PART III: EXHIBITS

State Timber Sale Contract
No. 341-18-68
East Chicken

EXHIBIT B

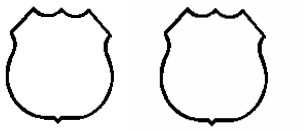
629-Form 341-203
Revised 06/97

OREGON DEPARTMENT OF FORESTRY

TIMBER SALE OPERATIONS PLAN
(See Page 2 for instructions)

Date Received by STATE: _____

(5) State Brand Information (complete):



(1) Contract No.: 341-18-68

(2) Sale Name: East Chicken

(3) Contract Expiration Date: May 31, 2019

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.

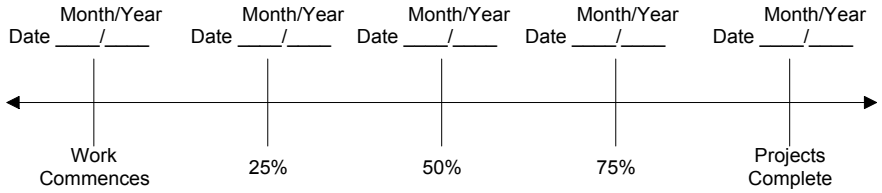
EXHIBIT B

OPERATIONS PLAN

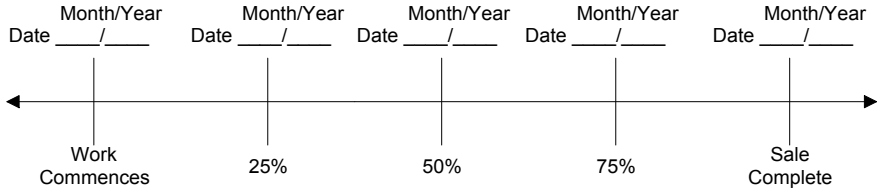
Completion Timeline

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
Unit
Purchaser
Operator
(Purchaser Representative)_____

EXHIBIT C – SAWMILL GRADE (WESTSIDE SCALE)

SCALING INSTRUCTIONS -- LOCATION APPROVAL -- BRAND INFORMATION

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

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

(3) FROM: Western Lane (03) Phone 541-935-2283
(State Forestry District)
Address 87950 Territorial Hwy., Veneta, OR, 97486

(4) PURCHASER: _____
Mailing Address: _____
Phone Number: _____

(5) **MINIMUM SCALING SPECIFICATIONS**	
SPECIES	MINIMUM NET VOLUME
Conifers	10
Hardwoods	10

Apply minimum volume test to whole logs over 40' Westside

(6) WESTSIDE SCALE: YES ☒ NO ☐
Use Region 6 actual taper rule. Logs over 40'.

(7) Weight Scale Sample ☐ ☒

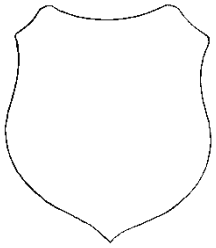
(8) **APPROVED SCALING LOCATIONS** (as shown on the ODF Approved Locations web-site)	Species	Yard	Truck	Weight

(9) SALE NAME: East Chicken
COUNTY: Lane

(10) STATE CONTRACT NUMBER: 341-18-68

(11) STATE BRAND REGISTRATION NUMBER:
_____

(12) STATE BRAND INFORMATION (COMPLETE):



(13) PAINT REQUIRED: YES ☒
COLOR: Orange

(14) **SPECIAL REQUESTS** (Check applicable)	
PEELABLE CULL (all species)	☒
NO DEDUCTIONS ALLOWED FOR MECHANICAL DAMAGE	☒
ADD-BACK VOLUME - Deductions due to delay	☒
OTHER:	

(15) **REMARKS**_____

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

(16) SIGNATURES:

_____
Purchaser or Authorized Representative Date

_____
State Forester Representative Date

_____
State Forester Representative PRINT NAME

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 (See specific instructions on pg. 2): ORIGINAL: Salem / COPIES: TPSO, Approved Scaling Location, Purchaser, District, Mgmt. Unit

EXHIBIT C – SAWMILL GRADE
INSTRUCTIONS FOR FORM 343-307a (rev. 11/11)

(1) Check appropriate box. REVISION NUMBER requires comments. CANCELLATION requires logging and hauling to be complete, recall branding hammers, date and sign where indicated, write diagonally across page "CANCEL", and send to TPSO.

(2) Designate Third Party Scaling Organization (TPSO).

Columbia River Log Scaling & Grading Bureau
P.O. Box 7002, Eugene, OR 97401
Phone: (541) 342-6007 Fax: (541) 342-2631
Email: services@crls.com

Pacific Rim Log Scaling Bureau, Inc.
8288 28th Court North East, Lacey, WA 98516
Phone: (360) 528-8710 Fax: (360) 528-8718
Email: office@prlsb.com

Mountain Western Log Scaling & Grading Bureau
P.O. Box 580, Roseburg, OR 97470
Phone: (541) 673-5571 Fax: (541) 672-6381
Email: info@mwlsgb.com

Yamhill Log Scaling & Grading Bureau
P.O. Box 709, Forest Grove, OR 97116
Phone: (503) 359-4474 Fax: (503) 359-4476
Email: yamhill@attglobal.net

Northwest Log Scalers, Inc. .
5526 NE 122nd Ave, Portland, OR 97230
Phone: (503) 254-0600 Fax: (503) 408-0919
Email: info@nwlogscalers.com

Pacific Log Scaling & Grading Bureau, Inc.
P.O. Box 23939, Portland, OR 97281
Phone: (503) 684-5599 Fax: (503) 639-4880
Email: PacLogScale@aol.com

(3) State District office, address and phone.

(4) Enter Purchaser's business name, address, and phone number as it appears on the Contract.

(5) Minimum Scaling Specifications.

(6) Westside – Region 6 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) Weight Scale Sample – Check box if sale is to be a Weight Scale Sample. All specifics for handling, scaling and processing will be attached or explained in the Remarks section Item (15).

(8) Show scaling locations only applicable to TPSO. Location name should appear as it does on the ODF Approved Scaling Location web site: http://www.odf.state.or.us/DIVISIONS/management/asset_management/ScalingLocation.asp Locations with scaling and processing directions specific to their location should be on a separate form. Species should be identified if not capable of receiving "all" species. Check appropriate box for either: yard, truck scale, or weight. Refer to the web site listed above for the locations approval status.

(9) Enter sale name and county.

(10) Enter sale Contract number.

(11) Enter Oregon's State Brand Registry Number **(REQUIRED)**.

(12) Show brand assigned to timber sale. One brand only. If more than one brand is assigned to the sale: (1) make a separate form for each brand and (2) on each form, explain and show other brand(s) in the Remarks section Item (15).

(13) Check yes for Paint Required and designate "Orange" for color. Non required removal volumes may sometimes require blue paint.

(14) Special Requests. These are requests that will be applied to ODF timber sales. All boxes applicable to the timber sales designated in the Exhibit C form must be "marked." If "Other" is indicated, it must contain a description and any necessary comments.

(15) Use this space to designate any weight conversion factors, per load volumes, weight scale sample instructions or any other explanations to clarify scaling, processing and/or mailing requirements. If additional scaling locations are approved, revise original or current form showing all (old and new) locations. Check REVISION box at top of form and explain under remarks. Route as indicated.

(16) Require purchaser to sign and date completed form in addition to State Forester Representative, sign and print name on the form.

Salem Distribution Instructions: Original will be mailed to Salem after it is electronically scanned and placed in the Salem transfer drive \\WPODFFILL01\Transfer\ScalingInstructions or e-mailed directly to scaling@odf.state.or.us. Scaling instructions for each brand should be scanned separately, for each approved TPSO.

EXHIBIT C – PULP SORT

PROCESSING INSTRUCTIONS -- LOCATION APPROVAL -- BRAND INFORMATION

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

(2) TO: _____
(Approved Pulp Processing Facility)

(3) FROM: Western Lane (03) Phone 541-935-2283
(State Forestry District)

(4) PURCHASER: _____

(5) Scaling Bureau (TPSO) Processing Weight receipts:

_____
Mailing Address: _____
Phone Number: _____

(6) **STATE Definition of Approved Pulp Sort:**

- Top portion of the tree (tops).
- All logs with a diameter (Big End) greater than _8_ inches marked with blue paint.

(7) PULP FACILITY PROCESSING INSTRUCTIONS:

- Pulp loads shall be weighed in lieu of scaling.
- One Ton = 2000 lbs. (Short Ton).
- Pulp loads shall have a yellow Log Load Receipt attached.
- Gross weight and truck tare weight for each load shall be machine printed on the weight receipt.
- Weigher shall sign the weight receipt.
- Weigher shall record the Log Load Receipt number on the weight receipt.
- Weigher shall attach the Weight receipt to the Log Load Receipt and mail them weekly to the TPSO processing the Weight receipt.

(8) TPSO PROCESSING INSTRUCTIONS

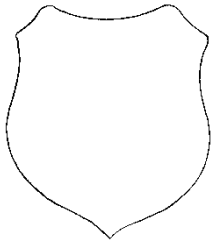
- Mail to ODF weekly.
- Convert to mbf using 10 tons per mbf.

(9) SALE NAME: East Chicken
COUNTY: Lane

(10) STATE CONTRACT NUMBER: 341-18-68

(11) STATE BRAND REGISTRATION NUMBER _____

(12) STATE BRAND INFORMATION: (COMPLETE BELOW)



(13) REMARKS: _____

Operator's Name (Optional inclusion by District):

_____

(14) SIGNATURES:

_____
Purchaser or Authorized Representative Date

_____
State Forester Representative Date

_____
State Forester Representative PRINT NAME

Notify the District within one hour when branding is inadequate for quick identification, the logs are marked with orange paint, the receipts are missing, not correctly or completely filled out, and/or logs do not meet the specifications of the STATE definition of Approved Pulp Sort.

Distribution: ORIGINAL: Salem / COPIES: TPSO, Approved Pulp Processing Location, Purchaser, District, Mgmt. Unit

EXHIBIT C – PULP SORT

INSTRUCTIONS FOR FORM 343-307b (rev. 11/11)

(1) **Must Complete.** Check appropriate box. REVISION NUMBER requires comments in the Remarks Section (13). CANCELLATION requires logging and hauling to be complete, recall branding hammers, date and sign where indicated, write diagonally across page "CANCEL", and send to TPSO.

(2) **Must Complete**. Approved Pulp Processing Facility. Write in as written in the Approved Log Delivery Location http://www.odf.state.or.us/DIVISIONS/management/asset_management/ScalingLocation.asp

(3) **Must Complete.** State Forestry District and District Phone Number.

(4) **Must Complete**. Purchaser's business name as it appears on the Contract.

(5) **Must Complete.** Third Party Scaling Organization that will be processing the weight tickets, mailing address, and phone number.

Columbia River Log Scaling & Grading Bureau
P.O. Box 7002, Eugene, OR 97401
Phone: (541) 342-6007 Fax: (541) 342-2631
Email: services@crls.com

Pacific Rim Log Scaling Bureau, Inc.
8288 28th Court North East, Lacey, WA 98516
Phone: (360) 528-8710 Fax: (360) 528-8718
Email: office@prlsb.com

Mountain Western Log Scaling & Grading Bureau
P.O. Box 580, Roseburg, OR 97470
Phone: (541) 673-5571 Fax: (541) 672-6381
Email: info@mwlsgb.com

Yamhill Log Scaling & Grading Bureau
P.O. Box 709, Forest Grove, OR 97116
Phone: (503) 359-4474 Fax: (503) 359-4476
Email: yamhill@attglobal.net

Northwest Log Scalers, Inc. .
5526 NE 122nd Ave, Portland, OR 97230
Phone: (503) 254-0600 Fax: (503) 408-0919
Email: info@nwlogscalers.com

Pacific Log Scaling & Grading Bureau, Inc.
P.O. Box 23939, Portland, OR 97281
Phone: (503) 684-5599 Fax: (503) 639-4880
Email: PacLogScale@aol.com

(6) **Must Complete.** Big end log not to exceed_____ inches. Big end of log is not to exceed 2 inches greater than the minimum removal specifications in the contract. Example: Minimum removal specifications 6 inches and 20 board feet, then the Big end of log not to exceed 8 inches. When conifer and hardwood removal specifications are different, use the smaller removal diameter to determine this specification.

(9) **Must Complete**. Enter sale name and county. If more than one county write in all the counties that the sale is located in.

(10) **Must Complete**. Enter sale Contract number.

(11) **Must Complete**. Enter Oregon's State Brand Registry Number **(REQUIRED)**.

(12) **Must Complete**. Show brand assigned to timber sale. One brand only. If more than one brand is assigned to the sale: (1) make a separate form for each brand and (2) on each form, explain and show other brand(s) in the Remarks section Item (13).

(13) Use this section to list any special instructions or the reason for any revisions in section item (1).

(14) **Must Complete.** Purchaser required to sign and date completed form in addition to State Forester Representative, sign and print name on the form.

Salem Distribution Instructions: Original will be mailed to Salem after it is electronically scanned and placed in the Salem transfer drive \\WPODFFILL01\Transfer\ScalingInstructions or e-mailed directly to scaling@odf.state.or.us . Scaling instructions for each brand should be scanned separately, for each approved TPSO.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

Minimum Road Specifications

ROAD	SUBGRADE WIDTH	SURFACED WIDTH	POINT TO POINT	STATION TO STATION	DRAINAGE
South Chicken Rd	16 ft.	12 ft.	A to B	0+00 to 70+00	Ditched
South Chicken Rd Extension	16 ft.	12 ft.	N/A	0+00 to 36+32	Ditched
Spur 1	14 ft.	12 ft.	N/A	0+00 to 1+26	Outslope
Spur 2	16 ft.	12 ft.	N/A	0+00 to 28+00	Ditched
Spur 2a	16 ft.	12 ft.	N/A	0+00 to 6+00	Ditched

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

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

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

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

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

GRUBBING CLASSIFICATION.

New construction - from the top of the cutslope to the toe of the fill.

Improvements and reconstructions - 4 feet back from the shoulder of the subgrade or ditch, whichever is widest, or as marked in the field.

CLEARING AND GRUBBING DISPOSAL. Scatter in stable locations through openings in the timber outside of the cleared right-of-way, except areas where end-haul is required. In areas where end-haul is required, clearing and grubbing debris shall be fully contained and hauled to a designated waste area. Clearing and grubbing debris shall be left in a stable location, and not left lodged against standing trees.

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-specified lines, grades, dimensions, and plans when provided.

Unless road plans show otherwise or as specified by STATE in this Exhibit "Full Bench and End Haul Requirements", 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.

Suitable excavated material shall be used 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.

Sidecast includes any road generated excess excavation material which is not essential as part of the road prism, is not compacted, and is below the roadway. Sidecast shall not be placed where it will enter a stream course. Leaving sidecast below the road is only permissible if specifically allowed in "Full Bench and End Haul Requirements" in this Exhibit.

All fills shall be machine compacted according to the "Compaction and Processing Requirements" in this Exhibit.

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 specified in the plans or as follows: 400 divided by the radius of the curve equals the amount of extra width.

DRAINAGE

Subgrade. Subgrade shall be crowned or outsloped at 3 to 6 percent as shown on the "Forest Road Specifications" table in this Exhibit.

Ditch. Unless otherwise specified in this Exhibit "General Road Construction/Improvement Instruction. Construct "V" shaped ditch 3 feet wide and to a depth of 1 foot below subgrade.

Ditchouts. Construct ditchouts to drain away from subgrade at locations marked in the field or as directed by STATE.

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.

SLOPES	Back Slopes	Fill Slopes
Solid Rock	Vertical to ¼ :1	
Fractured Rock	½:1	
Soil - side slopes 50% and over	¾ :1	1½:1
Soil - side slopes less than 50%	1 :1	1½:1

Top of cutslope shall be rounded on full bench portions.

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

TURNAROUNDS. Increase subgrade width an additional 20 feet for a length of 20 feet at locations marked in the field.

SEASONAL WINTERIZATION. All unsurfaced roads or unfinished subgrades shall be waterbarred in accordance with the specifications in Exhibit I, and blocked from vehicular traffic prior to October 31, annually and as directed by STATE.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

GENERAL ROAD CONSTRUCTION INSTRUCTIONS:

(1) Timber Removal. Remove all trees within posted right-of-way boundary as specified in Section 2210, "Designated Timber."

(2) Excavated Materials. Excavated materials shall be utilized for road construction and hauled in where necessary. Surplus excavation materials shall be hauled to the waste areas as marked in the field and/or designated on Exhibit A. Surplus excavated materials and waste materials shall be sloped and compacted for drainage. Fills shall be thoroughly compacted in accordance with this Exhibit.

(3) Fill Armor and Energy Dissipater Construction. Where rock is specified for fill armor, rock shall be machine placed and tamped at a 1½:1 slope, beginning at the toe of the fill. Where rock is used for an energy dissipater, rock shall be placed below the culvert outlet and embedded for a minimum of 3 feet, in accordance with Exhibit G.

(4) Controlled Blasting. 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 material within the road prism.

(5) Stream crossings and Cross Drain culverts shall be installed as directed by STATE and in accordance to Exhibit G. The Location of the culverts shall be marked by STATE. A STATE representative will mark the location after the completion of the subgrade. Rocking shall not occur until all culverts have been installed unless otherwise approved in writing by STATE.

(6) All inlets and outlets of stream crossings shall be armored with rock. All outlets of cross drains shall be armored with rock. Rock may be acquired at STATE approved locations on STATE lands, or utilized from STATE approved road generated rock material, or purchased from a commercial source. Install energy dissipater as outlined in Exhibit G.

(7) Each culvert shall be backfilled with some crushed rock, or provided extra surfacing rock allocated over the culvert on the running surface, or compact the soil with a tamping device. Operator shall provide adequate support around the culvert.

(8) Subgrade Preparation and Application of Surfacing Rock.

(a) Complete culvert installations, drainage ditches, ditchouts, fill construction, and other specified work prior to the application of surfacing rock.

(b) Subgrade shall be crowned or outsloped at 3 to 6 percent.

(c) Upon completion of above required work, apply, process, and compact surfacing rock in accordance with specifications in the "Compaction and Processing Requirements" in this Exhibit. Final road surface shall be crowned or outsloped at 3 to 6 percent.

The subgrade shall be approved by STATE prior to the application of rock.

Unless otherwise specified, full bench shall be required on all side slopes greater than 50%.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD CONSTRUCTION INSTRUCTIONS

South Chicken Extension Road (Stationing 0+00 to 36+32)

Subgrade instructions:

-2+00 to 0+00	Utilize 1,000 Cu. Yds. of clean waste from the road construction efforts to construct a turn out right.
	Additional subgrade width shall be approx. 10 feet from edge of existing road. Total subgrade width including turn out shall be approx. 26 feet wide.
	Seed and mulch the fill slopes.
0+00 to 36+32	Clear and grub. Approximately 40 feet wide of clearing grubbing is anticipated.
	On slopes greater than 60%, stumps shall be end hauled to an approved waste area. Otherwise, stumps shall be wasted in openings and gaps in stable locations.
	The subgrade construction consists of both balanced and full bench. All fill shall be clean soil, free from organic debris.
	Additional subgrade width shall be provided for offtracking around horizontal curves. See Offtracking table provided below.
	The subgrade shall be crowned at 3 to 6 percent unless otherwise approved by STATE.
0+00 to 29+30	The top of cut is approximately on average **10 feet horizontal distance** from posted Right-of-Way.
29+30 to 33+50	Top of cut shall be marked **in the field with slope stakes**.
0+00 to 2+00	Existing Landing. Where possible, maximize the width by incorporating the new road construction into existing landing.
	Minimize the loss of existing landing width at the back half by carefully constructing this portion according to plans.
1+40 to 3+25	Subgrade shall be full bench. The top of cutslope shall be rounded.
	STATE anticipates this material to be used for the truck turn out between -2+00 and 0+00. End haul or drifting techniques may be used according to the “full bench and end haul specifications” in this Exhibit.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD CONSTRUCTION INSTRUCTIONS

4+25 to 10+25	Subgrade shall be full bench. The top of cutslope shall be rounded.
11+76 to 12+17	Optional truck turn around location. Operator may construct a truck turn around by excvating into the cut slope to gain width. Excess material shall be end hauled to an approved waste area.
12+17 to 12+52	Turn out/Small Landing. Use clean fill material to construct a small landing/turn out. STATE anticipates a minimum width of 30 ft. wide by 35 ft. long. Operator shall not place fill material on the east aspect of the ridge starting from the crest of the ridge.
12+85 to 15+50	Subgrade shall be full bench. The top of cutslope shall be rounded.
17+00 to 18+15	Through fill construction. Utilize excess material from the construction efforts (approx. 400 Cu. Yds.) to build up subgrade. Subgrade width shall be 16 ft. Maximum depth of fill at centerline shall not exceed 5 ft. in depth. Fill material shall favor the southwest aspect and be centralized over the crest of the ridge. Operator shall not place fill material on the northeast aspect, starting from the sharp break in slope.
20+00 to 21+00	Through fill construction and turn out. Utilize excess material from the construction efforts (approx. 400 Cu. Yds.) to build up subgrade. Minimum width of subgrade shall be 24 ft. wide. 16 ft of width for standard running surface and an additional 8 ft. for a truck turn out. Maximum depth of fill at centerline shall not exceed 4 ft. in depth unless otherwise approved by State in writing. Fill material shall favor the southwest aspect and be centralized over the crest of the ridge. Operator shall not place fill material on the northeast aspect, starting from the sharp break in slope.
24+00 to 26+40	Through fill construction. Utilize excess material from the construction efforts (approx. 1,000 Cu. Yds.) to build up subgrade. Minimum subgrade width shall be 16 ft. Maximum depth of fill at centerline shall not exceed 5 ft. in depth. Fill material shall be centralized over the crest of the ridge.
29+30 to 33+50	Subgrade shall be full bench. The grade shall not exceed 25 percent grade.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD CONSTRUCTION INSTRUCTIONS

29+30 to 33+50	The STATE has set, centerline flags, slope and reference stakes out in the field. The slope and reference stakes are placed together just outside of the Right-of-Way. The operator shall take precautions to preserve slope stakes in the field during the felling, logging, and construction of the road. After felling and logging, a STATE representative shall move the slope stakes to their true position “top of cut.”
32+00 to 36+32	Operator may drift material forward to be incorporated into the roadway on top of the ridge.
33+05	Construct an empty truck turn out. Utilize excess road generated waste material in the construction efforts of the turnout. Max road width 30 ft.
33+90	Construct empty truck turn around.
36+32	Construct Landing 3. Width shall be 40 feet wide.

Rocking instruction for South Chicken Rd extension:

0+00 to 27+00	Apply a compacted depth of 6” of 3”-0” base rock and 2” of 1½” -0” cap rock.
27+00 to 33+50	Apply a compacted depth of 6” of 3”-0” base rock and 3” of ¾” – 0” cap rock. The rock size and gradation specs may be adjusted based on the use of the road as approved by STATE. A minimum of 9” of compacted aggregate, 50 Cu. Yds. loose truck measure per station, will be required for winter use.
33+50 to 36+32	Apply a compacted depth of 8” of 3”-0” base rock. Apply 40 Cu. Yds. of Jaw Run or Pit Run quality landing rock per landing.

Spur 1 (Stationing 0+00 to 1+26)

Subgrade instruction:

0+00 to 1+26	Clear and Grub. Waste stumps in openings and gaps away from the toe of the fill in stable locations. The subgrade shall be outsloped at 4 to 6 percent. Compact the subgrade in accordance to Exhibit F.
1+26	Construct a landing. Landing shall be a minimum 40 ft. wide by 50 ft long.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD CONSTRUCTION INSTRUCTIONS

Rocking instructions for Spur 1:

0+00 to 1+26 — Apply a compacted depth of 8" of 3"-0" base rock. Apply 40 Cu. Yds. of Jaw Run or Pit Run Landing Rock.

Spur 2 (Stationing 0+00 to 28+00)

Subgrade instructions:

0+00 to 28+00 — Clear and Grub. Waste stumps in openings and gaps away from the toe of the fill in stable locations.

When clearing and grubbing stumps in certain locations will cause a logistical or operational challenge and will not cause stability or structural issues; stumps may be left in place upon approval and as directed by STATE.

Stumps approved by STATE to be left in place shall be cut as flush to the ground as possible.

The subgrade construction consists of both balanced and full bench. All fill shall be clean soil, free from organic debris.

Additional subgrade width shall be provided for offtracking around horizontal curves. See Offtracking table provided bellow.

The subgrade shall be crowned at 4 to 6 percent.

2+00 to 8+00 — The subgrade shall be full bench. The top of cutslope shall be rounded.

Incidental sidecast may be allowed through portions of this section as outlined in the "Full Bench and Endhaul Requirements", as conditions allow on a case by case basis. Excess sidecast, in the opinion of the STATE shall be pulled back as instructed by STATE. Sidecast shall not serve as adequate subgrade. The minimum subgrade width shall be established from a true full bench road prism.

Drift or endhaul waste material forward to the switchback and ramp down fill section starting at 8+30 to 12+00.

All of the material generated from 2+00 to 8+00 shall be incorporated into the road prism and construction efforts of 9+00 to 12+00.

8+30 to 9+67 — Construct a switchback by using fill material to build up the subgrade. Fill material shall be clean soil, free from organic debris, suitable for construction.

The subgrade width shall be a minimum of 37 ft. wide. Approx. fill depth needed at 9+67 equals 10 ft. at centerline.

The minimum subgrade width shall be established by utilizing the inside edge of the switchback to gain subgrade width.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD CONSTRUCTION INSTRUCTIONS

Fill material shall be processed and compacted in lifts according to the Compaction and Processing Exhibit F.

9+67 to 12+00 — Embankment fill portion. Utilize waste material as subgrade fill material to build up the subgrade through this portion. Fill material shall be clean soil, free from organic debris, suitable for construction.

The minimum subgrade width through this portion shall be 27 ft. wide.

Approx. fill depth needed equals 8 ft. at centerline. The road is anticipated to be a ramp down fill construction. The fill should eventually key into the natural side slope and transition into standard balance cut/fill or full bench construction practices.

Fill material shall be processed and compacted in lifts according to the Compaction and Processing Exhibit F.

12+90 to 13+50 — The subgrade shall be full bench. The waste material shall be drifted or end-hauled forward or backwards to a stable location.

13+85 to 14+40 — Create a turnout left by utilizing construction generated material as fill material. The minimum subgrade width shall be 28 ft. Wide. Concentrate the fill material over the sub ridge below the fill slope.

16+00 to 17+00 — The subgrade shall be full bench. The waste material shall be drifted or end-hauled forward or backwards to a stable location.

19+40 to 28+00 — Embankment fill road construction. This road section serves as a “Waste Area ” for the South Chicken Rd. extension. Fill material shall be clean soil, free from organic debris, suitable for construction.

The subgrade width shall be 27 ft. wide.

The fill may vary in depth from centerline but should not exceed approximately 7 feet from centerline unless otherwise approved by STATE.

Fill material shall be processed and compacted in lifts according to the Compaction and Processing Exhibit F.

19+40 to 20+88 — Construct a large horizontal curve by using fill material to build up the subgrade. Fill material shall be clean soil, free from organic debris, suitable for construction.

The subgrade width shall be a minimum of 27 ft. wide. The minimum subgrade width shall be established by utilizing the inside edge of the switchback to gain subgrade width.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD CONSTRUCTION INSTRUCTIONS

28+00 Construct a Landing. Landing shall be a minimum 50 ft. wide by 50 ft. long.

Rocking instructions for Spur 2:

0+00 to 28+00 Apply and compact a loose truck quantity of 20 Cu. Yds. of 3”-0” rock per station.

Spur 2a (Stationing 0+00 to 6+00)

Subgrade instructions:

0+00 to 6+00 Clear and Grub. Waste stumps in openings and gaps in stable locations.

Construct the subgrade. A balanced cut and fill is anticipated throughout the majority of the construction, except through the periennial stream crossing where fill material will be needed.

The subgrade shall be compacted according to Compaction and Processing requirements of Exhibit F.

0+00 to 6+00 The subgrade shall be crowned for drainage.

Approx. 0+90 Perennial stream crossing.

Install a 30” Polyethylene culvert. The total anticipated pipe length will be 75 feet.

The culvert shall be install at approximately 15% gradient unless otherwise approved by STATE.

A bedding of crushed rock shall be placed to provide a wide band of support and to transmit the load from the above fill evenly over the entire length of the culvert. A minimum of 6” of 1 ½“-0” or equivalent rock shall be used.

Backfill shall consist of 1 ½”-0” crushed rock or potentially clean job excavated soil. The culvert trench shall be excavated approx. 1 culvert diameter width on each side to provide adequate room for handling and compaction. Compacted in 6 in lifts with a tamping device.

Fill material shall be hauled in from road generated waste material. Fill material shall be clean soil or rock absent of organic debris. The fill slope shall be 1 ½H: 1V.

Maximum fill depth shall be no greater than 15 ft. at centerline to the bottom of the stream channel unless otherwise approved in writing by the STATE.

The inlet and outlet shall be armored with Rip-Rap quality rock above and along the sides of the culvert to prevent erosion.

Seed and mulch fill slopes according to exhibit J.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD CONSTRUCTION INSTRUCTIONS

Approx. 2+70	Perennial stream crossing.
	Install a 30" Polyethylene culvert. The total pipe length will be 75 feet.
	The culvert shall be install at approximately 12% gradient, unless otherwise approved by STATE.
	A bedding of crushed rock shall be placed to provide a wide band of support and to transmit the load from the above fill evenly over the entire length of the culvert. A minimum of 6" of 1 ½"-0" or equivalent rock shall be used.
	Backfill shall consist of 1 ½"-0" crushed rock or potentially clean job excavated soil. The culvert trench shall be excavated approx. 1 culvert diameter width on each side to provide adequate room for handling and compaction. Compacted in 6 in lifts with a tamping device.
	Fill material shall be hauled in from road generated waste material. Fill material shall be clean soil or rock absent of organic debris. The fill slope shall be 1 ½H: 1V.
	Maximum fill depth shall be no greater than 15 ft. at centerline to the bottom of the stream channel unless otherwise approved in writing by the STATE.
	The inlet and outlet shall be armored with Rip-Rap quality rock above and along the sides of the culvert to prevent erosion.
	Seed and mulch fill slopes according to exhibit J.
6+00	Construct a landing plus an empty truck turn around.

Rocking instructions for Spur 2a:

0+00 to 6+00	Apply and compact a loose truck quantity of 20 Cu. Yds. of 3"-0" rock per station.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

Curve Widening Table:

Road	Horizontal Curve	Arc length	Delta "Δ"	Radius "R"	OFF TRACKING"OT"	Rock Total Cu. Yds.
S. Chick Ext Rd rock depth equals 8 inches						
S. Chick Ext Rd	0+00 to 0+50	51	39	75	4.7	9
S. Chick Ext Rd	12+20 to 12+64	44	56	45	7.8	13
S. Chick Ext Rd	14+12 to 14+91	78	50	90	4.7	14
S. Chick Ext Rd	15+11 to 16+07	96	42	130	3.4	13
S. Chick Ext Rd	18+36 to 18+87	51	45	65	5.5	11
S. Chick Ext Rd	19+00 to 19+51	51	58	50	7.5	15
S. Chick Ext Rd	19+65 to 20+04	40	30	75	3.9	6
S. Chick Ext Rd	20+63 to 20+97	34	24	80	3.2	5
S. Chick Ext Rd	21+10 to 21+55	44	39	65	5.0	9
S. Chick Ext Rd	22+84 to 23+34	50	58	50	7.5	14
S. Chick Ext Rd	23+45 to 24+03	58	17	200	1.8	4
S. Chick Ext Rd	30+32 to 30+99	67	86	45	10.0	25
S. Chick Ext Rd	33+05 to 33+73	67	52	75	5.4	14
S. Chick Ext Rd	34+21 to 35+00	78	30	150	2.8	9
Spur 2 rock depth equals 4 inches						
Spur 2	8+30 to 9+67	137	157	50	10.5	27
Spur 2	10+75 to 11+63	88	67	75	6.0	10
Spur 2	12+22 to 12+74	52	59	50	7.6	8
Spur 2	12+92 to 13+35	43	25	100	3.1	3
Spur 2	14+57 to 15+10	53	55	55	6.8	7
Spur 2	15+57 to 15+91	33	25	75	3.3	3
Spur 2	19+39 to 20+88	149	114	75	6.6	19
Spur 2	21+39 to 21+81	42	31	78	4.0	4
Spur 2	22+08 to 22+61	53	40	75	4.8	5
Spur 2	24+20 to 25+32	112	128	50	10.2	22
Spur 2	25+72 to 26+73	101	77	75	6.2	12
Spur 2a rock depth equals 4 inches						
Spur 2a		18	21	50.0	2.7	1
Spur 2a	0+64 to 1+04	40	46	50.0	6.4	5
Spur 2a	1+67 to 2+62	95	109	50.0	9.8	18
Spur 2a	3+18 to 3+88	70	90	45.0	10.2	14
					Total	**320**

Note: Off tracking is in addition to a 12’ running surface.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

GENERAL ROAD IMPROVEMENT INSTRUCTIONS:

1 Roadside Brushing. Conduct roadside brushing as specified in Exhibit H.

2 Excavated Materials. Excavated materials shall be utilized for road and fill construction and hauled in where necessary. Surplus excavation materials shall be hauled to the waste areas as marked in the field and/or designated on Exhibit A. Waste materials shall be sloped and compacted for drainage. Fills shall be thoroughly compacted in accordance with Exhibit F.

3 Bank Slough Removal. Dig out all bank slough. Bank slough material shall not be pulled across existing surfacing rock, but shall be placed in nearby waste areas and uniformly sloped and compacted for drainage, as directed by STATE.

4 Drainage Ditches. Restore or construct ditchlines, including ditchouts, as directed by STATE. Clean out all culvert inlets and outlets for a 10-foot radius. Re-establish or construct culvert sediment basins. Waste materials from drainage ditches and sediment basins shall not be pulled across existing surfacing rock, but shall be end-hauled to an approved waste area, as directed by STATE. Damaged culvert inlets and/or outlets shall be repaired by opening them with a hydraulic jack, or cutting off the culvert end to allow for free passage of water at peak flow levels. Install a culvert marker at each newly installed culvert and at each existing culvert that is missing a marker that could be reached by a grader blade.

5 Subgrade Preparation and Application of Surfacing Rock.

(a) Complete culvert work, drainage ditches, bank sough removal, ditchouts, and other specified work prior to the application of new surfacing rock.

(b) Cut out all potholes and/or washboard sections from the existing surfacing.

(c) Apply required patching and leveling rock, as directed by STATE.

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS

South Chicken Road Points (A to B):

- Conduct roadside brushing between points A and B.
- Remove bank slough, and clean out culvert inlets and outlets.
- Remove any berms on the outside edge of the road.
- Endhaul waste to an approved waste area, or as shown on Exhibit A.
- Establish proper drainage.
- Apply allocated spot rock.

Specific spot rock requirements:

- ¾”-0” rock shall be used on grades greater than 15% for traction.
- 1 ½“-0” rock shall be used on grades up to 15% for traction.
- 3”-0” rock may be used on flat running surfaces.

EXHIBIT D

FULL BENCH AND END-HAUL REQUIREMENTS

ROAD	STA. TO STA. or LOCATION	CONTAINMENT - SIDECAST	WASTE AREA LOCATION	WASTE AREA TREATMENT
South Chicken Rd. Extension.	1+40 to 3+25	2	1, 2, or 3	1, 2, 3, & 4
South Chicken Rd. Extension.	4+25 to 10+25	2	1, 2, or 3	1, 2, 3 & 4
South Chicken Rd. Extension	12+85 to 15+50	1	1, 2, or 3	1, 2, 3 & 4
South Chicken Rd. Extension	29+30 to 33+50	1	1, 2, or 3	1, 2, 3 & 4
Spur 2	2+00 to 8+00, 12+90 to 13+50, 16+00 to 17+00	3	1, 2, or 3	1, 2, 3 & 4

Full Bench and End-Haul Areas General Requirements

Sidecast includes any road generated excess excavation material which is not essential as part of the road prism, is not compacted, and is below the roadway. Material shall not be sidecast unless specified above.

Clearing and grubbing debris shall be end-hauled where specified.

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

Containment/Sidecast

(1) Full: No excavated material remains below the road.

(2) Normal/Incidental: The amount of excavated material lost over the outside edge of the road shall not exceed 1 foot in depth.

(3) The total quantity of sidecast allowed shall be determined by STATE and any sidecast in the opinion of the STATE found in excess shall be pulled back and end hauled to an approved Waste Area.

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

FULL BENCH AND END-HAUL REQUIREMENTS

Waste Area Location

(1) Turn out East Chicken Rd. Extension. Stationing (-2+00 to 0+00) as shown on Exhibit A, and as posted and directed by STATE. "Max 1,000 Cu. Yds."

(2) Drift or endhaul excess waste to be incorporated into the road prism as fill or as an embankment fill where specified.

- Embankment location – Spur 2 stationing 9+67 to 12+00 & 19+40 to 28+00.

(3) In a stable location as approved by the STATE.

Waste Area Treatment

(1) Deposit at waste area, spread evenly, and provide adequate drainage.

(2) Compact in lifts according to the Exhibit F "Compaction and Processing Requirements."

(3) Pile woody debris separate from other waste material.

(4) Mulch and seed all waste fill slopes in accordance with Exhibit J.

EXHIBIT E

ROAD SURFACING

ROAD	ROCK TYPE	SIZE OF ROCK	COMPACTED DEPTH	LOOSE TRUCK Cu. Yds./Sta.	STA. TO STA. OR POINT TO POINT	TOTAL LOOSE TRUCK VOLUME
South Chicken Rd. Extension	Base	3”-0”	6"	33 Cu. Yds.	0+00 to 27+00	890
South Chicken Rd. Extension	Cap	1 ½”-0”	2"	11 Cu. Yds.	0+00 to 27+00	300
South Chicken Rd. Extension	Base	3”-0”	6"	33 Cu. Yds.	27+00 to 33+50	210
South Chicken Rd. Extension	Cap	¾”-0”	3”	17 Cu. Yds.	27+00 to 33+50	110
South Chicken Rd. Extension	Base	3”-0”	8”	44 Cu. Yds.	33+50 to 36+32	120
Spur 1	Base	3”-0”	8”	44 Cu. Yds.	0+00 to 1+26	60
Spur 2	Base	3”-0”	Approx. 4”	20 Cu. Yds.	0+00 to 28+00	560
Spur 2a	Base	3”-0”	Approx. 4”	20 Cu. Yds.	0+00 to 6+00	120
TURNOUTS:				**NO. OF T.O.**	**Location**	
South Chicken Rd. Extension	Base	3”-0”	4”	2	-1+20 to -0+40 & 20+00 to 20+90	40
Spur 2	Base	3”-0”	4"	2-4	Determined by State	40
TURNAROUNDS:				**NO. OF T.A.**		
South Chicken Rd. Extension	Base	3”-0”	6"	3	≈12+00, ≈19+60, and at 33+90	30
LANDINGS AND JUNCTIONS:				**NO. OF LDGS. OR APPR**	**LOCATION**	
South Chicken Rd. Extension	Lndg.	Pit Run	6"	3	1+00,12+00 & 36+30	120
Spur 1	Lndg.	Pit Run	6"	1	1+26	40

EXHIBIT E

ROAD SURFACING

MISCELLANEOUS: (Spot, Curve Widening, Riprap, & Armor)			AMOUNT	POINTS	LOCATION	
South Chicken Rd. Extension	Widening	1½”-0” or 3”-0”	160	14	Determined by STATE	160
South Chicken Rd. Extension	Armor	Pit Run	40	4	Culverts Outlets	40
Spur 2	Widening	3”-0”	120	11	Determined by STATE	120
Spur 2	Armor	Pit Run	30	3	Culverts Outlets	30
Spur 2a	Widening	3”-0”	40	4	Determined by STATE	40
Spur 2a	Riprap	Riprap	60	2	Stream Crossings	60
South Chicken Rd.	Spot	1 ½”-0”	200	10	Determined by STATE	200

ROCK TOTALS	(3/4”-0”)	(1 ½”-0”)	(3”-0)	(Pit Run)	(Rip Rap)
CU. YDS.	110	500	2390	230	60

Lndg = Landing

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

LOOSE TRUCK Cu. Yds. are rounded to the nearest 10 Cu. Yds. in the table shown.

Depth Measurement shall be used to determine contract compliance.

The STATE shall reserve the right to approve the rock source.

EXHIBIT E

ROCK ACCOUNTABILITY

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 sediment will not enter streams. Additional surfacing needed because of construction season or construction practice is not included in the preceding ROAD SURFACING table, and shall be furnished at PURCHASER expense.

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 D. 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. The depth of compacted aggregates shall not vary more than 1 inch from the depth specified in the “Road Surfacing” table in Exhibit D. The average depth for each road segment shall be the specified depth or greater. If additional rock is required because of insufficient depth, the locations and volumes to be added shall be determined by STATE.

Load Records. Notify STATE before spreading the rock and maintain a record of all rock delivered for spreading. Make the record available for STATE inspection. A report listing the amount of rock delivered weekly. However depth measurement shall be used to determine contract compliance.

EXHIBIT E

DURABLE CRUSHED ROCK SPECIFICATIONS

Grading Requirements

For 3/4"-0"	Passing	1" sieve	100%
	Passing	3/4" sieve	90-100%
	Passing	3/8" sieve	55-75%
	Passing	1/4" sieve	40-60%
	Passing	No. 10 sieve	20-40%
	Passing	No. 40 sieve	8-16%
For 1½"-0"	Passing	2" sieve	100%
	Passing	1½" sieve	90-100%
	Passing	3/4" sieve	60-90%
	Passing	1/4" sieve	30-50%
	Passing	No. 10 sieve	15-30%
	Passing	No. 40 sieve	7-15%
For 3"-0"	Passing	4" sieve	100%
	Passing	3" sieve	90-100%
	Passing	1½" sieve	60-90%
	Passing	3/4" sieve	40-60%
	Passing	1/4" sieve	20-40%
	Passing	No. 10 sieve	5-20%

JAW-RUN, PIT-RUN, AND RIPRAP ROCK SPECIFICATIONS

For Jaw-Run	Passing	6" sieve	100%
	Passing	3" sieve	45-65%
For 6"-0" Pit-Run	Passing	10" sieve	100%
	Passing	6" sieve	60-85%
	Passing	3" sieve	30-50%
	Passing	1/4" sieve	0-20%

For 24"-6" Riprap A minimum of 50 percent of the material shall measure a minimum of 24 inches, measured in one dimension. Material shall be clean, well graded, and free of 2"-0" fines.

Control of gradation shall be by visual inspection by STATE.

EXHIBIT F

COMPACTION AND PROCESSING REQUIREMENTS

Moisture Content: Compaction must take place when moisture content of the materials being compacted is favorable for effective compaction as determined by STATE.

Compaction Pass: A pass is defined as traveling a road section forward and then backward over that same section.

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 the surface is smooth and hard and visible deformation ceases. At least 3 passes shall be made over the entire width and length of the road. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

Subgrade shall be crowned or outsloped at 4 to 6 percent as specified in the "Forest Roads Specifications" table in Exhibit D.

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
South Chicken Rd. Extension, Spur 1, Spur 2, and Spur 2a	1 Or as approved by STATE

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. At least 3 passes shall be made over the entire width and length of each layer.

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
South Chicken Rd. Extension: Stations: 17+00 to 18+15, 20+00 to 21+00, & 24+00 to 26+40	(1) Vibratory Roller for typical fill placement And (4) Vibratory Hand-Operated or Backhoe-Mounted Tamper for pipe installations in fills Or As approved by STATE
Spur 2: Stations: 8+30 to 12+00, & 19+40 to 28+00	
Spur 2a: Stations Approx. 0+90 and 2+70	

EXHIBIT F

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 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 until the surface is smooth and hard and visible deformation ceases. 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 or outsloped at 4 to 6 percent as specified in the “Forest Roads Specifications” table in Exhibit D.

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
All road segments requiring crushed rock.	1

Pit-Run Rock. The rock shall be uniformly mixed and spread in layers on the approved roadbed. Each layer of pit-run rock shall be moistened or dried to uniform moisture content suitable for maximum compaction and compacted in layers not to exceed 8 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. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

Rock shall be crowned or outsloped at 4 to 6 percent as specified in the “Forest Roads Specifications” table in Exhibit D.

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
Segments requiring pit-run rock	D7 Cat or equivalent

EXHIBIT F

COMPACTION EQUIPMENT OPTIONS

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

(2) Tampingfoot Compactors. Tampingfoot compactors shall exert a minimum pressure of 250 pounds per square inch on the ground area in contact with the tamping feet. The compactor shall cover a minimum width of 60 inches per pass and weigh a minimum of 16,000 pounds.

(3) 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.

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

EXHIBIT G

CULVERT SPECIFICATIONS

All culvert materials shall be furnished and installed by PURCHASER, unless otherwise specified in the Contract.

Culverts shall be constructed of corrugated aluminized (Type 2) steel.

Polyethylene culverts shall be double-walled and meet the requirements of AASHTO M-294-06, Type S, **or** ASTM F2648 Culvert.

Aluminized (Type 2) steel culverts shall meet the requirements of AASHTO M-36-03[1].

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

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 specified in special instructions.

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

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

Cross drain culverts shall be installed at a slope steeper than the incoming ditch grade, but not less than 3 percent or greater than 10 percent.

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

A bedding of 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 culvert for all stream crossing culverts.

Backfill shall consist of, crushed rock, rock crusher reject, or clean job-excavated soil free of stumps, limbs, rocks, or other objects which would damage the culvert.

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

EXHIBIT G

CULVERT SPECIFICATIONS

Minimum height of cover over top of culvert to subgrade when road is to be rocked shall be as follows: 12" for culverts 18” to 36”. 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 an energy dissipater, or other approved slope protection device. Construct lead-off ditches away from culvert outlets where the slope gradients restrict the free flow of water.

Compaction by tamping utilizing a Vibratory Hand-Operated or Backhoe-Mounted Tamper is required for all stream crossing culverts.

All culverts scheduled for replacement shall become property of the PURCHASER and be removed from STATE land and hauled to an approved refuse site in the same project period in which replacement occurred.

The intake ends of culverts in fills less than 3 feet to the top of the culvert shall be marked by driving steel posts within 6 inches of the downgrade side. Posts shall be painted with a rust-resistant paint and be a minimum of 5 feet long, with the spade driven 2 feet into the ground.

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

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

	Steel Culvert	Thickness			Band Widths (")	
Dia.	Gauge	Uncoated	Coated	Band Gauges	Annular	Helical
18-24	16	(0.0598")	(0.064”)	16	12	12
30-36	16	(0.0598")	(0.064”)	16	12	12

Culverts larger than 60” in diameter shall have (3” x 1”) corrugations.

EXHIBIT G

CULVERT LIST

CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	MATERIAL TYPE	GAUGE	ROAD SEGMENT POINT TO POINT	STATION
1	18”	35 ft.	ACSP	16	South Chicken Rd. Extension	5+95
2	18”	35 ft.	ACSP	16	South Chicken Rd. Extension	9+92
3	18”	35 ft.	ACSP	16	South Chicken Rd. Extension	31+19
4	18”	35 ft.	ACSP	16	South Chicken Rd. Extension	32+63
5	18”	40 ft.	ACSP	16	Spur 2	Determined by STATE
6	18”	40 ft.	ACSP	16	Spur 2	Determined by STATE
7	18”	40 ft.	ACSP	16	Spur 2	Determined by STATE
8	18”	40 ft.	ACSP	16	Spur 2a	Determined by STATE
9	30”	80 ft.	CPP	16	Spur 2a	Approx. 0+90
10	30”	80 ft.	CPP	16	Spur 2a	Approx. 2+70

ACSP = Aluminized, CPP = Polyethylene, GCSP = Galvanized

Approximate culvert lengths are provided. Actual installed culvert length may be altered i.e., shortened or lengthened, to fit the road prism or stream crossing in accordance to the specifications above.

EXHIBIT G

TYPICAL EMBEDDED ENERGY DISSIPATOR

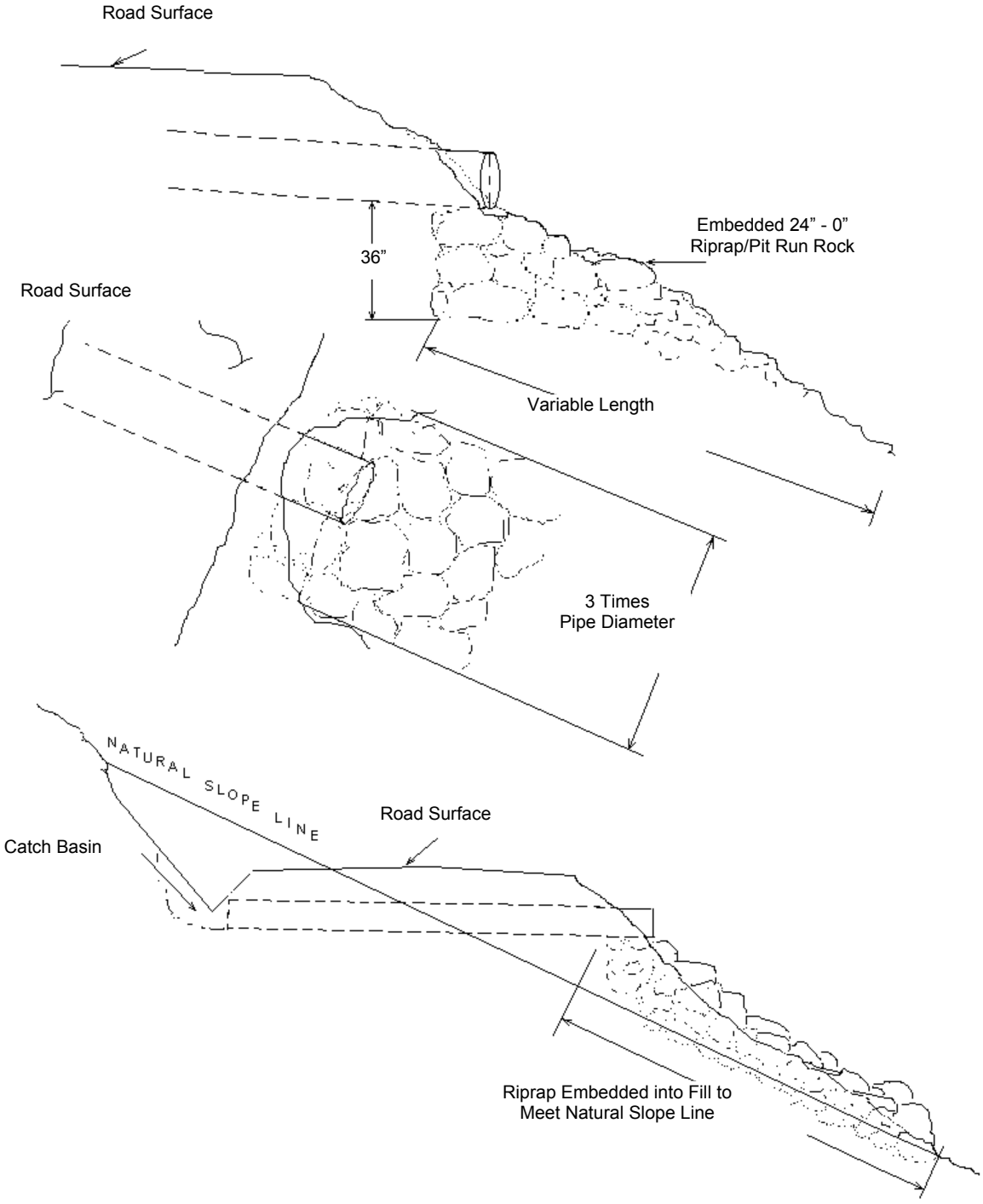
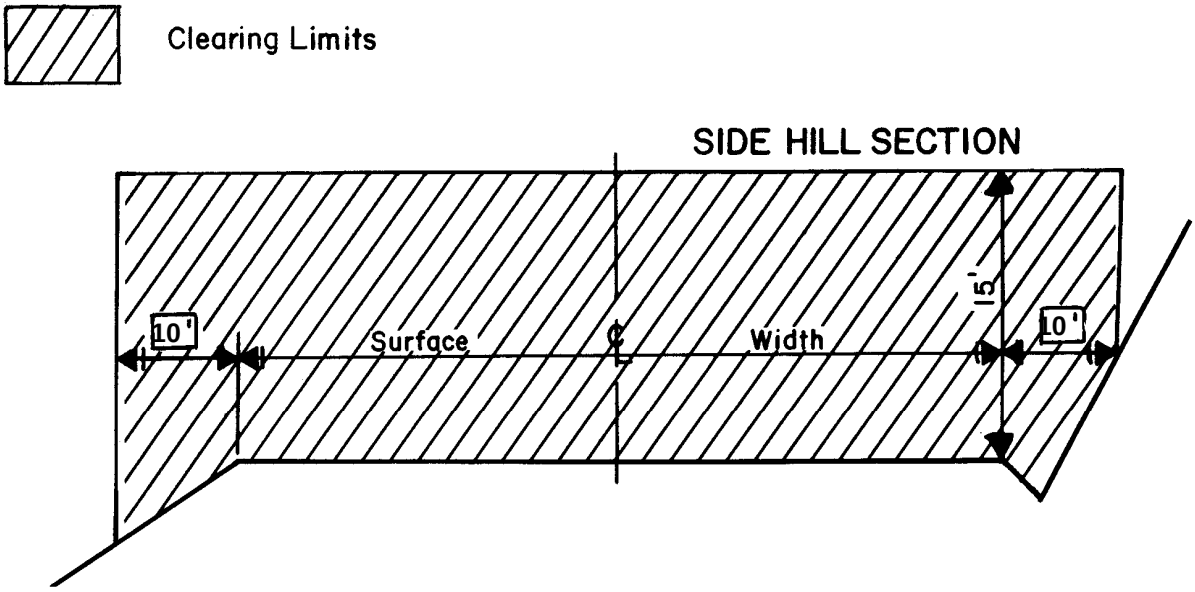


EXHIBIT H

ROAD BRUSHING SPECIFICATIONS



From Point A to B as shown on Exhibit A.

REQUIREMENTS

The minimum height of clearing shall be 15 feet from the road surface, and the minimum width of clearing on the cutslope side of the road shall be 10 feet horizontal distance from the shoulder of the road and 10 feet horizontal on the down slope side from the road shoulder. In situations where site distance is an issue brushing heights on the cutslope may vary from the drawing, as directed by STATE

Brush and trees shall be cut to a maximum height of 6 inches above the ground surface or obstructions such as rocks or existing stumps.

Debris resulting from the brushing operation shall be removed from the roadway, cutslope, ditches, water courses, culvert inlets and outlets and sediment catching basins. Debris shall be mulched or scattered downslope from the road or placed in other stable locations. Large debris, 6 inches or larger in diameter, shall be mulched or cut into lengths 6 feet or less to facilitate rapid decay, unless otherwise approved by STATE.

EXHIBIT H

ROAD BRUSHING SPECIFICATIONS

Trees larger than 6 inches in diameter at stump height, located within clearing limits but outside of the ditchline or shoulder, shall not be cut down, but shall be limbed for road visibility. Planted or established conifers, located within brushing limits but outside of the ditchline or shoulder, shall not be cut down, but shall be limbed for road visibility unless otherwise directed by STATE. No mechanical brushing of planted/established conifers is allowed. *Limbing of confier shall be done by hand and the limbs must be cut at the stem collar (i.e., approximately ¼" – ½" from bole of tree).*

Existing debris on the roadway, cutslope, ditchline, or catch basin shall be removed and treated. Debris shall be mulched or scattered downslope from the road or placed in other stable locations. Large non-merchantable debris, 6 inches or larger in diameter, shall be mulched or cut into lengths 6 feet or less to facilitate rapid decay, unless otherwise approved by STATE.

Merchantable blown down trees encountered shall be bucked in lengths as directed by STATE, and placed in locations acceptable to STATE, or pushed out of the road prism.

When spur roads to be brushed end with a Landing, the Landing is to be brushed as directed by STATE.

CULVERT AND ROAD MARKER DAMAGES. Culvert and road markers damaged, or any portion of a marker damaged from PURCHASER activities shall be assessed a damage fee of $25 per marker.

State Timber Sale Contract
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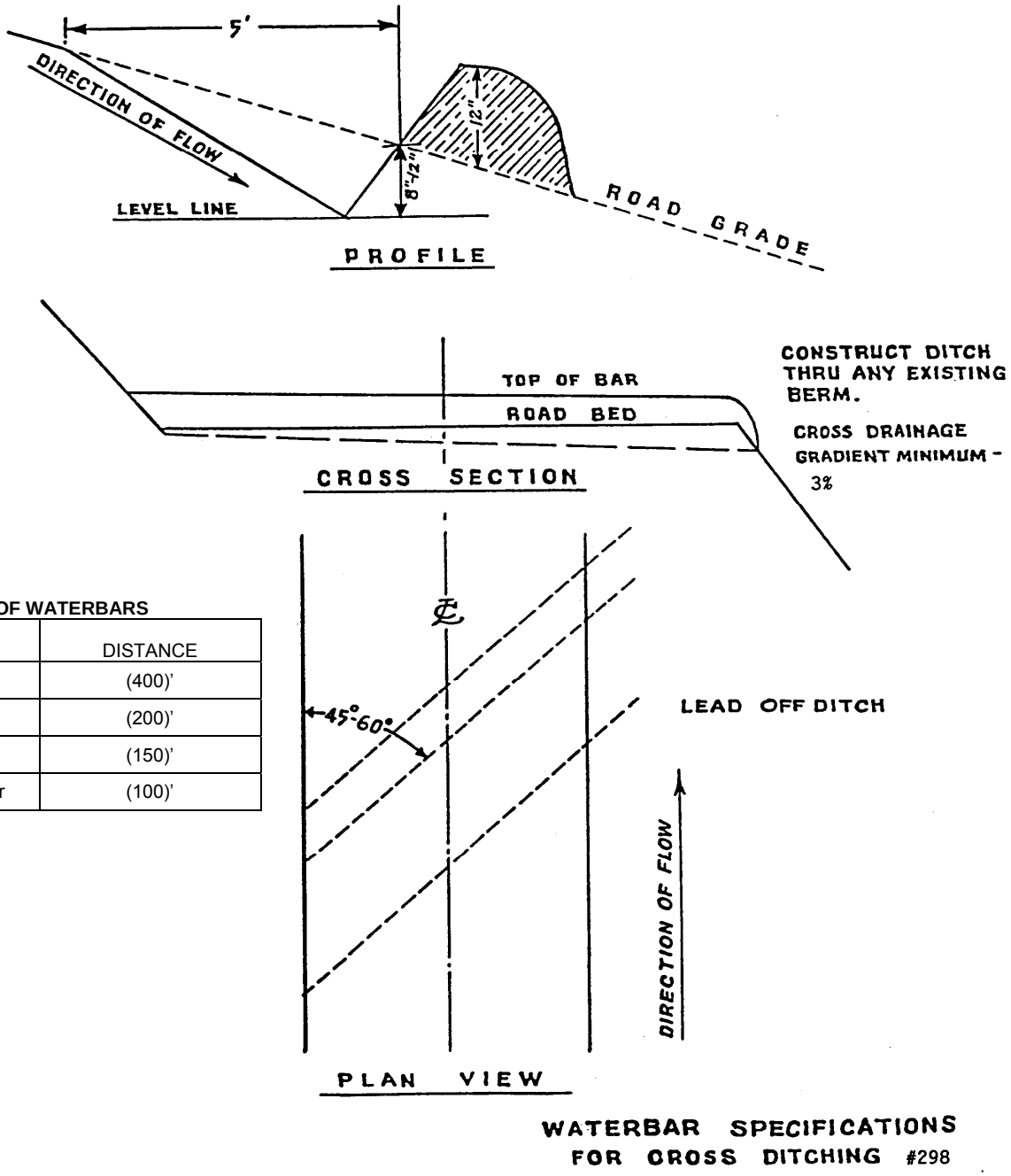
East Chicken

EXHIBIT I

WATERBAR SPECIFICATIONS



SPACING OF WATERBARS

ROAD GRADE	DISTANCE
≤ 5%	(400)'
6-10%	(200)'
11-15%	(150)'
16-20% or greater	(100)'

State Timber Sale Contract
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East Chicken

EXHIBIT J

SEEDING AND MULCHING

This work shall consist of preparing seedbeds and furnishing and placing required seed, fertilizer, and straw mulch. Straw mulch shall consist of straw that is free of noxious weeds. Apply seed, fertilizer, and straw mulch to all waste areas, and bare soils as specified.

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

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

The seed mixture listed below shall be applied at 100 lbs. per acre. The seed mixture shall be comprised of the following:

SPECIES	MIXTURE	PURE LIVE SEED	GERMINATION
Annual Rye	33%	95%	>90%
Orchard Grass	33%	95%	>90%
Perennial Rye	34%	95%	>90%

Fertilizer: Chemical analysis shall be 16-20-0 and shall be applied at the rate of 200 pounds per acre. Fertilizer shall not be applied within 100 feet of streams.

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 ½ to 1 inches. This rate requires between 1 and 2 tons of dry mulch per acre.

Application Locations:

As directed by STATE; and shall not be limited to just the locations listed below:

Road Segment	Location	Road Segment	Location
South Chicken Rd. Extension	-200 to 0+00	Spur 2a	Approx. 0+90
Spur 2a	Approx. 2+70		

PART IV: OTHER INFORMATION

State Timber Sale Contract
No. 341-18-68
East Chicken

OREGON DEPARTMENT OF FORESTRY
Western Lane District

Written Plan

East Chicken Timber Sale
341-18-68

Portions of Section 10, T17S, R8W, W.M.

Protected Waters: Small non-fish tributary of (Nelson Creek).

Activity: Constructing permanent crossings with fills over 15 feet deep in a Type N stream.

Protection Measures:

- The stream crossing culvert will meet or exceed the 100 year flow.
- The inlet and outlet will be armored with Rip-Rap quality rock.
- The pipe gradient will be placed at an angle that approximately matches the natural gradient of the stream.
- The total depth of fill shall be minimized where possible. Anticipated maximum fill depth measured from the road centerline at the intersection of the creek may be 15 feet, give or take a couple feet.
- The crossing will be the low spot of the subgrade so that if the pipe fails, water will not be redirected outside of its natural channel.

Prepared By: Chad Howard
Natural Resource Specialist

Date: June 20, 2017

State Timber Sale Contract
No. 341-18-68
East Chicken

OREGON DEPARTMENT OF FORESTRY
Western Lane District

Written Plan

East Chicken Timber Sale
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Portions of Section 10, T17S, R8W, W.M.

Protected Waters: Small fish tributary of (Nelson Creek).

Activity: Cable yarding within 100 feet of a small Type F stream for approximately 1500 feet (Chicken Creek).

Protection Measures:

Cable Yarding:

- No cutting will take place within approximately 100 feet of the stream (either side) except for any cable corridors that may be needed or for safety purposes.
- Any tree requiring to be felled for either corridors or safety reasons that is within the stream RMA (beyond the Timber Sale Boundary signs) will be felled away from the stream if safe to do so and left where they fall.
- Corridors through the RMA, if necessary, will be at least 100 feet apart (within the RMA).
- All lines will be re-spooled and then restrung for each new corridor.

Prepared By: Chad Howard
Natural Resource Specialist

Date: June 20, 2017