

**SCALE SALE
PROSPECTUS**

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
LAKEVIEW DISTRICT
KLAMATH FALLS RESOURCE AREA OFFICE

KLAMATH FALLS RESOURCE AREA
KLAMATH MASTER UNIT

Klamath Falls Sale No. ORL04-TS20-03
Sale Date: **October 28, 2020 (10:00am)**

Terminus Re-Offer Timber Sale,
Klamath County, O&C

Bid Deposit Required: **\$36,200**

All timber designated for cutting in SE ¼, NE ¼, NE ¼ SE ¼ Sec. 19; S ½ SW ¼ Sec. 20; W ½ NE ¼, NW ¼, NW ¼ SW ¼ Sec. 29; T.38S., R.6E., Willamette Meridian

Approximate Number of Trees	Species	Est. Volume MBF 16' Log	Appraised Price Per MBF*	Est. Volume Times Appraised Price
10,155	White Fir	2,621	\$127.00	\$332,867.00
1,374	Douglas Fir	131	\$212.30	\$27,811.30
47	Incense Cedar	6	\$140.10	\$840.60
31	Sugar Pine	1	\$62.70	\$62.70
11,607		2,759		\$361,581.60

*Stumpage values have been determined by analytical and market value appraisal methods. Additional information concerning the appraised price is available at the Klamath Falls Resource Area Office.

A revised Special Provisions has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and/or to modify or terminate the contract when necessary to: (1) Comply with the Endangered Species Act or to prevent incidental take of northern spotted owls in accordance with management direction in the Record of Decision (ROD) and Resource Management Plan (RMP), or (2) Comply with a court order, or: (3) Protect species which were identified for protection in accordance with management direction established in the ROD and RMP.

CRUISE INFORMATION - SAWLOG INFORMATION – This sale will be offered as a **scale sale**. Timber Volumes were based upon the PCMTRE method with 20 BAF as well as the 3-P method. Unit 19 was cruised as 3-P for Doug fir and white fir (with no minor species). Fifty-nine (59) sample trees were marked with yellow flagging and red/pink paint. Unit 29 was cruised as PCMTRE at 1.9 acres/plot, all species, with 79 plots. Plots are monumented at plot

center with orange pin flags and yellow flagging. Maps of sample trees and plot centers available as requested.

A 13.8% sampling error was achieved at a 95% confidence level. With respect to merchantable trees of all conifer species: the average tree is 16.5 DBHIB; the gross merch log contains 92 bd. ft.; the total gross volume is approximately 3,275 MBF and 84% recovery is expected. (Average WF is 17.0 inches DBHIB; average gross merch log is 98 bd. ft. All true fir species were cruised as WF and all pine species were cruised as SP.)

Note: This timber sale has been cruised, appraised, and advertised based upon Scribner Board Foot Volumes (16 Foot Log). The minimum bid figures shown by species are dollars per thousand board feet (MBF). The minimum bid increment will be \$.10 per MBF.

LOG EXPORT AND SUBSTITUTION RESTRICTIONS - All timber offered for sale hereunder is restricted from export from the United States in the form of unprocessed timber and is prohibited from use as a substitute for exported private timber.

CUTTING AREA & HARVEST PRESCRIPTION - Two (2) units containing approximately 189 acres of density management treatment. The total sale boundary area is approximately 232 acres when the 43 acres of skips are included.

CUTTING TIME - Contract duration will be thirty-six (36) months for cutting and removal of timber.

ACCESS - Access to the sale area is available via existing Klamath County and BLM roads.

ROAD MAINTENANCE - The Purchaser will be required to maintain approximately four (4) miles of existing BLM roads. In addition, the Purchaser will be required to pay a maintenance fee of \$4.07 per MBF or a total of \$11,224.01 for the use of these roads.

SOIL DAMAGE PREVENTION - Pursuant to Section 26 of Form 5450-4, Timber Sale Contract, the Purchaser shall not operate or cause to have operated on the contract area, any ground based logging equipment when soil moisture content exceeds 20% by weight as determined by a moisture meter. This requirement does not apply if snow logging conditions exist as described in the contract.

EQUIPMENT REQUIREMENTS -

1. Mechanized harvesting equipment capable of cutting up to a 20 inch DBH tree and reaching a minimum of twenty (20) feet laterally.
2. At least one ground based yarding tractor shall be equipped with an integral arch and winch system capable of lining logs at least one hundred feet (100').

SLASH DISPOSAL-

1. Whole tree yarding or yarding with the tops attached is required on all trees designated for cutting within all harvest units on exhibit A.

2. Unmerchantable timber (slash, limbs, tops, cull logs, pieces of logs, etc.) can be removed as biomass or other products. If unmerchantable timber is removed as biomass or other nontraditional products, a second contract will be used and the price of the material will be negotiated.
3. All landing piles shall be covered with Plastic.
4. All trees shall be processed to a (3) inch top. Any non-merchantable logs left at the landing shall be decked separately from logging slash.

OTHER-

1. For completing bonding and contract signing requirements, extension of time beyond the normal 30 days may be granted upon written request and justification from the Purchaser.
2. All operations are seasonally restricted from October 15th of one calendar year to June 1st of the following calendar year, unless waived by the Authorized Officer or winter logging conditions exist.
3. Cut stumps of all species fourteen (14) inches in diameter and larger will be treated with a fungicide. The fungicide will contain a cement dye to help monitor application compliance.
4. All equipment will be cleaned prior to operating on BLM lands to prevent the spread of noxious weeds.
5. All landing piles require a machine constructed fire line around the entire pile.
6. This contract includes an additional special provision to ensure the Purchaser understands he/she is required to conduct all operations in compliance with Contract Section 12 (Purchaser's Contractual Responsibilities for Liability) and Contract Section 29 (Safety and Health) and the Special Provisions included in Section 42 of this Contract.
7. The purchaser shall select, mark, and create fifty-one (51) snags in accordance with Exhibit E of the contract. Tops of trees that are topped are not reserved and must be skidded to a landing.
8. Hand falling shall be required for trees greater than twenty-four (24) inches unless approved by the authorized officer.
9. Timber within root disease areas as shown on Exhibit A shall be logged last in the logging sequence. After equipment has been used in root disease areas it will not be allowed to operate anywhere else in the contract area or on BLM land unless it is cleaned and free of soil and vegetation.
10. A revised Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and/or to modify or terminate the contract when necessary to: (1) Comply with the Endangered Species Act or to prevent incidental take of northern spotted owls in

accordance with management direction in the Record of Decision (ROD) and Resource Management Plan (RMP), or; (2) Comply with a stay or remedy issued by the Interior Board of Land Appeals or a court order, or; (3) Protect species which were identified for protection in accordance with management direction established in the ROD and RMP.

CONTRACT TERMINATION - A Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and/or to modify or terminate the contract when necessary to comply with the Endangered Species Act or comply with a court order. This contract provision limits the liability of the Government to the actual costs incurred by the Purchaser which have not been amortized by timber removed from the contract area.

NARRATIVE DESCRIPTION OF HOW TO GET TO THE TIMBER SALE AREA -

The sale is located approximately twenty (20) miles west of Klamath Falls. From Klamath Falls, take Highway 66 west for approximately twelve (12) miles to Keno. Turn right on Clover Creek road and travel west for approximately ten (10) miles to Spencer Creek Hookup Road (39-6E-5.0). Turn left onto the Spencer Creek Hookup Road. Continue approximately three (3) miles, turn right, onto the 38-6E-33.0. In approximately 1000 ft turn left on the 38-6E-33.1 road. After approximately 2000 feet turn right on the 38-6E-28.1 road in $\frac{3}{4}$ of a mile you will enter unit 29.

ENVIRONMENTAL ASSESSMENT - An environmental assessment was prepared for this sale, and a Finding of No Significant Impact has been documented. This document is available for inspection as background information for this sale at the Klamath Falls Resource Area Office.

Notice of Decision for sale of timber dated August 19, 2020.

Section 41

(A) Timber Reserved from Cutting

The following timber on the contract area is hereby reserved from cutting and removal under the terms of this contract and is retained as the property of the Government:

- (1) **AR-1** All timber on the reserve areas as shown on Exhibit A and all blazed, orange painted, or orange painted and/or posted trees which are on or mark the boundaries of the reserve areas, and all orange painted trees within cutting units as shown on Exhibit A, and all trees within the scattered reserve area “skips” designated with green posters and orange paint on the exterior boundary.
- (2) **IR-5** All young growth timber less than 9.9 inches diameter at breast height outside bark not damaged in the normal course of logging in all units shown on Exhibit A.
- (3) **IR-13** All existing snags, or downed trees of all decay classes in all cutting units shown on Exhibit A which do not present a safety hazard as determined by the Authorized Officer. All existing snags felled and all downed trees shall be retained on site unless approved by the Authorized Officer.

Section 42

(A) Log Exports

- (1) **LE-1** All timber sold to the Purchaser under the terms of the contract, except exempted species, is restricted from export from the United States in the form of unprocessed timber, and is prohibited from being used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as: (1) any logs, except those of utility grade or below, such as sawlogs, peeler logs; and pulp logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three-quarters (8-3/4) inches in thickness; (3) split or round bolts or other roundwood not processed to standards or specifications suitable for end-product uses; or (4) western red cedar lumber which does not meet lumber of American Standards Grades of Number 3 dimension or better, or Pacific Lumber Inspection Bureau R-List Grades of Number 3 Common or better. Thus, timber manufactured into the following will be considered processed: (1) lumber and construction timbers, regardless of size, manufactured to standards and specifications suitable for end-product uses; (2) chips, pulp, and pulp products; (3) green or dry veneer and plywood; (4) poles and piling cut or treated for use as such; (5) cants, squares, and lumber cut for remanufacturing of eight and three-quarters (8-3/4) inches in thickness or less; or (6) shakes and shingles.

Substitution will be determined under the definition found in 43 CFR 5400.0-5.

The Purchaser is required to maintain and upon request to furnish the following information:

1. Date of last export sale.

2. Volume of timber contained in last export sale.
3. Volume of timber exported in the past twelve (12) months from the date of last export sale.
4. Volume of Federal timber purchased in the past twelve (12) months from the date of last export sale.
5. Volume of timber exported in succeeding twelve (12) months from date of last export sale.
6. Volume of Federal timber purchased in succeeding twelve (12) months from date of last export sale.

In the event the Purchaser elects to sell any or all of the timber sold under this contract in the form of unprocessed timber, the Purchaser shall require each party buying, exchanging, or receiving such timber to execute a Form 5460-16 (Certificate as to Non-substitution and the Domestic Processing of Timber). The original of such certification shall be filed with the Authorized Officer. Additionally, when the other party is an affiliate of the Purchaser, the Purchaser will be required to update information under item (2) of Form 5450-17 (Export Determination) and file the form with the Authorized Officer.

In the event an affiliate of the Purchaser has exported private timber within twelve (12) months prior to purchasing or otherwise acquiring Federal timber sold under this contract, the Purchaser shall, upon request, obtain from the affiliate information in the form specified by the Authorized Officer and furnish the information to the Authorized Officer.

Prior to the termination of this contract, the Purchaser shall submit to the Authorized Officer Form 5460-15 (Log Scale and Disposition of Timber Removed Report), which shall be executed by the Purchaser. The purchaser shall also provide a current, interim Log Scale and Disposition of Timber Removed Report (Form 5460-15) upon request by the Authorized Officer at any time during the contract period for cutting and removal specified in Section 4 of this contract as amended. In addition, the Purchaser is required under the terms of this contract to retain for a three-year period from the date of termination of the contract the records of all sales or transfer of logs involving timber from the sale for inspection and use of the Bureau of Land Management.

Unless otherwise authorized in writing by the Contracting Officer, the Purchaser shall brand clearly and legibly one end of all logs with a scaling diameter (small end inside bark) of over ten (10) inches, prior to the removal of timber from the contract area. All loads of eleven (11) logs or more will have a minimum of ten (10) logs clearly and legibly branded on one end regardless of the diameter of the logs. All logs will be branded on loads of ten (10) logs or less. One end of all branded logs to be processed domestically will be marked with a three (3) square inch spot of highway yellow paint.

The Purchaser will stop trucks for accountability monitoring at mutually agreed upon locations when notified by the Authorized Officer.

If multiple trailers (mule trains) are used, each bunked load shall be considered an individual load, and these guidelines will apply to each bunked load. If a flatbed stake trailer is used, each bundle will be treated as a separate load.

At the discretion of the Contracting Officer, the Purchaser may be required to brand and paint all logs. Any increased costs for log branding and painting shall be the responsibility of the Purchaser.

In the event of the Purchaser's noncompliance with this subsection of the contract, the Authorized Officer may take appropriate action as set forth in Section 10 of this contract. In addition, the Purchaser may be declared ineligible to receive future awards of Government timber for a period of one year.

(B) Logging

- (1) **L-1** Before beginning operations on the contract area for the first time or after a shutdown of seven (7) or more days, the Purchaser shall notify the Authorized Officer in writing of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if they intend to cease operations for any period of seven (7) or more days.
- (2) **L-2** Prior to the commencement of operations the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract, which shall include measures needed to ensure protection of the environment and watershed. A pre-work conference between the Purchaser's authorized representative and the Authorized Officer must be held at a location designated by the Authorized Officer before the logging plan will be approved. All logging shall be done in accordance with the plan.
- (3) **L-4** All trees designated for cutting shall be cut so that the resulting stumps shall not be lower than six (6) inches nor higher than twelve (12) inches measured from the ground on the uphill side of the trees unless otherwise approved by the Authorized Officer.
- (3) **L-5** All green trees (10) inches or larger D.B.H.O.B. which are not reserved shall be felled and yarded in all cutting units shown on Exhibit A.
- (4) **L-8** In all harvest units as shown on Exhibit A, all trees designated for cutting less than twenty (24) inches D.B.H.O.B shall be mechanically felled and whole tree yarded except when excessive stand damage occurs as determined by the Authorized Officer. If excessive stand damage occurs, all logs shall be completely limbed and bucked into lengths determined by the authorized officer prior to being yarded.

In all harvest units as shown on Exhibit A, all trees designated for cutting greater than or equal to twenty four decimal one (24.1) inches D.B.H.O.B shall be felled by hand, bucked, and yarded with tops attached except when excessive stand damage occurs as

determined by the Authorized Officer. If excessive stand damage occurs, all logs shall be bucked into lengths determined by the authorized officer prior to being yarded.

- (5) **L-12** In the entire contract area shown on Exhibit A, yarding and felling shall be done in accordance with the yarding requirements or limitations for the designated area as follows.

<u>Designated Area</u>	<u>Yarding Requirements or Limitations</u>
Entire Contract Area	Approval of landing locations and sizes shall be obtained from the Authorized Officer prior to landing construction or use.
Entire Contract Area	Landing size shall not exceed one-quarter (1/4) acre unless otherwise approved by the Authorized Officer.
Entire Contract Area	No tractor or wheel-type equipment shall be operated in or through any stream shown on Exhibit A except under special condition approved in the logging plan.
Entire Contract Area	All log loading shall be done with boom type loaders.
Entire Contract Area	Winter yarding is allowed between October 15 and May 15, when one of the following conditions is present: (a) Snow depth in the cutting unit averages twenty (20) inches or more. (b) The ground is frozen to a depth of six (6) inches or more
All except Cable Yarding	The location of the skid roads shall be clearly designated on the ground, spaced at approximately 150 foot intervals, and approved by the Authorized Officer, prior to felling of timber to be yarded over that skid road. Existing skid roads will be utilized where possible.
All except Cable Yarding	Yarding and Mechanical Harvesting shall be confined to periods when soil moisture is less than twenty (20) percent at a six (6) inch depth as measured by the Authorized Officer, or when winter time yarding conditions are met. Yarding and Mechanical Harvesting will be suspended if soil damage is occurring, as determined by the Authorized Officer in accordance with Section 26.
All except Cable Yarding	Yarding equipment shall be operated only on skid roads approved by the Authorized Officer.
All except Cable Yarding	At least one yarding tractor or wheel- type equipment shall be equipped with an integral arch and winch system capable of lining logs at least one hundred (100) feet.

- All except Cable Yarding All trees designated for cutting that cannot be felled with a mechanical harvester shall be felled to the lead of designated skid trails.
- All except Cable Yarding All trees twenty (20) inches DBH and smaller designated for cutting shall be felled and pre-bunched within forty (40) feet of and to the lead of designated skid trails with a mechanical harvester. The mechanical harvester must be capable of cutting up to a twenty (20) inch DBH tree and have an arm capable of reaching at least twenty (20) feet laterally.
- Cable Yarding Area The location of skyline corridors shall be clearly designated on the ground, spaced approximately 150 foot intervals, and approved by the Authorized Officer, prior to felling of timber to be yarded over that corridor.
- Cable Yarding Area All trees designated for cutting shall be felled to the lead of the skyline corridors.
- Cable Yarding Area Yarding shall be done with a cable yarding system which will suspend one end of the log clear of the ground during inhaul on the yarding corridor.
- Cable Yarding Area A carriage is required which will maintain a fixed position on the skyline during lateral yarding and has a minimum lateral yarding capability of one hundred (100) feet.
- Cable Yarding Area The carriage shall be a minimum of fifteen (15) feet above the ground during lateral yarding.
- Cable Yarding Area Yarding corridors shall be perpendicular to the contours.
- Cable Yarding Area All logs/trees shall be cable yarded.
- Cable Yarding Area Prior to falling any timber in the cable yarding area, all tail/lift trees and/or intermediate support trees shall be identified by the Purchaser and approved by the Authorized Officer.
- (6) **L-13** In all units shown on Exhibit A, all logs more than 3 inches in diameter at the small end and exceeding 8 feet in length shall be processed and decked at landings except logs sold and removed from the contract area.
- (7) **L-14** Unless otherwise approved by the Authorized Officer; No falling, yarding, or loading is permitted in or through the root rot area as shown on Exhibit A until all other areas in the contract area have been logged. The root rot area will be logged last in order to reduce the spread of the disease.
- (7) **L-19** No harvest activity shall be conducted on all cutting units and all roads between

October 15 of one calendar year and May 15 of the following calendar year both days inclusive. If conditions are met as described in Section 42 [B][5] as determined by the Contracting Officer harvest activity will be allowed.

- (7) **L-21** Prior to attaching any logging equipment to a reserve tree the Purchaser shall obtain written approval from the Contracting Officer and shall take precautions to protect the tree from damage as directed in writing by the Contracting Officer.
- (8) **L-24** Before cutting and removing any trees necessary to facilitate logging in all cutting units shown on Exhibit A, the Purchaser shall identify the location of the skid roads, landings, corridors, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the Logging Plan. Said Purchaser identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding with cutting the following conditions must be met:
- (a) All skid roads upon which timber is identified by the Purchaser to be cut and removed in accordance with this special provision must be necessary for the safe and expeditious removal of timber sold under this contract and shall be limited to the minimum width necessary for yarding of logs with a minimum of damage to reserve trees, however, unless otherwise approved in writing by the Contracting Officer, the width of each skid road shall be limited to 14 feet.
- (b) The Purchaser may immediately cut and remove additional timber to clear skid roads, landings, and danger trees when the trees have been marked with pink paint above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Section 3.(a). of the contract or sufficient bonding has been provided in accordance with Section 3.(d). of the contract.
- (c) The Purchaser agrees that sale of this additional timber shall be accomplished by a unilateral modification of the contract executed by the Contracting Officer and that such timber shall be sold at the unit prices shown in Exhibit B of this contract unless: the value of the timber must be reappraised subject to the terms for contract extension set forth in Section 9 of the contract; or, the Authorized Officer determines that the species of trees are not listed in Exhibit B of this contract or any tree that exceeds forty (40) inches diameter at breast height shall be appraised and sold by bilateral modification of the contract at current fair market value in accordance with Section 8 of the contract.
- (d) This authorization for the Purchaser to cut and remove additional timber prior to the execution of a modification may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser has cut and removed any tree not previously marked and approved for cutting by the Authorized Officer, which under Section 10 of the contract constitutes a violation of the contract and under Section 13 of the contract may constitute a trespass rendering the

Purchaser liable for damages under applicable law.

(e) If authorization is withdrawn, the Contracting Officer shall issue a written notice to the Purchaser that the sale of additional timber under this special provision is no longer approved. In this case, the Purchaser shall inform the Authorized Officer at least one (1) working day prior to the need for cutting and removing any additional timber, and execute a bilateral modification prior to cutting for such additional approved timber at the unit prices shown in Exhibit B of the contract or in accordance with Section 8 or Section 9 of the contract as determined by the Authorized Officer in accordance with this provision. The Contracting Officer may issue a written order to the Purchaser to suspend, delay, or interrupt any or all contract work for the period of time deemed necessary and appropriate for the Government to safely measure and mark additional timber.

- (9) **L-32** Distributed within cutting units as shown on Exhibit A, the Purchaser shall, select, mark, and create Fifty-One (51) snags in accordance with Exhibit E which is attached hereto and made part hereof.
- (10) **L-33** Purchaser's operations shall facilitate BLM's safe and practical inspection of Purchaser's operations and BLM's conduct of other official duties on Contract Area. Purchaser has all responsibility for compliance with safety requirements for Purchaser's employees, contractors and subcontractors. In the event that the Authorized Officer identifies a conflict between the requirements of this contract or agreed upon methods of proceeding hereunder and State or Federal safety requirements, the contract may be modified. If the cost of such contract modification is of a substantial nature (\$2,000.00 or more), the Purchaser may request, in writing, an adjustment in the Total Purchase Price specified in Section 2 of the timber sale contract, as amended, to compensate for the changed conditions. Unless otherwise specified in writing, when operations are in progress adjacent to or on roads and/or trails in the harvest unit area, Purchaser shall furnish, install, and maintain all temporary traffic controls that provide the road or trail user with adequate warning of and protection from hazardous or potentially hazardous conditions associated with its operations. Purchaser shall prepare a Traffic Control Plan, which the Purchaser has determined is compliant with state and local OSHA and Transportation standards no later than the pre-work meeting and prior to commencing operations. Traffic control devices shall be appropriate to current operating and/or weather conditions and shall be covered or removed when not needed., Flagmen and devices shall be as specified in state OSHA and Transportation standards for logging roads or the "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD) published by the U.S. Department of Transportation - Federal Highway Administration. Included in the Traffic Control Plan, Purchaser shall note traffic control device locations on a Purchaser produced copy of the contract Exhibit "A" Map.

(C) Road Use and Maintenance

- (1) **R-1** The Purchaser shall renovate all roads and other structures in strict accordance with the plans and specifications shown on Exhibit C, which is attached hereto and made a part hereof.

- (2) **R-1a** Any required construction or renovation of structures and roads shall be complete and accepted, in accordance with Section 18, prior to removal of any timber, except Right-Of- Way timber, over that road.
- (3) **R-2** The Purchaser is authorized to use the roads listed below and shown on Exhibit D which are under the jurisdiction of the Bureau of Land Management for the removal of Government timber sold under the terms of this contract, provided that the Purchaser pay the required maintenance and rockwear obligation described in Section 42 (C) (5). Any road listed on Exhibit D and requiring renovation in Exhibit C of this contract shall be maintained by the Purchaser until receiving written acceptance from the Contracting Officer. The Purchaser shall pay current Bureau of Land Management maintenance and rockwear fees for the sale of additional timber under modification to the contract.

Road No. and Segment	Length Miles Used	Road Control / Maintenance Responsibility	Road Surface Type
38-6E-20.0	0.16	BLM/Purchaser	ROCK
38-6E- 28.1A	0.95	BLM/ Purchaser	ROCK
38-6E-28.1B	0.19	BLM/ Purchaser	ROCK
38-6E-33.0	0.21	BLM/Purchaser	ROCK
38-6E-33.1	2.61	BLM/ Purchaser	ROCK
39-6E-5.0 (SPENCER CK. HOOKUP RD.)	3.0	BLM/ BLM	BST

- (4) **R-2a** With the prior written approval of the Authorized Officer, the Purchaser may arrange for cooperative maintenance with other users on roads included in Section 42 (C) (3) of this contract; provided, that such cooperative arrangement shall not relieve the Purchaser of their liability for the maintenance and repair of such roads resulting from wear or damage, in accordance with this contract. The Purchaser shall furnish the Authorized Officer a copy of any cooperative maintenance agreements entered into with other users on these roads.
- (5) **R-2b** The Purchaser shall pay the Government a road maintenance and or rock wear fee obligation in the amount of **eleven thousand two hundred twenty-four dollars**

and 01/100 (\$11,224.01) for the transportation of timber included in the contract area over said road or roads. The above road maintenance amount is for the use of seven (7) miles of road or less. If the total road maintenance and rockwear does not exceed five hundred dollars and no/100 (\$500.00), the purchaser shall pay such amount in full prior to use of such roads. If the total road maintenance and rockwear fee exceeds five

hundred dollars and no/100 (\$500.00), the Authorized Officer shall establish an installment schedule of payments of the maintenance and rockwear obligations.

- (6) **R-2f** The Purchaser shall perform any required road repair and maintenance work on roads used by him under the terms of Exhibit D, "Road Maintenance Specifications", of this contract, which is attached hereto and made a part hereof except for the BST roads which will be maintained by the BLM.
- (7) **R-4** The Purchaser shall be required to secure written approval to use vehicles or haul forest products and equipment over Government owned or controlled roads when such vehicles or equipment exceeds the maximum allowable weights or dimensions established by the State for vehicles operating without a permit or if vehicles meet allowable non-permitted State vehicle weights, but the haul route crosses a structure or segment of road that is posted for reduced weights. The Purchaser agrees to abide by any special requirements included in said written approval.

Details of such equipment shall be furnished to the Authorized Officer for evaluation of load characteristics, at least fifteen (15) days prior to proposed move in.

Details shall include:

- A. Axle weights when fully loaded
- B. Axle spacing
- C. Transverse wheel spacing
- D. Tire size
- E. Outside width of vehicle
- F. Operating speed
- G. Frequency of use
- H. Special features (e.g. running tracks, overhang loads, etc....)

The Purchaser shall be responsible for repair of any damage to roads or structures caused by the use of overweight or over-dimension vehicles or equipment. (1) Without written approval, (2) in violation of the conditions of a written approval, or (3) in a negligent manner. The amount of actual damage shall be determined by the Authorized Officer following a technical inspection and evaluation.

- (8) **R-5** Tracked type equipment shall not be allowed to cross over concrete bridge decks, other concrete surfaced structures or asphalt surfaced roads without the proper

protection of that surface. Prior approval shall be obtained from the Authorized Officer when crossing with protective devices. The Purchaser shall be responsible for repair of any damage to roads or structures caused by the use overweight or over-dimension

vehicles or equipment: (1) without written approval; (2) in violation of the conditions of a written approval; or, (3) in a negligent manner. The amount of actual damage shall be determined by the Authorized Officer following a technical inspection and evaluation.

(D) Environmental Protection

- (1) **E-1** In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall conduct all operations in a manner that minimizes damage to conifer reproduction and all other reserved trees regardless of size or merchantability.
- (2) **E-1** In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall remove slash and debris from roadways and landings concurrently with yarding as directed by the Authorized Officer.
- (3) **E-1** In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall treat with a fungicide, as prescribed in this section, the stumps of all trees cut in the contract area having a diameter of fourteen (14) inches or larger in the following manner:
 - (a) Each stump shall be treated immediately after cutting.
 - (b) Treatment shall consist of application of fungicide to the sawn face of the stump.
 - (c) The fungicide used shall be provided by the Purchaser and approved by the Authorized Officer. The fungicide presently approved for use is Cellu-Treat made by the NISUS Corporation. The fungicide will contain a cement dye to help monitor application compliance.
 - (d) Dumping or cleaning of containers in streams or other bodies of water will not be permitted. Containers must be removed from the area and disposed of in conformance with Federal and Oregon State statutes.
 - (e) Fungicide treatment shall be performed at the direction of the Authorized Officer and to his satisfaction.
- (4) **E-2** The water bars to be constructed as required by Sec. 26(c) shall be constructed in accordance with the specifications shown on Exhibit C which is attached hereto and made a part hereof.
- (5) **E-3** The Purchaser shall immediately discontinue specified construction or timber harvesting operations upon written notice from the Contracting Officer that:
 - (1) threatened or endangered plants or animals protected under the Endangered Species Act of 1973, as amended, may be affected by the operation, and a

determination is made that consultation or reinitiation of consultation is required concerning the species prior to continuing operation, or;

- (2) when, in order to comply with the Endangered Species Act, or to prevent incidental take of northern spotted owls in accordance with management direction in the Record of Decision (ROD) and Resource Management Plan (RMP), the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
- (3) Federal proposed, Federal candidate, Bureau sensitive or State listed species protected under BLM Manual 6840 - Special Status Species Management - have been identified, and a determination is made that continued operations would affect the species or its habitat, or;
- (4) when, in order to comply with a court order, which enjoins operations on the sale or otherwise requires the Bureau of Land Management to suspend operations, or;
- (5) when, in order to comply with a court order, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
- (6) when, in order to comply with a stay or other remedy issued by the Interior Board of Land Appeals (IBLA) the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
- (7) species have been discovered which were identified for protection in accordance with management direction established in the ROD and RMP, and the Contracting Officer determines that continued operations would affect the species or its habitat, or;
- (8) when, in order to protect species which were identified for protection in accordance with management direction established in the ROD and RMP, the Contracting Officer determines it may be necessary to modify or terminate the contract.

Those operations necessary for a safe removal of personnel and equipment from the contract area and those directed by the Contracting Officer, which are required in order to leave the contract area in an acceptable condition will be permitted. Discontinued operations may be resumed upon receipt of written instructions and authorization by the Contracting Officer.

During any period of suspension, the Purchaser may withdraw performance and payment bond coverage aside from that deemed necessary by the Authorized Officer to secure cut and/or removed timber for which the Bureau of Land Management has not received payment, and/or unfulfilled contract requirements associated with harvest operations that have already occurred and associated post-harvest requirements.

In the event of a suspension period or a combination of suspension periods that exceed a total of 30 days, the First Installment held on deposit may be temporarily reduced upon the written request of the Purchaser. For the period of suspension extending beyond 30 days, the First Installment on deposit may be reduced to five (5) percent of the First Installment amount listed in Section 3.a. of the contract. Any First Installment amount temporarily reduced may be refunded or transferred to another BLM contract at the request of the Purchaser. However, if the Purchaser has outstanding debt owing the United States, the Contracting Officer must first apply the amount of First Installment that could be refunded to the debt owed in accordance with the Debt Collection Improvement Act, as amended (31 USC 3710, et seq.). Upon Purchaser's receipt of a bill for collection and written notice from the Contracting Officer lifting the suspension, the Purchaser shall restore the First Installment to the full amount shown in Section 3.a. of the contract within 15 days after the bill for collection is issued, subject to Section 3.i. of the contract. The Purchaser shall not resume contract operations until the First Installment amount is fully restored.

In the event of a suspension period or a combination of suspension periods that exceed a total of 30 days, the unamortized Out-of-Pocket Expenses for road or other construction required pursuant to Exhibit C of the contract shall be refunded or transferred to another BLM contract at the request of the Purchaser. Upon written notice from the Contracting Officer lifting the suspension, the Purchaser shall reimburse the Government the amounts refunded or transferred. The Purchaser may choose to pay this reimbursement at once or in installments payable at the same time as payments are due for the timber under the contract and in amounts approximately equal to the expenses associated with the timber for which payment is due.

In the event that operating time is lost as a result of the incorporation of additional contract requirements, or delays due to Endangered Species Act consultation with the U.S. Fish and Wildlife Service or U.S. National Marine Fisheries Service, court-ordered injunctions, or an IBLA issued stay or remedy, the Purchaser agrees that an extension of time, without reappraisal, will constitute a full and complete remedy for any claim that delays due to the suspension hindered performance of the contract or resulted in damages of any kind to the Purchaser.

The Contracting Officer may determine that it is necessary to modify the contract or terminate the cutting and removal rights under the contract in order to comply with the Endangered Species Act, prevent incidental take of northern spotted owls

in accordance with the ROD and RMP, protect species that have been discovered which were identified for protection in accordance with management direction established in the ROD and RMP, or comply with a court order or an IBLA issued stay or remedy. Following the issuance of a written notice that cutting and removal rights will be terminated, the Purchaser will be permitted to remove timber cut under the contract, if allowed by the Endangered Species Act, if able to proceed without causing incidental take of northern spotted owls in accordance with the ROD and RMP, if consistent with species protection in accordance with

management direction established in the ROD and RMP, or if consistent with a court order or an IBLA issued stay or remedy.

In the event the contract is modified or cutting and removal rights are terminated under this subsection, the Purchaser agrees that the liability of the United States shall be limited to the actual costs incurred by the Purchaser which have not been amortized by timber removed from the contract area. This calculation of liability shall utilize actual Purchaser costs and Government estimates of timber volumes. At the Authorized Officer's request, the Purchaser agrees to provide documentation of the actual costs incurred in the performance of the contract. In addition, the Purchaser shall be released from the obligation to pay the contract price for any timber which is not authorized to be removed from the contract area.

The Purchaser specifically and expressly waives any right to claim damages, other than those described in the preceding paragraphs, based on an alleged breach of any duty to the Purchaser, whether express or implied, in regard to the manner in which the Government defended the litigation which resulted in the court order affecting the operation of the contract. This waiver also extends to any claims based on effects on the operation of the contract that arise from litigation against another agency. Furthermore, the Purchaser specifically acknowledges and agrees that a court ruling that the Government violated the Administrative Procedures Act cannot be interpreted, in itself, to mean that the Government had not acted reasonably in regard to its duties to the Purchaser under this contract.

- (6) **E-7** In order to prevent the spread of noxious weeds, the Purchaser shall pressure wash all equipment prior to entry onto BLM lands and between sale locations as directed by the Authorized Officer. Cleaning shall be defined as removal of all dirt, grease, plant parts and material that may carry noxious weed seeds.

(E) Fire Prevention and Control

- (1) **F-1a** Fire Prevention and Control Primarily for purposes of fire prevention and control, the Purchaser shall comply with the following provisions.
- (a) At least three (3) days prior to the operation of power driven equipment in construction of logging operations under this contract during the closed fire season or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the State of Oregon, Department of Forestry.
 - (b) Provide and maintain on the contract area in good working order, and immediately available, the following equipment for use during closed fire season or periods of fire danger: see Exhibit F-1
 - (c) The Purchaser shall restrict operations, and provide the services of a fire watchman, during periods of fire danger as specified in Exhibit F-2 which is attached hereto and made a part hereof.
 - (d) Where blocks and cables are used on the contract area during periods of fire

danger, the Purchaser shall remove all flammable material at least ten (10) feet from the place where the tail or any other block will hang when the cable is tight. Such clearings shall be inspected periodically by the Purchaser and shall be kept free of flammable material.

(F) Slash Disposal and Site Preparation

- (1) **SD-1 Fire Hazard Reduction** In addition to the requirements of Sec. 15 of this contract, and notwithstanding the Purchaser's satisfactory compliance with State laws and regulations regarding offsetting or abating the additional fire hazard created by this operation and the State's willingness to release the Purchaser from liability for such hazard, the Purchaser shall remain responsible to the Government for performance of the following hazard reduction measure(s) required by this contract:

- (a) **Definitions** - Slash, as defined for this section, shall mean all woody material (brush, limbs, tops, logs, chunks, and severed trees) not removed from the contract area during the primary removal operation. This includes old slash existing prior to timber sale entry. Landing, as defined for this section, shall mean any location where woody material was loaded on trucks and also any other location that became a destination for yarded woody material.
- (b) **Landing Piling** Pile all slash located within one hundred (100) feet of landings and designated locations for placement of gross yarded material. Slash shall be piled with a grapple/shovel loader. Finished piles shall be tight and free of earth. No portion of any pile will be located under the crown of any live or other reserve trees. A four (4) foot wide, fuel free area shall be cleared around each pile. Unmerchantable logs at landings sixteen (16) inches in diameter and larger at the small end shall be used to block skid trails.
- (c) Upon completion of landing piling, the Purchaser shall prepare the landing piles for burning by securely covering each pile with polyethylene plastic film a minimum of 6 millimeters thick and covering a 10 feet X 20 feet area. Pieces of burnable material shall be placed on top of the plastic to secure it from moving and to prevent it from blowing off during strong wind episodes. The Purchaser is required to furnish the covering materials. The timing of this covering work shall be in accordance with instructions from the Authorized Officer. If the structure of the landing piles will not permit adequate consumption of piled debris by burning, the Purchaser shall re-pile them at the direction of the Authorized Officer.

Chipping In Lieu Of Burning Slash Piles

- (a). The purchaser may remove and utilize non-sawlog forest products by submitting a written or verbal request to the Government.

(b). The Government may execute a separate negotiated forest product/vegetative sale permit under 43 CFR 5400. Payment under the permit must be at a price equal to or greater than the appraised value of the forest product.

(1) The purchaser must make any appropriate payment specified in the vegetative sale contract before removal may be authorized.

(2) This contract will contain a separate expiration date and stipulations as determined by the Authorized Officer.

a. The contract must include stipulations that require the purchaser to report quantity of non-sawlog material removed (i.e. tons of biomass).

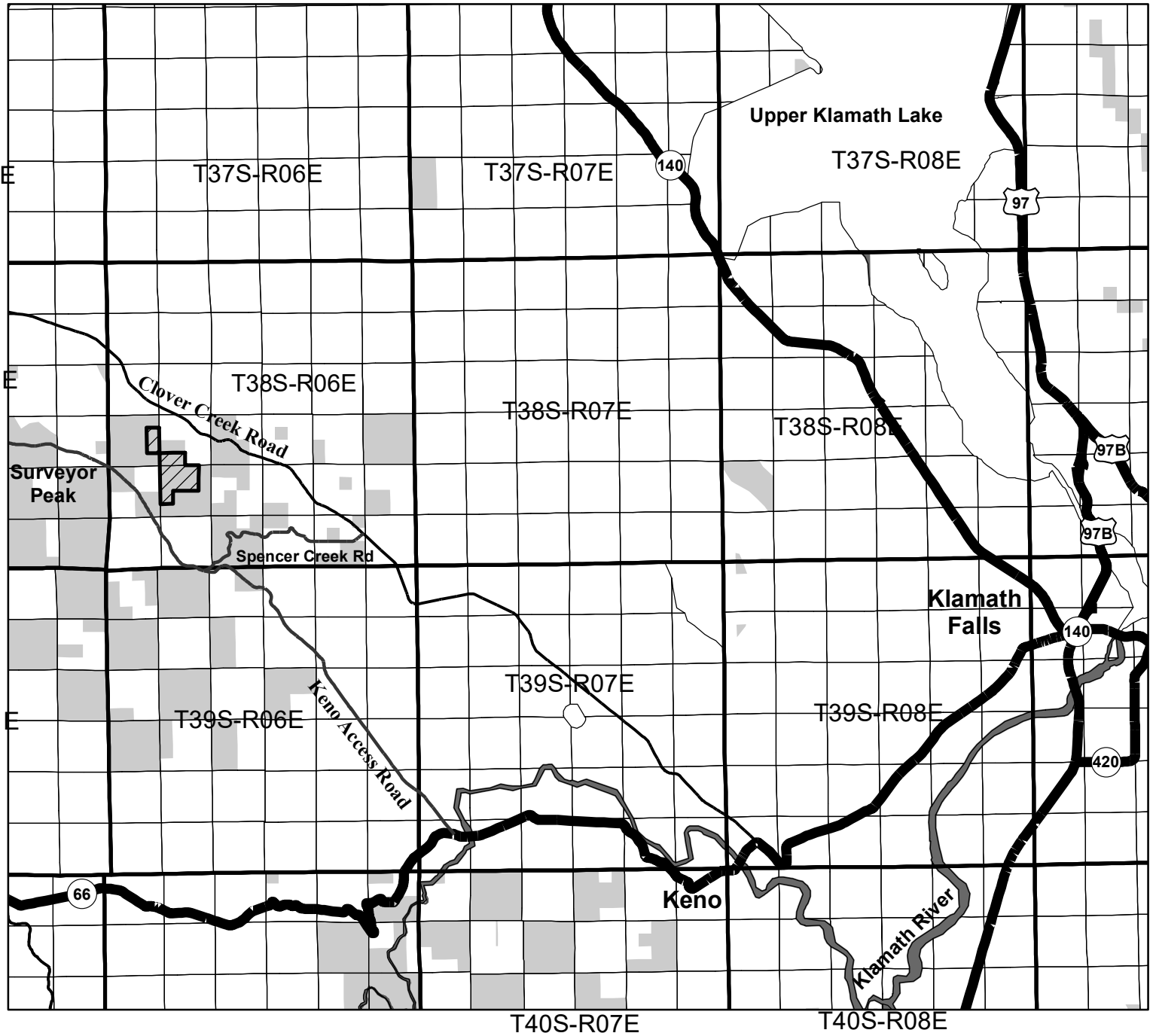
(c). If the landing piles are chipped, all burning requirements will be waived.

(G) Equal Opportunity in Employment

Certification of Nonsegregated Facilities attached hereto and made a part hereof.

Timber Sale: Terminus Re-Offer
Willamette Meridian
T.38S., R.6E., Sec. 19, 20, 29

Timber Sale Contract Map
Contract No. ORL04-TS20-03
Exhibit A
Page 1 of 3



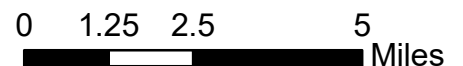
Highways

Bureau of Land Management Lands

Contract Area

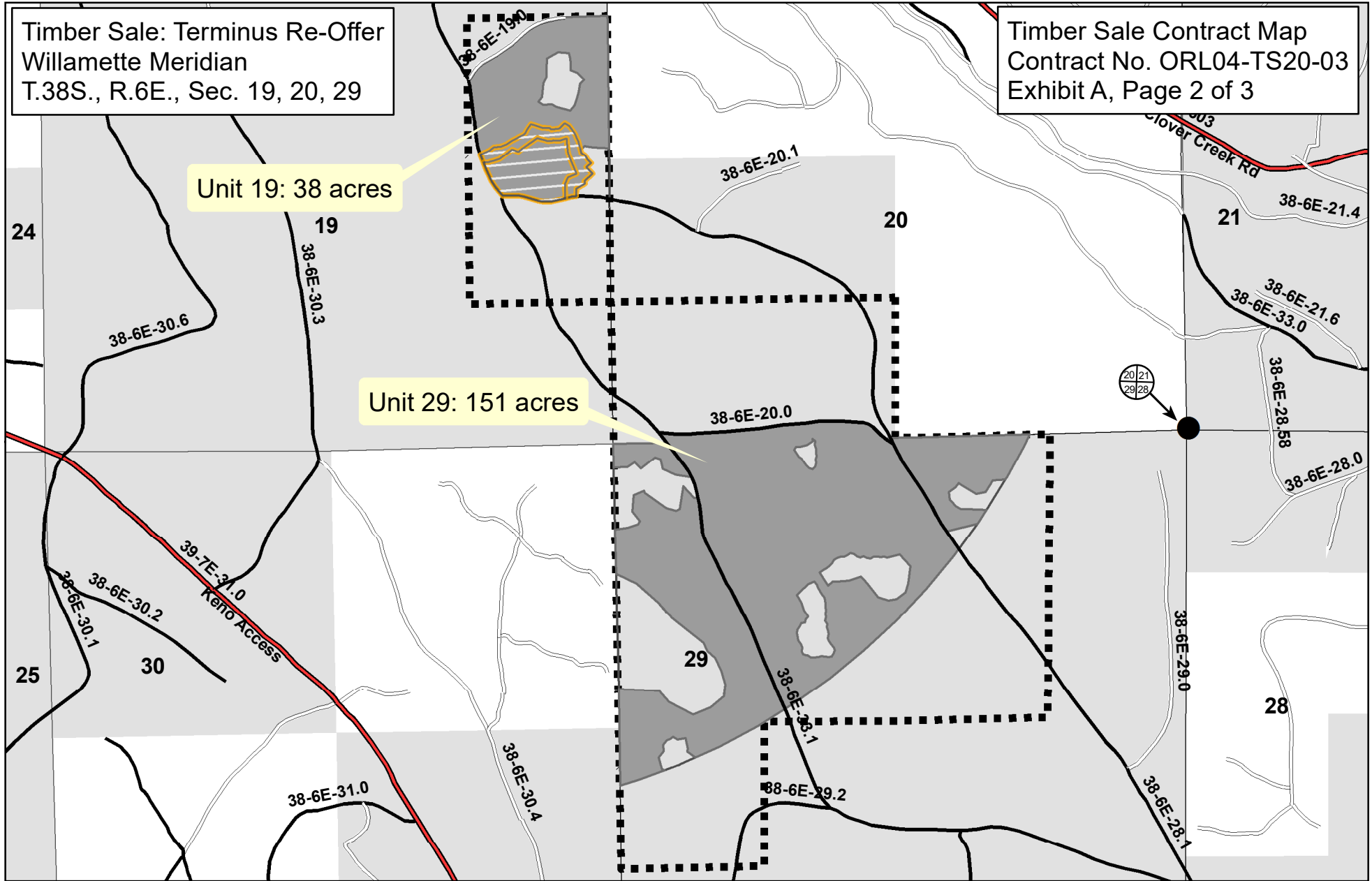


1 inch = 15,000 feet



Timber Sale: Terminus Re-Offer
 Willamette Meridian
 T.38S., R.6E., Sec. 19, 20, 29

Timber Sale Contract Map
 Contract No. ORL04-TS20-03
 Exhibit A, Page 2 of 3



Unit 19: 38 acres

Unit 29: 151 acres

- Corner
- BLM Ownership
- Section Lines
- Contract Boundary

- Reserve Areas
- Cutting Units
- Root Rot

- Paved Road
- Rock Road
- Dirt Road
- 20' Contour

N
 1:15,000
 1 inch = 1,250 feet
 0 0.125 0.25 Miles



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.

USDI-BLM Klamath Falls Resource Area
Sale Name: Terminus Re-Offer

Timber Sale Contract Map
Contract No. ORL04-TS20-03
Exhibit A – Contract Acres
Page 3 of 3

Willamette Meridian: T.38S., R.06E., Sec. 19, SE ¼, NE ¼, NE ¼ SE ¼.
 Sec. 20, S ½ SW ¼.
 Sec. 29, W ½ NE ¼, NW ¼, NW ¼ SW ¼.

Cutting Units	Total Cutting Unit Acres	Harvest Method
019	38	Density Management
029	151	
Total	189 acres	

Total Cutting Area 189 acres*
 Total Reserve Area 257 acres**
 Total Contract Area 446 acres

* 232 ac. unit polygons - 43 ac. thermal clumps = 189 ac.

** 446 ac. contract area – 189 ac. cutting units = 257 ac.

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT (BLM)**

Contract No.: ORL04-TS-20-03

Sale Name: Terminus Re-Offer Timber Sale

Issuing Office: Klamath Falls

**EXHIBIT B
SCALE SALE
PURCHASE PRICE SCHEDULE AND MEASUREMENT SPECIFICATIONS**

- I. **Total Actual Purchase Price** - In accordance with Section 2 and 3 of the contract, the Purchaser agrees to pay the Government for the timber sold under the contract in accordance with the following schedule and measurement requirements. Timber sold is comprised of Merchantable Timber, Merchantable Timber Remaining, and Other Timber as defined below. In the event an Extension of Time is approved, the prices per measurement unit are subject to readjustment (refer to Section 9 of the contract).

Schedule of Species/Products, Measurement Units, and Prices		
Species/Products	Measurement Unit	Price Per Measurement Unit
Merchantable Timber		
White Fir	MBF	\$127.00
Douglas Fir	MBF	\$212.30
Incense-cedar	MBF	\$140.10
Sugar Pine	MBF	\$62.70
Unmerchantable Timber – Biomass (Clean Chips and Hog Fuel)		
Clean Chips	Ton	To be negotiated
Hog Fuel	Ton	To be negotiated

- II. **Merchantable Timber** - All timber which can be cut into logs, which equal or exceed the following specifications, shall be considered merchantable timber required to be removed from the contract area. Purchaser shall pay for same in accordance with Section 3 of the contract at the unit prices shown in Section I of this Exhibit.

Schedule of Material Specifications			
Species/Product	Length (feet)	Diameter (inches inside bark at small end)	Net Scale (% of gross volume of any log segment)
All Species	8 feet	5 inches	33 1/3% of gross volume of any log segment

If Purchaser elects to remove any logs which do not meet the above minimum material specifications and which have not been reserved to Government in Sec. 41 of the contract, such logs shall be scaled in accordance with section V of this Exhibit herein and be paid for in accordance with Section 2 and 3 of the contract and the value in Section I of this Exhibit.

III. Merchantable Timber Remaining - Measurement Requirements - The remaining volume of any merchantable sold timber on the contract area shall be determined as provided in Section 3. (g). of the contract. Purchaser shall pay for same in accordance with Section 3 of the contract at the unit prices shown in Section I of this Exhibit.

IV. Other Timber - If any timber is of a species not listed in Section I of this Exhibit the Authorized Officer shall establish volumes and values in accord with Standard BLM methods.

V. Scaling

A. Log Rule and Measurement - All logs shall be scaled in Eastside Scribner according to the Northwest Log Rules Eastside and Westside Log Scaling Handbook, as amended, or supplemented by BLM before the first advertisement date of the sale.

B. Scaling Service - A Scaling Authorization Form must be completed and approved by the Authorized Officer prior to beginning of hauling operations. All sites on the Scaling Authorization are required to have a Log Yard Agreement with the BLM. Log scaling services shall be provided and performed by BLM personnel or third party scaling organizations under agreement with BLM.

1. All logs shall be scaled and volumes determined by BLM or a certified contract scaler.
2. The BLM scaler or contract scaler is designated to collect Eastside MBF scale data from all loads.
3. All logs shall be scaled using an authorized BLM scaling method approved by the Authorized Officer in accordance with BLM prescribed procedures.

C. Defect Caused by Abnormal Delay - Scaling deductions made for rot, check or other defect resulting from abnormal delay in scaling caused by Purchaser shall be recorded separately and charged to the Purchaser in accordance with Section 3 of the contract.

D. **Log Presentation** - Purchaser shall present logs so that they may be scaled in an economical and safe manner in accordance with the Log Yard Authorization required in Section V. B. of this Exhibit.

E. **Check Scale**

The BLM will conduct check scales using the following standards.

Gross Scale. A variance of one and ½ percent (1.5%) in gross scale is the standard unless otherwise justified.

Net scale. The allowable variance is as follows:

Check scaler's percent defect in logs	Scalers allowable variance
0-10 percent	2 percent
over 10 percent	0.2 x percent defect to a maximum of 5 percent

Determinations as to volume of timber made by a BLM check scaler in conformance with the standards as set forth herein shall be final. When such checks show a variance in scale in excess of acceptable standards, in two or more consecutive check scales, an adjustment to the volume reported as scaled will be made by BLM. Such adjustments will be made based on the difference between available BLM check scales and the original scale during the period covered by the unsatisfactory check scales. Unless otherwise approved in writing by the Authorized Officer, the volume to which this difference will be applied will be 50 percent of the volume scaled between the last satisfactory check and the first unsatisfactory check, 100 percent of the volume scaled during the unsatisfactory check, and 50 percent of the volume between the last unsatisfactory check scale and the next satisfactory check scale.

F. **Accountability**

1. Purchaser shall notify the Authorized Officer three (3) days prior to starting or stopping of hauling operations performed under the contract.
2. All logs will be painted and branded at the landing and accounted for in accordance with Section 42 of the contract. If Sale Area is within a State that maintains a log brand register, brands shall be registered with the State. Purchaser shall use assigned brand(s) exclusively on logs from this sale until the Authorized Officer releases the brand(s).
3. Each truck driver shall obtain a load receipt and a BLM scaler receipt from the Log Truck Ticket Book issued by the Authorized Officer and comply with the instructions

specified on the cover of said book. All load tickets will be marked with the cutting area number using a permanent marker or as directed by the Authorized Officer. While products are in transit, the truck driver shall display the load receipt and BLM scaler receipt on the bunk or wing log at the front of the load on the driver's side. All logs on each load shall be delivered to the destination listed on the woods receipt. The BLM scaler receipt shall be surrendered at the location of BLM scaling, the unloading location, or as requested by BLM. A designated area shall be identified at the yard scaling location for logs arriving during off hours. Logs arriving during off hours shall be left on the truck or may be off loaded to the designated area.

4. The Purchaser shall not haul logs from the contract area on weekends; Memorial Day, Fourth of July, Labor Day, Thanksgiving, Christmas, and New Year's holidays; or outside the hours of __6:00__ a.m. to __4:00__ p.m. daily, unless otherwise approved in writing by the Authorized Officer or designated in the Approved Logging Plan. (Refer to Section 42 of the contract).
5. The Purchaser shall furnish BLM a map showing the route which shall be used to haul logs from the timber sale area to the scaling location. Such route shall be the most direct haul route between the two points, unless another route is approved by BLM. The route of haul may be changed only with advance notice to and approval by BLM. The haul route map shall be attached to the Approved Logging Plan.
6. All loads will be scaled at locations listed on the Scaling Authorization as approved by the Authorized Officer. Purchaser shall notify the Authorized Officer three (3) days in advance to request additional scale site locations for approval on the Scaling Authorization.
7. Any removal of logs from loaded trucks before being accounted for and/or scaled as required by the contract shall be considered a willful trespass and render the Purchaser liable for damages under applicable law. Any payment made for purchase of such logs shall be deducted from amount due because of trespass.

G. Scaling Lost Products - The value of lost loads shall be equal to the highest value load for the month in which the lost load is hauled regardless of where the highest value load is scaled. If no loads have been scaled in that month, value will be determined from the closest month in which loads were scaled.

VI. Estimated Volumes and Values - The following volume estimates and calculations of value of timber sold are made solely as an administrative aid for determining payment amounts, when payments are due, the value of timber subject to any special bonding provisions, and other purposes specified in various portions of the contract. The cutting areas are shown on Exhibit A of the contract.

- A. Merchantable Timber Volume Removed from Contract Area** - The total volume of removed timber shall be determined using the Government's records of scaled volumes

of timber skidded or yarded monthly, or a shorter period if agreed to by the Purchaser and Government, to loading points or removed from the contract area.

- B. Merchantable Timber Not Yet Removed from Contract Area** - The value of merchantable timber which has not been removed will be determined by multiplying the value per acre as shown below times the amount of acreage subject to the purpose of the value determination, as determined by the Authorized Officer:

Total Estimated Purchase Price And/or Schedule of Volumes and Values for Merchantable Timber Not Yet Removed from Contract Area					
Cutting Area		Total Estimated Volume (MBF)		Total Estimated Purchase Price	
Cutting Area Number	Approximate Number of Acres	Volume per Acre	Total Volume	Value per Acre	Total Value
19	38	13.8	524		
29	151	14.8	2,235		
Sale Total	189	14.6	2,759		

Information for Timber Sale Notice, Prospectus, Sec. 41 & 42
Terminus Re-Offer Timber Sale
ORL04-TS-2020.0003

Approx # of trees	Est Volume MBF 32'	Species	Est Volume MBF 16'	Appraised \$/MBF	Appraised Price
10,155	2,065.0	White Fir	2,621.0	\$127.00	\$332,867.00
1,374	104.0	Douglas Fir	131.0	\$212.30	\$27,811.30
47	4.0	Incense-cedar	6.0	\$140.10	\$840.60
31	0.8	Sugar Pine	1.0	\$62.70	\$62.70
11,607	2,173.8		2,759.0		\$361,581.60

CRUISED BY:	Hultz/Rentz
CRUISE COMPLETED:	July 2020
COMBINED SAMPLING ERROR:	13.80 %

CRUISE DESIGN/METHOD Description:
Unit 19 was cruised as 3-P for Doug fir and white fir (with no minor species). 59 sample trees were marked with yellow flagging and red/pink paint.
Unit 29 was cruised as PCMTRE at 1.9 acres/plot, all species (79 plots). Plots are monumented at plot center with orange pin flags and yellow flagging.
Maps of sample trees and plot centers available as requested.

TRACT FEATURES

ALL SPECIES

QM DBH	16.5	INCHES
GM LOG	92	BD FT
Total Gross Volume	3,275	MBF
Recovery	84	%
Salvage	0	MBF
Export	0	MBF

Dominant Species: **White Fir**

QM DBH	17.0	INCHES
GM Log	98	BD FT
Recovery	84	%

Salvage	0	MBF
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EXPORT VOLUME (LE-1)	Port Orford Cedar	0	MBF
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Reserve Tree Paint Color	Reserve Tree Count
	0

Harvest Tree Paint Color	Harvest Tree Count
	0



**United States
Department of the Interior
Bureau of Land Management**

Timber Appraisal

Sale Name: Terminus Re-Offer	Sale Date: Wednesday, October 28, 2020
BLM District: Lakeview DO	Unit of Measure: 16' MBF
Contract #: ORL04-TS-2020.0003	Contract Term: 36 months
Sale Type: Advertised	Contract Mechanism: 5450-4 Sale of Timber - Scale Sale

Content

**Timber Appraisal Summary
Stumpage Summary
Unit Summary
Stump to Truck
Transportation
Engineering Allowances
Other Allowances**

Prepared By: Hultz, Cory A - 9/17/2020

Approved By: Rentz, George C - 9/17/2020

Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
O&C	Klamath	38S	6E	19	SE 1/4 NE 1/4, NE 1/4 SE 1/4	Willamette
O&C	Klamath	38S	6E	29	W1/2 NE1/4, NW1/4, NW1/4 SW1/4	Willamette
O&C	Klamath	38S	6E	20	S1/2 SW1/4	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
White Fir	2,621.0	3,089.0	3,121.0	30,738	1,386	10,155
Douglas Fir	131.0	142.0	145.0	3,262	129	1,374
Incense-cedar	6.0	6.0	6.0	124	0	47
Sugar Pine	1.0	2.0	2.0	31	0	31
Totals	2,759.0	3,239.0	3,274.0	34,155	1,515	11,607

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
0.0	189.0	0.0	189.0	14.6

Logging Costs

Stump to Truck	\$291,762.68
Transportation	\$221,616.00
Road Construction	\$9,212.92
Maintenance/Rockwear	\$8,287.40
Road Use	\$11,224.01
Other Allowances	\$20,589.32
Total:	\$562,692.33
Total Logging Cost per MBF:	\$203.95

Utilization Centers

Location	Distance	% of Net Volume
White City, OR	62.0 miles	100 %

Profit & Risk

Profit	10 %
Risk	4 %
Total Profit & Risk	14 %

Tract Features

Quadratic Mean DBH	16.5 in
Average GM Log	92 bf
Average Volume per Acre	14.6 mbf
Recovery	84 %
<u>Net MBF volume:</u>	
Green	2,759.0 mbf
Salvage	0 mbf
Export	0 mbf
<u>Ground Base Logging:</u>	
Percent of Sale Volume	100 %
Average Yarding Slope	10 %
Average Yarding Distance	328 ft
<u>Cable Logging:</u>	
Percent of Sale Volume	0 %
Average Yarding Slope	0 %
Average Yarding Distance	0 ft
<u>Aerial Logging:</u>	
Percent of Sale Volume	0 %
Average Yarding Slope	0 %
Average Yarding Distance	0 ft

Cruise

Cruise Completed July 2020

Cruised By Hultz/Rentz

Cruise Method

Unit 19 was cruised as 3-P for Doug fir and white fir (with no minor species). 59 sample trees were marked with yellow flagging and red/pink paint. Unit 29 was cruised as PCMTRE at 1.9 acres/plot, all species (79 plots). Plots are monumented at plot center with orange pin flags and yellow flagging. Maps of sample trees and plot centers available as requested.

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Appraised Price/MBF	Appraised Value
White Fir	10,155	2,621.0	\$384.79	\$53.87	\$203.95	\$0.00	\$127.00	\$332,867.00
Douglas Fir	1,374	131.0	\$483.96	\$67.75	\$203.95	\$0.00	\$212.30	\$27,811.30
Incense-cedar	47	6.0	\$400.02	\$56.00	\$203.95	\$0.00	\$140.10	\$840.60
Sugar Pine	31	1.0	\$310.00	\$43.40	\$203.95	\$0.00	\$62.70	\$62.70
Totals	11,607	2,759.0						\$361,581.60

Percent of Volume By Log Grade

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
White Fir		1.0 %	6.0 %	39.0 %	49.0 %	5.0 %	

Species	No. 1 & 2 Peeler	No. 3 Peeler	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Douglas Fir			4.0 %	38.0 %	40.0 %	18.0 %	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Incense-cedar							100.0 %

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Sugar Pine							100.0 %

Terminus Re-Offer**Unit Summary****ORL04-TS-2020.0003****Unit: 19**

Species	Net	Gross Merch	Gross	# of Trees
White Fir	490.0	667.0	672.0	1,315
Douglas Fir	34.0	37.0	37.0	150
Totals:	524.0	704.0	709.0	1,465

Net Volume/Acre: 13.8 MBF

Regeneration Harvest	0.0
Partial Cut	38.0
Right of Way	0.0
Total Acres:	38.0

Unit: 29

Species	Net	Gross Merch	Gross	# of Trees
White Fir	2,131.0	2,422.0	2,449.0	8,840
Douglas Fir	97.0	105.0	108.0	1,224
Incense-cedar	6.0	6.0	6.0	47
Sugar Pine	1.0	2.0	2.0	31
Totals:	2,235.0	2,535.0	2,565.0	10,142

Net Volume/Acre: 14.8 MBF

Regeneration Harvest	0.0
Partial Cut	151.0
Right of Way	0.0
Total Acres:	151.0

Comments:

Shasta Red Fir included in White Fir.

Western White Pine, Ponderosa Pine included in Sugar Pine.

Total Stump To Truck	Net Volume	\$/MBF
\$291,762.68	2,759.0	\$105.75

Stump to Truck: Falling, Bucking, Yarding, & Loading

Yarding System	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Manual Felling/Skidder	GM MBF	2,304.0	\$98.22	\$226,298.88	Manual falling >20" 1 wheeled skidder, 1 loader
Feller Buncher	GM MBF	935.0	\$69.48	\$64,963.80	Feller Buncher <20" 1 FB, 1 wheeled skidder, 1 processor, 1 loader used in appraisal
Subtotal				\$291,262.68	

Additional Costs

Item	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Subtotal				\$0.00	

Additional Moves

Equipment	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
D6 cat for waterbars	Each	1.0	\$500.00	\$500.00	Move-in for waterbar creation
Subtotal				\$500.00	

Comments:

2304 GM MBF over 20"

935 GM MBF under 20"

Feller Buncher system -

17GMmbf/day x 3 acre/day = 51mbf/day / 5mbf/load = 10 loads/day

\$2.25/gal fuel

935 GMmbf x \$69.48/mbf = \$64,963.80

Manual Falling/Skidding system -

17GMmbf/acre x 2 acre/day = 34mbf/day / 5mbf/load = 6.5 loads/day

2304 GMmbf x \$98.22/mbf = \$226,298.88

Total	Net Volume	\$/MBF
\$221,616.00	2,759.0	\$80.32

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	\$/Unit of Measure	Total Cost	% of Sale Volume
White City, OR	62.0	All saw logs	Hour	2,332.8	\$95.00	\$221,616.00	100 %

Comments:

214.5 round trip minutes per load, 5GMBF per load estimated.
 3239 GMMBF / 5mbf per load = 648 loads
 648 loads X 3.6 hrs/load = 2332.8 total hours for hauling
 2332.8 X \$95/hour trucking cost (includes driver) = \$221,616.00
 SP/IC Low volume (no change utilization center)

Engineering Allowances

Total	Net Volume	\$/MBF
\$28,724.33	2,759.0	\$10.41

Cost Item	Total Cost
Road Construction:	\$9,212.92
Road Maintenance/Rockwear:	\$8,287.40
Road Use Fees:	\$11,224.01

Comments:

Ex C - \$9212.92
 Ex D - \$8287.40 (includes watering 20 days, Topsy Res.)
 Road Maintenance Fees - \$11,224.01

Total	Net Volume	\$/MBF
\$20,589.32	2,759.0	\$7.46

Environmental Protection

Cost item	Total Cost
Equipment wash	\$235.30
Fungicide Treatment	\$4,768.52
Water bar >30% slope	\$1,194.00
Subtotal	\$6,197.82

Logging

Cost item	Total Cost
Snag creation	\$4,207.50
Subtotal	\$4,207.50

Slash Disposal & Site Prep

Cost item	Total Cost
Cover piles	\$544.00
Landing pile fireline	\$616.00
Slash sort - delimb tops and sort	\$9,024.00
Subtotal	\$10,184.00

Comments:

Equipment wash - 1 season estimated / pressure washing at \$23.53/hr

Fungicide treatment - \$1.05 for material, \$23.53 labor per acre

Water bars - 2 acres/hr. at \$77/hr+ travel between units(8hrs)

Snag creation - admin costs included in \$/unit assumes manual treatment. \$82.50 each, 51 snags.

Cover landing piles - \$20/tarp + 0.5 hr labor (\$23/hr)

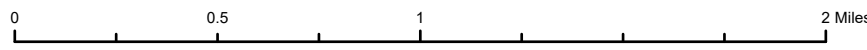
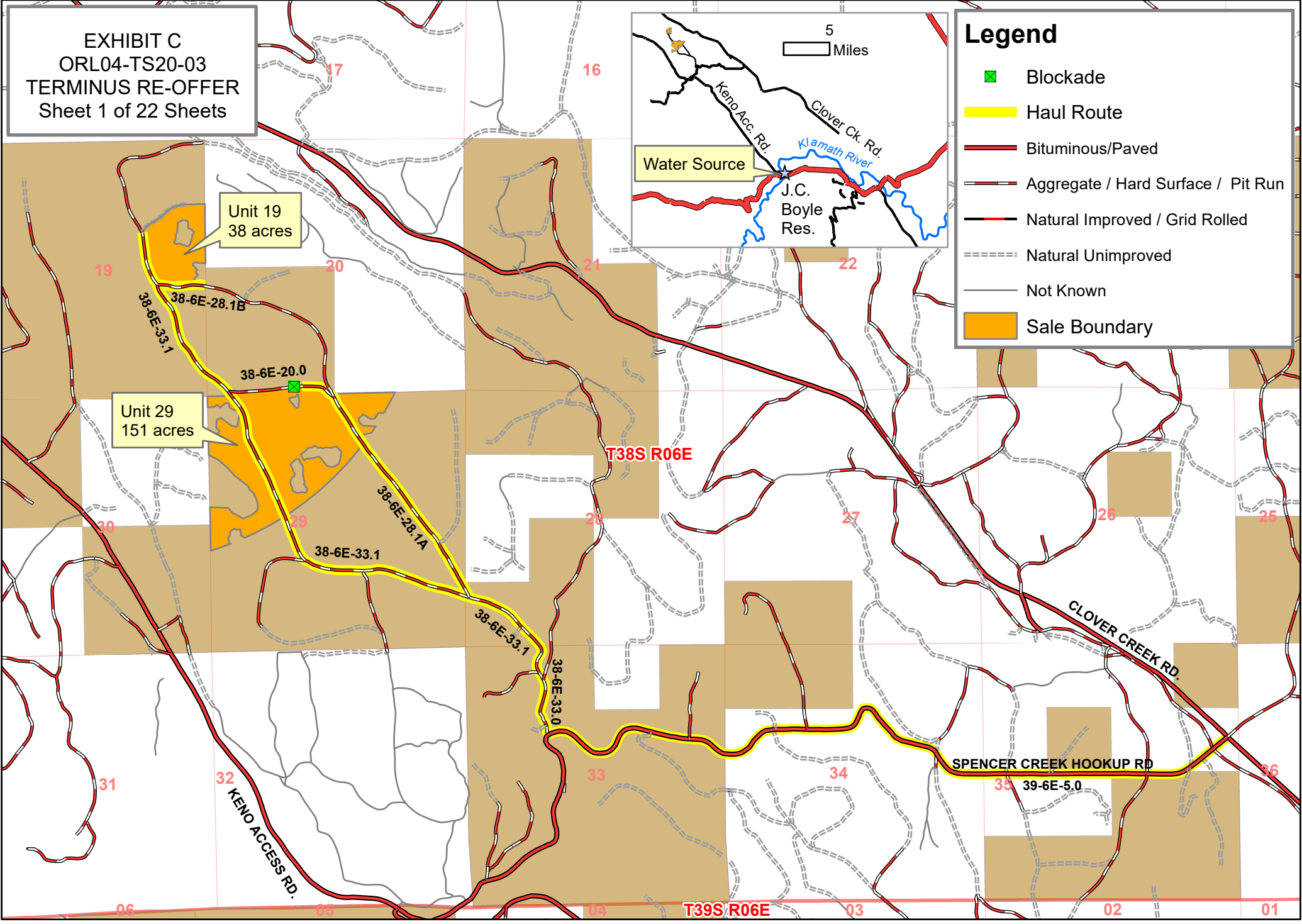
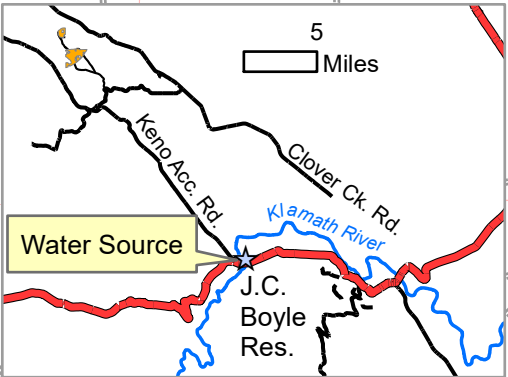
Landing pile fireline - 2640 ft/hr, 17 landings at 500' per landing + moving time between landings

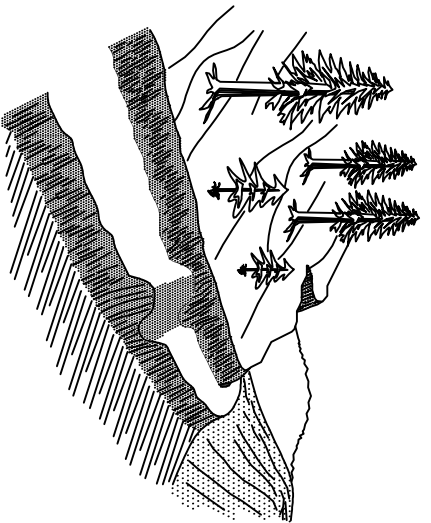
Slash sort - delimb tops and sort - 0.5 min/tree, 11607 tops, \$94/hr processor and labor

EXHIBIT C
 ORL04-TS20-03
 TERMINUS RE-OFFER
 Sheet 1 of 22 Sheets

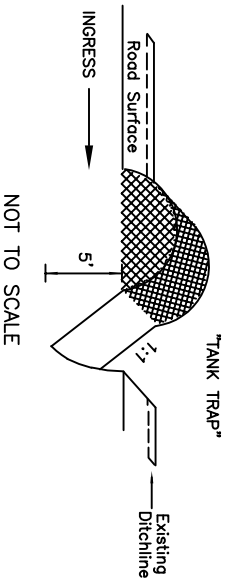
Legend

- Blockade
- Haul Route
- Bituminous/Paved
- Aggregate / Hard Surface / Pit Run
- Natural Improved / Grid Rolled
- Natural Unimproved
- Not Known
- Sale Boundary

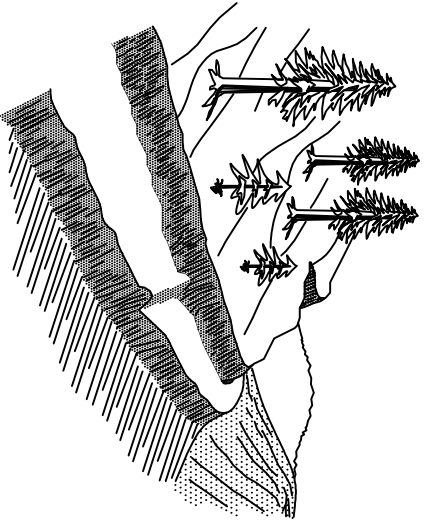




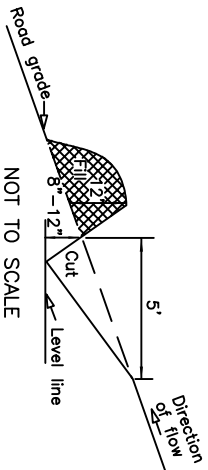
BARRIERS



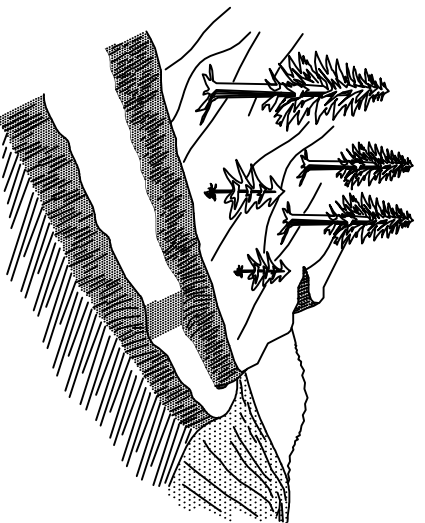
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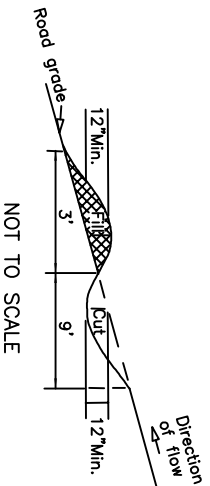
WATER BAR



NOT TO SCALE



WATER DIP

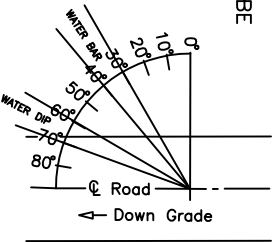


NOT TO SCALE

NOTES

1. ALL BARRIERS, WATER BARS, AND WATER DIPS AS REQUIRED SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATIONS WILL BE DIRECTED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL WATER BARS SHALL BE SKEWED 30°-40°.
4. ALL WATER DIPS SHALL BE SKEWED 60°-70°.
5. ALL WATER BARS AND WATER DIPS SHALL BE CUT INTO THE ROADBED FROM THE DITCHLINE.
6. DITCHLINES SHALL BE BLOCKED WITH EXCAVATED MATERIAL (DITCHDAM) DOWNGRADE FROM ALL WATER BARS AND WATER DIPS.
7. EXCAVATED MATERIAL FROM BARRIER TRENCH (TANK TRAP) SHALL BE PLACED ON THE SIDE NEAREST THE BEGINNING OF THE ROAD.
8. OUTLETS OF WATER DIPS MUST BE ROCKED ON FILL SLOPE.
9. RIPRAP BARRIERS SHALL BE AT LEAST 4' HIGH, 4' DEEP, AND OF SUFFICIENT WIDTH TO COMPLETELY BLOCK THE ROADWAY AND ANY ADJACENT SHOULDERS THAT CAN BE TRAVELED WITH A VEHICLE.
10. ALL BERMS INCLUDING WATER BARS, WATER DIPS, AND EARTHEN BARRIERS SHALL BE COMPACTED TO 85% OF MAXIMUM DENSITY.

SKIEW DIAGRAM



WATER DIP/BAR SPACING

ROAD GRADE %	MAXIMUM SPACING FEET
0-4	500
5-6	400
7-9	300
10-14	100
15-20	50

ON GRADES IN EXCESS OF 14% CONSTRUCT WATER BARS.



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
LAKEVIEW DISTRICT OREGON
BARRIER AND EROSION CONTROL DETAIL

DESIGNED CAH

REVIEWED

APPROVED

DRAWN CAH

DATE AUG. 2019

SHEET 2/22

SCALE: None

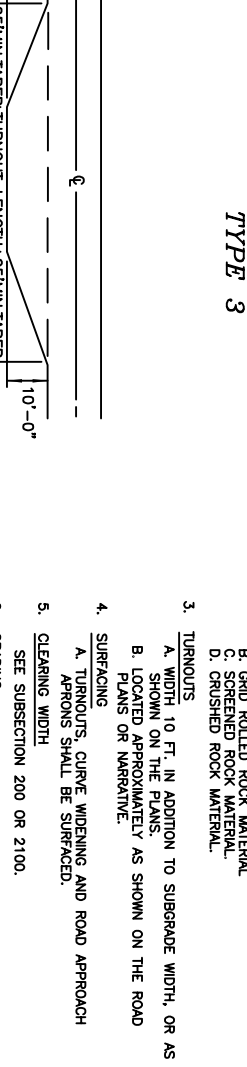
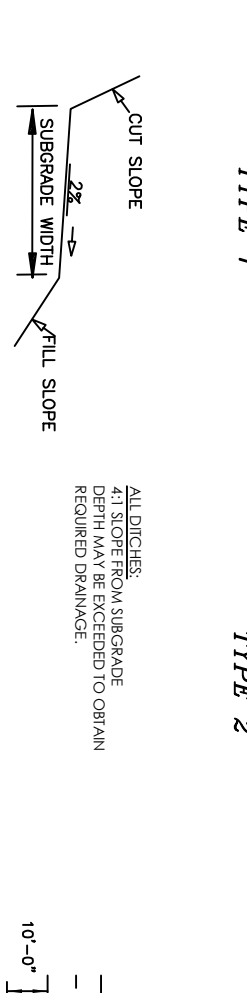
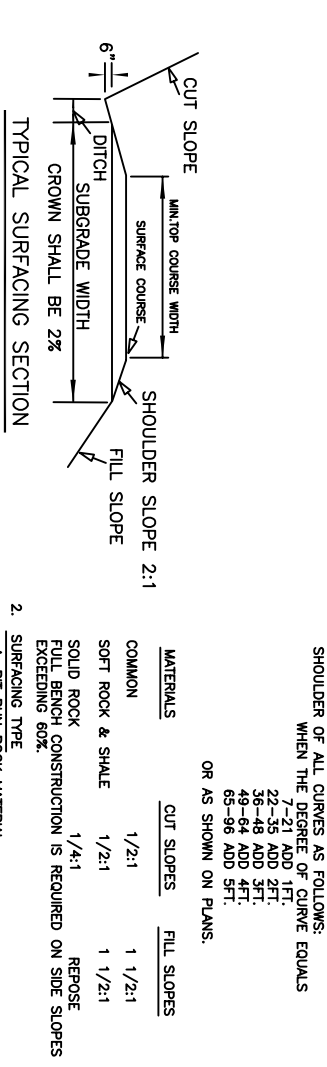
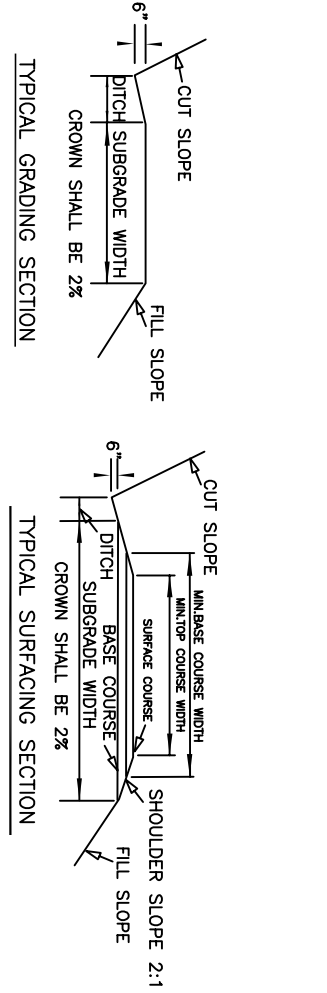
STANDARD DRAWING

TYPICAL CROSS SECTION DETAIL

EXHIBIT C
 ORL04-TS20-03
 TERMINUS RE-OFFER
 SHEET 3 OF 22 SHEETS

ROAD NUMBER	FROM STATION OF MILE POST	TO STATION OF MILE POST	LENGTH MILES	TYPICAL SECTION TYPE	ROAD WIDTH ¹			CLADDING WIDTH		SURFACING			REMARKS				
					Subgrade	Ditch	Shoulder	BEYOND EXISTING TOPTOE CUT/FILL	ROADS ⁹	Minimum Width	Comp. Depth	Minimum Width		Depth	Type ²	Roller Composition	Cubic Yards
38-6E-20.0	0+00	8+30	0.16	3	12.0 FT.	3 FT.	10	10									No additional surfacing
38-6E-28.1A	0+00	50+18	0.95	2	15.0 FT.	3 FT.	10	10									No additional surfacing
38-6E-28.1B	0+00	10+00	0.19	2	15.0 FT.	3 FT.	10	10									No additional surfacing
38-6E-33.0	0+00	11+27	0.21	2	18.0 FT.	3 FT.	10	10									No additional surfacing
38-6E-33.1	0+00	137+60	2.61	2	15.0 FT.	3 FT.	10	10									No additional surfacing

NOTES:
 1. EXTRA SUBGRADE WIDTHS
 ADD TO EACH FILL SHOULDER 1 FT. FOR FILLS OF 1-6 FT.
 AND 2 FT. FOR FILLS OVER 6 FT. WIDEN THE INSIDE
 SHOULDER OF ALL CURVES AS FOLLOWS:
 WHEN THE DEGREE OF CURVE EQUALS
 7-21 ADD 1FT.
 22-35 ADD 2FT.
 36-48 ADD 3FT.
 49-64 ADD 4FT.
 65-96 ADD 5FT.
 OR AS SHOWN ON PLANS.



1. EXTRA SUBGRADE WIDTHS
 ADD TO EACH FILL SHOULDER 1 FT. FOR FILLS OF 1-6 FT.
 AND 2 FT. FOR FILLS OVER 6 FT. WIDEN THE INSIDE
 SHOULDER OF ALL CURVES AS FOLLOWS:
 WHEN THE DEGREE OF CURVE EQUALS
 7-21 ADD 1FT.
 22-35 ADD 2FT.
 36-48 ADD 3FT.
 49-64 ADD 4FT.
 65-96 ADD 5FT.
 OR AS SHOWN ON PLANS.
2. SURFACING TYPE
 A. PIT RUN ROCK MATERIAL.
 B. GRID ROLLED ROCK MATERIAL.
 C. SCREENED ROCK MATERIAL.
 D. CRUSHED ROCK MATERIAL.
3. TURNOUTS
 A. WIDTH 10 FT. IN ADDITION TO SUBGRADE WIDTH, OR AS SHOWN ON THE PLANS.
 B. LOCATED APPROXIMATELY AS SHOWN ON THE ROAD PLANS OR NARRATIVE.
4. SURFACING
 A. TURNOUTS, CURVE WIDENING AND ROAD APPROACH APRONS SHALL BE SURFACED.
5. CLEARING WIDTH
 SEE SUBSECTION 200 OR 2100.
6. GRADING

ITEM	SIZE	GRADE
900	4 INCH	A
1000	3 INCH	B
1200	1 1/2 INCH	C&C-1
	1 INCH	D&D-1
	3/4 INCH	E&E-1

MATERIALS	CUT SLOPES	FILL SLOPES
COMMON	1/2:1	1 1/2:1
SOFT ROCK & SHALE	1/2:1	1 1/2:1
SOLID ROCK	1/4:1	REPOSE
FILL BENCH CONSTRUCTION IS REQUIRED ON SIDE SLOPES EXCEEDING 60%.		

ROAD NUMBER	NEW CONSTRUCTION	RENOVATION	IMPROVEMENT	SLASH TREATMENT	GRUBBING	ROADSIDE BRUSHING	SLOPE STAKING	SURFACE COARSE AGGREGATE ROCK						CULVERT 1				CULVERT ROCK
								TOP WIDTH	DEPTH	GRADE	SIZE	LENGTH	QUANTITY	CPE 18"	CPE 24"	CMP 18"	CMP 48"	
SPEC. NO.		500	500	200	200	2100	2300	1200	1200	1200	1200	1200	400	400	400	400	400	400
UNITS	Ft.	Ft.	Ft.	ACRES	ACRES	Acres	Ft.	Ft.	INCHES		L.F.	C.Y.	L.F.	L.F.	L.F.	L.F.	C.Y.	
38-6E-20.0		830				0.4												
38-6E-28.1A		5018				0												
38-6E-28.1B		1000				0.5												
38-6E-33.0		1127				0												
38-6E-33.1		13760				1.7												
TOTALS		21,735				2.6												

ESTIMATE OF QUANTITIES *



* FOR INFORMATIONAL USE ONLY. QUANTITIES SHOWN ARE NOT PAY ITEMS. ALL ROCK QUANTITIES ARE LOOSE (TRUCK) MEASURE.

#1 CPE - CORRUGATED POLYETHYLENE PIPE

#2 CMP - CORRUGATED METAL PIPE

#3 SEE DOWNSPOUT INSTALLATION SHEET

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
KLAMATH FALLS R.A. LAKEVIEW DIST.

ESTIMATE OF QUANTITIES

DESIGNED HULTZ

REVIEWED _____

APPROVED _____

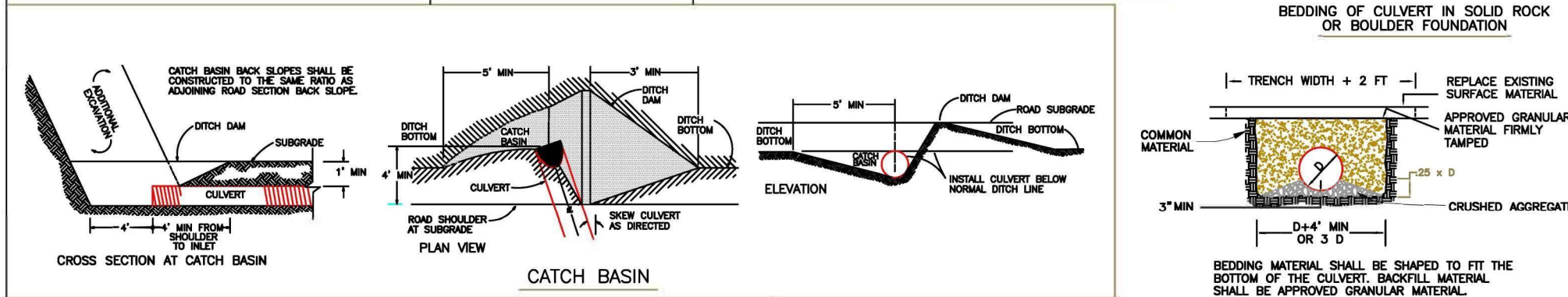
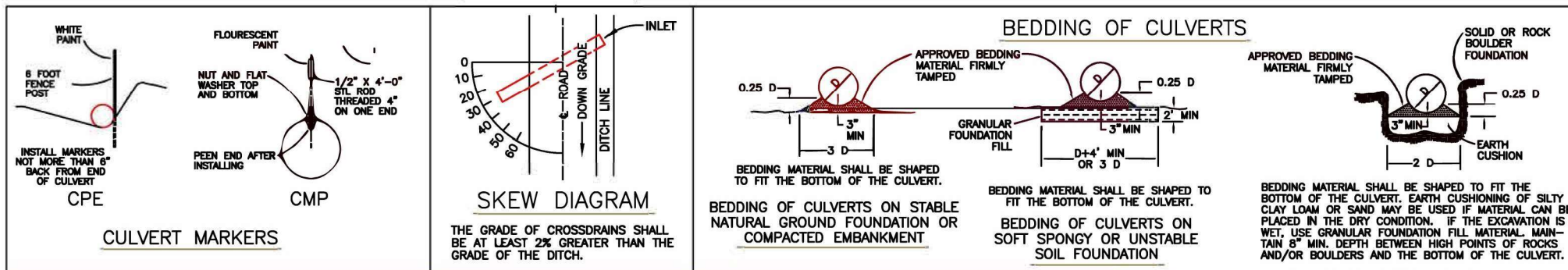
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DATE 08/2020

DRAWING NO. _____

SCALE NONE

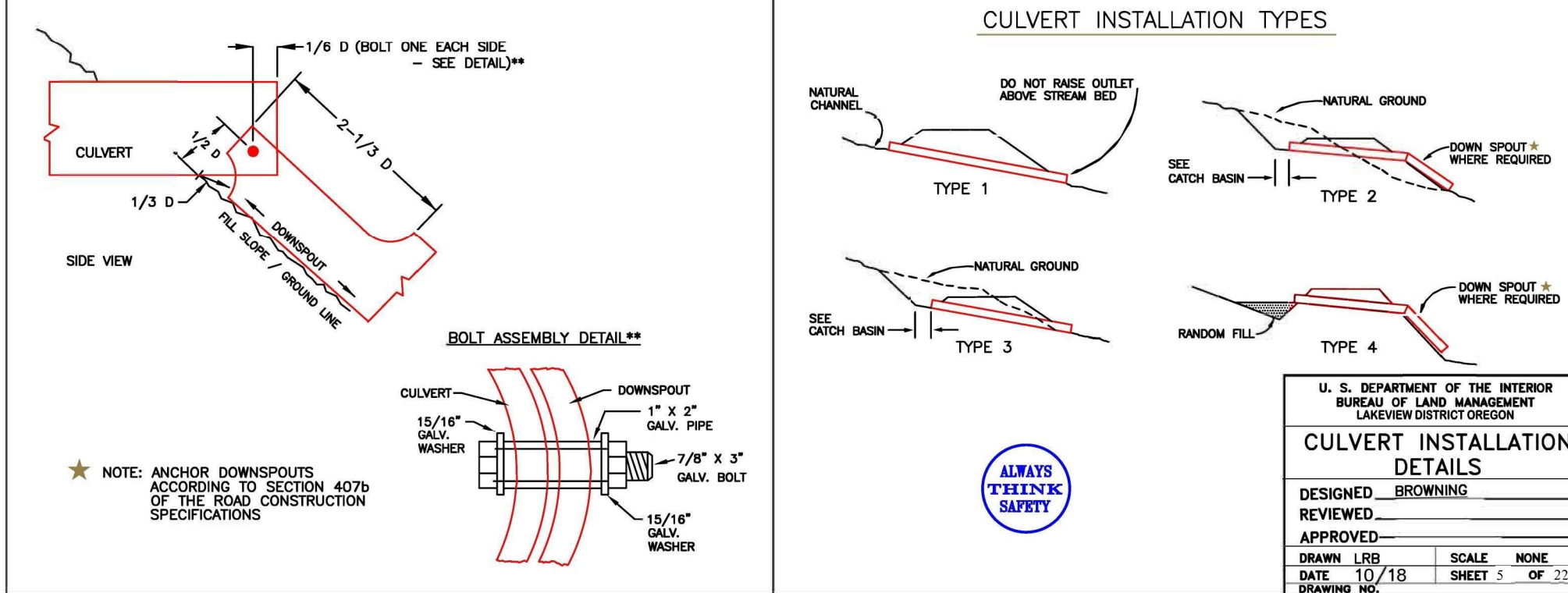
SHEET 4 OF 22



USE "FLEXIBLE ELBOW" FOR CPE AND CMP DOWNSPOUTS

BANDS SHALL MEET MANUFACTURER'S SPECIFICATIONS

BEDDING OF CULVERTS ON EXISTING SURFACED ROADS



ROAD NARRATIVES

<u>Station</u>	<u>Remarks</u>
	38-6E-20.0
0+00	Junction with 38-6E-28.1 Begin grading, brushing, watering, and ditching.
2+93	Remove PVC and rock pile structure. Re-establish ditch.
5+64	Remove inverted half-round CMP and rock pile. Discard metal at the local metal recycling yard.
8+30	End renovation.
	38-6E-28.1 A
<u>Station</u>	<u>Remarks</u>
0+00	Junction with 38-6E-33.1 Begin grading, watering, and ditching. Spot grading and ditching is acceptable if approved by the contract administrator.
2+89	Clean CMP and CMP inlet and outlet.
7+21	Clean CMP and CMP inlet and outlet.
11+53	Clean CMP and CMP inlet and outlet.
13+28	Clean CMP and CMP inlet and outlet.
21+31	Clean CMP and CMP inlet and outlet.
30+ 90	Clean CMP and CMP inlet and outlet.
42+14	Remove inverted half-round CMP. Discard metal at the local metal recycling yard. Re-establish ditch.
44+90	Remove inverted half-round CMP. Discard metal at the local metal recycling yard. Re-establish ditch.

48+17 Clean CMP and CMP inlet and outlet.

50+18 End renovation.

38-6E-28.1 B

Station

Remarks

0+00

Junction with 38-6E-33.1

Begin watering, grading, light brushing, and ditching. Spot grading and ditching is acceptable if approved by the contract administrator.

1+65

Clean CMP and CMP inlet and outlet.

10+00

End renovation.

38-6E-33.0

Station

Remarks

0+00

Junction with the Spencer Creek Road
(39-6E-5.0)

Begin watering, grading, and ditching. Spot grading and ditching is acceptable if approved by the contract administrator.

1+68

Clean CMP and CMP inlet and outlet

4+20

Clean CMP and CMP inlet and outlet

11+27

Junction with 38-6E-33.1.

Clean CMP and CMP inlet and outlet. End renovation.

38-6E-33.1

Station

Remarks

0+00

Junction with 38-6E-33.0

Begin watering, grading, and ditching. Spot grading and ditching is acceptable if approved by the contract administrator.

1+74

Clean CMP and CMP inlet and outlet.

8+15	Clean CMP and CMP inlet and outlet.
21+04	Clean CMP and CMP inlet and outlet.
24+69	Junction with 38-6E-28.1
42+96	Clean CMP and CMP inlet and outlet.
46+86	Clean CMP and CMP inlet and outlet.
47+75	Junction with 38-6E-29.1
53+43	Clean CMP and CMP inlet and outlet.
58+92	Clean CMP and CMP inlet and outlet.
59+98	Junction with 38-6E-29.2
70+78	Clean CMP and CMP inlet and outlet.
73+29	Remove inverted half-round CMP. Discard metal at the local metal recycling yard. Re-establish ditch.
76+11	Remove inverted half-round CMP. Discard metal at the local metal recycling yard. Re-establish ditch.
84+27	Clean CMP and CMP inlet and outlet.
91+07	Clean CMP and CMP inlet and outlet.
101+25	Clean CMP and CMP inlet and outlet. Begin light brushing.
109+95	Clean CMP and CMP inlet and outlet.
115+20	Clean CMP and CMP inlet and outlet.
121+50	Clean CMP and CMP inlet and outlet.
124+95	Junction with 38-6E-28.1

133+00	Clean CMP and CMP inlet and outlet.
137+60	End renovation.

TIMBER SALE ROAD SPECIFICATIONS

TABLE OF CONTENTS

SECTION	DESCRIPTION
100	General
400	Pipe Culverts
500	Renovation and Improvement of Existing Roads
600	Watering
2100	Roadside Brushing

TIMBER SALE ROAD SPECIFICATIONS

GENERAL – 100

101 - Prework Conference(s):

A prework conference will be held prior to the start of operations. The Purchaser shall request the conference at least 48 hours prior to the time it is to be held. The conference will be attended by the Purchaser and/or his representative(s), subcontractor(s) and/or his or their representative(s) and the Authorized Officer and/or his representative(s).

The purpose of the prework conference will be to review the required work, exhibits and specifications, and to establish a work schedule and a list of the Purchaser's representatives (and subcontractor(s)).

102 - Definitions:

AASHTO - American Association of State Highway and Transportation Officials.
Current editions of tests and specifications.

Abrasion Resistance - The ability of a fabric surface to resist wear by friction.

ACI - American Concrete Institute

Apparent Opening Size (AOS) - Number of the U.S. Bureau of Standard sieve (or its opening size in millimeters or inches) having openings closest in size to the diameter of uniform particles which will allow 5 percent by weight to pass through the geotextile material when shaken in a prescribed manner. This is also referred to as Equivalent Opening Size (EOS).

ASTM - American Society for Testing and Materials.

Base Course - Surfacing structure consisting of crushed gravel or stone, crushed sandstone, pitrun rock, bank or river-run gravels, etc., to provide support and, in the event no surface course is placed, the running surface for traffic load.

BLM - Bureau of Land Management

Borrow - Excavated material required for embankments and other portions of the work.

TIMBER SALE ROAD SPECIFICATIONS

Burst Strength - The resistance of a geotextile material to rupture from pressure applied at right angles to the plane of the geotextile material under specified conditions, usually expressed as the amount of pressure causing failure. Rupture or burst results from tensile failure of the geotextile material.

Culvert - A pipe, pipe-arch, arch, or box structure constructed of metal, concrete, plastic or wood which provides an opening under the roadway primarily for the conveyance of liquids, pedestrians or livestock.

Curve Widening - Widening required on inside of curves to accommodate long log and equipment hauling trucks.

Embankment - A structure of soil, aggregate, or rock material placed on a prepared ground surface and constructed to subgrade.

End Haul - Excavated material moved, other than by dozer, to an embankment or waste area to prevent sidecasting material outside of the road prism.

Excess Excavation - Material from the roadway in excess of that needed for construction of the designed roadway (waste).

Grab Tensile Strength - A modified tensile strength of a geotextile material. The strength of a specific width of geotextile material together with the additional strength contributed by adjacent areas. Typically, grab strength is determined on a 12-inch-wide strip of geotextile material, with the tensile load applied at the midpoint of the geotextile material width through 1-inch-wide jaw faces.

Grading - Leveling to grade, shaping and smoothing of a road subgrade; the shaping of roadside ditches as to grade and contour. In some instances includes smoothing of the cut bank.

Nonwoven Geotextile Material - A textile structure produced by bonding or interlocking of fibers, or both, accomplished by mechanical or chemical means.

Overhaul - Distance excavated material is transported in excess of the distance included in the cost for excavation.

Penetration Resistance - The geotextile material property determined by the force required to penetrate a geotextile material with a sharp pointed object. Initial penetration

TIMBER SALE ROAD SPECIFICATIONS

is by separating the fibers. Further penetration is essentially a tearing process.

Percent Open Area - The net area of a geotextile material that is not occupied by geotextile material filaments, normally determinable only for woven and nonwoven geotextile material having distinct, visible, and measurable openings that continue directly through the geotextile material.

Permeability - The geotextile material property which permits water to be transmitted in the longitudinal or transverse planes of the geotextile material.

Pioneer Road - Temporary construction access built along the route of the project.

Piping - The process by which soil particles are washed in or through pore spaces in drains and filters or poorly compacted fill/backfill material.

Plans - The approved drawings, or exact reproductions thereof which show the locations, character, dimensions, and details of the work to be done.

Pore Size - The size of an opening between geotextile material filaments; apparent opening size (AOS) is used to quantify this geotextile material property.

Puncture Resistance - The geotextile material property determined by the force required to penetrate a geotextile material with a blunt object. Failure results in a tearing of the geotextile material.

Purchaser - The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through their, or its agents, employees, or contractors.

Reasonably Close Conformity - Compliance with reasonable and customary manufacturing and construction tolerances where working tolerances are not specified.

Reinforcement - Strengthening of concrete with iron bars or mesh: geotextile with geotextile material inclusion: subgrade with aggregate: etc.

Roadbed - The graded portion of the road within top and side slopes, prepared as a foundation for the pavement structure and shoulders.

Road Centerline - The longitudinal center of a roadbed.

TIMBER SALE ROAD SPECIFICATIONS

Road Improvement - Work done to an existing road which improves it over its original design standard.

Road Renovation - Work done to an existing road which restores it to its original design.

Roadway - The portion of a road within limits of construction. Usually from the toe of the fill slope to a point where the cut slope intersects natural ground line. Synonym - road prism.

Scale - In quarrying, consists of the removal of loose or overhanging rock adhering to the solid face after a shot or a round of shots has been fired.

Scarification - The process of loosening or breaking up of the surface layer of soil or road, usually to a specified depth.

Separation - Function of geotextile material as a partition between adjacent materials to prevent mixing of those materials.

Shoulder - The portion of the roadbed contiguous with the traveled way designed for accommodation of stopped vehicles, safety, and lateral support of base and surface courses.

Slope ratio notation (horizontal:vertical) – Slope ratios for constructed cut and fill slopes are expressed as a ratio of horizontal units to vertical units.

Spalls - Flakes or chips of stone.

Specifications - A general term applied to all directions, provisions, and requirements pertaining to performance of the work.

Specific Gravity - The ratio of the density of a material to the density of water obtained by weighing known volumes of both items in air. A specific gravity less than one implies that the material will float.

Structures - Bridges, culverts, catch basins, retaining walls, underdrains, flumes, splash pads, downspouts, and other project features which may be involved in the work and not otherwise classified in these specifications.

TIMBER SALE ROAD SPECIFICATIONS

Subbase - Reinforcement of the subgrade with large particles of pitrun rock or crushed stone. Usually confined to roads having wet subgrades or subgrades with weak support characteristics.

Surface Course - Top layer of a road structure consisting of finely crushed gravels or asphalt designed to provide a smooth running surface for traffic load.

Subgrade - The top surface of a roadbed upon which the traveled way and shoulders are constructed.

Tensile Strength - The strength shown by a geotextile material subjected to tension as distinct from torsion, compression, or shear.

Tensile Stress - Strain Modulus - A measure of the resistance to elongation under stress. The ratio of the change in tensile stress to the corresponding change in strain.

Tensile Test - A test which subjects geotextile material to tensile forces and measures resultant stresses and strains.

Timber - Standing trees, downed trees, or logs which can be measured in board feet.

Traveled Way - The portion of the roadbed used for the movement of vehicles, exclusive of shoulders.

Typical Cross Sections - Cross-sectional plane of a typical roadway; showing natural ground line and designed roadway in relation to cut and fill, through cut, and through fill.

Turnout - Extra widening of the roadbed at appropriate intervals on single-lane roads for passing purposes.

Ultraviolet (UV) Radiation Stability - The ability of geotextile material to resist deterioration from exposure to sunlight.

Unaged Cloth - Cloth in condition received from the manufacturer or distributor.

Woven Geotextile Material - A textile structure comprising two or more sets of filaments of yarns interlaced in such a way that the elements pass each other at essentially right angles with one set of elements parallel to the geotextile material axis.

103 - Compaction equipment shall meet the following requirements:

TIMBER SALE ROAD SPECIFICATIONS

103i - Other. Compaction equipment approved by the Authorized Officer.

TIMBER SALE ROAD SPECIFICATIONS

PIPE CULVERTS - 400

- 402 - The “inverted half-round” pipe culverts located at the following road locations:

Road numbers	Sta./M.P.
38-6E-20.0	2+93, 5+64
38-6E-28.1A	42+14, 44+90
38-6E-33.1	73+29, 76+11

as shown on the plans shall be removed. Details are also contained in the Road Narratives.

- 428 - Remove and dispose of old culverts in a legal manner, and pay for any fees required. The Purchaser shall remove the old culverts from the work site within three 3 working days of completion of the culvert replacement work for each road prior to road acceptance.

TIMBER SALE ROAD SPECIFICATIONS

RENOVATION OF EXISTING ROADS - 500

- 501 - This work shall consist of reconditioning and preparing the roadbed and shoulders, minor excavation and/or embankment, cleaning and shaping drainage ditches, trimming vegetation from cut and embankment slopes, and cleaning and repairing drainage structures of existing roads in accordance with these specifications as shown on the plans and as marked on the ground with stakes.
- 502 - The existing road surface shall be bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans at the following location(s):

Road No.	From Sta./M.P.	To Sta./M.P.	Standard Drawing #
38-6E-20.0	0+00	8+30	3
38-6E-28.1A	0+00	50+18	2
38-6E-28.1B	0+00	10+00	2
38-6E-33.0	0+00	11+27	2
38-6E-33.1	0+00	137+60	2

- 502a - Rocks larger than 4 inches in maximum dimension shall be removed from the scarified layers of the roadbed. Material so removed will not be permitted to remain on road shoulders or in ditches.
- 502b - Drainage ditches shall be bladed and shaped in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans.
- 504 - Existing road surfaces shall be uniformly watered to the optimum moisture content suitable for grading in accordance with the following table:

TIMBER SALE ROAD SPECIFICATIONS

Road No.	From Sta./M.P.	To Sta./M.P.
38-6E-20.0	0+00	8+30
38-6E-28.1A	0+00	50+18
38-6E-28.1B	0+00	10+00
38-6E-33.0	0+00	11+27
38-6E-33.1	0+00	137+60

506 - The inlet end of designated existing drainage structures as shown on the plans shall be cleared of vegetative debris and boulders that are of sufficient size to obstruct normal stream flow. Pipes shall be cleared of sediment and other debris lodged in the barrel of the pipe. The outflow area of designated pipe structures shall be cleared of rock and vegetative obstructions which will impede the structure's designed outflow configuration. Catch basins shall conform to the lines, grade, dimensions, and typical diagram shown on the plans.

508 - Vegetation encroaching on the roadbed and the drainage ditches of existing roads at the following locations shall be removed by cutting and disposed of in accordance with Subsection 2100 of these specifications:

Road No.	From Sta./M.P.	To Sta./M.P.	Standard Drawing #
38-6E-20.0	0+00	8+30	3
38-6E-28.1A	None	None	2
38-6E-28.1B	0+00	10+00	2
38-6E-33.0	None	None	2
38-6E-33.1	101+25	137+60	2

509 - The finished grading shall be approved by the Authorized Officer. The Purchaser shall give the Authorized Officer 3 days notice prior to final inspection of the grading operations.

TIMBER SALE ROAD SPECIFICATIONS

WATERING - 600

- 601 - This work shall consist of furnishing and applying water required for the finishing and reconditioning of existing roadbeds, laying dust, or for other uses in accordance with these specifications.
- 602 - Water, when needed for compaction or laying dust, shall be applied at the locations, in the amounts, and during the hours as directed by the Authorized Officer. Amounts of water to be provided will be the minimum needed to properly execute the compaction requirements in conformance with these specifications, and for laying dust during work periods.
- 603 - Water trucks used in this work shall be equipped with a distributing device of ample capacity and of such design as to ensure uniform application of water on the road bed.
- 604 - Water required under these specifications shall be obtained at the location indicated below:

T. 39S., R. 7 E., Sec 32 – JC BOYLE RESERVOIR (Topsy Res.)

Use of the water source is subject to applicable State water regulations.

TIMBER SALE ROAD SPECIFICATIONS

ROADSIDE BRUSHING - 2100

- 2101 - This work shall consist of the removal of vegetation from the road prism - variable distance, and inside curves in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail Sheet of this exhibit, at designated locations as shown in the plans.
- 2102 - Roadside brushing may be performed mechanically with self powered, self-propelled equipment and/or manually with hand tools, including chain saws.
- 2103 - Vegetation cut manually or mechanically less than 6 inches in diameter D.B.H. shall be cut to a maximum height of 2 inches above the ground surface or above obstructions such as rocks or stumps on cut and fill slopes and all limbs will be severed from the trunk.
- 2103a - Vegetation shall be cut and removed from the road bed between the outside shoulders and the ditch centerline and such vegetation shall be cut to a maximum height of 1 inch above the ground and running surface. All limbs will be severed from the trunk. Sharp pointed ends will not be permitted. Cuts shall be parallel to the ground line or running surface.
- 2104 - Trees in excess of 6 inches in diameter at D.B.H. shall be limbed, so that no limbs extend into the treated area or over the roadbed to a height of 12 feet above the subgrade of the roadway on cut and fill slopes, within the road prism-variable distance. Limbs shall be cut to within 1 inch of the trunk to produce a smooth vertical face. Removal of trees larger than 6 inches in diameter for sight distance or safety may be directed by the Authorized Officer.
- 2105 - Vegetation that is outside of the road prism-variable distance that protrudes into the road prism and within 12 feet in elevation above the subgrade) shall be cut, to within 1 inch of the trunk to produce a smooth vertical face.
- 2106 - Vegetative growth capable of growing 1 foot in height or higher shall be cut, within the road prism-variable distance or as directed by the Authorized Officer.
- 2108 - Self propelled equipment shall not be permitted on cut and fill slopes or in

TIMBER SALE ROAD SPECIFICATIONS

ditches.

- 2109 - Debris resulting from this operation shall be scattered downslope from the roadway. Debris shall not be allowed to accumulate in concentrations. Debris in excess of 1 foot in length and 2 inches in diameter shall not be allowed to remain on cut slopes, ditches, roadways or water courses, or as directed by the Authorized Officer.
- 2113 - Roadside brushing shall be accomplished as specified on SHEET 4
- 2115 - Mechanical brush cutters shall not be operated when there are people and occupied vehicles within 400 feet of the immediate operating area.
- 2116 - Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the Manual on Uniform Traffic Devices.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Version: 6.1.0.23

Summary of All Roads and Projects

Updated: 11/20/2019

T.S. Contract Name: Terminus Re-Offer Tract No: Sale Date: 10/28/2020
 Prepared by: Hultz Ph: Print Date: 8/3/2020 7:17:00 PM
 Construction: 0.00 sta
 Improve: 0.00 sta Renov: 217.35 sta Decom: 0.00 sta Temp: 0.00 sta

200 Clearing and Grubbing: 0.0 acres	\$0.00
300 Excavation:	\$0.00
Haul < 500 ft: 0 sta-yds	
Haul > 500 ft: 0 yd-mi	
400 Drainage:	\$599.28
Culvert: 0 lf DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$4,536.88
Blading 4.12 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing:	\$692.86
Mechanical Brushing: 2.6 acres	
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$3,383.90 Surf. \$0.00.....	\$3,383.90
Quarry Development:	\$0.00
Total: 2,759 mbf @ \$3.339/mbf =	\$9,212.92

Notes:

Quantities shown are estimates only and not pay items.
 Surfacing Quantities are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Terminus Sale Date: 9/16/2020

Road Number: 38-6E-20.0 Road Name:

Road Renovation: 0.16 mi 12 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$199.76
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$113.37
Blading 0.16 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.4 acres	\$162.84
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$276.31 Surf. \$0.00.....	\$276.31
Quarry Development:	\$0.00
Total:	\$752.27

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-6E-20.0 Road Name:

Half-round culvert removal

Excavator -Small (1.5 CY) Half-round culvert removal
2 hr x \$99.88/hr = \$199.76

Subtotal: \$199.76

Section 500 Renovation:

Comment: STA 0+00 - 8+30

Blading: \$708.54/mi x 0.16 mi = \$113.37

Subtotal: \$113.37

Surfacing:

Section 2100 Roadside Brushing:

Mechanical Brushing

Comment: STA 0+00 - 8+30

RoadSide Brushing Medium: \$407.09/acre x 0.40 acres = \$162.84

Subtotal: \$162.84

Mobilization:

Construction - 8.17% of total Costs = \$276.31

surfacing = 0% \$0.00

Subtotal: \$276.31

Total: \$752.27

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Terminus Sale Date: 9/16/2020

Road Number: 38-6E-28.1A Road Name:

Road Renovation: 0.95 mi 15 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$199.76
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$1,037.29
Blading 0.95 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (NONE):0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$718.14 Surf. \$0.00.....	\$718.14
Quarry Development:	\$0.00
Total:	\$1,955.18

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-6E-28.1A Road Name:

Remove half-round CMP x2

Excavator -Small (1.5 CY) 2 hr x \$99.88/hr = \$199.76

Subtotal: \$199.76

Section 500 Renovation:

Comment: STA 0+00 - 50+18

Blading: \$708.54/mi x 0.95 mi = \$673.11

Clean Culverts: \$383.34/mi x 0.95 mi = \$364.17

Subtotal: \$1,037.29

Surfacing:

Mobilization:

Construction - 21.22% of total Costs = \$718.14

surfacing = 0% \$0.00

Subtotal: \$718.14

Total: \$1,955.18

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Terminus Sale Date: 9/16/2020

Road Number: 38-6E-28.1B Road Name:

Road Renovation: 0.19 mi 15 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$195.96
Blading 0.19 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.5 acres	\$122.13
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$184.66 Surf. \$0.00.....	\$184.66
Quarry Development:	\$0.00
Total:	\$502.74

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-6E-28.1B Road Name:

Section 500 Renovation:

Comment: 0+00 - 10+00

Blading: $\$708.54/\text{mi} \times 0.19 \text{ mi} = \134.62

Clean Culverts: $\$383.34/\text{mi} \times 0.16 \text{ mi} = \61.33

Subtotal: \$195.96

Surfacing:

Section 2100 Roadside Brushing:

Mechanical Brushing

Comment: 0+00 - 10+00

Brushing width Left: 10ft. Right: 10ft.

RoadSide Brushing Light: $\$244.25/\text{acre} \times 0.50 \text{ acres} = \122.13

Subtotal: \$122.13

Mobilization:

Construction - 5.46% of total Costs = \$184.66

surfacing = 0% \$0.00

Subtotal: \$184.66

Total: \$502.74

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Terminus Sale Date: 9/16/2020

Road Number: 38-6E-33.0 Road Name:

Road Renovation: 0.21 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$340.46
Blading 0.21 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (NONE):0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$197.65 Surf. \$0.00.....	\$197.65
Quarry Development:	\$0.00
Total:	\$538.11

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-6E-33.0 Road Name:

Section 500 Renovation:

Blading: $\$708.54/\text{mi} \times 0.21 \text{ mi} = \148.79

Clean Culverts: $\$383.34/\text{mi} \times 0.50 \text{ mi} = \191.67

Subtotal: \$340.46

Surfacing:

Mobilization:

Construction - 5.84% of total Costs = \$197.65

surfacing = 0% \$0.00

Subtotal: \$197.65

Total: \$538.11

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Terminus Sale Date: 9/16/2020

Road Number: 38-6E-33.1 Road Name:

Road Renovation: 2.61 mi 15 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$199.76
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$2,849.81
Blading 2.61 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):1.7 acres	\$407.90
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$2,007.15 Surf. \$0.00.....	\$2,007.15
Quarry Development:	\$0.00
Total:	\$5,464.61

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-6E-33.1 Road Name:

Remove Half-round CMP x2

Excavator -Small (1.5 CY) 2 hr x \$99.88/hr = \$199.76

Subtotal: \$199.76

Section 500 Renovation:

Comment: 0+00 - 137+60

Blading: \$708.54/mi x 2.61 mi = \$1,849.29

Clean Culverts: \$383.34/mi x 2.61 mi = \$1,000.52

Subtotal: \$2,849.81

Surfacing:

Section 2100 Roadside Brushing:

Mechanical Brushing

Comment: 101+25 - 137+60

Brushing width Left: 10ft. Right: 10ft.

RoadSide Brushing Light: \$244.25/acre x 1.67 acres = \$407.90

Subtotal: \$407.90

Mobilization:

Construction - 59.31% of total Costs = \$2,007.15

surfacing = 0% \$0.00

Subtotal: \$2,007.15

Total: \$5,464.61

UNITED STATES
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BUREAU OF LAND MANAGEMENT

Mobilization Costs - Construction and Surfacing

T.S. Contract Name: Terminus Sale Date: 9/16/2020

Average Mobilization distance = 30 miles Factor = 0.70

Mobilization: Construction

Fire Equipment: 1 ea x (0.70 x \$75.00/ea + 27 mi x \$4.16/mi)= \$164.82
Graders-all: 1 ea x (0.70 x \$414.00/ea + 27 mi x \$14.27/mi)= \$675.09
Brush Cutter: 1 ea x (0.70 x \$414.00/ea) = \$289.80
Water Truck: 1 ea x (0.70 x \$96.00/ea + 27 mi x \$3.99/mi)= \$174.93
Excavators(Small): 1 ea x (0.70 x \$414.00/ea + 27 mi x \$19.98/mi)= \$829.26
Equipment Washing: 5 ea x (\$250.00) /ea = \$1,250.00

Subtotal: \$3,383.90

Mobilization: Surfacing

Subtotal: \$0.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Summary of Construction Quantities

T.S. Contract Name: Terminus Sale Date: 9/16/2020

Road Number	Const	Improv	Renov	Decomm	Temp
38-6E-20.0			8.30		
38-6E-28.1A			50.18		
38-6E-28.1B			10.00		
38-6E-33.0			11.27		
38-6E-33.1			137.60		

Total Sta:			217.35		
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200 Clearing and Grubbing	Clearing acres
38-6E-20.0	0.0
38-6E-28.1A	0.0
38-6E-28.1B	0.0
38-6E-33.0	0.0
38-6E-33.1	0.0
Totals:	0.0

300 Excavation	Excav LCY.s	Haul sta-yds	Haul yd-mi
Totals:	0	0	0

400 Drainage

Road Number	CMP Culvert	Polypipes	Downspouts
Total Drainage:			

Culvert Qty	Totals:		No Quantities
	Aluminized	Galvanized	Poly Pipe
12 inch	0 lf	0 lf	
18 inch	0 lf	0 lf	0 lf
24 inch	0 lf	0 lf	0 lf
30 inch	0 lf	0 lf	0 lf
36 inch	0 lf	0 lf	0 lf
42 inch	0 lf	0 lf	
48 inch	0 lf	0 lf	

Downspout Qty	Half Round	Full (poly)	Full (galv)
18 inch	0 lf	0 lf	0 lf
21 inch	0 lf		
24 inch	0 lf	0 lf	0 lf
30 inch		0 lf	

Half-round culvert removal 38-6E-20.0
 Excavator -Small (1.5 CY) Half-round culvert removal 2 hr
 Remove Half-round CMP x2 38-6E-33.1
 Excavator -Small (1.5 CY) 2 hr

Continuation of Construction Quantities

Remove half-round CMP x2 38-6E-28.1A
 Excavator -Small (1.5 CY) 2 hr

500 Renovation	Blade Miles	Slide cy
38-6E-20.0	0.16	0
38-6E-28.1A	0.95	0
38-6E-28.1B	0.19	0
38-6E-33.0	0.21	0
38-6E-33.1	2.61	0
Totals:	<u>4.12</u>	<u>0</u>

Surfacing (Loose Cubic Yards)

Note: Due to slight rounding differences between total LCY vs. subtotaled LCY, Totals shown here may not be exactly as shown in the road summaries and worksheets.

1300 Geotextiles

1400 Slope Protection

Totals:	<u>0</u>	Totals:	<u>0</u> cy
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1800 Soil stabilization - acres	Dry W/O Mulch	Dry/with Mulch	Hydro Mulch
Totals:	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>

1900 Cattleguards

2100 RoadSide Brushing	acres
38-6E-20.0 - Mechanical Brushing	0.4
38-6E-28.1B - Mechanical Brushing	0.5
38-6E-33.1 - Mechanical Brushing	1.7
Totals:	<u>2.6</u>

2300 Engineering	stations
Totals:	<u>0.00</u>

2400 Minor Concrete

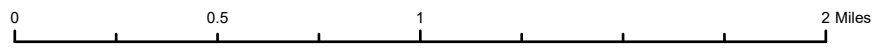
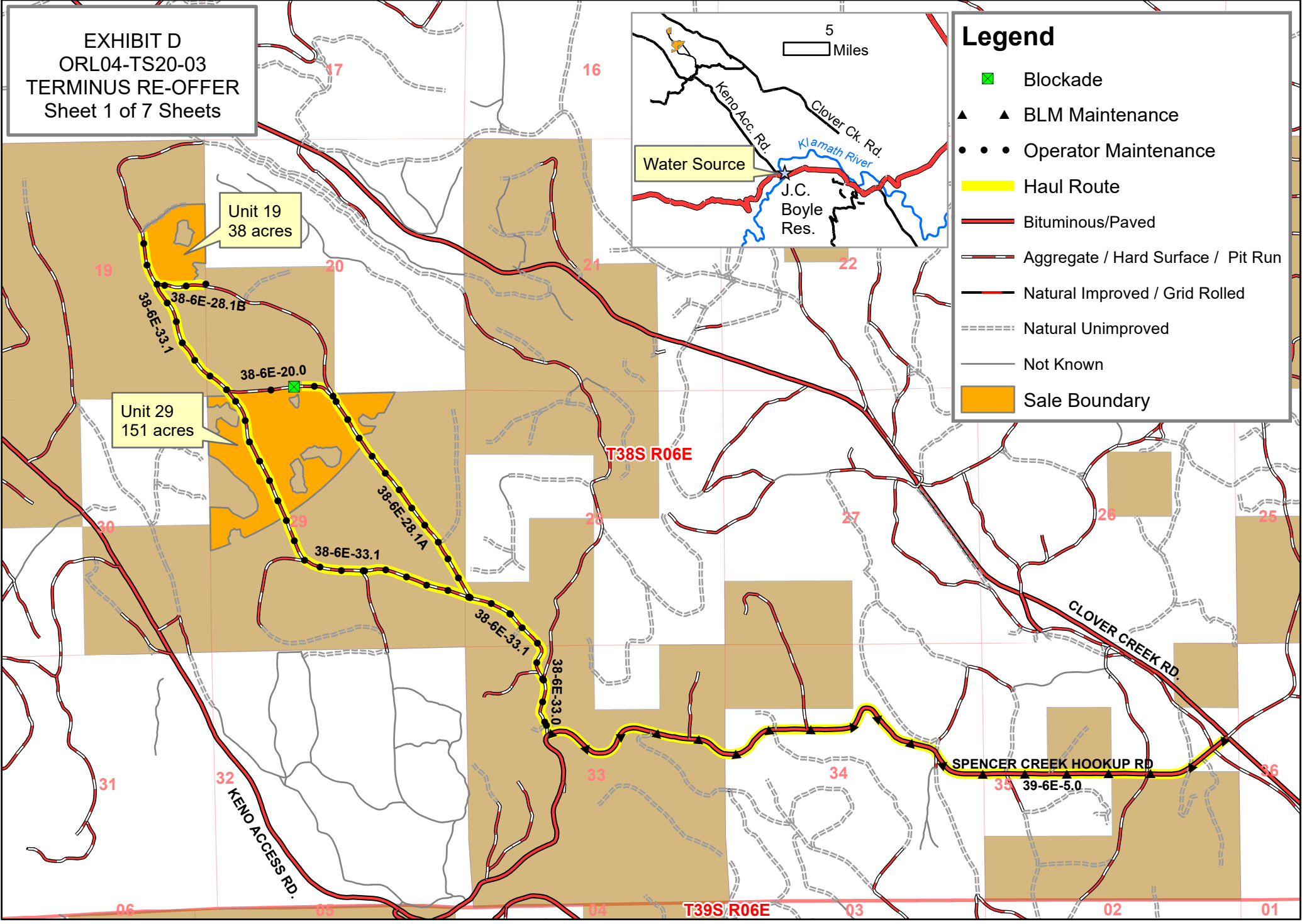
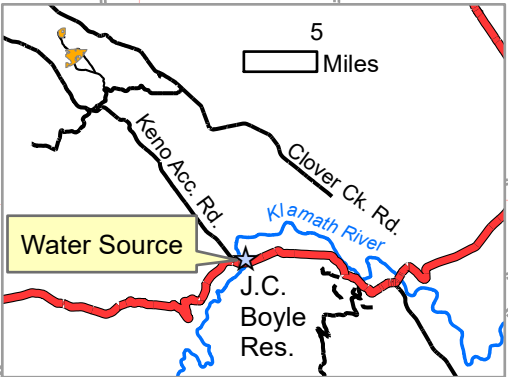
2500 Gabions

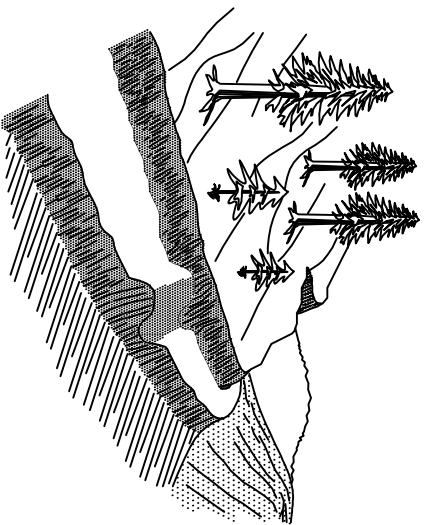
8000 Miscellaneous

EXHIBIT D
 ORL04-TS20-03
 TERMINUS RE-OFFER
 Sheet 1 of 7 Sheets

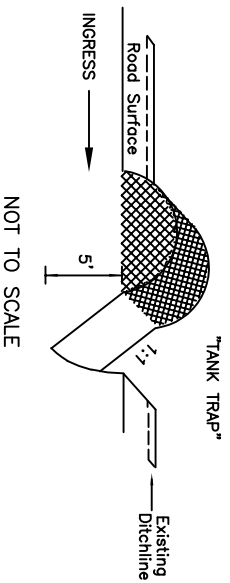
Legend

- Blockade
- ▲ BLM Maintenance
- Operator Maintenance
- Haul Route
- Bituminous/Paved
- Aggregate / Hard Surface / Pit Run
- Natural Improved / Grid Rolled
- Natural Unimproved
- Not Known
- Sale Boundary

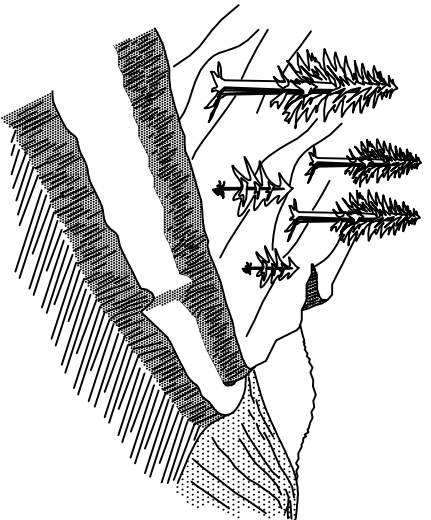




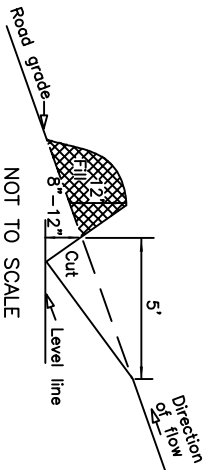
BARRIERS



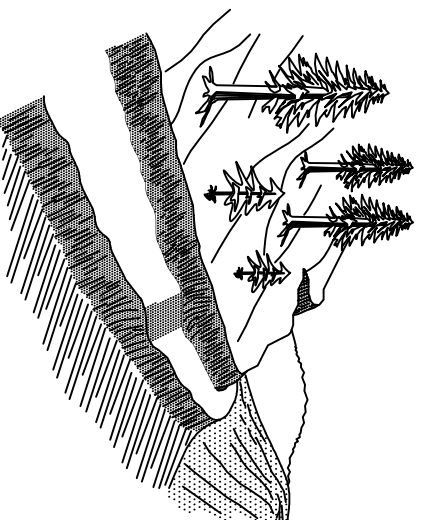
NOT TO SCALE



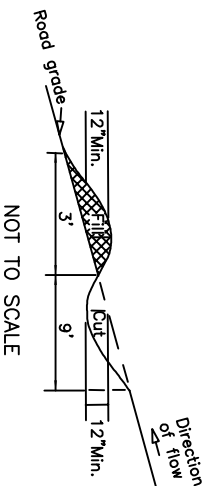
WATER BAR



NOT TO SCALE



WATER DIP

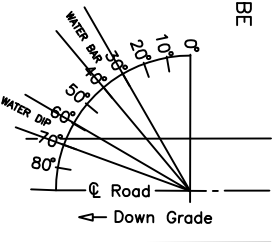


NOT TO SCALE

NOTES

1. ALL BARRIERS, WATER BARS, AND WATER DIPS AS REQUIRED SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATIONS WILL BE DIRECTED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL WATER BARS SHALL BE SKEWED 30°-40°.
4. ALL WATER DIPS SHALL BE SKEWED 60°-70°.
5. ALL WATER BARS AND WATER DIPS SHALL BE CUT INTO THE ROADBED FROM THE DITCHLINE.
6. DITCHLINES SHALL BE BLOCKED WITH EXCAVATED MATERIAL (DITCHDAM) DOWNGRADE FROM ALL WATER BARS AND WATER DIPS.
7. EXCAVATED MATERIAL FROM BARRIER TRENCH (TANK TRAP) SHALL BE PLACED ON THE SIDE NEAREST THE BEGINNING OF THE ROAD.
8. OUTLETS OF WATER DIPS MUST BE ROCKED ON FILL SLOPE.
9. RIPRAP BARRIERS SHALL BE AT LEAST 4' HIGH, 4' DEEP, AND OF SUFFICIENT WIDTH TO COMPLETELY BLOCK THE ROADWAY AND ANY ADJACENT SHOULDERS THAT CAN BE TRAVELED WITH A VEHICLE.
10. ALL BERMS INCLUDING WATER BARS, WATER DIPS, AND EARTHEN BARRIERS SHALL BE COMPACTED TO 85% OF MAXIMUM DENSITY.

SKIEW DIAGRAM



WATER DIP/BAR SPACING

ROAD GRADE %	MAXIMUM SPACING FEET
0-4	500
5-6	400
7-9	300
10-14	100
15-20	50

ON GRADES IN EXCESS OF 14% CONSTRUCT WATER BARS.



U. S. DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 LAKEVIEW DISTRICT OREGON
BARRIER AND EROSION CONTROL DETAIL

DESIGNED CAH

REVIEWED

APPROVED

DRAWN CAH

DATE AUG. 2019

SHEET 2/7

SCALE: None

STANDARD DRAWING

ROAD MAINTENANCE SPECIFICATIONS

General road maintenance specifications are designated by numeric symbols according to the type of work performed as follows:

SECTION	DESCRIPTION
3000	General
3100	Operational Maintenance
3200	Seasonal Maintenance
3300	Final Maintenance
3400	Other Maintenance
3500	Decommissioning

ROAD MAINTENANCE SPECIFICATIONS

GENERAL - 3000

- 3001 The Purchaser shall be required to maintain roads referenced in section 42.(C)(3) and as shown on the Exhibit D map of this contract in accordance with Sections 3000, 3100, 3200, 3300, 3400, and 3500 of this exhibit.
- 3001a The Purchaser shall be required to provide maintenance on roads in accordance with Subsections 3403 and 3404.
- 3002 The Purchaser shall maintain the cross section of existing dirt or graveled roads to the existing geometric standards. Any roads required to be renovated under terms of this contract shall be maintained to the geometric standards required in Exhibit C of this contract.
- 3003 The minimum required maintenance on any roads shall include the provisions specified in Subsections 3101, 3104, and 3105.
- 3004 The Purchaser shall be responsible for providing timely maintenance and cleanup on any roads with logging units substantially completed prior to moving operations to other roads. The maximum length of non-maintained or non-cleanup of the road prism shall not exceed the sum of one 1 mile at any time. Release of maintenance requirements may be granted, upon written request, when the conditions specified in Sections 3300 and 3400 are met satisfactorily.

OPERATIONAL MAINTENANCE - 3100

- 3101 The Purchaser shall blade and shape the road surface and shoulders with a motor grader. Banks shall not be undercut. Back blading with tractors or similar equipment will be allowed only around landings and other areas when approved by the Authorized Officer.
- 3103 The purchaser shall maintain established berms and place additional berms using adjacent material where needed to protect fills as directed by the Authorized Officer.
- 3104 The purchaser shall perform other road cleanup including removal of debris, fallen timber, bank slough, and slides which can practicably be accomplished by a motor grader, rubber tired front end bucket loader, rubber tired backhoe or comparable equipment, and by the use of hand tools.
- 3105 The Purchaser shall be responsible for maintaining normal flow in drainage structures. This includes cleaning out drainage ditches, catch basins, clearing pipe inverts of sediment and other debris lodged in the barrel of the pipe, and maintaining water dips and water-bars using equipment specified in Subsection 3104 and other culvert cleaning and flushing equipment.
- 3107 The Purchaser shall cut or trim trees and brush which obstructs vision or prevents the safe

ROAD MAINTENANCE SPECIFICATIONS

passage of traffic along the traveled way when directed by the Authorized Officer.

The Purchaser shall also cut trees or brush encroaching on the road prism that are a result of his activities or winter damage during the contract period. Disposal of such vegetative material shall be in accordance with Section 2100 of Exhibit C.

- 3108 The Purchaser shall avoid fouling gravel or bituminous surfaces through covering with earth and debris from side ditches, slides or other sources. The Purchaser shall also avoid blading surfacing material off the running surface of the roadway. Skidding of logs on the roadway in or outside designated logging units is not authorized without prior written approval by the Authorized Officer. Repair required caused by such skidding activity is not considered maintenance and shall be repaired at the Purchaser's expense.

SEASONAL MAINTENANCE - 3200

- 3201 The Purchaser shall perform preventative maintenance at the end of Purchaser's hauling each season and during non-hauling periods which occur between other operations on the contract area. This includes requirements specified in Section 3100.
- 3202 The purchaser shall perform and complete maintenance specified in Sections 3000, 3100, and 3200 on all roads maintained by him, prior to October 15 each year, except as specified in Subsection 3203, after initial commencement of construction or logging operations. Thereafter, all roads shall have continuous preventive maintenance and road cleanup until suspension of seasonal operations. This includes all roads used and not used during the proceeding operating seasons.
- 3203 The Purchaser shall complete road cleanup and maintenance, as specified in Section 3100, at the completion of logging operations on any roads located in an area separate from the area where logging activities will resume.
- 3204 The Purchaser shall be responsible for performing post storm inspections and maintenance during the winter season to minimize erosion and potential road or watershed damage.

FINAL MAINTENANCE - 3300

- 3301 The Purchaser shall complete final maintenance and/or damage repairs on all roads used under terms of their contract within thirty 30 calendar days following the Purchaser's completion of hauling and in accordance with Sec. 16b of this contract. This work shall include any maintenance and/or damage repairs specified in Sections 3000, 3100, and 3200 necessary to meet the conditions specified in Subsection 3002 and shall be executed in accordance with Subsection 3302 of this section.

ROAD MAINTENANCE SPECIFICATIONS

The Authorized Officer may grant acceptance of Purchaser's maintenance responsibility in part where certain individual roads or road segments are no longer of any use to the Purchaser's remaining removal operations, providing that all contract requirements as specified under Sec. 16b and Special Provisions Sections 3000, 3100, 3200 and 3300 of the maintenance specifications have been completed and a relinquishment of cutting and removal rights on cutting units tributary to these roads is signed by the Purchaser. Request for partial acceptance must be submitted in writing by the Purchaser.

3302 The Purchaser shall perform final road maintenance only when weather or soil moisture conditions are suitable for normal maintenance equipment operations as determined by the Authorized Officer.

If final maintenance is delayed after the date required in Subsection 3301 of this contract by adverse soil moisture or unsuitable equipment operating conditions, the Purchaser will be notified by the Authorized Officer when soil moisture and equipment operating conditions are suitable. The Purchaser shall then be required to complete final maintenance within 30 days.

OTHER MAINTENANCE - 3400

3401 The Purchaser shall repair any damage to road surfaces that was specified under Subsection 3108. This repair includes restoring the roadway to the designed standard and replacement of surfacing with approved surface material. This repair is not limited to use of equipment specified in Subsection 3104.

3402 The Purchaser shall be permitted to remove ice and snow from roads authorized for use under this contract only when prior written approval has been secured from the Authorized Officer. The Purchaser shall submit a written request for permission to remove ice and snow in advance of the date operations are to begin.

Upon receiving written authorization for ice or snow removal, the Purchaser will perform the work according to the conditions and equipment requirements set forth in the authorization.

DECOMMISSIONING – 3500

3509 Access shall be blocked with barricades as shown on the typical SHEET 2 of Exhibit D and at locations as shown on Exhibit D maps.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sale: Terminus Re-Offer
Sale Date: 10/28/2020
Prep. By : Hultz
Tract No:

ROAD MAINTENANCE AND ROAD USE APPRAISAL WORK SHEET

Summary of Costs

1.1) Road Use - Amortization: \$0.00/2759 MBF = \$0.00/MBF

Road Maintenance Obligation:

(2.1) BLM Maintenance		\$0.00
(2.2) BLM Rockwear	\$0.00	
(5.1) Purchaser Maintenance Rockwear	<u>\$0.00</u>	
Total Rockwear Payable to BLM		\$0.00
(3.1) 3rd Party Maintenance		\$0.00
(3.2) 3rd Party Rockwear		\$0.00
(4.1) Other Maintenance Payments		\$10,865.56
Total Maintenance Fee Obligation (2.1-5.1)		<u>\$0.00</u>

Purchaser Maintenance Allowances:

(5.2A) Move In		\$546.48
(5.2B) Culverts, Catch Basins, Downspouts		\$1,150.02
(5.2C) Grading, Ditching		\$2,919.18
(5.2D) Slide Removal and Slump Repair		\$0.00
(5.2E) Dust Palliative (Water)		\$3,671.72
(5.2F) Surface Repair (Aggregate)		\$0.00
(5.2G) Other		\$0.00
Total Purchaser Maintenance Allowances (5.2A-5.2G)		<u>\$8,287.40</u>

(2.1-5.2G) Cost (\$0.00 + \$8,287.40) = \$8,287.40
Cost/MBF \$8,287.40 / 2759 MBF = \$3.00/MBF \$3.00/MBF

(5.2H) Decommissioning \$0.00

(5.2H) Cost/MBF \$0.00/2759 MBF = \$0.00/MBF

(2.1-5.2H) Cost (\$0.00 + \$8,287.40 + \$0.00) = \$8,287.40

Total Cost/MBF (Excluding Road Use) \$8,287.40/2759 MBF = \$3.00/MBF

1) Road Use Fees - Amortization

Details

R/W		Rd Use	Vol	Road Use
Number	Road Number	Fee x	MBF =	Obligation

Subtotal by agreement number

(1.1) Subtotal \$0.00

2) BLM Maintenance - Timber Haul

	MAINTENANCE (2.1)				ROCKWEAR (2.2)			
Road Number	A Surf	Maint	Vol					
and Segment	N Type	Mi x Fee x	MBF =	Maint	Fee x MBF =	Rkwear		

(2.1) Subtotal \$0.00 (2.2) Subtotal \$0.00

3) Third Party Maintenance and Rockwear

	MAINTENANCE (3.1)				ROCKWEAR (3.2)			
Agrmnt	Surface	Road						
Number	Type	Number	Mi x Fee x	MBF =	Maint	Fee x MBF =	Rkwear	

Subtotal of maintenance fees by agreement number:

Subtotal of rockwear fees by agreement number:

(3.1) Subtotal \$0.00
 (3.2) Subtotal \$0.00

4) Other Maintenance Payments - USFS or Others Perform Maintenance

Road Maintenance Fees- see RMF spreadsheet

		Miles	Vol	Fee
Agency	Road Number	(Log) x	(mbf) x	MBF/MI = Cost
BLM	ALL	0.00		\$10,865.56

(4.1) Subtotal \$10,865.56

5) Purchaser Maintenance - Rock Wear

TIMBER HAUL (5.1)

Road No	A	RkWear	Vol	Total
and Segment	N Mi	x Fee x	MBF =	RkWear

(5.1) Subtotal \$0.00

Purchaser Operational Maintenance

Move In

No	Move	Cost/	Dist	Sub-	
Equipment	Units	x in x	50 Mi x	Factor =	total
Motor Grader:	1	1	\$414.00	0.66	\$273.24
Back Hoe:			\$308.00	0.63	\$0.00
Loader:			\$414.00	0.63	\$0.00
Water Truck:			\$96.00	0.63	\$0.00
Dump Truck:			\$91.00	0.63	\$0.00
Excavator:	1	1	\$414.00	0.66	\$273.24
Roller:			\$414.00	0.63	\$0.00

(5.2A) Total \$546.48

Culvert Maintenance - Including Catch basins and Downpipes

		<u>Miles x Cost/Mi = Subtotal</u>	
3	\$383.34	\$1,150.02	

(5.2B) Total \$1,150.02

Grading (Includes Ditches and Shoulders)

	<u>Miles x Cost/Mi x Freq = Subtotal</u>	
Blade w/ Ditch:	4.12 \$708.54	1 \$2,919.18
Blade w/o Ditch:	0.00 \$434.19	0 \$0.00

(5.2C) Total \$2,919.18

Slide and Slough removal, Slump Repair (15 sta-yds. ea.)

Type	No Slides	Hours	Equip	
Equipment	/Slumps	x Each x	Cost	= Subtotal
Grader:	0	0	\$142.72	\$0.00
Loader:	0	0	\$102.93	\$0.00
Backhoe:	0	0	\$87.60	\$0.00

(5.2D) Total \$0.00

Dust Palliative (Water)

Spreading Hours

	No	Freq	Truck	
	Miles	/ MPH	= Hours	x Days x /Day = Hours
	4.12	5	0.8	20 1 16
Load & Haul =			1.0	20 1 20
Return trip =			0.5	20 1 10
Total Hours =			46	

Truck Cost: \$79.82/Hr. x 46.0 Hours = \$3,671.72

(5.2E) Total \$3,671.72

Surface Repair (Aggregate)

(5.2F) Total \$0.00

Other

Fallen Timber Cutting:	0.0 Hours x \$0.00/Hour	= \$0.00
Brush Cutting/Tree Trimming:	0.0 Hours x \$0.00/Hour	= \$0.00
Oil/Asphalt Materials:	Lump Sum	= \$0.00
Signing for Dust Palliatives:	Lump Sum	= \$0.00
	Lump Sum	= \$0.00
	Lump Sum	= \$0.00
	Lump Sum	= \$0.00
	Lump Sum	= \$0.00
	Lump Sum	= \$0.00

(5.2G) Total \$0.00

Decommissioning

(5.2H) Decommissioning Total \$0.00

SELECTION CRITERIA DESIGNATION BY PRESCRIPTION EXHIBIT E

The Selection Criteria shown below shall be used by the Purchaser in determining which trees are to be selected for snags creation. The operator will have responsibility to select trees as described below to create snags in a safe manner for workers on site.

The selection of trees for snag creation shall comply with Sec 41. The Purchaser shall leave all boundary trees marked with orange paint and/or poster tags and all orange marked trees within cutting units. For the Terminus Re-Offer Timber Sale 51 snags shall be created using the selection criteria below.

TREE SELECTION CRITERIA

- Purchaser shall select trees to become snags and mark each tree with white paint above DBH height (4.5 feet) and at stump height. All snags shall be created within one (1) year of completion of skidding operations.
- Any tree species.
- No orange marked reserve trees shall be selected.
- Minimum diameter of twenty (20) inches measured at DBH (4.5 feet above ground level).
- Within all cutting units, snags shall not be created within falling distance of power lines, structures, or roads that will remain open after harvest operations are completed.
- Fifty (50%) per cent of the trees shall be topped at fifty (50') feet above ground level or above the lowest three (3) live limbs whichever is greater. All snags created shall have a minimum of three (3) live limbs below the cut.
- Fifty (50%) per cent of the trees shall be topped at a minimum of fifteen (15') feet above ground level.
- Top of all trees shall be severed and removed from the tree. Tops of trees are not reserved and must be skidded to a landing.
- Snags can be individual or grouped.
- All tree locations shall be mapped by GPS.

Section 15 of this contract provides that the Authorized Officer may, under certain conditions, require fire prevention and control measures in addition to those required by applicable (State) laws and regulations. Accordingly:

- (A) The Authorized Officer may by written notice require the Purchaser to restrict operations in accordance with the industrial fire precaution levels below (however, purchaser may also be required to restrict operations in accordance with closures on lands protected by Oregon Department of Forestry (ODF) which include those within the Klamath Falls Resource Area located west of Langell Valley). During periods of fire danger the precaution level will be determined by the Lakeview District Office and will be available daily.

IFPL LEVEL

- I Closed Season -Fire precaution requirements are in effect.
-Watch person is required for one (1) hour.
- II Partial hoot owl - the following may operate from only between the hours of 8:00 P.M. and 1:00 P.M. local time:
- Power saws, except at loading sites;
Cable yarding;
Blasting;
Welding or cutting metal.
- III Partial shutdown - the following are prohibited except as indicated:
- Cable yarding - except that gravity operated logging systems employing non-motorized carriages may operate between the hours of 8:00 p.m. and 1:00 p.m. local time when all blocks and moving lines are ten (10) feet or more above the ground, except the line between the carriage and the choker.
- Power saws - except power saws may be used at loading sites and on tractor/skidder operations between the hours of 8:00 p.m. and 1:00 p.m. local time.
- In addition, the following are permitted to operate between the hours of 8:00 p.m. and 1:00 p.m. local time:
- Tractor/skidder operations;
 - Mechanized loading and hauling of any product or material;
 - Blasting;
 - Welding or cutting metal;
 - Any other spark-emitting operation not specifically mentioned.
- IV General shutdown- All operations are prohibited.

(B) The Purchaser will provide fire watchman services for three (3) hours after daily shutdowns of areas of operation, including truck haul routes through the sale area and other areas where Purchaser's employees or contractors have worked on or with power driven equipment, whenever any of the following conditions apply:

- (1) the BLM industrial fire precaution level is II or greater;
- (2) directed in writing by the Authorized Officer;
- (3) required by State law.

The fire watchman shall be physically capable, alert and have adequate experience to perform the following duties:

- (1) operate Purchaser's communications and fire fighting equipment specified in the contract;
- (2) direct the Purchaser's personnel on forest fires;
- (3) report any fire detected to the Bureau of Land Management or Oregon State Division of Forestry;
- (4) move throughout the operation area constantly on the lookout for fires and take suppression action on any fire detected.

Fire Prevention and Control Equipment Requirements

The Purchaser shall provide and maintain in good repair, in the contract area, the following equipment for use during closed fire season or periods of fire danger:

- (a) **F-2** Fire fighting tools shall be kept at each landing or at such other place as the Authorized Officer shall designate whenever people are working in the contract area. All fire fighting tools shall be kept in a sturdily constructed box which shall be painted red and lettered on the front or top in large letters, "FOR FIRE ONLY".

The box shall have a hinged lid and a hasp by which the lid can be sealed. One box may serve two landings not over six hundred (600) feet apart. When filled, the box shall not weight over two hundred (200) pounds. The fire tools shall be in good condition, be tight on strong handles, and have sharp cutting edges. There shall not be less than four (4) tools in each box not less than one (1) tool for each person working in the contract area. The fire tools shall be used only for fighting fire.

- (b) **F-2b** A round pointed shovel in good condition which has a face at least 8" wide with a handle at least 26" long, shall be within fifty (50) feet of any power saw when in operation.
- (c) **F-2c** At each landing during periods of operation one (1) tank truck. Each truck shall have three hundred (300) gallons minimum capacity with five hundred (500) feet minimum of hose and a nozzle acceptable to the Authorized Officer and a mounted or portable pump conforming to the standards set forth in Oregon Revised Statute (ORS) 476.410 through ORS 476.440 and any rule promulgated pursuant to those statutes. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.410 as amended or be provided with suitable adapters. At the close of each working day, all bulldozers and tank trucks shall be filled with fuel and made ready for immediate use. All tank trucks and portable tanks shall be filled with water and made available for immediate use.
- (d) **F-2d** Serviceable radio or radio-telephone equipment able to provide prompt and reliable communication between the contract area and Klamath Falls, Oregon. Such communication shall be available during periods of operation including the time watch-service is required.

- (e) **F-2e** During declared fire season and if and when harvested chip material is curing on the sale, one dozer complete with qualified operator, angle blade, lowboy, and transport shall be located within one (1) hour transport time, fifteen (15) minute dispatch time during daylight hours, two (2) hours dispatch time nighttime hours, for the suppression of wildfire in the contract area. The Dozer and Transport shall be fueled and equipped for immediate use.

In addition, a pair of headlights capable of being quickly attached to each dozer used in the contract area shall be required. The headlights shall be adequate to provide illumination sufficient to allow use of the dozers for fire fighting and construction of fire trails at night.

- (f) **F-2h** A chemical fire extinguisher of at least eight (8) ounces minimum capacity of a type approved by the Oregon State Forester shall be carried during the closed fire season or periods of fire danger by each saw operator using a power saw in the contract area. Such fire extinguisher shall be filled and in effective operating condition and shall at all times be immediately available to the operator when the saw is being fueled or the motor of the saw is running. A size shovel specified above or larger shall be available with each gas can when refueling. Any fueling of a power saw shall be done in an area which has first been cleared of all flammable material. Power saws shall be moved at least twenty (20) feet from the place of fueling before the engine is started. Each power saw shall be equipped with an exhaust system and a spark arresting device which are of types approved by the Oregon State Forester.