

PROSPECTUS

GRANTS PASS RESOURCE AREA
JOSEPHINE MASTER UNIT

Medford Sale # ORM07-TS-18-17
September 13, 2018 (SQF)

#4. Elk Stew TS, Douglas County, O&C

BID DEPOSIT REQUIRED: \$24,800.00

All timber designated for cutting in Lot 2, Lot 3, Lot 4, Lot 5, Lot 6, Lot 7, Lot 8, Lot 9, Lot 11, Lot 12, N½NE¼, SW¼NE¼, W¼SE¼ Sec. 31, NE¼, SE¼SW¼, N¼SE¼, SW¼SE¼ Sec. 33, T. 31 S., R. 8 W., Willamette Meridian.

Approx. Number Merch. Trees	Est. Volume MBF 32' Log	Species	Est. Volume MBF 16' Log	Appr. Price Per MBF*	Est. Volume Times Appraised Price
10,824	908.0	Douglas-Fir	1,100.0	\$222.90	\$245,190.00
513	30.0	Ponderosa Pine	41.0	\$40.30	\$1,652.30
127	12.0	White Fir	15.0	\$53.50	\$802.50
33	0.8	Incense-Cedar	1.0	\$93.50	\$93.50
9	0.8	Sugar Pine	1.0	\$42.00	\$42.00
11,506	951.6	Totals	1,158.0		\$247,780.30

*Stumpage values have been determined by market value estimates and analytical appraisal methods were used to compute the appraised price. Additional information concerning the appraised price is available at the Medford District Office.

TIMBER AUCTION LOCATION – The timber auction will be held at the Medford Inter-agency Office, located at 3040 Biddle Road, Medford, Oregon, at 9 a.m. on Thursday, September 13, 2018.

Bidders will be restricted to bidding on a unit (MBF) rate of the Douglas-fir volume. All other species will be sold at appraised price per unit (MBF). The minimum bid increment will be \$0.10 per MBF.

CRUISE INFORMATION - The Douglas-fir have been cruised using the 3-P sampling method to select sample trees. Maps showing the location and description of these sample trees are available at the Medford District Office. The sample trees have been measured, utilizing the VOLT system of measurement, and the volume expanded to a total sale volume. The volume of all other species in this sale has been derived from individual tree measurements taken during a 100% cruise using form class tables for estimating board foot volume of trees in 16-foot logs. Approximately 0 trees which are considered to be non-merchantable are designated for cutting. With respect to merchantable trees of all conifer species: the average tree is 11.7 inches DBHOB; the average gross merchantable log contains 37 bd. ft.; the total gross volume is approximately 1,233 M bd. ft.; and 94 % recovery is expected. (Average DF is 11.7 inches DBHOB; average gross merchantable log DF contains 37 bd. ft.)

LOG EXPORT AND SUBSTITUTION RESTRICTIONS - All timber sold to the Purchaser under the terms of the contract, except exempted species, is restricted from export under the United States in the form of unprocessed timber and is prohibited from use as a substitute for exported private timber.

The BLM has revised the log export restrictions special provision to reduce the log branding and

painting requirements. The new requirements include branding of one end of all logs with a scaling diameter of over 10 inches. All loads of 11 logs or more, regardless of the diameter of the logs, will have a minimum of 10 logs branded on one end. All logs will be branded on loads of 10 logs or less. One end of all branded logs will be marked with yellow paint. At the discretion of the Contracting Officer, the Purchaser may be required to brand and paint all logs. The Purchaser shall bear any increased costs for log branding and painting.

CUTTING AREA – Nine (9) units containing one hundred forty three (143) acres must be partial cut. This includes two (2) right-of-ways that must be clear cut for temporary route 33-7A new construction and roadside management unit 31-8-31.5. Additionally, one (1) right-of-way containing one half (.50) acre must be clear cut outside unit boundaries for a temporary route 33-7A reconstruction.

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

ACCESS - Access to the sale area is available via a public road system near the contract area, existing BLM roads, Right-of-Way and Road Use Agreement M-700 with Roseburg Resources Co., and Right-of-Way and Road Use Agreement M-605 with Weyerhaeuser Co. Among other conditions, Right-of-Way and Road Use Agreement M-700 with Roseburg Resources requires road maintenance by the Purchaser; completion of an agreement between the Purchaser and Permittee; arbitration of conditions of road use. The Permittee has indicated they will require a rockwear obligation of \$759.51. Among other conditions, Right-of-Way and Road Use Agreement M-605 with Weyerhaeuser Co. requires road maintenance by the Purchaser; completion of an agreement between the Purchaser and Permittee; arbitration of conditions of road use. The Permittee has indicated they will require a rockwear obligation of \$120.12.

ROAD MAINTENANCE - The Purchaser will be required to maintain all of the roads/ temporary routes which he constructs plus 10.97 miles of existing BLM and private road. BLM will maintain 17.41 miles of the 30-6-32.0, 32-8-1.1, and 33-7-2.0 roads.

ROAD CONSTRUCTION - The contract will require the Purchaser to construct 49.11 stations of temporary routes and renovate 579.22 stations of existing road. Additional information is available in the timber sale prospectus.

SOIL DAMAGE PREVENTION - Pursuant to Section 26 of Form 5450-3, Timber Sale Contract, the Purchaser shall not operate or cause to have operated mechanical ground based harvesting, ground based yarding, skid trail and landing rehabilitation, temporary route construction, temporary route reconstruction, temporary route decommissioning, or non-emergency road maintenance (including blading of aggregate roads, rocking, and cross drain installation) shall be conducted on the contract area between October 15 of one calendar year and May 15 of the following calendar year both days inclusive. Purchaser may request in writing, a conditional waiver of this restriction. If soil moisture conditions are dry, as determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and by the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks, the Contracting Officer may approve a conditional waiver. If impacts to soil resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.

EQUIPMENT REQUIREMENTS - A yarding tractor not greater than 9 feet wide as measured from the outer edges of standard width shoes and equipped with an integral arch and a winch for lining logs seventy-five (75) feet. Mechanized felling equipment with a single-grip felling head capable of fully suspending trees after they are cut. Mechanized felling equipment must have a boom with a minimum reach of 20 feet. A skyline yarder with a large (50-70 foot) tower; capable of one-end suspension with a minimum lateral yarding capability of seventy-five (75) feet while maintaining a fixed position during inhaul; capable of multi-span; and capable of an external yarding distance of one thousand three hundred thirty five (1,335) feet slope distance. A

minimum two hundred (200) flywheel horsepower tractor with mounted rippers no more than thirty six (36) inches apart and capable of ripping to a depth of eighteen (18) inches will be required for decommissioning temporary routes and utilized skid roads within Riparian Reserves.

SLASH DISPOSAL - Slash disposal will consist of lop and scatter, hand pile and cover, hand pile burn and mop-up, machine pile, cover and burn landing decks, and underburning as described in SD-1 and SD-4 of the Special Provisions. There is an option to provide payment in lieu of burning in C-1 of the Special Provisions. **Lop and scatter** all slash outside of hand pile areas in units 31-2A, 33-7, and 33-8 as shown on Exhibit S. **Hand pile, cover, and burn** all slash situated within one hundred (100) feet of road 32-8-10.2 where the road coincides with a harvest unit boundary in units 33-7 and 33-8. Pile and burn all slash situated within two hundred (200) feet of road 31-8-31.1 where the road coincides with a harvest unit boundary in unit 31-2A. Pile and burn all slash situated within two hundred (200) feet of road 32-8-1.1 where the road coincides with a harvest unit boundary in unit 31-4D. Pile and burn all slash situated below road 31-8-31.1 in unit 31-11B. Pile and burn all slash situated in units 31-4B, 31-4C, and 31-20.

Machine pile, cover, and burn all landing decks in all units. **Underburn** all slash in units 31-11A and 31-11B above road 31-8-31.3. A post logging assessment shall be conducted to determine treatment needs in all units. The initial appraisal prescribed forty four (44) acres of lop and scatter, fifty (50) acres of hand pile, cover, and burn, (10) acres of machine pile, cover, burn, landing decks, and forty nine (49) acres of underburning.

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, or protect occupied marbled murrelet sites in accordance with the Standards and Guidelines of the Medford District Record of Decision (ROD) and Resource Management Plan (RMP). 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.

OPTIONAL CONTRIBUTION - The purchaser will have the option of performing certain slash disposal requirements or contributing \$13,432.00 in lieu thereof. The option must be declared upon execution of the contract. The optional contribution must be paid in installments payable in the same manner as and together with payments required in Section 3 of the contract

PERFORMANCE BOND - A performance bond in the amount of 20% of the total purchase price will be required.

OTHER -

1. No extension of time beyond the normal 30 days will be granted for completing bonding and contract signing requirements.
2. No haul shall be conducted on natural surface and hydrologically connected roads 31-8-31.1 and 32-8-10.2 in the Contract Area between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a conditional waiver of this restriction. If the Authorized Officer determines that hauling would not result in road damage or the transport of sediment to nearby stream channels based on soil moisture conditions or rain events, Contracting Officer may approve a conditional waiver for hauling. If soil moisture conditions or rain events are anticipated to cause impacts to roads or stream water quality resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.
3. Work activities that produce noise above ambient levels that may disturb northern spotted owls would not occur within units 31-20, 31-11B, 33-7 and 33-8 from March 1 to June 30

both days inclusive. This restriction may be extended until September 30 during the year of harvest if the operations would cause a nesting northern spotted owl to flush. This restriction will not apply if it can be shown from northern spotted owl protocol surveys conducted in accordance with accepted standards, that northern spotted owl nesting and/or fledging activities are not occurring during the year and/or time of harvest.

4. A harvester, feller-processor, or feller-buncher with purpose built carriers with boom-mounted felling heads and a boom with a minimum lateral reach of twenty (20) feet may be used in the ground based units. See the Elk Stew Special Provisions for full ground based harvesting restrictions.
5. Cable corridors in the water bar portions of units 33-7 and 33-8 as shown on Exhibit A and cable corridors in all units that are hydrologically connected to streams shown on Exhibit A shall be water-barred and shall have slash placed over them prior to winter rain events to protect water quality.
6. Temporary routes constructed or reconstructed and all skid trails and landings within two hundred (200) feet of streams shall be discontinuously sub-soiled with winged ripper, seeded, water-barred, mulched, and blocked prior to October 15th during dry soil conditions upon completion of current harvest and slash disposal treatments.

NARRATIVE DESCRIPTION OF HOW TO GET TO THE TIMBER SALE AREA - From I-5 take Exit 80 to Glendale, proceed down Glendale Valley Road (Hwy. 313) toward Glendale. Turn right onto Azalea-Glen Road, then turn left onto Reuben Road (Hwy. 27). Proceed for 15 miles and take a left onto Cow Creek Road. Follow Cow Creek Road for 0.2 miles and turn left onto West Fork Cow Creek Road, which becomes BLM Road #32-8-1.1. All units can be accessed from BLM Road #32-8-1.1.

ENVIRONMENTAL ASSESSMENT - An environmental assessment (DOI-BLM-ORWA-M070-2016-0001-EA) was prepared for this sale, and a Finding of No Significant Impact has been documented. This document is available for inspection as background for this sale at the Medford District Office.

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THIS IS A SALE PROSPECTUS ONLY. THESE ARE THE SPECIAL PROVISIONS AS THEY WILL BE WRITTEN IN THE CONTRACT. ATTACHMENTS MAY NOT INCLUDE ALL EXHIBITS REFERRED TO IN THE CONTRACT PROVISIONS. THE COMPLETE CONTRACT, INCLUDING ALL EXHIBITS, IS AVAILABLE FOR INSPECTION AT THE MEDFORD INTERAGENCY OFFICE.

Sec. 41. 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 Government.

- (A) AR-1 All timber on the Reserve Areas as shown on Exhibit A and all trees marked with a combination of orange paint, orange flagging, and/or posters which are on or mark the boundaries of the Reserve Areas.
- (B) AR-2 All timber on the reserve areas shown on Exhibit A and all blazed, painted, or posted trees which are on or mark the boundaries of the reserve areas, except approximately three thousand one hundred thirty (3,130) Douglas-fir trees, three hundred seventy four (374) ponderosa pine trees, twenty eight (28) white fir trees, and one (1) incense-cedar tree marked for cutting heretofore by the Government with blue paint above and below stump height in units 31-11A, 31-11B, and 31-8-31.5 shown on Exhibit A.
- (C) IR-1 Approximately five thousand one hundred twenty four (5,124) Douglas-fir trees, ninety seven (97) ponderosa pine trees, nineteen (19) white fir trees, sixteen (16) sugar pine trees, one hundred thirty nine (139) incense-cedar trees, twenty eight (28) Pacific Madrone trees, six (6) canyon live oak trees, and thirty four (34) tanoak trees marked with orange paint above and below stump height in units 31-2A, 31-4B, 31-4C, 31-4D, 31-20, 33-7, and 33-8 as shown on Exhibit A.
- (D) IR-13 All trees in stream, plant, and red tree vole buffers shown on Exhibit A which do not present a safety hazard as determined by the Authorized Officer. Trees within stream, plant, and red tree vole buffers felled for safety reasons shall be retained on site.
- (E) IR-13 All snags and hardwood trees in all units shown on Exhibit A which do not present a safety hazard as determined by the Authorized Officer. Snags and hardwood trees felled for safety reasons shall be retained on site.
- (F) IR-14 All pre-existing large woody debris in units shown on Exhibit A.

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Section 42

(A) 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 he intends 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 in variable density thin units shall be cut so that the resulting stumps shall not be higher than twelve (12) inches measured from the ground on the uphill side of the trees unless otherwise approved by the Authorized Officer.
- (4) L-4 All trees designated for cutting in roadside management unit 31-8-31.5, outside of the ditchline and road bed surface, shall be cut so that the resulting stumps shall not be higher than twelve (12) inches measured from the ground on the uphill side of the trees unless otherwise approved by the Authorized Officer.
- (5) L-4 All vegetation designated for cutting in roadside management unit 31-8-31.5, within the ditchline and road bed surface including turnouts that would interfere with normal motor patrol blading, shall be removed or ground down to a minimum of three (3) inches below ground or road surfacing level as described in Exhibit C6-2, unless otherwise approved by the Authorized Officer.
- (6) L-4 All vegetation designated for cutting in roadside management unit 31-8-31.5, within the road bed surface including turnouts and the inside portion of the ditchline that will not interfere with motor patrol grading, shall be cut down to one (1) inch vertical height as described in Exhibit C6-2, unless otherwise approved by the Authorized Officer.

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- (7) L-5 All vegetation greater than one (1) foot tall that follows the blue-mark cut tree line, which are not reserved shall be felled in roadside management unit 31-8-31.5 as described in Exhibit C6-2. All vegetation required to be cut shall be felled concurrently. All machine piling of slash shall be accomplished within sixty (60) days of the completion of yarding the unit.
- (8) L-5 All conifer trees eight (8) inches or larger D.B.H.O.B., which are not reserved shall be felled in all units shown on Exhibit A.
- (9) L-8 In all units except roadside management unit 31-8-31.5 as shown on Exhibit A, all trees designated for cutting shall be felled and whole tree yarded or yarded with tops attached except when excessive stand damage occurs as determined by the Authorized Officer. If excessive stand damage occurs, all trees shall be bucked into log lengths not to exceed forty one (41) feet prior to being yarded.
- (10) L-10 In the units shown on Exhibit A, all trees designated for cutting which are within two hundred five (205) feet of the stream shall be directionally felled away from the stream.
- (11) L-11 No trees may be felled into the stream, seep, wetland, or other resource buffers designated on Exhibit A.
- (12) L-12 In the areas of units designated herein and shown on Exhibit A, yarding/felling shall be done in accordance with the yarding/felling requirements or limitations for the designated area.

Designated Area	Yarding Requirements or Limitations
<u>Roadside Management Unit 31-8-31.5</u>	<p>Mechanical felling required with a single-grip felling head (a head that can hold and fully suspend the tree after it is cut) is preferred, however hand felling is allowed.</p> <p>The harvester, feller-processor, or feller-buncher shall be approved by the Authorized Officer prior to the start of mechanized felling operations. Only purpose built carriers with boom-mounted felling heads may be approved. The boom must have a lateral reach of twenty (20) feet or more, and the machine's lateral reach must</p>

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<p><u>Continued Roadside Management Unit</u> 31-8-31.5</p>	<p>be utilized as much as possible. The purpose-built carrier may be of the articulated, rubber-tired design, or the zero-clearance tail swing leveling track-mounted design.</p> <p>Yarding shall be done with a system which will fully suspend both ends of the log clear of the ground during inhaul.</p> <p>Landing size shall not exceed one-quarter (¼) acre, shall be located along existing road 31-8-31.5, and shall be approved by the Authorized Officer. No landing creation or expansion shall occur without prior approval from the Authorized Officer. Design landings with adequate drainage.</p> <p>Conifer tops and limbs, hardwoods, brush, and other cut vegetation created from the roadway clearing treatment shall be treated concurrently with felling operations and shall be treated according to the roadway clearing prescriptions found in Exhibits C4-1, C6-2, C-10, and C-12.</p> <p>All mechanized equipment shall only operate on existing road surfaces.</p>
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Designated Area	Yarding Requirements or Limitations
<p><u>Ground Based (Tractor) Yard Units</u> 31-2A, 31-4B, 31-4C, 31-4D, 31-11A, 31-11B, 31-20, 33-7, 33-8</p>	<p>Mechanized harvesting operations are optional. All ground-based harvest units may be manually felled. The harvester, feller-processor, or feller-buncher shall be approved by the Authorized Officer prior to the start of mechanized felling operations. Only purpose built carriers with boom-mounted felling heads may be approved. The boom must have a lateral reach of twenty (20) feet or more, and the machine's lateral reach must be utilized as much as possible. The purpose-built carrier may be of the articulated, rubber-tired design, or the zero-clearance tail swing leveling track-mounted design. The harvest equipment shall walk on existing or</p>

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<u>Continued Ground Based (Tractor) Yard Units</u> 31-2A, 31-4B, 31- 4C, 31-4D, 31-11A, 31-11B, 31-20, 33- 7, 33-8	<p>created slash as directed by the Authorized Officer. If Purchaser is required to create slash to walk on, then Purchaser shall not be required to whole-tree-yard. Mechanized felling operations shall be limited to slopes of thirty-five (35) percent or less.</p> <p>Yarding tractor width shall not be greater than nine (9) feet track width and shall be equipped with an integral arch.</p> <p>New skid roads must be located on ground less than thirty-five (35) percent slope. Rehabilitate all utilized skid roads that are within two hundred five (205) feet of streams as specified in Sec. 42(C)(9)(E-1).</p> <p>Existing skid roads shall be used when possible. Skid roads shall not exceed a width of twelve (12) feet on average per unit and new skid roads shall be placed at least one hundred fifty (150) feet apart where topography will allow, unless the Purchaser proposes an alternate logging plan that limits soil compaction to less than twelve (12) percent, limits soil productivity loss to less than five (5) percent of the harvest unit, and is approved by the Authorized Officer.</p> <p>Landing size shall not exceed one-quarter ($\frac{1}{4}$) acre, shall be located along existing roads, temporary routes, and/or cable-tractor swing routes within unit boundaries, and shall be approved by the Authorized Officer. Design landings with adequate drainage so that they are not hydrologically connected to draws or the ditchline of roads.</p> <p>The designated landing at the end of the tractor-swing route on private land for unit 33-8 shall be located at the approximate location as shown on Exhibit A, shall adhere to the terms and conditions of the License Agreement, and shall be approved by the Authorized Officer.</p>
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<u>Continued Ground Based (Tractor) Yard Units</u> 31-2A, 31-4B, 31-4C, 31-4D, 31-11A, 31-11B, 31-20, 33-7, 33-8	<p>Directional falling to lead and away from streams, unit boundaries, and resource buffers shown on Exhibit A will be required.</p> <p>The use of blades while tractor yarding will be limited, equipment shall walk over as much ground litter as possible.</p>
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Designated Area	Yarding Requirements or Limitations
<u>Cable Yard Units</u> 31-2A, 31-4C, 31-4D, 33-7, 33-8	<p>Yarding will 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. The cable yarding system shall be capable of yarding one thousand three hundred thirty five (1,335) feet slope distance.</p> <p>A carriage is required which will maintain a fixed position on the skyline during lateral yarding and has a minimum lateral yarding capability of seventy five (75) feet.</p> <p>Yarding corridors will be perpendicular to the contours and located outside of all buffers shown on Exhibit A.</p> <p>Prior to falling any timber in the unit, all tail/lift trees and/or intermediate support trees shall be pre-designated by the Purchaser and approved by the Authorized Officer.</p> <p>Existing cable corridors shall be used whenever possible. Yarding corridors shall be approximately one hundred fifty (150) feet apart, measured at the tailholds.</p> <p>Yarding corridor widths shall not exceed six (6) feet either side of the skyline centerline.</p> <p>Landing size shall not exceed one-quarter (1/4) acre, shall be located along existing roads, temporary routes, and/or cable-tractor swing routes within unit boundaries where possible, and shall be approved by the Authorized Officer. Short purchaser spurs into units may be</p>

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<u>Continued Cable</u> <u>Yard Units</u> 31-2A, 31-4C, 31-4D, 33-7, 33-8	<p>necessary to achieve one-end log suspension. Design landings with adequate drainage so that they are not hydrologically connected to draws or the ditchline of roads.</p> <p>Landings and corridors may be needed outside of unit boundaries in unit 33-7 along the old dozer line. These landings and corridors shall not be located in any of the buffers shown on Exhibit A and shall be approved by the Authorized Officer prior to use. Any trees outside of unit boundaries that need to be felled for the unit's temporary routes, landings, and corridors shall be left on-site.</p> <p>Directional falling to lead and away from streams, unit boundaries, and resource buffers shown on Exhibit A will be required.</p> <p>Cable corridors that are hydrologically connected; or are perpendicular to and within two hundred five (205) feet of streams shown on Exhibit A; or are located in the water bar designated areas of units 33-7 and 33-8 as shown on Exhibit A shall be water-barred and shall have slash placed over them prior to winter rain events to protect water quality.</p> <p>Skyline equipment shall be capable of yarding in a multispans configuration.</p> <p>In unit 33-8 the Purchaser shall be allowed to walk yarder into the unit utilizing a tractor-swing system as approved by the Authorized Officer. This tractor-swing route is allowed to cross the plant site buffer shown on Exhibit A as long as the tractor-swing route width is minimized and avoids the plant site tagged in the field.</p>
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- (13) L-14 No yarding is permitted in or through the botany buffer in unit 33-8 except as permitted and approved by the Authorized Officer to avoid the plant site as shown on Exhibit A.

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- (14) L-16 No new landing, skid trail, or cable corridor shall be located within stream, plant, or red tree vole buffers shown on Exhibit A.
- (15) L-17 The designated landing on private land for unit 33-8 shall be placed at the approximate location as shown on Exhibit A. Any alternative landing sites must be approved by the Contracting Officer in the written operations and logging plan.
- (16) L-19 No mechanical ground based harvesting, ground based yarding, skid trail and landing rehabilitation, temporary route construction, temporary route reconstruction, temporary route decommissioning, or non-emergency road maintenance shall be conducted for all units between October 15 of one calendar year and May 15 of the following calendar year both days inclusive. Purchaser may request in writing, a conditional waiver of this restriction. If soil moisture conditions are dry, as determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and by the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks, the Contracting Officer may approve a conditional waiver. If impacts to soil resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.
- (17) L-19 No haul on all natural surface and hydrologically connected rocky roads 31-8-31.1 and 32-8-10.2 shall be conducted on the Contract Area between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a conditional waiver of this restriction. If the Authorized Officer determines that hauling would not result in road damage or the transport of sediment to nearby stream channels based on soil moisture conditions or rain events, Contracting Officer may approve a conditional waiver for hauling. If soil moisture conditions or rain events are anticipated to cause impacts to roads or stream water quality resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.
- (18) L-20 No operations within units 31-20, 31-11B, 33-7 and 33-8 as shown on Exhibit A shall be conducted between March 1 and June 30 or until two (2) weeks after the fledging period of the same calendar year, both days inclusive. This restriction may be extended until September 30 during the year of harvest if the operations would cause a nesting northern spotted owl to flush. This restriction will not apply if it can be shown from northern spotted owl protocol surveys conducted in accordance with accepted standards, as approved by the Contracting Officer, that northern spotted owl nesting and/or fledging activities are not occurring during the year and/or time of harvest.

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- (19) L-22 During logging operations, the Purchaser shall keep the 31-8-31.1, 31-8-31.2, and 32-8-1.1 roads, where it passes through the contract area, clear of trees, rock, dirt, and other debris so far as is practicable. The road shall not be blocked by such operations for more than fifteen (15) minutes.
- (20) L-23 The Purchaser shall provide two (2) flaggers to control traffic on the 32-8-1.1 road where it passes through units 31-4B, 31-4C, and 31-4D whenever logging operations are active or as required by OSHA regulations.
- (21) L-23 The Purchaser shall provide flaggers and/or signs to control traffic or alert forest road users of active operations on roads where it passes through or near active logging, hauling, or burning operations as required by OSHA regulations.
- (22) L-24 Before cutting and removing any trees necessary to facilitate logging in the harvest units shown on Exhibit A, the Purchaser shall identify the location of the skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, 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 and/or cable yarding 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, and/or cable yarding road shall be limited to twelve (12) feet.
 - (b) The Purchaser may immediately cut and remove additional timber to clear skid roads and cable yarding roads; and provide tailhold, tieback, guyline, lift and intermediate support trees; and clear 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

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this provision unless sufficient installment payments have been made in accordance with Section 3(b) 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.
- (f) The Government may reserve trees previously designated for cutting and removal by blacking out blue paint, and/or applying orange paint as replacements for additional trees cut and removed for skid roads and/or

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cable yarding roads when the Authorized Officer determines such reservation is necessary to maintain stand densities consistent with objectives set forth in the management prescriptions. This may include the replacement of trees damaged by storm events, or insects or disease. The volume of this timber to be reserved will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and the value shall be based on the unit prices shown in Exhibit B of the contract. The Purchaser agrees that the Total Purchase Price shall be reduced accordingly through a unilateral modification to the contract executed by the Contracting Officer.

- (23) 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.

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(B) ROAD CONSTRUCTION, MAINTENANCE, AND USE

- (1) R-1 The Purchaser shall construct, improve/renovate all roads, in strict accordance with the plans and specifications shown on Exhibit C, which is attached hereto and made a part hereof.
- (a) R-1a: Any required construction, improvement, or renovation of structures and roads shall be completed and accepted prior to the removal of any timber, except right -of-way timber or hazard trees over that road.
- (b) R-1c: The Purchaser shall not commence work until receipt of written notice do so from the Authorized Officer.
- (2) 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 obligations described in Section 42(B)(4)(R-2b). Any road listed on Exhibit D and requiring construction, improvement, or renovation in Exhibit C of this contract, shall be maintained by the Purchaser until receiving written acceptance of the construction, improvement, or renovation 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 Number and Segment	Length Miles used	Road Control	Road Surface Type
30-6-32(D)	0.30	BLM	BST
31-8-31.1(A1-A2)	1.61	BLM	ASC
31-8-31.2(A)	1.00	BLM	ASC
31-8-31.3	1.00	BLM	PRR
31-8-31.5	0.16	BLM	ASC
32-8-1.1(A-B2)	7.01	BLM	BST
32-8-9.1(A-C)	1.18	BLM	PRR
32-8-10.2(D)	1.35	BLM	Nat
33-7-2.0(A-B)	10.1	BLM	BST
Total	23.71		

- (3) R-2a With the prior written approval of the Authorized Officer, the Purchaser may arrange for cooperative maintenance with other users of road(s) included in

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Section 42(B)(6)(R-2f) of this contract; provided, that such cooperative arrangement shall not relieve the Purchaser of his 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.

- (4) R-2b The Purchaser shall pay the Government a road maintenance and rockwear fee of Sixteen thousand six hundred ninety and 79/100 dollars (\$16,690.79) for the transportation of timber included in this contract over said roads. The above maintenance amount is for the use of 23.71 miles of road or less. If the total road maintenance and rockwear fee does not exceed five hundred and no/100 dollars (\$500.00), the Purchaser shall pay such amount in full prior to use of such roads. If the total road maintenance fee exceeds five hundred and no/100 dollars (\$500.00), the Authorized Officer shall establish an installment schedule of payments of the maintenance obligation(s).
- (5) R-2e The Contracting Officer may at any time, by written notice, terminate the Purchaser's operator road maintenance obligations and require instead payment of current Bureau of Land Management road maintenance and rockwear fees for the particular surface type of the road(s) involved. These fees will be applied to the remaining contract volume on the sale area, as determined by the Authorized Officer, to be transported over the road(s) listed in Section 42(B)(2)(R2). If the total road maintenance and rockwear fee does not exceed five hundred and no/100 dollars (\$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 and no/100 dollars (\$500.00), the Authorized Officer shall establish an installment schedule of payments of the maintenance and rockwear obligations.
- (6) R-2f Except for road maintenance in accordance with Section 42(B)(4)(R-2b), the Purchaser shall perform any required road repair and maintenance work on roads used by them, under the terms of Exhibit D, Road Maintenance Specifications, of the contract, which is attached hereto and made a part hereof and shown below:

Road Number and Segment	Length Miles used	Road Control	Road Surface Type
31-8-31.1(A1-A2)	1.61	BLM	ASC
31-8-31.2(A)	1.00	BLM	ASC
31-8-31.3	1.00	BLM	PRR
31-8-31.5	0.16	BLM	ASC

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32-8-9.1(A-C)	1.18	BLM	PRR
32-8-10.2(A)	0.44	Weyerhaeuser Co.	Agg
32-8-10.2(B1-B2)	2.28	Roseburg Resources	Agg
32-8-10.2(C)	0.80	Weyerhaeuser Co.	Nat
32-8-10.2(D)	1.35	BLM	Nat
32-8-11(A-B)	1.15	Roseburg Resources	PRR
TOTAL	10.97		

- (7) R-3 In the use of Road Nos. 32-8-10.2(B1, B2) and 32-8-11.0(A, B), the Purchaser shall comply with the conditions of **Right-of-Way and Road Use Agreement No. M-700** (OR-53740) dated May 02, 1963. This document is available for inspection at the Medford Office.

These conditions include:

- (a) Payment of a rockwear obligation of *seven hundred fifty nine and 51/100 dollars (\$759.51)* payable to **Roseburg Resources Co.** at the time indicated in the License Agreement.
 - (b) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.
 - (c) Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.
- (8) R-3 In the use of Road No. 32-8-10.2A,C; the Purchaser shall comply with the conditions of **Right-of-Way and Road Use Agreement No. M-605** (OR 053756) Dated March 01, 1961. This document is available for inspection at the Medford Office.
- (a) Payment of a road rockwear obligation of *one hundred twenty and 12/100 dollars (\$120.12)* payable to **Weyerhaeuser Co.** at the time indicated in the License Agreement.
 - (b) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.

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- (c) Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.
- (9) R-3c The Purchaser agrees that if they elect to use any other private road, which is the subject of a right-of-way agreement with the Government for the removal of Government timber sold under the terms of this contract, Purchaser shall request and agree to the modification of this contract to provide for such use and for allowances for amortization of the Government's share of the capital investment of any such road.
- (10) 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:

1. Axle weights when fully loaded.
2. Axle spacing.
3. Transverse wheel spacing.
4. Tire size.
5. Outside width of vehicle.
6. Operating speed.
7. Frequency of use.
8. 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)

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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.

- (11) 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 tracked 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.

(C) ENVIRONMENTAL PROTECTION

- (1) E-1 In addition to the requirement set forth in Section 26 of this contract, the Purchaser shall implement the following noxious weed control measures:
- (a) In order to prevent the potential spread of noxious weeds into the Medford District BLM, the operator would be required to clean all logging, construction, chipping, grinding, shredding, rock crushing, and transportation equipment prior to entry on BLM lands.
 - (b) Cleaning shall be defined as removal of dirt, grease, plant parts, and material that may carry noxious weed seeds into BLM lands. Cleaning prior to entry onto BLM lands may be accomplished by using a pressure hose.
 - (c) Only equipment inspected by the BLM would be allowed to operate within the Analysis Area. All subsequent move-ins of equipment as described above shall be treated the same as the initial move-in.
 - (d) Prior to initial move-in of any equipment, and all subsequent move-ins, the operator shall make the equipment available for BLM inspection at an agreed upon location off Federal lands.
 - (e) Equipment would be visually inspected by the Authorized Officer to verify that the equipment has been reasonably cleaned.

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- (2) E-1 In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall implement the following noxious weed control measures:

Upon decommissioning and prior to fall rains, the Purchaser shall scarify and contour landings and temporary spurs to provide for adequate drainage, then stabilize and revegetate all bare soil with certified weed free straw mulch and a native seed mixture approved by the Authorized Officer. Landings on roads and rocky areas that lack soil for seed germination need not be scarified, seeded or mulched, as determined by the Authorized Officer. The BLM may provide the seed mixture and straw mulch if the purchaser is unable to locate and buy the approved materials from a commercial source. The Purchaser shall reimburse the government for the cost of seed and straw, if provided by the government. The Purchaser shall furnish the specific seed mixture prescribed by the Authorized Officer, which will include up to 3 grasses and 2 forbs from the following list, but may include substitutions approved by the Authorized Officer:

Grasses: *Achnatherum lemmonii*, *Bromus carinatus*, *Brumus vulgaris*, *Elymus glaucus*, *Festuca californica*, *Festuca roemerii*, *Koeleria macrantha*, *Poa secunda*, *Vulpia microstachys*

Forbs: *Achillea millefolium*, *Clarkia purpurea*, *Clarkia homboidea*, *Collinsia grandiflora*, *Eriophyllum lanatum*, *Lupinus bicolor*, *Madia elegans*, *Madia gracilis*

The proportion of each species in the mixture shall be prescribed by the Authorized Officer. The Purchaser shall apply prescribed seed and straw mulch to acres designated for treatment, as directed by the Authorized Officer, at the following rates of application:

Grass seed	20 to 25 lbs/acre (cumulative, all species)
Forb seed	0.5 to 2 lbs/acre (cumulative, all species)
Straw mulch	1000 lbs/acre

The Purchaser shall apply seed and straw mulch between August 1 and October 15. Deviations from that timing must be approved by the Authorized Officer. The Purchaser shall notify the Authorized Officer at least 5 days in advance of the date that he/she intends to commence revegetation and soil stabilization work.

If the Purchaser furnishes seed from any source other than the BLM, that seed shall meet the following minimum test standards:

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<u>Test</u>	<u>Grasses (%)</u>	<u>Forbs (%)</u>
Purity:	95	80
Germination:	85	70
Other species/weed content (max):	0.2	0.2
Noxious weed content:	Prohibited	Prohibited

Furnished seed shall meet the minimum requirements for either Yellow Tag Source Identified Seed or Blue Tag Certified Class Seed, as defined by the Association of Official Seed Certifying Agencies. Seed source shall be approved by the Authorized Officer and shall be from the EPA Level III Ecoregion in which the project occurs. For each lot of seed, the Purchaser shall furnish the Authorized Officer a Seed Test result from a certified seed testing lab (e.g., Oregon State University), which shall include: test date; lot number; seed source; and results of test for purity, germination, and weed content. All seed lots must have been tested within the previous 12 months to be accepted. Seed that has become wet, moldy, or otherwise damaged shall not be accepted. Seed must be available to the Authorized Officer for inspection at least 5 days in advance of commencing revegetation work. If the Purchaser furnishes straw mulch from any source other than the BLM, the material must be from native grass or other approved sterile grain crops that are certified weed free and free of mold or other objectionable materials. Straw mulch shall be in an air-dry condition and suitable for spreading in a uniform manner. Straw mulch must be available to the Authorized Officer for inspection at least 5 days in advance of commencing revegetation work.

- (3) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser would be required to be in compliance with OAR 629-605-0130 of the Forest Practices Act. Notification, removal, transport, and disposal of oil, hazardous substances, and hazardous wastes would be accomplished in accordance with OAR 340-142 (OARD, 2018), and the operator will have a Spill Prevention, Control and Countermeasure Plan (SPCC) in place. The Purchaser shall prepare a Spill Prevention, Control, and Countermeasure Plan for all hazardous substances to be used in the contract area, as directed by the Authorized Officer. Such plan shall include identification of Purchaser's representatives responsible for supervising initial containment action for releases and subsequent cleanup. Such plans must comply with the State of Oregon DEQ OAR 340-142, Oil and Hazardous Materials Emergency Response Requirements.

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- (4) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not refuel equipment, store, or cause to have stored, any fuel or other petroleum products within one hundred fifty (150) feet of all riparian management or wet areas. All Petroleum products shall be stored in durable containers and located so that any accidental releases will be contained and not drain into any stream system. Hydraulic fluid and fuel lines on heavy mechanized equipment would be in proper working condition in order to minimize potential for leakage into streams. Absorbent materials shall be onsite to allow for immediate containment of any accidental spills. Spilled fuel and oil shall be cleaned up and disposed of at an approved disposal site.
- (5) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall not use fire suppression foam within one hundred fifty (150) feet of streams and wetlands.
- (6) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not locate new landings in areas that contribute eroded fines to streams, wet areas, dry draws and swales. If these landing locations cannot be avoided, ensure that properly installed sediment control measures are placed and maintained, as needed, to keep eroded material onsite.
- (7) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall ensure that silt fencing or other sediment control measures are properly placed and maintained during use and periods of non-use when utilizing landings or temp routes that have the potential to release eroded fines into a stream or wet area, directly or via draws or ditchlines. Any project-related activity would be suspended if conditions develop that cause a potential for sediment laden runoff to enter a wetland, floodplain or waters of the state. Operations can resume when sediment control devices are in place and conditions allow turbidity standards to be met.
- (8) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall, prior to October 15 of the same operating season, winterize and rehabilitate temporary routes, landings, hydrologically connected corridors and skidtrails, cable corridors in the waterbar area of units 33-7 and 33-8, and other areas of exposed soils by properly installing and/or using water bars, berms, sediment basins, gravel pads, hay bales, small dense woody debris, seeding and/or mulching, to reduce sediment runoff and divert runoff water away from stream channels, headwalls, slide areas, high landslide hazard locations or steep erodible fill slopes as directed by the Authorized Officer.

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- (9) E-1 In addition to the requirement set forth in Section 26 of this contract, the Purchaser shall as directed by the Authorized Officer rehabilitate all ground based skid trails utilized within two hundred five (205) feet of streams, all temporary routes on BLM lands, the cable-tractor swing route on BLM land in units 31-4B, 31-4C, 31-4D, 31-11A, 31-11B, 31-20, 33-7, and 33-8 and all landings in all units outside of the road prism by one of the following methods:
- (a) If the Authorized Officer deems ripping will not cause unacceptable damage to the root systems of residual trees the Purchaser shall discontinuously subsoil with winged ripper teeth, simultaneously water bar, seed, mulch, and barricade.
 - 1. Use a minimum 200 flywheel horsepower tractor with mounted rippers having shanks and teeth consistent with drawings and specifications shown on Exhibit R of this contract, which, is attached hereto and made a part hereof.
 - 2. Rip to a depth of twelve (12) inches, and no further than thirty six (36) inches apart.
 - 3. Ripping will occur before **October 15** of the year of harvest.
 - 4. Any step landings shall be re-contoured following use.
 - (b) If the Authorized Officer deems ripping will cause an unacceptable amount of damage to the root systems of residual trees the Purchaser shall scarify to a depth of up to six (6) inches and simultaneously water bar, seed, mulch, and barricade.
- All rehabilitation shall occur within eighteen (18) months of harvest, during the dry season, and after pile burning is complete.
- (10) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall, upon completion of skidding, pull vegetation over and block skid trails if unauthorized off-highway vehicles (OHV) are identified utilizing the skid trails.
- (11) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall place material removed during excavation in locations where it cannot enter streams or other water bodies.

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- (12) 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 C7-1 which is attached hereto and made a part hereof.
- (13) E-3 The Purchaser shall immediately discontinue specified construction or harvesting operations upon written notice from the Contracting Officer that:
- (a) 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;
 - (b) when, in order to comply with the Endangered Species Act, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
 - (c) 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;
 - (d) other active raptor nests have been discovered, and a determination is made that continued operations under this contract would adversely affect the present use of the discovered nesting area by the raptor, or;
 - (e) 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;
 - (f) when, in order to comply with a court order, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
 - 1. species have been discovered which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, and the Contracting Officer determines that continued operations would affect the species or its habitat, or;
 - 2. when, in order to protect species which were identified for protection through survey and manage and/or protection buffer

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standards and guidelines 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.b. 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.b. of the contract within 15 days after the bill for collection is issued, subject to Section 3.j. 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

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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, or court-ordered injunctions, 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 terminate the cutting and removal rights under the contract in order to comply with the Endangered Species Act, protect species that have been discovered which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, or comply with a court order. 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, survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, or court order requirements necessitating the modification or termination.

In the event 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

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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.

- (14) E-5 The Purchaser shall notify the Authorized Officer in writing by February 1 of each calendar year in which operations are expected to take place on the contract area between March 1 and September 30, both days inclusive. If notification is not received by the Authorized Officer by February 1, felling, bucking, yarding, road construction, or any other activity with the potential to disturb nesting northern spotted owls may not be allowed during this time period.

Upon receipt of a notice that the Purchaser expects to perform such operations during this time period, the Government will conduct surveys to determine whether owls are nesting within 0.25 miles of the harvest units. If it is determined owls are not nesting or that no young have been produced, the Authorized Officer may lift the seasonal restriction on such operations (in writing). Without this approval, such operations are prohibited from March 1 through September 30 of each year.

(D) MISCELLANEOUS PROVISIONS

- (1) M-2 The Government, at its option, may administratively check scale any portion of the timber removed from the contract area, and if necessary, conduct check scaling of independent scalers contracted to BLM for administrative check scaling purposes. The Purchaser hereby agrees to make such contract timber available for such scaling at a location or locations to be approved in writing by the Authorized Officer. At the approved location or locations, the Purchaser shall provide an area for logs to be safely rolled out for scaling, to unload logs from trucks, place logs in a manner so that both ends and three faces of each log are visible for scaling, and to reload or remove logs after scaling has been completed. In the event that BLM elects to administratively check scale and if such check scaling causes a delay in log transportation time, an adjustment will be made to the purchase price as follows: If the entire sale is check scaled, the purchase price of this contract shall be reduced by eight hundred sixty eight dollars and fifty cents (\$868.50). In the event that only a portion of the contract timber is scaled, the purchase price shall be reduced by that portion of eight hundred sixty eight dollars and fifty cents (\$868.50) which is equal to the percentage of timber sold which was actually scaled by the Government. For purposes of computing this price reduction, the percentage of timber sold which has been scaled shall be determined by the Government. Any reduction in purchase price under the terms of this provision shall be full

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compensation to the Purchaser for any expense or loss incurred as a result of such scaling. Scaling shall be conducted in accordance with the Northwest Log Rules Eastside Log Scaling Handbook, as amended, or supplemented by BLM before the first advertisement date of the sale, by BLM scalers, and/or independent scalers contracted to BLM. A copy of the scale report will be made available to the Purchaser upon request.

(E) FIRE PREVENTION

- (1) F-1 Fire Prevention and Control. Primarily for purposes of fire prevention and control, the Purchaser shall, prior to the operation of power driven equipment in construction or 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 of the Authorized Officer.
- (2) 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 during any 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 Authorized Officer and 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:
 1. F-2a Fire fighting tools shall be kept at each landing or at such other place as the Authorized Officer shall designate whenever employees are working on 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 weigh 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 be not less than four (4) tools in each box nor less than one (1) tool for each employee working on the contract area. Three-fourths (3/4) of all fire tools shall be

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shovels, hazel hoes, or other scraping tools. The fire tools shall be used only for fighting fire.

2. F-2b At each landing or such other place as the Authorized Officer shall designate during periods of operation one (1) tank truck of three hundred (300) gallons or more capacity with five hundred (500) feet of 1½ inch hose (must be adequate length to reach 200 feet beyond active work sites), six (6) 1½ inch wyes, six (6) 1½ inch to 1 inch reducers, three (3) 1½ inch nozzles and three (3) 1 inch nozzles. One (1) three hundred (300) gallon fire engine may be substituted for each required 300 gallon tank truck, provided that the total capability to pump and deliver water remains unchanged. Each fire engine / tank truck shall be equipped with a pump capable of delivering a minimum of forty (40) gallons per minute (gpm) water flow at one hundred fifty (150) pounds per square inch (psi) engine pressure through fifty (50) feet of 1½ inch fire hose. The pump may be either power take off driven or truck-mounted auxiliary engine driven, or portable. All equipment shall be acceptable to and approved by the Authorized Officer and shall conform to the standards set forth in Oregon Revised Statutes 477.645 through 477.670. All hose couplings shall have the standard thread adopted by the BLM (1 ½ inches National Hose Thread (NH), 1 inch National Pipe Straight Hose Thread (NPSH) or be provided with suitable adapters. At the close of each working day, all bulldozers and fire/tank trucks shall be filled with fuel and made ready for immediate use. All fire/tank trucks shall be filled with water and made available for immediate use.
3. F-2c Serviceable cell phone or radio equipment able to provide prompt and reliable communication between the contract area, Medford BLM District Office, and Oregon Department of Forestry. Such communication shall be available during periods of operation including the time watchman service is required.
4. F-2d A pair of headlights capable of being quickly attached to each bulldozer used on the contract area. The headlights shall be adequate to provide illumination sufficient to allow use of the bulldozers for firefighting and construction of fire lines at night.

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5. F-2e A headlamp for each employee in the woods crew adequate to provide sufficient illumination for night firefighting. A headlight shall be of the type that can be fastened to the head so as to allow independent use of the hands. At least one extra set of batteries shall be provided for each such headlight.
 6. F-2f Two (2) back-pack pumps at each landing and one (1) at each tail block, all to be kept full of water and in good operating condition.
 7. F-2g A chemical fire extinguisher of at least eight (8) ounces minimum capacity of a type approved by the Authorized Officer and a size 0 or larger shovel shall be carried during the closed fire season or periods of fire danger by each falling crew and each buckner using a power saw on 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. 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 Authorized Officer.
- (c) F-5 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.
- (3) F-9 During Oregon Department of Forestry regulated use closure, no smoking shall be permitted outside of closed vehicles.

(F) SLASH DISPOSAL

- (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

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for performance of the following hazard reduction measures required by this contract:

- (a) SD-1a LOP AND SCATTER Lop and scatter all slash outside of hand pile areas in units 31-2A, 33-7, and 33-8 as shown on Exhibit S. All top and side branches must be free of the central stem so that such stem is reduced to the extent that it is within eighteen (18) inches of the ground at all points. Slash includes all woody material (brush, limbs, tops, unmerchantable stems, or chunks) severed, uprooted, or broken from live plants as a result of Purchaser's operations under the terms of this contract. Lop and scatter shall be completed in accordance with Exhibit S as directed by the Authorized Officer.
 - 1. All slash shall be arranged in a discontinuous pattern across the forest floor.
 - 2. All slash shall be loped to no more than eight (8) feet in length.
- (b) SD-1b MACHINE PILE, COVER, AND BURN ROADSIDE LANDING DECKS Pile and burn all slash cut within fifteen (15) feet on each side of the road in roadside management unit 31-8-31.5. Slash shall be piled by machine. Piling shall be completed in accordance with Exhibit S as directed by the Authorized Officer. Finished piles shall be tight and free of earth.
 - 1. The BLM will prepare a fire burn plan. The purchaser shall obtain smoke clearance before ignition of piles.
 - 2. Slash includes woody material (brush, limbs, tops, unmerchantable stems, or chunks) severed, uprooted, or broken from live plants as a result of Purchaser's operations under the terms of this contract.
 - 3. All equipment shall be approved by the Authorized Officer. Piling shall be accomplished using a track mounted hydraulic excavator or equivalent with at least a five (5) tooth brush rake. The excavator shall have a minimum reach of twenty (20) feet. The excavator shall be equipped with a hydraulic thumb or rotating controllable grapple head.

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4. Machine piling operations in roadside management units are limited to existing road surfaces and to seasonal restrictions described in Sec. 42(A)(16)(L-19).
 5. Machine piles shall be constructed as compactly as possible. There should be an adequate supply of fine fuels located within and under the covered area of the pile to ensure ignition of the larger fuels. Completed piles shall be free of projecting limbs or slash which would interfere with adequate covering of the piles.
 6. Machine piles shall be adequately covered with a cap of ten (10) feet by ten (10) feet of four (4) millimeter black polyethylene plastic. The plastic shall be held in place with woody debris or tied with rope or twine to ensure coverage. Coverage shall be completed when piles are constructed, or as directed by the Authorized Officer.
 7. Machine piles shall not be placed within fifteen (15) feet of snags, stumps, reserve trees or large woody debris.
 8. Machine piles will be burned within eighteen (18) months of harvest completion.
 9. Machine piles will be burned in the fall to spring season after one (1) or more inches of precipitation have occurred.
 10. The purchaser shall burn one hundred (100) percent of machine piles with a minimum consumption of ninety (90) percent.
 11. The Purchaser is required to furnish the fuel and equipment for machine pile burning.
- (c) SD-1c HAND PILE, COVER, AND BURN Pile and burn all slash situated within one hundred (100) feet of road 32-8-10.2 where the road coincides with a harvest unit boundary in units 33-7 and 33-8. Pile and burn all slash situated within two hundred (200) feet of road 31-8-31.1 where the road coincides with a harvest unit boundary in unit 31-2A. Pile and burn all slash situated within two hundred (200) feet of road 32-8-1.1 where the road coincides with a harvest unit boundary in unit 31-4D. Pile and burn all slash situated below road 31-8-31.1 in unit 31-11B. Pile and burn all slash situated in units 31-4B, 31-4C, and 31-20. Slash shall be piled by hand.

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Piling shall be completed in accordance with Exhibit S as directed by the Authorized Officer. Finished piles shall be tight and free of earth.

1. The BLM will prepare a fire burn plan. The purchaser shall obtain smoke clearance before ignition of piles.
2. Slash includes woody material (brush, limbs, tops, unmerchantable stems, or chunks severed, uprooted, or broken from live plants as a result of Purchaser's operations under the terms of this contract.
3. Hand pile all slash which is between one (1) and six (6) inches in diameter on the large end and exceeds two (2) feet in length, or as directed by the Authorized Officer.
4. Hand piles shall be constructed as compactly as possible. There should be an adequate supply of fine fuels located within and under the covered area of the pile to ensure ignition of the larger fuels. Completed piles shall be free of projecting limbs or slash which would interfere with adequate covering of the piles.
5. Hand piles shall be placed within unit boundaries, however, outside of wildlife buffers, roadways, turnouts, shoulders, or cut banks. No hand piles shall be located in any stream channel, down logs, stumps or within ten (10) feet of any other pile or trunk of the nearest reserve tree. No portion of the pile will be under the crown of any living tree. No piles shall be placed adjacent to or within twenty five (25) feet of unit boundaries.
6. Hand piles shall be adequately covered with a minimum cap of five (5) feet by five (5) feet of four (4) millimeter black polyethylene plastic that is large enough to cover 80% of the pile to ensure ignition. The plastic shall be held in place with woody debris or tied with rope or twine to ensure coverage. Coverage shall be completed when piles are constructed, or as directed by the Authorized Officer.
7. Hand piles would not be constructed on roadways, turnouts, shoulders, or on the cut bank, unless authorized by the Authorized officer.

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8. Hand piles will be burned within eighteen (18) months of harvest completion.
9. Hand piles will be burned in the fall to spring season after one (1) or more inches of precipitation have occurred.
10. The purchaser shall burn ninety (90) percent of hand piles with ninety (90) percent consumption for satisfactory completion of treatment.
11. The Purchaser is required to furnish the fuel and equipment for hand pile burning.

- (d) SD-1f PILE, COVER, AND BURN LANDINGS Within twenty (20) feet of the edge of each landing, all tops, broken pieces, limbs and debris more than one (1) inch in diameter at the large end and longer than two (2) feet in length shall be piled within fourteen (14) days of completion of hauling logs from that landing. Landing piles shall be kept free of dirt and located off of the driving surface of roads and at least fifteen (15) feet from any Reserve Tree and/or as directed by the Authorized Officer.

Upon completion of landing piling, the Purchaser shall prepare the landing piles for burning by constructing a fire line by hand or machine approximately eighteen (18) inches wide down to mineral soil around each pile to prevent escaped fire. Cover piles with a large enough piece of four (4) millimeter thick black plastic to ensure a dry ignition spot, generally ten (10) foot by ten (10) foot. 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.

1. The BLM will prepare a fire burn plan. The Purchaser shall obtain smoke clearance prior to ignition.
2. Landing piles will be burned in the fall to spring season after one (1) or more inches of precipitation have occurred.
3. Landing piles shall be burned within eighteen (18) months of harvest completion.

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4. If the Purchaser elects to set aside pole/firewood decks and not put the material in landing piles, then the Purchaser shall be required to remove decks before the expiration of cutting rights. The pole/firewood material shall be hauled off site for processing. The Authorized Officer shall determine location of pole/hardwood decks.
- (2) SD-2 Notwithstanding the provisions of Sec. 15 of this contract, the Government shall assume all obligations for disposal or reduction of fire hazards created by Purchaser's operations on Government lands, except for burning and mop up assistance as required herein, and measures required in Sections 42(E) and 42(F). In accordance with written instruction to be issued by the Authorized Officer at least ten (10) days in advance of earliest date of required performance, the Purchaser shall, under supervision of the Authorized Officer or his designated representative, assist in preparing units for preparing units for burning, mop-up, and patrol by furnishing, at his own expense, the services of personnel and equipment on each unit as shown below.

All crews shall arrive on the project area with radios capable of inter-crew communications and communication with a BLM representative at a ratio of one (1) radio per every five (5) crew members.

- (a) For Igniting and Burning Hand Pile Units 31-2A, 31-4B, 31-4C, 31-4D, 31-11B, 31-20, 33-7, and 33-8 as shown on Exhibit S:
1. One (1) person to supervise crew and equipment operators, and to serve as Purchaser's representative.
 2. One (1) crew with ten (10) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
 3. One (1) tank truck driver.
 4. One (1) tank truck. Each truck shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each truck shall be equipped

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with a mounted pump conforming to the standards set forth in ORS 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. Truck and tank shall be in good working order and shall be filled with water.

5. Ten (10) drip torches, Forester Sealtite, or equivalent.
6. Hand ignition with drip torches is required in pile burn units.
7. All ignition personnel will be directly supervised by a BLM representative.

(b) For Mop-up of Hand Pile Units 31-2A, 31-4B, 31-4C, 31-4D, 31-11B, 31-20, 33-7, and 33-8 as shown on Exhibit S:

1. One (1) person to supervise crew and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or other scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) tank truck driver.
4. One (1) tank truck. Each truck shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each truck shall be equipped with a mounted pump conforming to the standards set forth in ORS 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. Truck and tank shall be in good working order and shall be filled with water.

(c) For Igniting and Burning Landing Piles in All Units as shown on Exhibit S:

1. One (1) person to supervise crew and to serve as Purchaser's representative.

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2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) tank truck driver.
4. One (1) tank truck. Each truck shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each truck shall be equipped with a mounted pump conforming to the standards set forth in ORS 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. Truck and tank shall be in good working order and shall be filled with water.

(d) For Mop-up Landing Piles in All Units as shown on Exhibit S:

1. One (1) person to supervise crew and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) tank truck driver.
4. One (1) tank truck. Each truck shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each truck shall be equipped with a mounted pump conforming to the standards set forth in ORS 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. Truck and tank shall be in good working order and shall be filled with water.

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Aircraft and pilots used for Logging Residue Reduction or the suppression of escaped fires from Logging Residue Reduction operations, shall be acquired from a list of aircraft and pilots approved (i.e., carded for these specific activities) by the Office of Aircraft Services or the U.S. Forest Service. This list is available from BLM District Offices upon request.

All listed personnel shall be physically fit, experienced and fully capable of functioning as required. All personnel shall arrive at the project area(s) with the following personal safety equipment: long sleeve natural fabric shirt, full length natural fabric trousers, minimum eight (8)-inch top leather boots, hardhat, and leather gloves. All personnel shall wear long pants and long sleeve shirts, lug-soled leather boots with minimum eight (8)-inch tall uppers that provide ankle support, approved hardhat, and leather gloves. On the day of ignition, clothing shall be of approved aramid fabric Nomex™ or equivalent and all personnel shall carry an approved fire shelter. Clothing shall be free of diesel fuel oil.

All listed tools and equipment shall be in good usable condition. All power driven equipment shall be fully fueled and available for immediate use. During periods of use under this subsection, the Purchaser shall provide fuel and maintenance for all such power- driven equipment.

Except as provided hereafter for fire escapement, the Purchaser shall continue the required assistance in mop up on each hand pile unit and for landing decks in all units shown on Exhibit S for four hundred fifty (450) hours as directed by the Authorized Officer within a ten (10) day period beginning 8:00 a.m. the day following completion of ignition in that unit or until released from such services by the Authorized Officer, whichever occurs first.

In the event of a fire escapement, Purchaser's personnel and equipment shall, under supervision of the Authorized Officer, take action to suppress, including control and mop-up, the escaped fire until released from such service by the Government. If it becomes necessary to suppress a fire which escapes from the prescribed fire area for a period beyond midnight of ignition day, then the Government shall, at its option:

- (a) reimburse Purchaser for such additional use of personnel and equipment at wage rates shown in the current Administratively Determined Pay Rates for Western Area and at equipment rates shown in current Oregon-Washington Interagency Fire Fighting Equipment Rental Rates schedule, until the Purchaser is released from such service by the Government, or

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- (b) release the Purchaser from additional suppression work and assume responsibility for suppressing the escaped fire.

In situations where an escaped fire is controlled and contained by an adequate fire break (e.g., trail, road, stream, rock formation), the Government may permit the Purchaser to remove personnel for that day; provided that, all mop up work on the escaped fire area is included with mop up work on the prescribed fire area. In such an event, the Purchaser must sign a statement of agreement to complete mop up work on all escaped fire areas concurrently with mop up work on the prescribed fire area.

In case of injury to personnel or damage to equipment furnished by the Purchaser as required by this subsection, liability shall be borne by the Purchaser, unless such injury or damage is caused by Government negligence.

Time is of the essence in complying with this provision. In the event the Purchaser fails to provide personnel and equipment required herein, the Purchaser shall be responsible for all additional costs incurred by the Government in disposing of slash, including but not limited to the wages and other costs of providing federal employees and others as substitute labor force, the cost of providing substitute equipment, and appropriate additional overhead expenses. If the Purchaser's failure results in deferral of burning and new conditions necessitate additional site preparation work and/or use of additional personnel and equipment to accomplish planned burning, the Purchaser also shall be responsible for such additional costs.

- (3) SD-4 Logging Residue Reduction. In addition to the requirements of Secs. 15 and 25 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 Purchaser from liability for such hazard, the Purchaser shall remain responsible to the Government for performance of the following logging residue reduction and site preparation measures required by this contract:

- (a) Perform UNDERBURNING in units 31-11A and 31-11B above road 31-8-31.3 as shown on Exhibit S.

Notwithstanding the provisions of Sec. 15 of this contract, the Government shall assume all obligations for disposal or reduction of fire hazards created by Purchaser's operations on Government lands, except for burning and

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mop up assistance as required herein, and measures required in Sections 42(E) and 42(F). In accordance with written instruction to be issued by the Authorized Officer at least ten (10) days in advance of earliest date of required performance, the Purchaser shall, under supervision of the Authorized Officer or his designated representative, assist in preparing units for burning, mop-up, and patrol by furnishing, at his own expense, the services of personnel and equipment on each unit as shown below.

1. All crews shall arrive on the project area with radios capable of inter-crew communications and communication with a BLM representative at a ratio of one (1) radio per every five (5) crew members.
2. Underburn units shall follow the Resource, Prescribed Fire Objectives and Constraints (Element 5 Objectives) for each underburn unit as outlined in Prescribed Fire Burn Plan and as directed by the Authorized Officer or BLM representative.
3. Smoke clearance will be obtained the day prior to planned ignition for all burn units.
4. Prescribed burning shall be conducted in a manner that will minimize damage to reserve trees, duff, soil, and to avoid loss of large/coarse woody debris and will be consistent with ecosystem management objectives out-lined in the burn plan.
5. Hand fire lines to mineral soil, minimum width eighteen (18) inches and maximum width three (3) feet, shall be located, constructed and maintained as directed by the Authorized Officer not to exceed two thousand nine hundred (2,900) horizontal feet in length. The Authorized Officer shall designate the time of construction.
6. Limit fire lines inside Riparian Reserves (within two hundred five (205) feet of streams shown on Exhibit S). On very steep ground where runoff could enter waterways, incorporate water bars as directed by the Authorized Officer.
7. Fire lines shall be constructed within thirty (30) days of notification by the Authorized Officer. Water bars shall be

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constructed and maintained on the fire lines to the satisfaction of the Authorized Officer.

8. The Purchaser is required to furnish the fuel and equipment for underburning.

(b) For Igniting and Holding Underburn Units 31-11A and 31-11B as shown on Exhibit S:

1. One (1) person to supervise crews and equipment operators, and to serve as Purchaser's representative.
2. Two (2) crews with ten (10) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) tractor/dozer operator.
4. Three (3) tank truck drivers.
5. One (1) tractor (Caterpillar D6 or equivalent) equipped with straight solid blade.
6. Three (3) tank trucks. Each truck shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each truck shall be equipped with a mounted pump conforming to the standards set forth in ORS 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. Truck(s) and tank(s) shall be in good working order and shall be filled with water.
7. Sixteen (16) drip torches, Forester Sealtite, or equivalent.
8. Hand ignition with drip torches is required in underburn units.
9. All ignition personnel will be directly supervised by a BLM representative.

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(c) For Mop-up of Underburn Units 31-11A and 31-11B as shown on Exhibit S:

1. One (1) person to supervise crew and equipment operators, and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis or other scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) tank truck driver.
4. One (1) tank truck. Each truck shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each truck shall be equipped with a mounted pump conforming to the standards set forth in ORS 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. Truck and tank shall be in good working order and shall be filled with water.

Aircraft and pilots used for Logging Residue Reduction or the suppression of escaped fires from Logging Residue Reduction operations, shall be acquired from a list of aircraft and pilots approved (i.e., carded for these specific activities) by the Office of Aircraft Services or the U.S. Forest Service. This list is available from BLM District Offices upon request.

All listed personnel shall be physically fit, experienced and fully capable of functioning as required. All personnel shall arrive at the project area(s) with the following personal safety equipment: long sleeve natural fabric shirt, full length natural fabric trousers, minimum eight (8)-inch top leather boots, hardhat, and leather gloves. All personnel shall wear long pants and long sleeve shirts, lug-soled leather boots with minimum eight (8)-inch tall uppers that provide ankle support, approved hardhat, and leather gloves. On the day of ignition, clothing shall be of approved aramid fabric, Nomex™ or equivalent, and all personnel shall carry an approved fire shelter. Clothing shall be free of diesel fuel oil.

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All listed tools and equipment shall be in good usable condition. All power driven equipment shall be fully fueled and available for immediate use. During periods of use under this subsection, the Purchaser shall provide fuel and maintenance for all such power- driven equipment.

Except as provided hereafter for fire escapement, the Purchaser shall continue the required assistance in mop up on each underburn unit shown on Exhibit S for six hundred forty (640) hours as directed by the Authorized Officer within a ten (10) day period beginning 8:00 a.m. the day following completion of ignition in that unit or until released from such services by the Authorized Officer, whichever occurs first.

In the event of a fire escapement, Purchaser's personnel and equipment shall, under supervision of the Authorized Officer, take action to suppress, including control and mop-up, the escaped fire until released from such service by the Government. If it becomes necessary to suppress a fire which escapes from the prescribed fire area for a period beyond midnight of ignition day, then the Government shall, at its option:

- (a) reimburse Purchaser for such additional use of personnel and equipment at wage rates shown in the current Administratively Determined Pay Rates for Western Area and at equipment rates shown in current Oregon-Washington Interagency Fire Fighting Equipment Rental Rates schedule, until the Purchaser is released from such service by the Government, or
- (b) release the Purchaser from additional suppression work and assume responsibility for suppressing the escaped fire.

In situations where an escaped fire is controlled and contained by an adequate fire break (e.g., trail, road, stream, rock formation), the Government may permit the Purchaser to remove personnel for that day; provided that, all mop up work on the escaped fire area is included with mop up work on the prescribed fire area. In such an event, the Purchaser must sign a statement of agreement to complete mop up work on all escaped fire areas concurrently with mop up work on the prescribed fire area.

In case of injury to personnel or damage to equipment furnished by the Purchaser as required by this subsection, liability shall be borne by the Purchaser, unless such injury or damage is caused by Government negligence.

ELK STEW TIMBER SALE

SPECIAL PROVISIONS

Time is of the essence in complying with this provision. In the event the Purchaser fails to provide personnel and equipment required herein, the Purchaser shall be responsible for all additional costs incurred by the Government in disposing of slash, including but not limited to the wages and other costs of providing federal employees and others as substitute labor force, the cost of providing substitute equipment, and appropriate additional overhead expenses. If the Purchaser's failure results in deferral of burning and new conditions necessitate additional site preparation work and/or use of additional personnel and equipment to accomplish planned burning, the Purchaser also shall be responsible for such additional costs.

- (4) SD-5 The Purchaser shall perform logging residue reduction and site preparation work on approximately one hundred forty three (143) acres of harvest area located in Cutting Unit No(s). 31-2A, 31-4B, 31-4C, 31-4D, 31-11A, 31-11B, 31-20, 33-7, 33-8, and 31-8-31.5 as shown on Exhibit S.
- (a) The required work shall consist of any treatment or combination of treatments listed in the table below, as determined by the Authorized Officer and specified in writing by the Contracting Officer. The number of acres of each treatment shall be determined by the Authorized Officer.

Treatment	Cost/Acre
Lop and Scatter 0-12 tons/acre	\$42.00
Hand Pile and Cover 0-25 piles/acre	\$325.00
Hand Pile Burn and Mop-up 0-25 piles/acre	\$42.00
Cover and Burn Landing Decks	\$56.00

- (b) The following treatments were assumed for appraisal purposes on this contract:

Appraised Treatment	Acres	Cost/Acre	Total Cost Per Treatment
Lop and Scatter 0-12 tons/acre	44	\$42.00	\$1,848.00
Hand Pile and Cover 0-25 piles/acre	50	\$325.00	\$16,250.00
Hand Pile Burn and Mop-up 0-25 piles/acre	50	\$42.00	\$2,100.00
Cover and Burn Landing Decks	10	\$56.00	\$560.00

ELK STEW TIMBER SALE

SPECIAL PROVISIONS

Total Appraised Cost			\$20,758.00
-----------------------------	--	--	--------------------

- (c) The Total Purchase Price set forth in Section 2 shall be adjusted in a unilateral modification executed by the Contracting Officer by the amount that the total cost of the site preparation treatments designated pursuant to Section 42(F)(4)(SD-5)(a) differs from twenty thousand seven hundred fifty eight and no/100 (\$20,758.00) dollars, as calculated by using the estimated acres determined by the Authorized Officer and the per acre costs listed in Section 42(F)(4)(SD-5)(a).
- (d) Lop and scatter will be done in accordance with Section 42(F)(1)(a)(SD-1a), hand piling and burning will be done in accordance with Section 42(F)(1)(c)(SD-1c) and Section 42(F)(2)(a & b), landing deck piling and burning will be done in accordance with Section 42(F)(1)(b)(SD-1b), Section 42(F)(1)(d)(SD-1f) and Section 42(F)(2)(c & d).

(G) CONTRIBUTIONS

- (1) C-1 The Purchaser shall perform HAND FIRE LINE CONSTRUCTION and UNDERBURNING in accordance with Section 42(F)(3)(SD-4). The Purchaser shall have the option of completing the hand fire line construction work, or in lieu thereof, may make a contribution to the Bureau of Land Management in the amount of two thousand four hundred seven and no/100 dollars (\$2,407.00) and upon making such contribution, the Purchaser shall be relieved of the obligations set out in this subsection. The Purchaser shall have the option of completing the underburning work, or in lieu thereof, may make a contribution to the Bureau of Land Management in the amount of eleven thousand twenty five and no/100 dollars (\$11,025.00), and upon making such contribution, the Purchaser shall be relieved of the obligations set out in this subsection. The Purchaser shall notify the Authorized Officer of their intention to make this contribution prior to the date of execution of this contract. If the total contribution does not exceed five hundred and no/100 dollars (\$500.00), the Purchaser shall pay such amount in full prior to the commencement of operations. If the total contribution exceeds five hundred and no/100 dollars (\$500.00), the Authorized Officer shall establish an installment schedule of payments.

(H) LOG EXPORTS

ELK STEW TIMBER SALE

SPECIAL PROVISIONS

- (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 (8¾) inches in thickness; (3) split or round bolts or other roundwood not processed to standards and specifications suitable for end-product uses; or (4) western red cedar lumber which does not meet lumber of American Lumber 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 timber, 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 (8¾) inches in thickness or less; (6) shakes and shingles.

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

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

- (a) Date of last export sale.
- (b) Volume of timber contained in last export sale.
- (c) Volume of timber exported in the past twelve (12) months from the date of last export sale.
- (d) Volume of Federal timber purchased in the past twelve (12) months from the date of last export sale.
- (e) Volume of timber exported in succeeding twelve (12) months from date of last export sale.
- (f) Volume of Federal timber purchased in succeeding twelve (12) months from date of last export sale.

ELK STEW TIMBER SALE

SPECIAL PROVISIONS

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 a 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. 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 10 inches, prior to the removal of timber from the contract area. All loads of 11 logs or more will have a minimum of 10 logs clearly and legibly branded on one end regardless of the diameter of the logs. All logs will be branded on loads of 10 logs or less. One end of all branded logs to be processed domestically will be marked with a 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.

ELK STEW TIMBER SALE

SPECIAL PROVISIONS

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.

	Unrestricted Period
	Restricted To Dry Condition
	Restricted To Dry Condition Waiver Required
	NSO Restricted Period (May be waived if NSO protocol surveys determine owls are not nesting)
	NSO Restricted Period (May be extended if owls are nesting)

** In-stream work periods for culvert cleaning are June 15th-September 15th

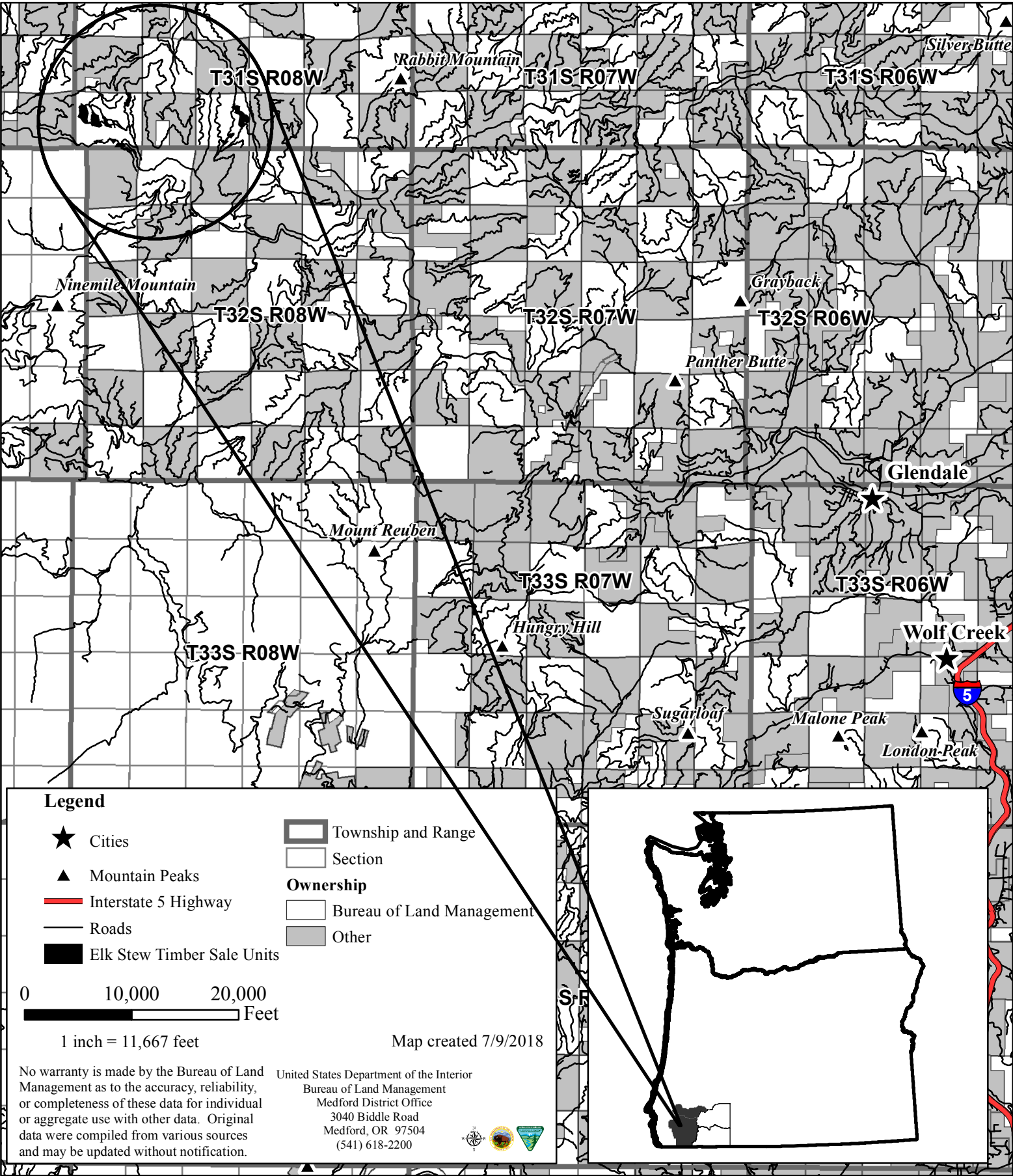
Dry Condition Haul = Loading, hauling, and certain non-emergency road maintenance activities (including blading of aggregate roads, rocking, and cross drain installation) would not occur on hydrologically-connected rocked or natural surface roads when water is flowing in the ditchlines or during any conditions that would result in any of the following: surface displacement such as rutting or ribbons; continuous mud splash or tire slide; fines being pumped through road surfacing from the subgrade and resulting in a layer of surface sludge; road drainage causing a visible increase in stream turbidities; or any condition that would result in water being chronically routed into tire tracks or away from designed road drainage during precipitation events. Hauling on natural surface or hydrologically-connected rocked roads would not resume for a minimum of 48 hours following any storm event that results in 1/2 inch or more precipitation within a 24 hour period, and until road surface is sufficiently dry to prevent any of the above conditions from reoccurring.

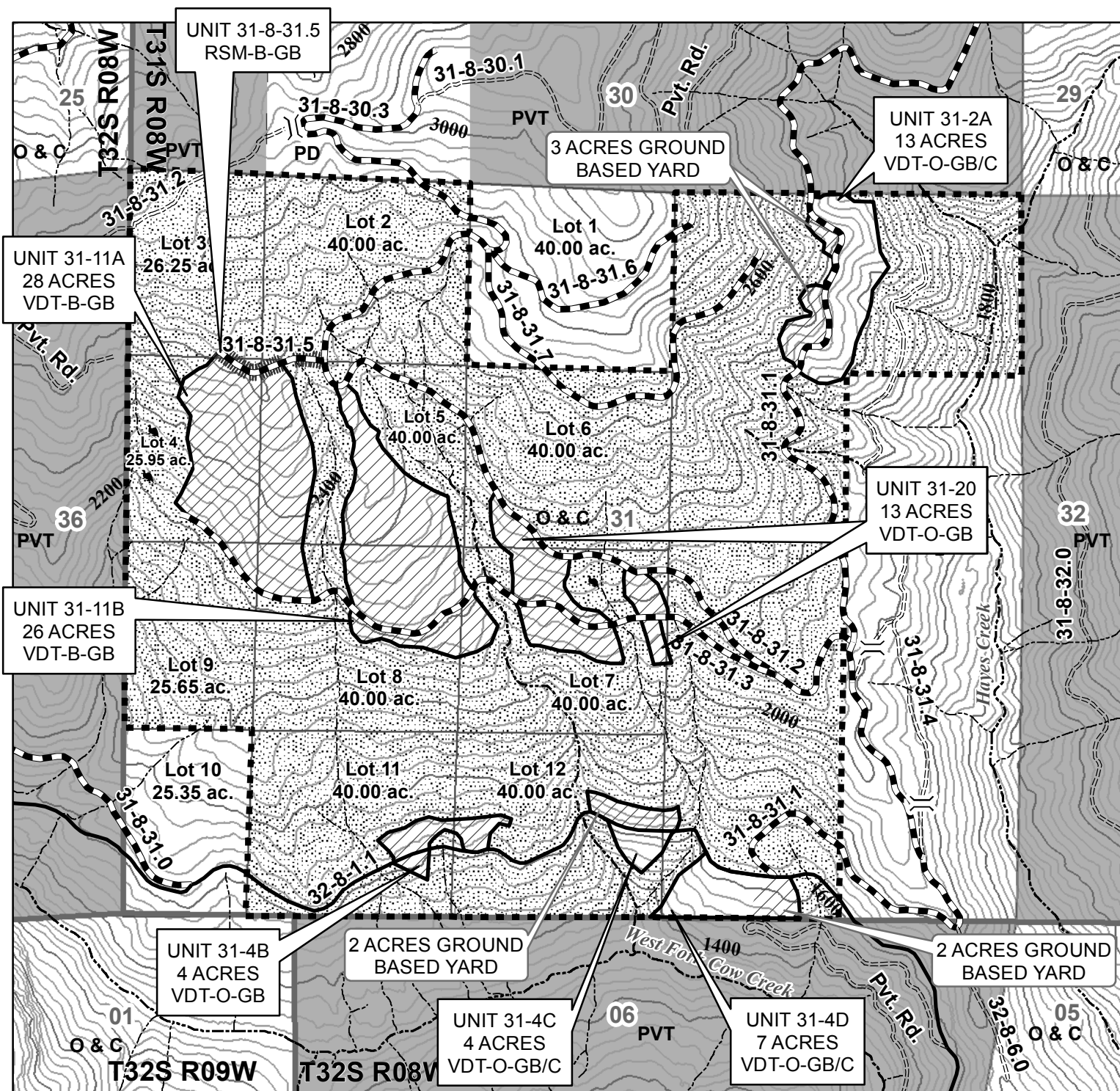
Dry Condition Ground-based harvesting and Temporary Route work = Ground-based harvesting & yarding, temporary route work, and rehabilitation activities would not occur when soil moisture at a depth of 4-6 inches is wet enough to maintain form when compressed, or when soil moisture at the surface would readily displace, causing ribbons and ruts along equipment tracks. These conditions are generally found when soil moisture at a depth of 4-10 inches is between 15-25% depending on soil type.

[illegible]

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	5	15	1	15	1	15	1	15	1
<u>Ground-based & Cable Yard Unit</u> <u>w/ Haul</u> <u>Restrictions:</u> 31-2A	Manual Felling and Bucking*																								
	Ground-based Harvesting & Yarding																								
	Cable Yarding*																								
	Loading and Hauling																								
	All Rehabilitation Activities & Road Maintenance**																								
<u>Ground-based & Cable Yard Unit</u> <u>w/Haul & Owl</u> <u>restrictions:</u> 33-8	Manual Felling and Bucking*																								
	Ground-based Harvesting & Yarding																								
	Cable Yarding*																								
	Loading and Hauling																								
	All Rehabilitation Activities & Road Maintenance**																								
<u>Ground-based & Cable Yard Unit</u> <u>w/Temp. Routes,</u> <u>w/Haul & Owl</u> <u>restrictions:</u> 33-7	Manual Felling and Bucking*																								
	Ground-based Harvesting & Yarding																								
	Cable Yarding*																								
	Loading and Hauling																								
	Temp. Route Construction, All Rehabilitation Activities & Road Maintenance**																								

SALE LOCATION MAP





0 750 1,500 3,000 Feet

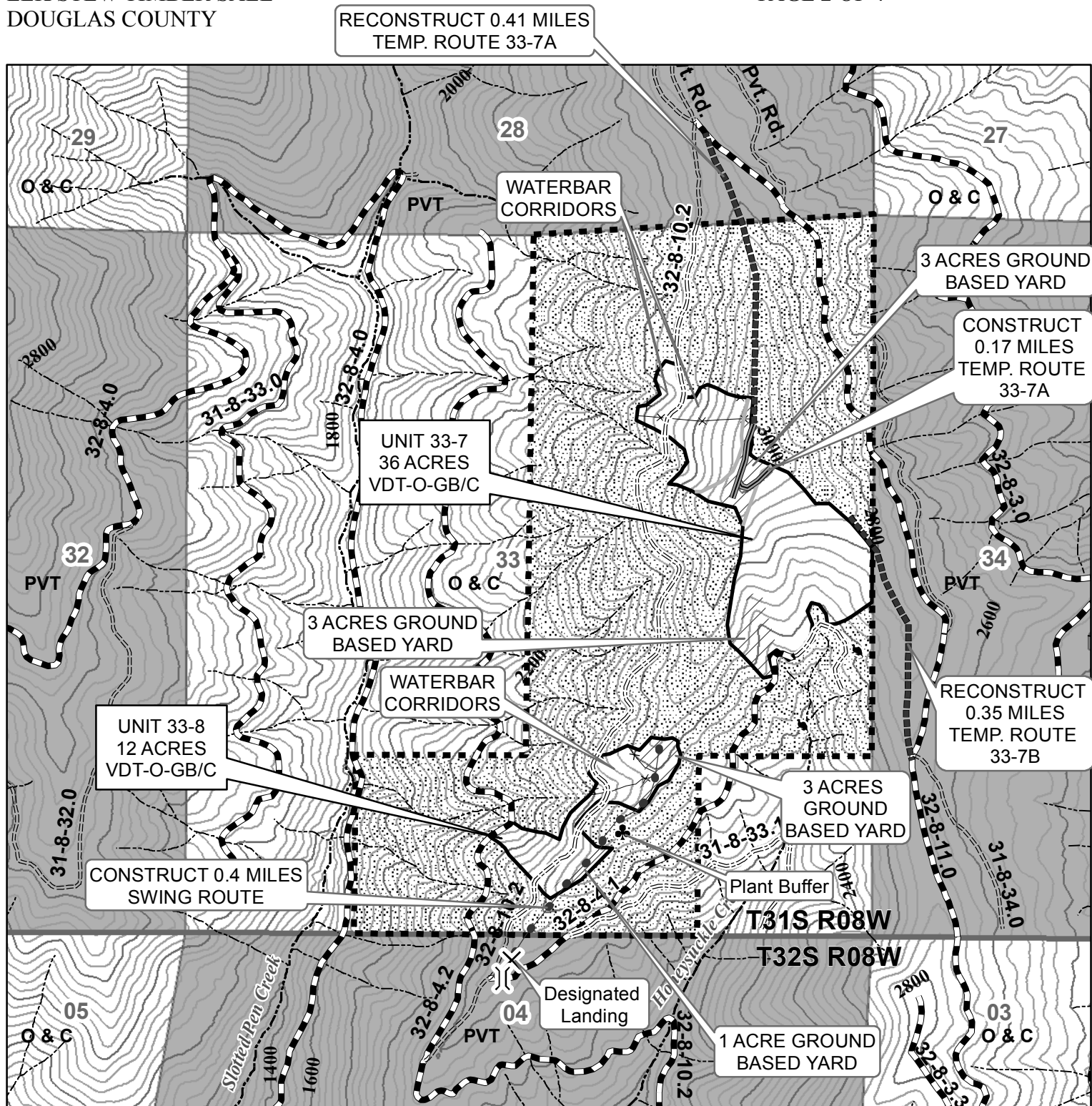
40 FOOT CONTOUR INTERVAL 1 inch = 1,000 feet

Map created 7/9/2018

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.

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Medford, OR 97504
(541) 618-2200





0 750 1,500 3,000 Feet

40 FOOT CONTOUR INTERVAL 1 inch = 1,000 feet






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Legend

-  Red Tree Vole Buffer
-  Plant Buffer
-  Designated Landing
-  Gate
-  Barricade




Temporary Routes

Type



-  Temp. Route Construction
-  Temp. Route Reconstruction
-  Tractor Swing Route

Roads




Surface Type

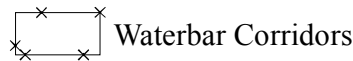
-  Paved
-  Rocked
-  Natural

Contours









-  Intermediate 40-ft
-  Index 200-ft

Streams




-  Perennial
-  Intermittent
-  Rx Change Line (flagged in yellow & white)



Elk Stew Timber Sale Units

-  Roadside Management Unit, Ground-based Harvest & Yard
-  Variable Density Thin Unit, Ground-based Harvest & Yard
-  Variable Density Thin Unit, Cable Yard
-  Reserve Area
-  Contract Area Boundary
-  Lots
-  Sections
-  Township and Range

Ownership

-  Bureau of Land Management O & C Land
-  Bureau of Land Management Public Domain Land
-  Private Land

UNIT	ACRES	PRESCRIPTION- PAINT COLOR- LOGGING SYSTEM
31-2A	13	VDT-O-GB/C
31-4B	4	VDT-O-GB
31-4C	4	VDT-O-GB/C
31-4D	7	VDT-O-GB/C
31-11A	28	VDT-B-GB
31-8-31.5		RSM-B-GB
31-11B	26	VDT-B-GB
31-20	13	VDT-O-GB
33-7	36	VDT-O-GB/C
33-8	12	VDT-O-GB/C
TOTAL	143	

ALL ACRES COMPUTED BY GPS TRAVERSE
BOUNDARIES OF HARVEST UNITS ARE
POSTED AND PAINTED IN ORANGE




VDT = VARIABLE DENSITY THIN
RSM = ROADSIDE MANAGEMENT
O = ORANGE PAINT (LEAVE TREE MARK)
B = BLUE PAINT (CUT TREE MARK)
GB = GROUND BASE YARD
C = CABLE YARD
GB/C = GROUND BASE AND CABLE YARD

Map created 7/9/2018

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SUMMARY

VDT-O-GB	VARIABLE DENSITY THIN-ORANGE PAINT (LEAVE TREE MARK)-GROUND BASE YARD (UNITS 31-4B, 31-20)	17 ACRES
VDT-B-GB	VARIABLE DENSITY THIN-BLUE PAINT (CUT TREE MARK)-GROUND BASE YARD (UNITS 31-11A, 31-11B)	54 ACRES
VDT-O-GB/C	VARIABLE DENSITY THIN-ORANGE PAINT (LEAVE TREE MARK)-GROUND BASE YARD AND CABLE YARD (UNITS 31-2A, 31-4C, 31-4D, 33-7, 33-8)	72 ACRES
RSM-B-GB	ROADSIDE MANAGEMENT-BLUE PAINT (CUT TREE MARK)-GROUND BASE YARD (ROAD 31-8-31.5)	ACRES INCLUDED WITH UNIT 31-11A
	TOTAL TIMBER SALE UNIT AREA	143 ACRES
	RESERVE AREA	734.85 ACRES
	TOTAL CONTRACT AREA	877.85 ACRES





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

Timber Appraisal

Sale Name: Elk Stew	Sale Date: Thursday, September 13, 2018
BLM District: Medford DO	Unit of Measure: 16' MBF
Contract #: ORM07-TS-18-0017	Contract Term: 36 months
Sale Type: Advertised	Contract Mechanism: 5450-3 Sale of Timber - Lump Sum

Content

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

Prepared By: Caulfield, David J
Approved By: Caulfield, David J

Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
O&C	Douglas	31S	8W	31	Lot 2,3,4,5,6,7,8,9,11,12 N1/2NE1/4, SW1/4NE1/4, W1/2SE1/4	Willamette
O&C	Douglas	31S	8W	33	NE1/4, SE1/4SW1/4, N1/2SE1/4, SW1/4SE1/4	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
Douglas Fir	1,100.0	1,164.0	1,170.0	31,530	91	10,824
Ponderosa Pine	41.0	43.0	44.0	1,155	68	513
White Fir	15.0	15.0	16.0	358	26	127
Incense-cedar	1.0	1.0	1.0	46	4	33
Sugar Pine	1.0	2.0	2.0	29	4	9
Totals	1,158.0	1,225.0	1,233.0	33,118	193	11,506

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
0.0	143.0	0.0	143.0	8.1

Logging Costs

Stump to Truck	\$293,981.99
Transportation	\$45,643.50
Road Construction	\$68,325.71
Maintenance/Rockwear	\$37,339.84
Road Use	\$0.00
Other Allowances	\$46,429.88
Total:	\$491,720.92
Total Logging Cost per MBF:	\$424.63

Utilization Centers

Location	Distance	% of Net Volume
Glendale, OR	24.0 miles	100 %

Profit & Risk

Basic Profit & Risk	9 %
Additional Risk	3 %
Total Profit & Risk	12 %

Tract Features

Quadratic Mean DBH	11.7 in
Average GM Log	37 bf
Average Volume per Acre	8.1 mbf
Recovery	94 %
<u>Net MBF volume:</u>	
Green	1,158.0 mbf
Salvage	0 mbf
Export	0 mbf
<u>Ground Base Logging:</u>	
Percent of Sale Volume	52 %
Average Yarding Slope	0 %
Average Yarding Distance	0 ft
<u>Cable Logging:</u>	
Percent of Sale Volume	48 %
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	June 2018
Cruised By	Cannon/Caulfield
Cruise Method	
3P Douglas Fir & BLM 100% all other species	

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Appraised Price/MBF	Appraised Value
Douglas Fir	10,824	1,100.0	\$735.85	\$88.30	\$424.63	\$0.00	\$222.90	\$245,190.00
Ponderosa Pine	513	41.0	\$402.44	\$48.29	\$424.63	\$0.00	\$40.30 *	\$1,652.30
White Fir	127	15.0	\$534.33	\$64.12	\$424.63	\$0.00	\$53.50 *	\$802.50
Incense-cedar	33	1.0	\$588.80	\$70.66	\$424.63	\$0.00	\$93.50	\$93.50
Sugar Pine	9	1.0	\$420.00	\$50.40	\$424.63	\$0.00	\$42.00 *	\$42.00
Totals	11,506	1,158.0						\$247,780.30

* Minimum Stumpage values were used to compute the Appraised Price/MBF (10% of Pond Value)

Percent of Volume By Log Grade

Species	No. 1 & 2 Peeler	No. 3 Peeler	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Douglas Fir			1.0 %	12.0 %	76.0 %	11.0 %	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Ponderosa Pine				10.0 %	76.0 %	14.0 %	

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
White Fir				22.0 %	65.0 %	13.0 %	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Incense-cedar				14.0 %	49.0 %	37.0 %	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Sugar Pine				55.0 %	38.0 %	7.0 %	

Elk Stew**Unit Summary****ORM07-TS-18-0017****Unit: 31-2A****Net Volume/Acre: 8.4 MBF**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	109.0	115.0	116.0	1,088
Totals:	109.0	115.0	116.0	1,088

Regeneration Harvest	0.0
Partial Cut	13.0
Right of Way	0.0
Total Acres:	13.0

Unit: 31-4B**Net Volume/Acre: 5.3 MBF**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	17.0	18.0	18.0	126
Ponderosa Pine	4.0	4.0	4.0	57
Totals:	21.0	22.0	22.0	183

Regeneration Harvest	0.0
Partial Cut	4.0
Right of Way	0.0
Total Acres:	4.0

Unit: 31-4C**Net Volume/Acre: 5.0 MBF**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	19.0	20.0	20.0	173
Ponderosa Pine	1.0	1.0	1.0	22
Totals:	20.0	21.0	21.0	195

Regeneration Harvest	0.0
Partial Cut	4.0
Right of Way	0.0
Total Acres:	4.0

Unit: 31-4D**Net Volume/Acre: 5.3 MBF**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	35.0	37.0	37.0	273
Ponderosa Pine	2.0	2.0	2.0	32
Totals:	37.0	39.0	39.0	305

Regeneration Harvest	0.0
Partial Cut	7.0
Right of Way	0.0
Total Acres:	7.0

Unit: 31-11A**Net Volume/Acre: 6.7 MBF**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	154.0	163.0	164.0	1,454
Ponderosa Pine	32.0	34.0	35.0	367
White Fir	1.0	1.0	1.0	6
Totals:	187.0	198.0	200.0	1,827

Regeneration Harvest	0.0
Partial Cut	28.0
Right of Way	0.0
Total Acres:	28.0

Unit: 31-11B**Net Volume/Acre: 6.5 MBF**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	166.0	176.0	177.0	1,636
White Fir	4.0	4.0	4.0	38
Totals:	170.0	180.0	181.0	1,674

Regeneration Harvest	0.0
Partial Cut	26.0
Right of Way	0.0
Total Acres:	26.0

Unit: 31-20**Net Volume/Acre: 4.9 MBF**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	52.0	55.0	55.0	423
White Fir	10.0	10.0	11.0	83
Incense-cedar	1.0	1.0	1.0	33
Ponderosa Pine	1.0	1.0	1.0	17
Totals:	64.0	67.0	68.0	556

Regeneration Harvest	0.0
Partial Cut	13.0
Right of Way	0.0
Total Acres:	13.0

Unit: 33-7**Net Volume/Acre: 11.5 MBF**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	415.0	439.0	441.0	4,413
Totals:	415.0	439.0	441.0	4,413

Regeneration Harvest	0.0
Partial Cut	36.0
Right of Way	0.0
Total Acres:	36.0

Unit: 33-8**Net Volume/Acre: 11.3 MBF**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	133.0	141.0	142.0	1,238
Sugar Pine	1.0	2.0	2.0	9
Ponderosa Pine	1.0	1.0	1.0	18
Totals:	135.0	144.0	145.0	1,265

Regeneration Harvest	0.0
Partial Cut	12.0
Right of Way	0.0
Total Acres:	12.0

Total Stump To Truck	Net Volume	\$/MBF
\$293,981.99	1,158.0	\$253.87

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

Yarding System	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Track Skidder	GM MBF	637.0	\$245.83	\$156,593.71	
Cable: Medium Yarder	GM MBF	588.0	\$223.31	\$131,306.28	
Subtotal				\$287,899.99	

Additional Costs

Item	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Deadman Anchor	Each	6.0	\$450.00	\$2,700.00	3 anchors at 2 settings
Intermediate Support	Each	4.0	\$250.00	\$1,000.00	4 intermediate supports
Lift Tree	Each	6.0	\$150.00	\$900.00	Lift Trees over 30'
Subtotal				\$4,600.00	

Additional Moves

Equipment	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Cable: Medium Yarder	Hour	3.0	\$134.00	\$402.00	One yarder
Loader	Hour	3.0	\$134.00	\$402.00	One loader
Delimber	Hour	3.0	\$134.00	\$402.00	One Delimber
Track Skidder	Hour	3.0	\$92.00	\$276.00	One skidder
Subtotal				\$1,482.00	

Comments:

See logging plan for yarding details.

	Total	Net Volume	\$/MBF
	\$45,643.50	1,158.0	\$39.42

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	\$/Unit of Measure	Total Cost	% of Sale Volume
Glendale, OR	24.0	All Species	GM MBF	1,225.0	\$37.26	\$45,643.50	100 %

Engineering Allowances

	Total	Net Volume	\$/MBF
	\$105,665.55	1,158.0	\$91.25

Cost Item	Total Cost
Road Construction:	\$68,325.71
Road Maintenance/Rockwear:	\$37,339.84
Road Use Fees:	\$0.00

Total	Net Volume	\$/MBF
\$46,429.88	1,158.0	\$40.09

Environmental Protection

Cost item	Total Cost
Equipment Washing	\$437.52
Barricades	\$450.00
Hand Seeding and Mulching	\$1,824.00
Ripping	\$3,320.00
Subtotal	\$6,031.52

Logging

Cost item	Total Cost
Skid Location	\$145.84
Waterbar Skyline Corridors	\$291.68
Waterbar Skids	\$225.00
Landing Construction	\$2,700.00
Subtotal	\$3,362.52

Road Construction, Maintenance, Use, & Decommissioning

Cost item	Total Cost
Stream and Culvert Cleaning	\$145.84
Subtotal	\$145.84

Slash Disposal & Site Prep

Cost item	Total Cost
Fire Line Construction	\$2,407.00
Lop and Scatter	\$1,848.00
Handpile Burn and Mop-up	\$2,100.00
Cover and Burn Landing Decks	\$560.00
Landing Clean-up	\$2,700.00
Underburning	\$11,025.00
Handpile and Cover	\$16,250.00
Subtotal	\$36,890.00

EXHIBIT C1 _____
ELK STEW TIMBER SALE
TRACT NO. ORM07-TS-18-17



LEGEND

BLM OWNERSHIP

NON-BLM

TIMBERSALE UNITS

BITUMINOUS

AGGREGATE

NATURAL

ROAD TO BE
RENOVATED
BY PURCHASER

TEMPORARY

TEMPORARY
CONSTRUCTION

TRACTOR SWING ROUTE

REV	NO	DESCRIPTION	DATE	APPROV

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

ELK STEW TIMBER SALE
ROAD RENOVATION MAP

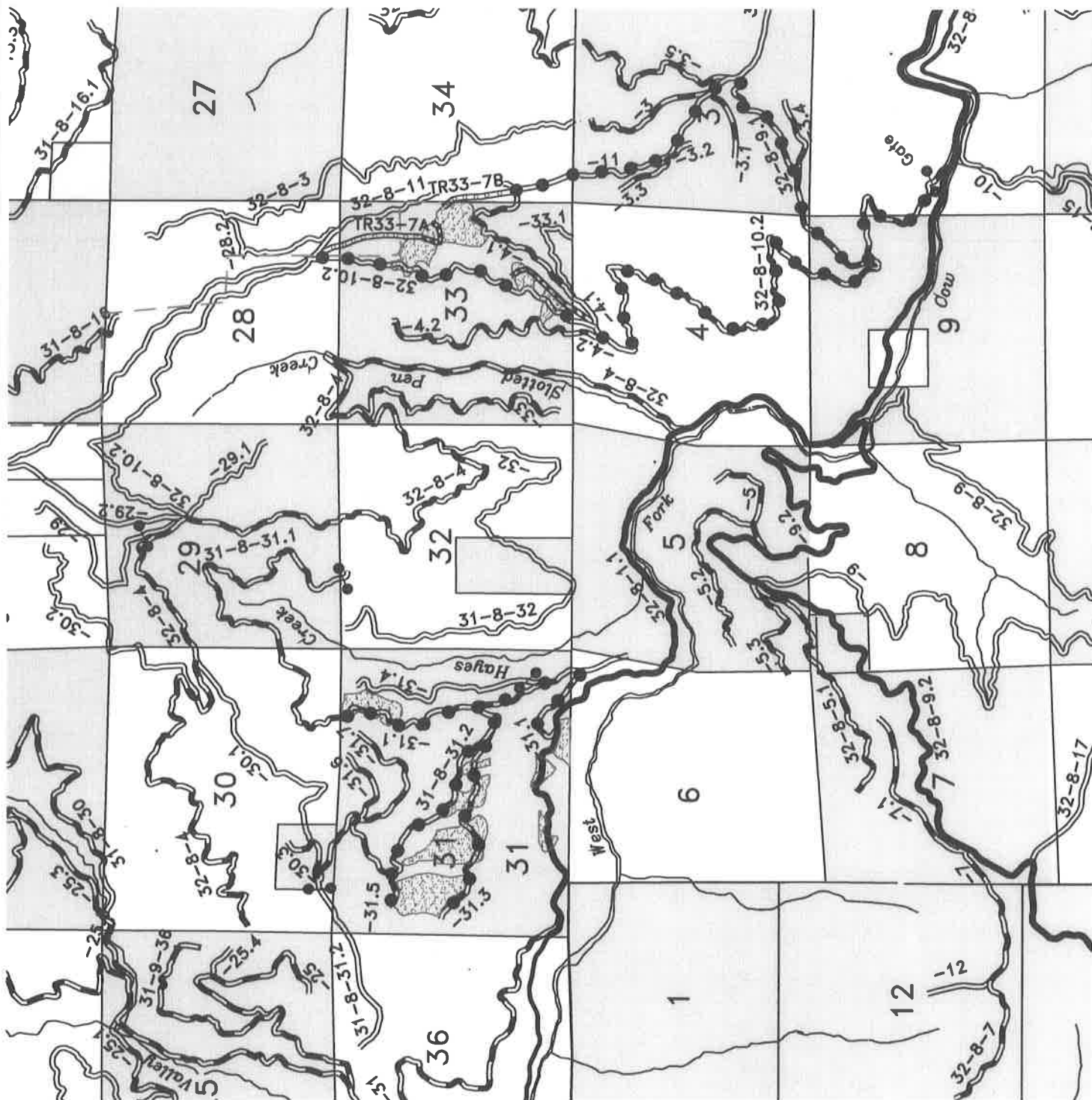
DESIGNED:

REVIEWED:

APPROVED:

DRAFTED BY: FLF

DATE: JUN 2018



LEGEND

BLM OWNERSHIP

NON-BLM

TIMBERSALE UNITS

BITUMINOUS

AGGREGATE

NATURAL

ROAD TO BE
RENOVATED
BY PURCHASER

TEMPORARY RECONSTRUCTION

TEMPORARY
CONSTRUCTION

TRACTOR SWING ROUTE

REV NO	DESCRIPTION	DATE	APPROV

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

ELK STEW TIMBER SALE
ROAD RENOVATION MAP

DESIGNED:

REVIEWED:

APPROVED:

DRAFTED BY

DATE: JUN



EXHIBIT C3

ROAD NUMBER	FROM (STA)	TO (STA)	LENGTH (MILES)	CLEARING AND GRUBBING	EXCAVATION		DRAINAGE							RENOVATION			AGGREGATE			SOIL STABILIZATION	CONSTRUCT WATER DIP	CONSTRUCT TRUCK TURNAROUND	BARRICADES	DECOMMISSIONING			
					RIPPABLE ROCK	COMMON	SIZE			CMP				LIGHT BLADING (DOZER)	HEAVY BLADING (DOZER)	SLIDE REMOVAL	PIT RUN	CRUSHED BASE ROCK	SLOPE PROTECTION (RIPRAP)					SUBGRADE	CONSTRUCT WATER BARS	SEED AND MULCH	
							18"	24"	30"	ELBOWS	DOWNSPOUT TYPE ROUND	18"	24"														
SPECIFICATION NO.	—————→			200	300		400							500			700	1200	1400	1800	8000			2600			
UNITS —→	MP	MP	MILE	ACRE	CY	CY	LF	LF	LF	EA	LF	MILE	MILE	CY	CY	CY	CY	ACRE	EA	EA	EA	EA	STA	EA	EA	ACRE	EA
31-8-31.1	0.00	1.61	1.61									1.61															
31-8-31.2	0.00	1.00	1.00									1.00															
31-8-31.3	0.00	1.00	1.00									1.00															
31-8-31.5	0.00	0.16	0.16									0.16															
32-8-9.1	0.00	1.18	1.18									1.18															
32-8-10.2	0.00	4.87	4.87				72					4.87		15													
32-8-11.0	0.00	1.15	1.15									1.15															
TR33-7A1	0.00	0.41	0.41	1.0		500						0.41								1	22	22	0.8				
TR33-7A2	0.00	0.17	0.17	0.5		1800						0.17										9	5	0.3			
TR33-7B	0.00	0.35	0.35	0.8		1800						0.35								1	18	18	0.7				
TOTALS				2.3		4100	72					11.9		15						2	49	45					1.8

RENOVATION NOTES

1. ROADS LISTED FOR SURFACE RESHAPING SHALL CONSIST OF BLADING, WATERING, & ROLLING PER CONTRACT SPECIFICATIONS & DRAWINGS.

2. DITCH/CULVERT CLEANING SHALL CONSIST OF DITCH BLADING AND RESHAPING, CLEARING DEBRIS, VEGETATION, SEDIMENT, ROCK AND ALL OTHER MATERIAL HINDERING THE FLOW OF RUNOFF PER CONTRACT SPECIFICATIONS & DRAWINGS.

*FOR INFORMATIONAL USE ONLY.
QUANTITIES SHOWN ARE NOT PAY ITEMS.

AGGREGATE GRADATION REQUIREMENTS

ITEM 900			ITEM 1000			ITEM 1200		
SIZE	GRADATION		SIZE	GRADATION		SIZE	GRADATION	
4 inch	A		3 inch	A,C,F		1 1/2 inch	C,C-1	
3 inch	B		2 inch	B,D,G,H		1 inch	D,D-1	
2 inch	C					3/4 inch	E,E-1	
1 1/2 inch	D							

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ELK STEW TIMBER SALE ESTIMATE OF QUANTITIES

DESIGNED: _____
 REVIEWED: _____
 APPROVED: _____
 DRAFTED BY: ELF
 DATE: JUN 2018
 SCALE: NONE
 SHEET: 1 OF 1
 DRAWING NO.: OR-11-9113-4-1

REV. NO. DESCRIPTION DATE APPROVAL
 UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 MEDFORD DISTRICT - MEDFORD, OREGON

EXHIBIT C4-1

[illegible]

NOTES

1. EXTRA SUB-GRADE WIDTHS
TO EACH FILL SHOULDER, ADD 1 FOOT FOR FILLS
OF 1-6 FEET AND 2 FEET FOR FILLS OVER 6 FEET.
WIDEN THE INSIDE SHOULDER OF ALL CURVES AS
FOLLOWS WHEN THE DEGREE OF CURVE EQUALS:
- | | |
|-------|-----------|
| 7-21 | ADD 1 FT. |
| 22-35 | ADD 2 FT. |
| 36-48 | ADD 3 FT. |
| 49-64 | ADD 4 FT. |
| 65-96 | ADD 5 FT. |

<u>MATERIALS</u>	<u>CUT SLOPE</u>	<u>FILL SLOPE</u>
COMMON	1/2 : 1	1 1/2 : 1
SOFT ROCK & SHALE	1/2 : 1	1 1/2 : 1
SOLID ROCK	1/2 : 1	angle of repose

- ## 2. SURFACING TYPES

- A. PIT RUN ROCK
B. GRID ROLLED ROCK MATERIAL
C. SCREENED ROCK MATERIAL
D. CRUSHED ROCK MATERIAL
E. NATURAL/NATIVE SOIL

- ### 3. TURNOUTS

- A. WIDTH 10 FT. IN ADDITION TO SUB-GRADE WIDTH, OR AS SHOWN ON THE PLANS.
- B. LOCATED APPROXIMATELY, AS SHOWN ON THE ROAD PLANS.
- C. INVISIBLE AND NOT MORE THAN 750 FT. APART

- #### 4. SURFACING

**TURNOUTS, CURVE WIDENING, AND ROAD
APPROACH APRONS SHALL BE SURFACED**

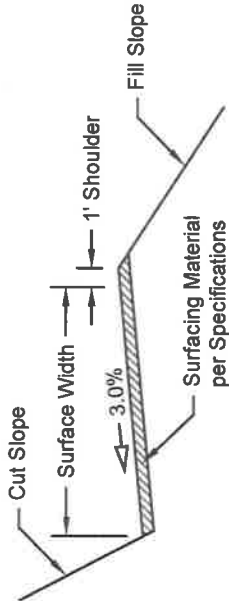
- ## 5. CLEARING WIDTH

5. CLEARING WIDTH
SEE SUBSECTION 2100

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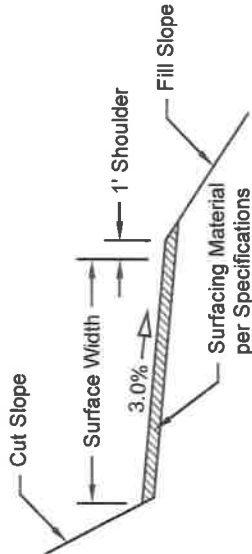
ELK STEW TIMBER SALE SPECIFICATION SHEET

REV. NO.	DESCRIPTION	DATE	APPROV.		
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON					
ELK STEW TIMBER SALE SPECIFICATION SHEET					
DESIGNED: _____					
REVIEWED: _____					
APPROVED: _____					
DRAFTED BY: ELF		SCALE: NONE			
DATE: JULY 2016		SHEET: 5 OF 6			
DRAWING NO.: OR-11-9113-4-1					



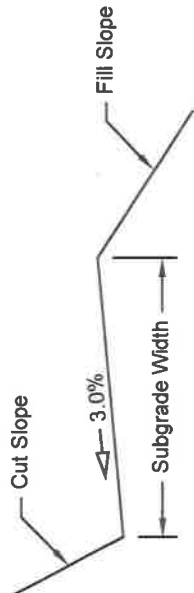
TYPICAL SURFACING SECTION

TYPE 2



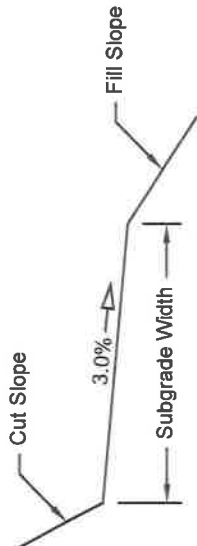
TYPICAL SURFACING SECTION

TYPE 4



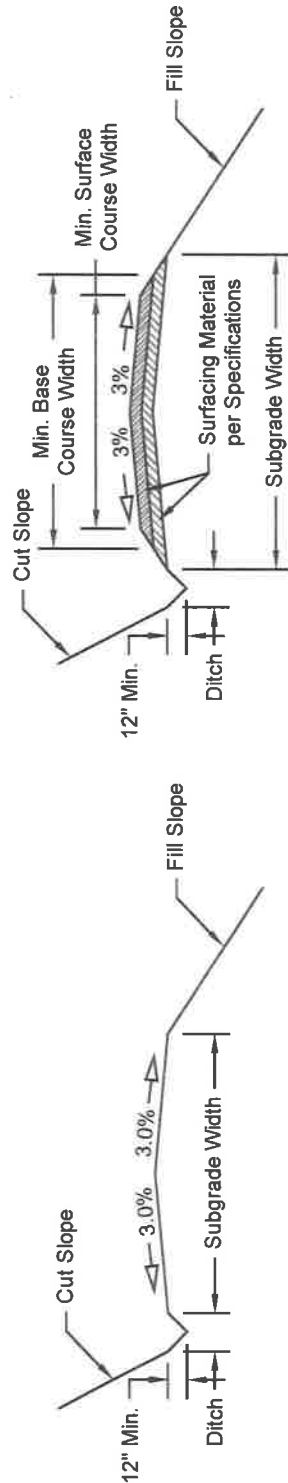
TYPICAL GRADING SECTION

TYPE 1



TYPICAL GRADING SECTION

TYPE 3



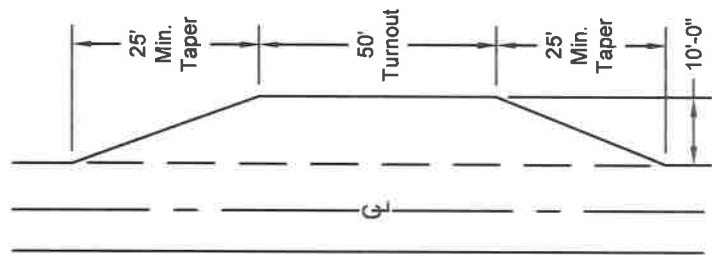
TYPICAL GRADING SECTION

TYPE 5

TYPICAL SURFACING SECTION

TYPE 6

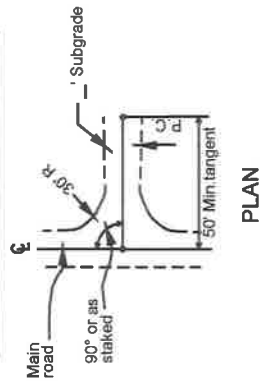
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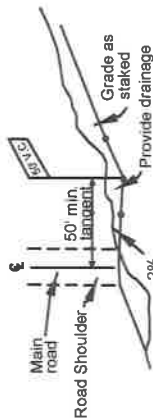
TYPICAL TURNOUT
PLAN VIEW

	</				

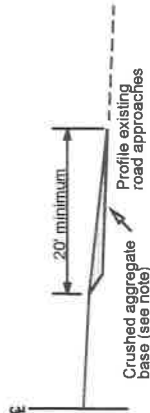
TYPICAL ROAD APPROACHES



PLAN



PROFILE



TYPICAL SURFACING SECTION

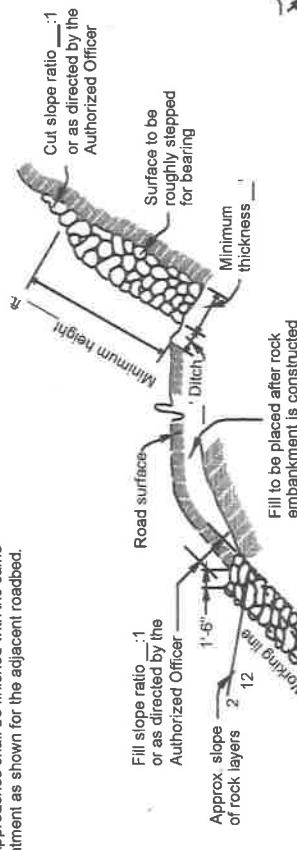
NOTES:

1. The profile of the existing approach roads shall be tapered to meet the shoulder line of the main roadway and shall receive the same wearing surface
2. The crushed aggregate base shall be of the same gradation as used in the adjacent roadbed.
3. Approaches shall be finished with the same treatment as shown for the adjacent roadbed.

TYPICAL BENCHING SECTION

SPECIAL COMPACTON

TYPICAL BENCHING SECTION



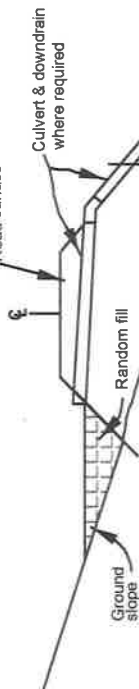
ROCK BLANKETS AND STRUCTURES

see Exhibit C Section 1400

SLOPE PROTECTION ROCK

see Exhibit C Section 1400

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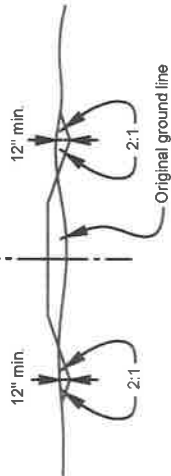


TYPICAL RANDOM FILL

Road fill and random fill compacted as indicated in Exhibit C Section 300



CUT SLOPE ROUNDING

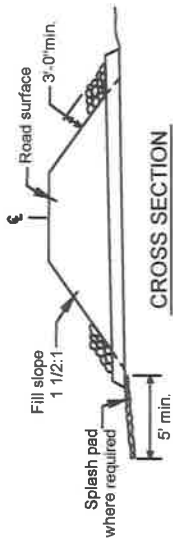


TYPICAL ROAD SECTION FOR TURNPIKE CONSTRUCTION

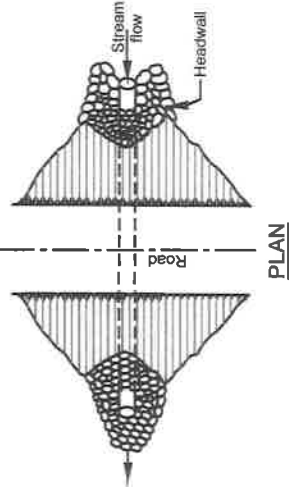
NOTES: RIPRAP AT CULVERTS

1. Riprap shall be placed in such a manner that it will not damage the culvert.
2. Trenching will be done as required by the Authorized Officer.
3. Minimum depth of splash pads shall be 1FT.
4. Minimum quantity shall be 1CY per culvert.
5. Riprap shall be placed before October 1st of the year the culvert is installed

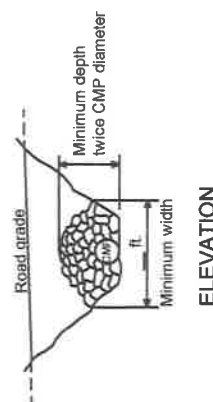
RIPRAP AT CULVERTS



CROSS SECTION



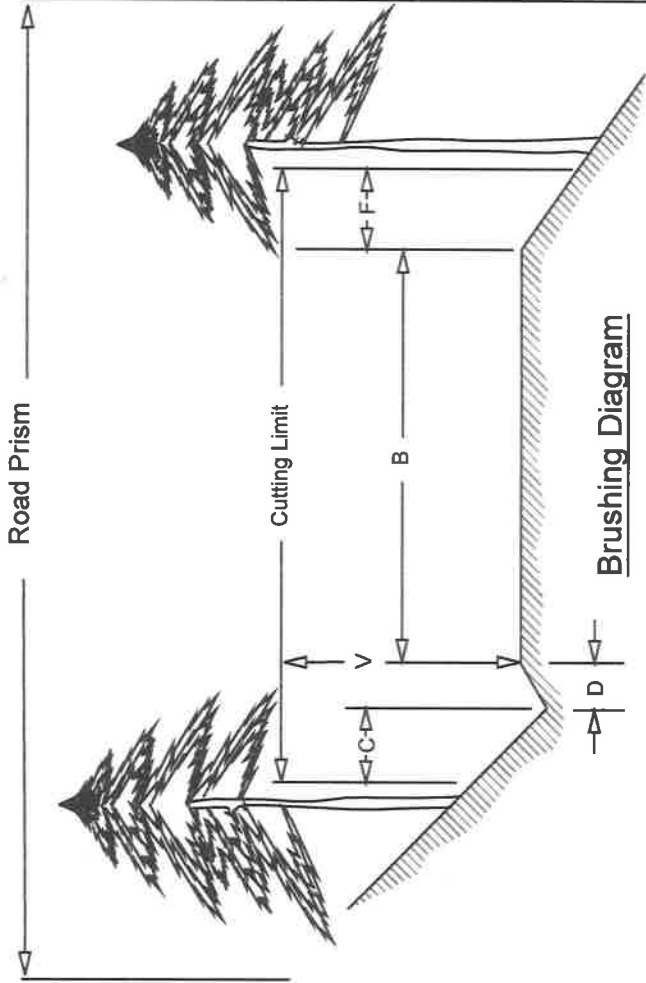
PLAN



ELEVATION

REV. NO.	DESCRIPTION	DATE	APPROV.
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
ELK STEW TIMBER SALE TYPICAL ROAD DATA			
DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY: ELF		SCALE: NONE	
DATE: JUN 2018		SHEET: 1 OF 1	
DRAWING NO.: OR-11-9113.4-4			

EXHIBIT C6-1



Cutting Limit = C + D + B + F

B = Road Bed Subgrade (includes turnouts)

Cut all vegetation to maximum height of 1" flush with the running surface.

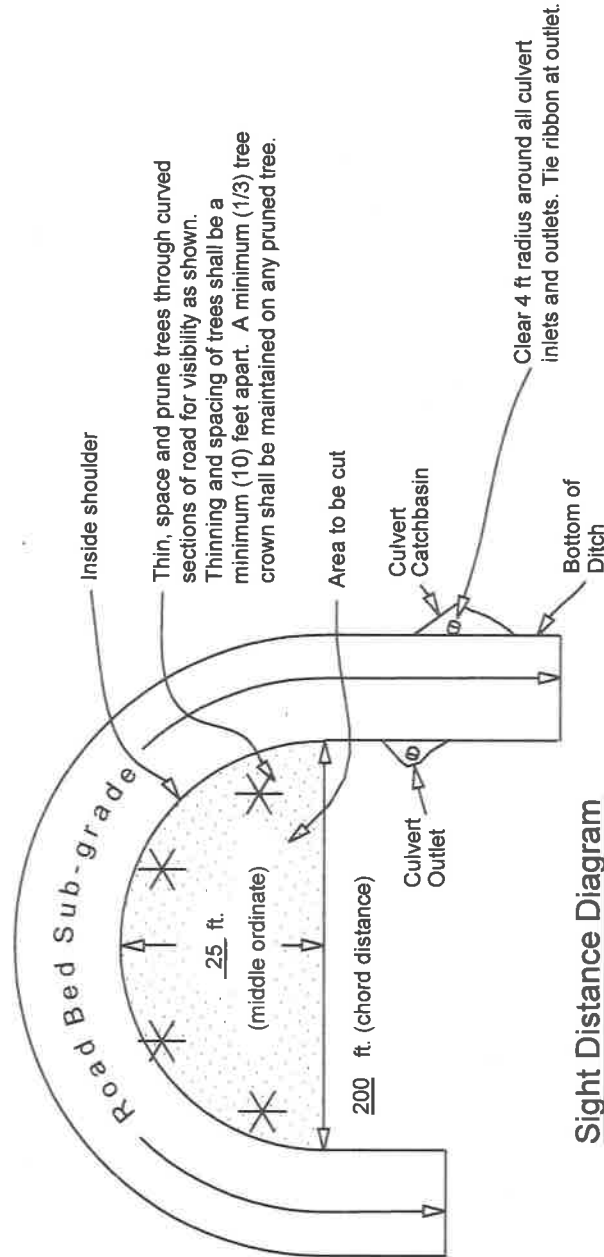
C = 4 ft - Distance to be brushed on cut slope beyond centerline of ditch. Cut all vegetation to maximum height of 4".

D = Centerline of ditch to inside shoulder. Cut all vegetation to maximum height of 1".

F = 4 ft - Distance to be brushed on fill slope beyond outside shoulder. Cut all vegetation to maximum height of 4".

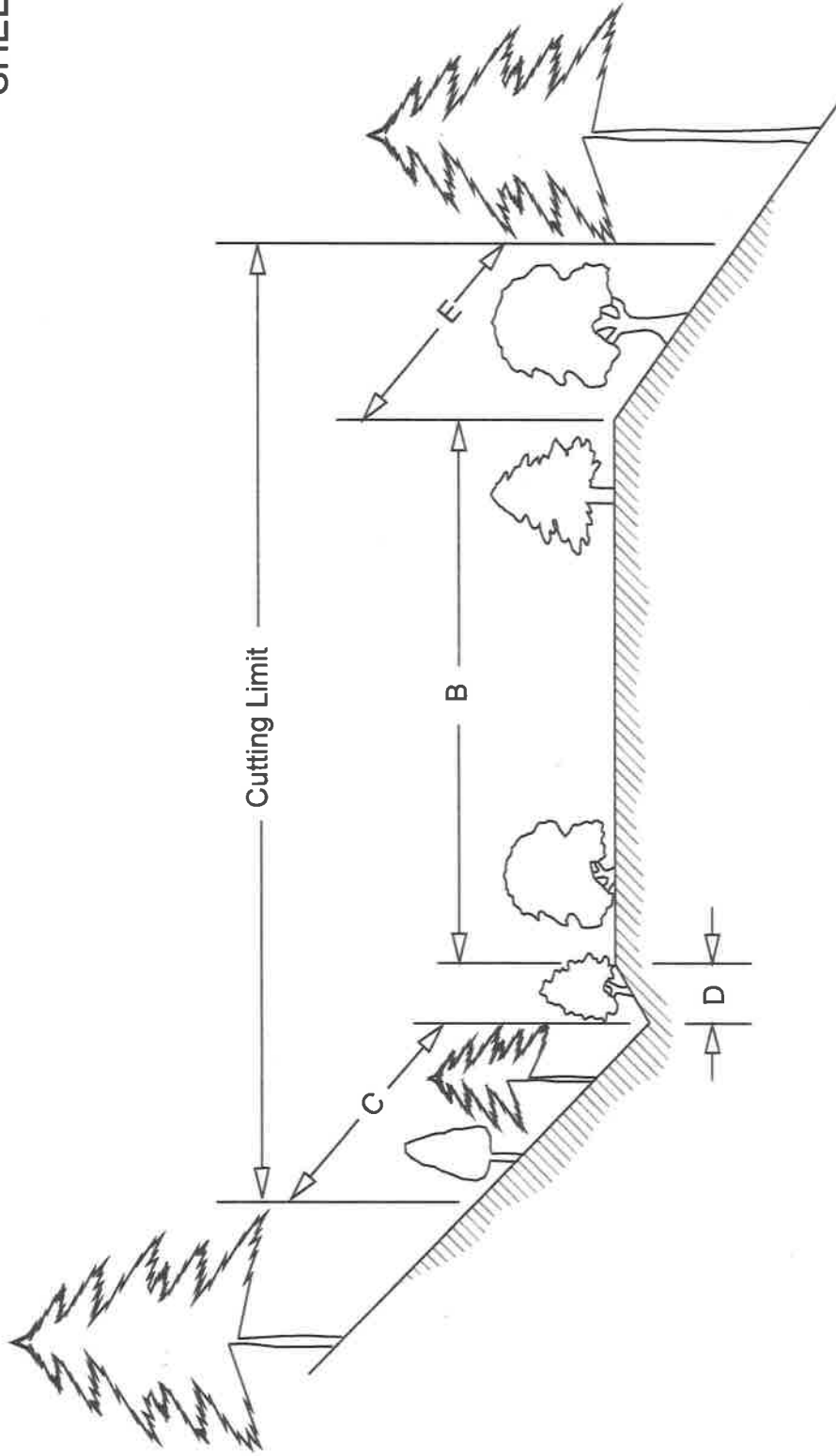
V = 14 ft - Height of vertical cutting limit

Inside Corner



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REV. NO.	DESCRIPTION	DATE	APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
ELK STEW TIMBER SALE ROADSIDE BRUSHING DETAIL			
DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY: ELF		SCALE: NONE	
DATE: JUN 2018		SHEET: 1 OF 1	
DRAWING NO.: OR-11-9113.4-4			



Cutting Limit = C + D + B + E
 B = Road Bed Subgrade (includes turnouts)

C = (15') Distance of vegetation removal beyond centerline of ditch
 Variable slope distance as specified in timber sale specifications

D = Centerline of ditch to inside shoulder

E = (15') Distance of vegetation removal along the fill slope
 Variable slope distance as specified in timber sale specifications

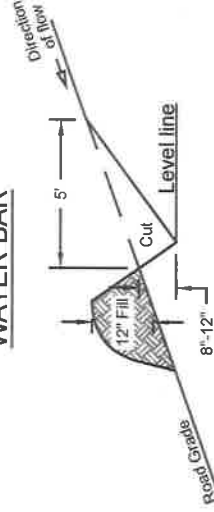
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REV. NO.	DESCRIPTION	DATE	APPROV.		
UNITED STATES DEPARTMENT OF THE INTERIOR					
BUREAU OF LAND MANAGEMENT					
MEDFORD DISTRICT - MEDFORD, OREGON					
ELK STEW TIMBER SALE					
ROADSIDE BRUSHING DETAIL					
Road 31-8-31.5 only					
DESIGNED: _____					
REVIEWED: _____					
APPROVED: _____					
DRAFTED BY: ELF			SCALE: NONE		
DATE: FEB 2013			SHEET: 1 OF 1		
DRAWING NO.: OR-11-9113.4-4					

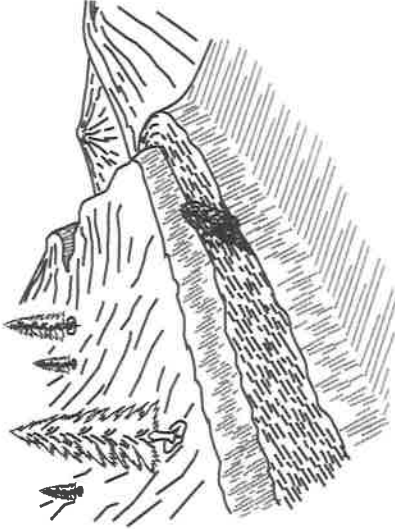
EXHIBIT C7-1



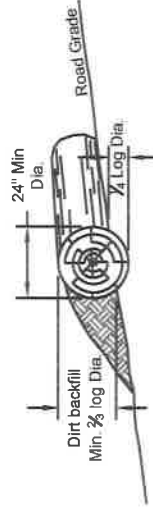
WATER BAR



1. Water bars shall be constructed as shown above.
2. Exact location will be flagged by the Authorized Officer prior to construction.
3. All water bars shall be skewed 30 degrees.
4. Upon completion of skidding logs, for the logging season, each skid road will have cross drainage constructed as shown above.



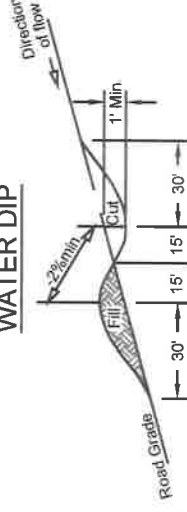
LOG BARRICADE



1. Log barricade shall be constructed as shown above.
2. Exact location is listed in Roads Work List.
3. All barricades shall be skewed 30 degrees.
4. The length shall be sufficient to extend from the cut bank to the fill slope.
5. The minimum small end diameter of the log barricade shall be 24".



WATER DIP



1. Water dips shall be constructed as shown above.
2. Exact location is listed in Roads Work List.
3. All water dips shall be skewed 30 degrees.
4. The length shall be sufficient to extend from the cut bank to the fill slope.
5. Armor outlet of water dip on fill slope. Riprap material will be securely placed at outlet a minimum of 10 LF wide by 8 LF down fill slope by 1 FT in depth. Key-in toe of Riprap apron for stability.
6. Seed and mulch fill slope upon completion to stabilize side-cast material. See Slope Protection specifications.

WATER BAR SPACING* BY EROSION CLASS^

ROAD GRADE	HIGH	MODERATE	LOW
%	FEET	FEET	FEET
2-5	200	300	400
6-10	150	200	300
11-15	100	150	200
16-20	75	100	150
21-35	50	75	100
35+	50	50	50

* Spacing is determined by slope distance and is the maximum allowed for the grade.

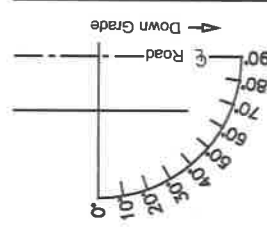
^ The erosion classes include the following rock types:

High: Granite, sandstone, andesite porphyry, glacial or alluvial deposits, soft matrix conglomerate, volcanic ash, and pyroclastics.

Moderate: Basalt, andesite, quartzite, hard matrix conglomerate, and rhyolite.

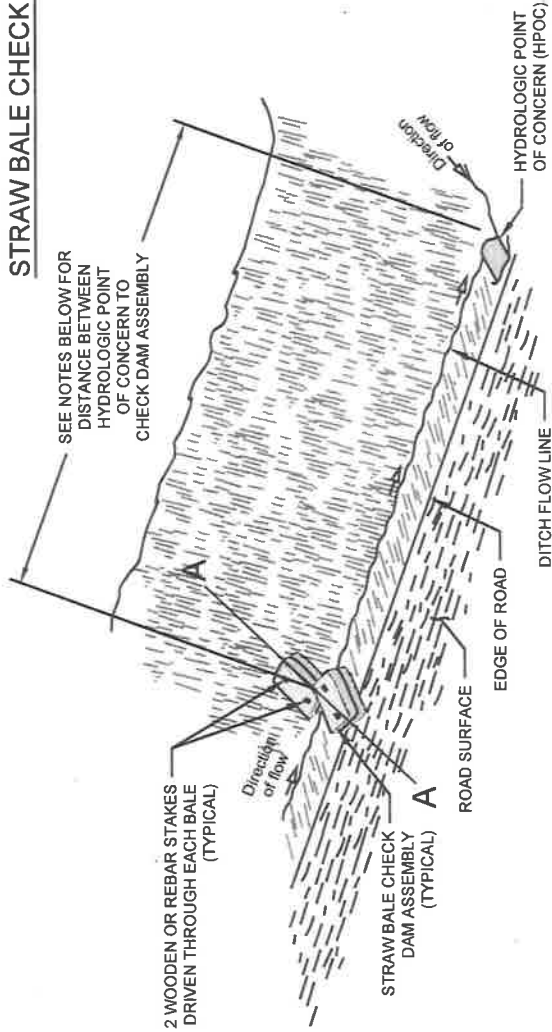
Low: Metasediments, metavolcanics, and hard shale.

SKEW DIAGRAM



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REV. NO.	DESCRIPTION	DATE	APPROV.
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
ELK STEW TIMBER SALE DRAINAGE & EROSION CONTROL DETAILS			
DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY: ELF	SCALE: NONE		
DATE: JUN 2018	SHEET: 1 OF 2		
DRAWING NO.: OR-11-91134-4			



PLAN

NOTES:

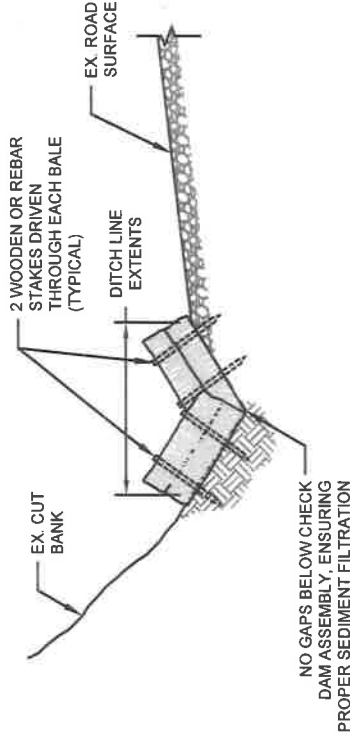
1. All straw bales will be from a weed free certified source.
2. Hydrologic Points of Concern (HPOC) are natural drainage features (ie. streams, creeks, draws) that intersect with existing or proposed roads.
3. If the HPOC is a bridge spanning across a noted or listed critical fish habitat (Coho) waterway, install check dam assembly, or other approved BMP, in road ditch line 150 LF up-grade from top of creek bank or edge of bridge.
4. If the HPOC is a draw culvert, install check dam assembly, or other approved BMP, in road ditch line 100 LF up-grade from inlet of culvert.

INSTALLATION NOTES:

1. Do not construct the check dam assembly more than one bale high.
2. Bales shall be placed tightly together and snug to the ground to ensure no gaps between bales or underneath the assembly.
3. Securely anchor the bales in place with two wooden or rebar stakes driven through the bales. Drive the stakes in the second bale toward the previously laid bale to force the bales tightly together. Ensure stakes are driven 12 inches minimum into the ground.
4. The assemblies do not need to be anchored if the terrain is relatively flat, less than 2% ditch line grade.

INSPECTION/MAINTENANCE NOTES:

1. Inspect each assembly before, during, and after each rain event.
2. Repair and/or replace damaged assemblies or decomposed bales promptly. Replacement bales shall be in good condition to ensure sediment trapping.
3. Trapped sediment shall be removed when it reaches 6-8 inches in depth.
4. Sediment shall be removed and placed in a stable area outside of wetlands, riparian reserves, floodplains, and waters of the State.

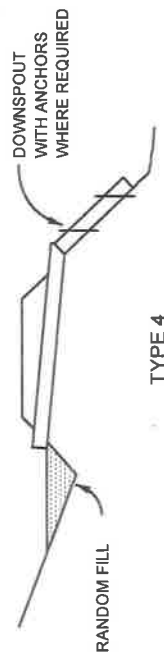
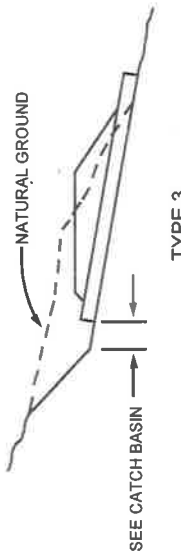
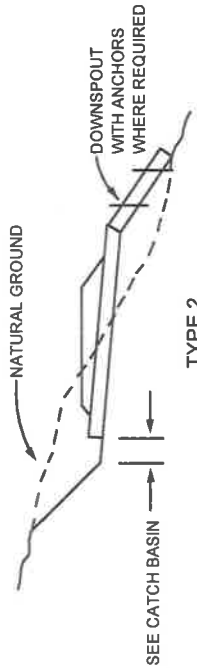
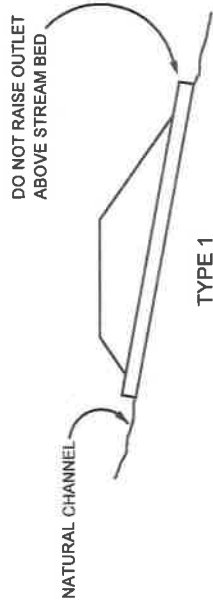


SECTION A-A

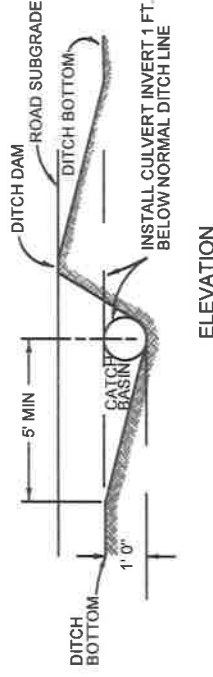
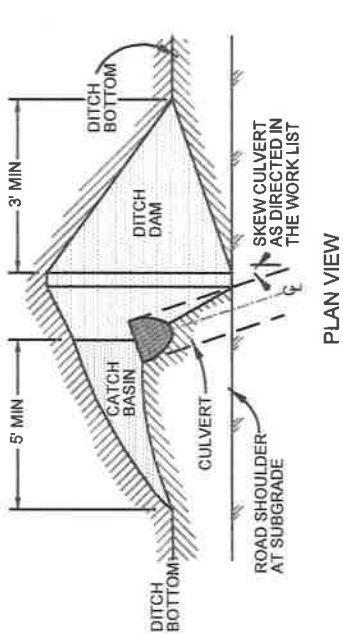
REV. NO.	DESCRIPTION	DATE	APPROV.	
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
ELK STEW TIMBER SALE DRAINAGE & EROSION CONTROL INSTALLATION				
DESIGNED: _____				
REVIEWED: _____				
APPROVED: _____				
DRAFTED BY: ELF		SCALE: NONE		
DATE: JUN 2018		SHEET: 2 OF 2		
DRAWING NO.: OR-11-9113.4-4				

ALWAYS
THINK
SAFETY

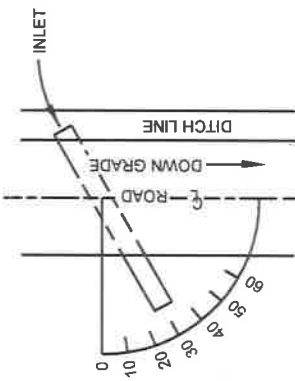
CULVERT INSTALLATION TYPES



CATCH BASIN

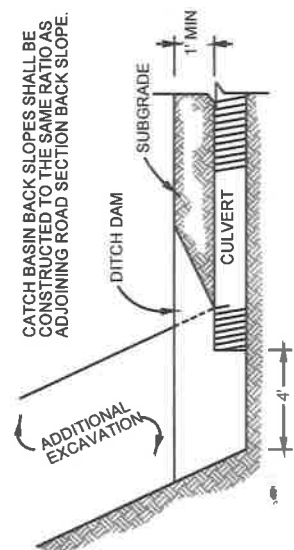


SKEW DIAGRAM



THE GRADE OF CROSSDRAINS SHALL BE AT LEAST 2% GREATER THAN THE GRADE OF THE DITCH

CATCH BASIN BACK SLOPES SHALL BE CONSTRUCTED TO THE SAME RATIO AS ADJOINING ROAD SECTION BACK SLOPE.



ALWAYS
THINK
SAFETY

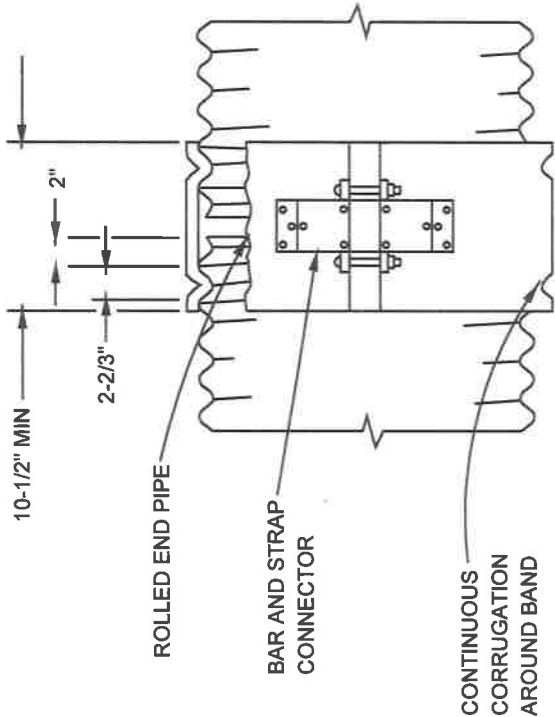
REV NO.	DESCRIPTION	DATE	APPROV

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

ELK STEW TIMBER SALE CULVERT INSTALL DETAIL

DESIGNED:	
REVIEWED:	
APPROVED:	
DRAFTED BY: BLM	SCALE: NONE
DATE: JUNE 2016	SHEET: 1 OF 2
DRAWING NO.: OR-11-9113.4-4	

CSP "HUGGER" COUPLER BANDS



STANDARD CONSTRUCTION IS A ONE PIECE BAND FOR 12" THRU 48" PIPES AND A TWO PIECE BAND FOR 54" PIPES AND ABOVE

THE HUGGER COUPLER BAND OR AN APPROVED EQUIVALENT COUPLER BAND SHALL BE MADE OF THE SAME MATERIAL AND FINISH AS THE PIPES JOINED. THE COUPLER BANDS SHALL BE A MINIMUM OF 10-1/2 INCHES WIDE AND BE 16 GAUGE OR HEAVIER. THE BAND SHALL BE DESIGNED TO BE DRAWN TOGETHER WITH A MINIMUM OF TWO (2) 1/2 INCH BOLTS THROUGH USE OF A BAR AND STRAP SUITABLY WELDED TO THE BAND. THE BAND SHALL ENGAGE AND MESH WITH THE SECOND ANNULER CORRUGATION INWARD FROM THE END OF EACH OF THE CONDUIT SECTIONS JOINED.

WHEN DESIGNATED ON THE PLANS OR IN THE SPECIAL PROVISIONS, GASKETS SHALL BE INSTALLED WHEN THE "HUGGER" TYPE, OR AN APPROVED EQUIVALENT COUPLER BAND IS INSTALLED ON SPILLWAY, OVERSIDE OR DOWN DRAINS.

ALWAYS
THINK
SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON	
ELK STEW TIMBER SALE CULVERT BAND DETAIL					
DESIGNED:					
REVIEWED:					
APPROVED:					
DRAFTED BY: BLM		SCALE: NONE			
DATE: JUNE 2016		SHEET: 1 OF 1			
DRAWING NO.: OR-11-8113.4-4					

Road Work List

Definitions:

ABC = Aggregate Base Course

ASC = Aggregate Surface Course

BST = Bituminous

CMP = Corrugated Metal Pipe

CY = Cubic Yard

GRR = Grid Rolled Rock

HDPE = High-density Polyethylene

JCT = Junction/Intersection

MP = Mile Post

NAT = Natural Road Surface

PRR= Pit Run Rock

PVT = Private Land/Ownership

Seg = Segment

Existing Road Renovation

The existing road renovation work list consists of work to be performed to the road prior to its use. All work shall comply with the contract specifications and drawings.

Road 31-8-31.1(A1,A2) - Hayes Creek Road - ASC

<u>MP</u>	<u>Task</u>
0.00	JCT w/ West Fork Cow Creek Road, 32-8-1.1 Road. Begin road renovation which may include, but is not limited to, reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing. Existing 18" CMP.
0.07	Unit 31-04B boundary on left.
0.13	Unit 31-04B boundary on left.
0.15	Existing 18" CMP.
0.18	Existing 18" CMP.
0.30	Existing 18" CMP.
0.40	Property line.
0.41	JCT w/ 32-8-6.0 Road on right. Begin Seg A2.
0.42	Property line.
0.44	Existing 18" CMP.
0.51	JCT w/ 31-8-31.4 Road on right.
0.54	Existing 18" CMP.
0.61	Unit 31-05 boundary on right.
0.62	Existing 18" CMP.
0.72	Existing 18" CMP.
0.77	Existing 18" CMP.
0.78	Unit 31-05 boundary on right.
0.82	Existing 18" CMP.
0.84	JCT w/ 31-8-31.2 Road on left w/ an existing 18" CMP crossing under the -31.2 Road.
0.94	Existing 18" CMP.
1.02	Existing 18" CMP.
1.16	Existing 24" CMP.
1.27	Existing 24" CMP.
1.33	Existing 18" CMP.

- 1.39 Existing 18" CMP.
- 1.58 Existing 18" CMP.
- 1.61 Property line. End Road Renovation

Road 31-8-31.2(A) Hayes Creek Sp - ASC

- | <u>MP</u> | <u>Task</u> |
|-----------|--|
| 0.00 | JCT w/ 31-8-31.1 Road. Begin road renovation which may include, but is not limited to, reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing. Existing 18" CMP. |
| 0.08 | Existing 18" CMP. |
| 0.14 | Existing 18" CMP. |
| 0.17 | JCT w/ 31-8-31.3 Road on left. |
| 0.22 | Existing 18" CMP |
| 0.29 | Existing 18" CMP |
| 0.36 | Existing 24" CMP Draw Pipe |
| 0.48 | Existing 18" CMP |
| 0.53 | Existing 18" CMP |
| 0.60 | Existing 18" CMP |
| 0.67 | Existing 18" CMP |
| 0.77 | Existing 18" CMP Draw Pipe |
| 0.85 | Existing 18" CMP Draw Pipe |
| 0.87 | Existing 18" CMP Draw Pipe |
| 0.93 | Existing 24" CMP Draw Pipe |
| 1.00 | JCT w/ 31-6-31.5 Road. End Road Renovation |

Road 31-8-31.3 - Hayes Ridge Sp - PRR

- | <u>MP</u> | <u>Task</u> |
|-----------|--|
| 0.00 | JCT w/ 31-8-31.2 Road. Begin road renovation which may include, but is not limited to, reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing. |
| 0.03 | Existing 18" CMP. |
| 0.16 | Existing 24" CMP. Hydrologic Point of Concern: Install check dams or other approved BMP's per contract specifications and drawings. |
| 0.23 | Existing 24" CMP. Hydrologic Point of Concern: Install check dams or other approved BMP's per contract specifications and drawings. |
| 0.35 | Existing 18" CMP. |
| 0.43 | Existing 24" CMP. Hydrologic Point of Concern: Install check dams or other approved BMP's per contract specifications and drawings. |
| 0.50 | Existing 18" CMP. |
| 0.69 | Existing 18" CMP. Hydrologic Point of Concern: Install check dams or other approved BMP's per contract specifications and drawings. |
| 0.71 | Unit 31-11A boundary on right. |

- 0.79 Construct truck turnaround.
- 0.80 Unit 31-11A boundary on right.
- 1.00 End Road Renovation.

Road 31-8-31.5 – Hayes Ck B Sp - ASC

- 0.00 JCT with 31-8-31.2 Begin road renovation which may include, but is not limited to, reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing in accordance with **Exhibit C6-2**.
- 0.04 Existing 18" CMP
- 0.08 Existing 18" CMP
- 0.10 Existing turnout left
- 0.16 Existing turnout left. End Renovation

Road 32-8-9.1(A-C) - Jackass Prairie Road - PRR

- | <u>MP</u> | <u>Task</u> |
|-----------|--|
| 0.00 | JCT w/ 32-8-10.2 Road. Begin road renovation which may include, but is not limited to, reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing. |
| 0.07 | Existing 18" CMP. |
| 0.13 | Existing 18" CMP. |
| 0.21 | Existing 18" CMP. |
| 0.26 | Existing 18" CMP. |
| 0.32 | Existing 18" CMP. |
| 0.34 | JCT w/ PVT Road on right. |
| 0.36 | Property line. Begin Seg B. |
| 0.39 | JCT w/ PVT Road on left. |
| 0.44 | Existing 18" CMP. |
| 0.45 | Property line. Begin Seg C. |
| 0.56 | Existing 18" CMP. |
| 0.59 | JCT w/ 32-8-3.4 Road on right. |
| 0.68 | Existing 18" CMP. Hydrologic Point of Concern: Install check dams or other approved BMP's per contract specifications and drawings. |
| 0.76 | Existing 18" CMP. |
| 0.86 | Existing 18" CMP. |
| 0.90 | Remove slash from road shoulder. Reestablish ditch for approx. 100 LF. |
| 1.00 | Existing 18" CMP. |
| 1.09 | Existing 18" CMP. |
| 1.16 | Existing 18" CMP. |
| 1.18 | JCT w/ PVT 32-8-11.0 Road. End road renovations. |

Road 32-8-10.2 (A-B-C-D) - Honey Suckle Road – ABC/NAT

<u>MP</u>	<u>Task</u>
0.00	JCT w/ West Fork Cow Creek Road, 32-8-1.1 Road. Begin road renovation which may include, but is not limited to, reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing.
0.03	Existing private industry gate.
0.14	Existing 18" CMP.
0.22	Existing 18" CMP with ½ round downspout.
0.43	JCT w/ PVT road on right.
0.44	Begin Segment B1; Property line.
0.52	Existing 18" CMP with ½ round downspout.
0.60	Property line.
0.61	Existing 18" CMP.
0.71	Existing 36" CMP. Hydrologic Point of Concern: Install check dams or other approved BMP's per contract specifications and drawings.
0.72	15 CY slump in ditch line. End haul to MP 1.27.
0.76	Existing 18" CMP with ½ round downspout.
0.80	Property line.
0.82	Existing 24" plastic culvert. Hydrologic Point of Concern: Install check dams or other approved BMP's per contract specifications and drawings.
0.89	Existing 18" CMP.
0.94	remove 30" x 20' downed tree from road and cut bank. Place on outside edge of road.
0.97	Existing 12" CMP.
1.04	JCT w/ 32-8-9.1 Road on right; Begin Seg B2.
1.28	Existing 18" CMP.
1.38	Property line.
1.46	Existing 18" CMP with ½ round downspout.
1.62	Existing 36" CMP. Hydrologic Point of Concern: Install check dams or other approved BMP's per contract specifications and drawings.
1.71	Existing 24" CMP.
1.77	JCT w/ PVT road on right. Cross poly pipe. Slump material end haul area.
1.80	Existing 18" HDPE Pipe.
1.88	JCT w/ PVT 32-8-4.3 Road on left.
1.94	Existing 18" CMP
2.01	JCT Right 32-8-4.5 Road.
2.02	Existing 18" plastic pipe
2.14	Wet shallow draw. Possible culvert. Locate and clean inlet and outlet. Reestablish ditch line into culvert
2.19	Drain Dip.
2.28	Existing 18" CMP
2.40	Existing 18" CMP. Inlet badly damaged. Cut off and replace 3' of inlet.
2.48	Existing 18" CMP
2.61	Existing 18" CMP in shallow draw. ½ round downspout
2.72	Existing 18" CMP in shallow draw

2.80 Existing 18" CMP in shallow draw
2.86 Existing 30" CMP draw culvert. Clean out inlet.
2.95 Existing 18" CMP
2.99 JCT Spur Road left
3.06 Existing 18" CMP
3.26 JCT Spur Road left
3.34 JCT left 32-8-4.2 road
3.52 Road turns to native surface and narrows.
3.71 Remove small tree wad (6-8" tree). Approximately 15 cubic yards.
3.72 Existing 18" CMP. Clean inlet. Reestablish ditch into culvert inlet.
3.83 Existing 18" CMP. Clean inlet and outlet of slash.
3.96 Existing 18" CMP. Clean inlet and locate and clean or repair outlet as needed.
4.20 Existing 18" CMP.
4.40 Existing rusted 18" CMP. Replace with 18" x 34' CMP
4.64 Blade road to facilitate drainage.
4.68 Install NEW 18" x 38' CMP
4.87 JCT with 32-8-11.00 Road. End road renovation.

Road 32-8-11.0(A-B) - Multnomah W Fk Ridge Road - PRR

<u>MP</u>	<u>Task</u>
0.00	JCT w/ 32-8-9.1 Road. Begin road renovation which may include, but is not limited to, reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing.
0.05	JCT Right
0.14	JCT Right 32-8-3.0
0.16	JCT Left 32-8-3.1
0.27	Existing 18" CMP. Clean inlet of small log. Clean outlet.
0.28	Clean ditch line of burnt logs
0.49	JCT left 32-8-3.3 and 3.2 Roads.
0.62	Existing 18" CMP. Clear ditch line of slash and reestablish.
0.73	Existing 18" CMP
1.00	Existing 18" CMP
1.15	JCT Left. Road to unit.

Temp Reconstruction Road 33-7A1 and Temp Construction road 33-7A2

- 0.00 Begin temp route reconstruction (existing cleared R/W) JCT w/ rd 32-8-10.2
- 0.01 Construct earthen or log barricade upon completion of timber haul/operations and decommissioning requirements.
- 0.41 End temporary road reconstruction, begin temporary road new construction
- 0.58 End temporary road new construction

Temp Reconstruction Road 33-7B

- 0.00 Begin temp route reconstruction (existing jeep road) JCT w/ rd 32-8-11.0
- 0.01 Construct earthen or log barricade upon completion of timber haul/operations and Decommissioning requirements.
- 0.35 End temporary road reconstruction

TIMBER SALE ROAD SPECIFICATIONS

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400	Pipe Culverts
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1400	Slope Protection
1700	Erosion Control
1800	Soil Stabilization
2100	Roadside Brushing

TIMBER SALE ROAD SPECIFICATIONS

GENERAL – 100

Note: Information in parenthesis is a choice typically used and can be modified or deleted when necessary to insure an appropriate specification.

101 - Prework Conference(s):

A prework conference will be held prior to the start of new construction, and improvement, and renovation, and surfacing 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 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

TIMBER SALE ROAD SPECIFICATIONS

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.

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

TIMBER SALE ROAD SPECIFICATIONS

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.

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.

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.

TIMBER SALE ROAD SPECIFICATIONS

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.

102a - Tests Used in These Specifications:

<u>AASHTO T 11</u>	Quantity of rock finer than No. 200 sieve.
<u>AASHTO T 27</u>	Sieve analysis of fine and coarse aggregate using sieves with square openings; gradation.
<u>AASHTO T 89</u>	Liquid limit of material passing the No. 40 sieve. Water content at which the soil passes from a plastic to a liquid state.
<u>AASHTO T 90</u>	Plastic limits and plasticity index of soil. a. Plastic limit - lowest water content at which the soil remains plastic. b. Plasticity index - range of water content, within which the material is in a plastic state. Numerical difference between the liquid and plastic limits of the soil.
<u>AASHTO T 96</u>	Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.

TIMBER SALE ROAD SPECIFICATIONS

<u>AASHTO T 99</u>	Relationship between soil moisture and density of soil. Method A - 4" mold, soil passing a No. 4 sieve 25 blows/layer & 3 layers. Method C - 4" mold, soil passing a 3/4 inch sieve 25 blows/layer & 3 layers. Method D - 6" mold, soil passing a 3/4 inch sieve. 56 blows/layer & 3 layers.
<u>AASHTO T 119</u>	Slump of hydraulic cement concrete.
<u>AASHTO T 152</u>	Air content of freshly mixed concrete.
<u>AASHTO T 166</u>	Specific Gravity of compacted Bituminous Mixtures.
<u>AASHTO T 176</u>	Shows relative portions of fine dust or claylike materials in soil or graded aggregate.
<u>AASHTO T 180</u>	(OSHD 106-71) moisture density relationship of soil same as AASHTO T 99 proctor but uses a 10-lb rammer & 18-in drop height.
<u>AASHTO T 191</u>	<u>Sand Cone.</u> Density of soil in place: For subgrade use 6-inch or 12- inch cone. For rock surfacing for 1-1/2-inch minus to 3-inch minus use 12-inch cone.
<u>AASHTO T 205</u>	<u>Rubber balloon.</u> Density of soil in place. Use for compacted or firmly bonded soil.
<u>AASHTO T 209</u>	Maximum Specific Gravity of Bituminous Paving Mixtures.
<u>AASHTO T 210</u>	Durability of aggregates based on resistance to produce fines.
<u>AASHTO T 224</u>	Correction for coarse particles in the soil.
<u>AASHTO T 238</u>	Density of Soil and Soil-Aggregate in place by nuclear methods.
<u>AASHTO T 248</u>	Reducing field samples of aggregate to testing size by mechanical splitter, quartering, or miniature stockpile sampling.
<u>ASTM D 4564</u>	Determination of relative density of cohesionless soils.
<u>DMSO (dimethyl sulfide)</u>	Determines volume of expanding clays in aggregates. Usually

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associated with marine basalts.

- 103 - Compaction equipment shall meet the following requirements:
- 103f - Vibratory roller. The drum diameter shall be not less than 48 inches, the drum width not less than 58 inches, and have a turning radius of 15 feet or less. Vibration frequency shall be regulated in steps to 1400, 1500, and 1600 vibrations per minute (VPM), corresponding to engine speeds of 1575, 1690, and 1800 RPM. The centrifugal force developed shall be 7 tons at 1600 RPM. It shall be activated by a power unit of not less than 25 horsepower. The vibratory roller shall be self-propelled or drawn by a vehicle of sufficient horsepower to enable the unit to travel through a loose layer of material at a speed ranging from 0.9 mile to 1.8 miles per hour, as directed by the Authorized Officer.
- The towing vehicle and roller or self-propelled unit meeting the above requirements shall be considered a vibratory roller unit.
- 103g - Vibratory compactor. Vibratory compactors shall consist of multiple or gang-type compacting units or pads with a minimum variable width of 2 feet. It shall be self-contained and capable of compacting material as required.
- 103i - Other. Compaction equipment approved by the Authorized Officer.

TIMBER SALE ROAD SPECIFICATIONS

CLEARING AND GRUBBING - 200

- 201 - This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions within the clearing limits in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans (and as staked on the ground).
- 202 - Where clearing limits have not been staked, established by these specifications or shown on the plans, the limits shall extend 10 feet back of the top of the cut slope and 5 feet out from the toe of the fill slope.
- 202a - Where clearing limits for structures have not been staked or shown on the plans, the limits shall extend 10 feet out from the outside edge of the structure.
- 203 - Clearing shall consist of the removal and disposal of trees, logs, rotten material, brush, and other vegetative materials and surface objects in accordance with these specifications and within the limits established for clearing as specified under SubsectionS 202 and 202a and as posted.
- 203b - Standing trees and snags to be cleared shall be felled within the limits established for clearing unless otherwise authorized.
- 204 - Grubbing shall consist of the removal and disposal of stumps, roots, and other wood material embedded in the ground and protruding obstacles remaining as a result of the clearing operation (in accordance with Subsections 204c ,and 204e Undisturbed stumps, roots and other solid objects which will be a minimum of 3 feet below subgrades or slope surfaces or embankments are excluded.
- 204c - On excavated areas, roots and embedded wood shall be removed to a depth not less than 6 inches below the subgrade.
- 204e - Roots and embedded wood material shall be removed to a depth not less than 1 foot below embankment subgrades or slope surfaces.
- 205 - Clearing and grubbing debris shall not be placed or permitted to remain in or under road embankment sections. (Such debris will, however, be permitted to remain under waste material from full-bench construction on steep side slopes.).
- 206 - Clearing and grubbing debris shall be disposed of by scattering in accordance with Subsection 210 and at the following road locations:

TIMBER SALE ROAD SPECIFICATIONS

Road No.	From Sta./M.P.	To Sta./M.P.
TR33-7A1	0.00	0.41
TR33-7A2	0.41	0.58
TR33-7B	0.00	0.35

- 210 - Disposal of clearing and grubbing debris shall be by scattering over government owned lands outside of established clearing limits in a manner acceptable to the Authorized Officer. The areas for such scattering shall have the prior approval of the Authorized Officer.
- 210a - Disposal of clearing and grubbing debris on non-government property by scattering and/or piling this material outside of clearing limits will be permitted provided the Purchaser obtains a written permit from the property owner on whose property the disposal is to be made. The Purchaser shall furnish the Authorized Officer a certified copy of the permit and a written release from the property owner absolving the Government from responsibilities in connection with the disposal of debris on said property.
- 212 - No grading will be permitted prior to completion and approval by the Authorized Officer of the required clearing and grubbing work, except that stump grubbing may proceed with the excavation of the road prism.
- 213 - No clearing or grubbing debris shall be left lodged against standing trees.

TIMBER SALE ROAD SPECIFICATIONS

EXCAVATION AND EMBANKMENT - 300

- 301 - This work shall consist of excavating, overhaul, placement of embankments, backfilling, leveling, ditching, grading, out-sloping, and scarification of the subgrade, compaction, disposal of excess and unsuitable materials, and other earth-moving work in accordance with these specifications and conforming to the typical cross sections shown on the plans.
- 302 - Excavation shall also consist of the excavation of temporary route and landing cut sections, backfilling, leveling, ditching, grading, compaction, and other earth moving work necessary for the construction of the temporary routes in accordance with these specifications and conforming to the typical cross sections shown on the plans.
- 303 - Suitable material removed from the excavation shall be used in the formation of embankment subgrade, shoulders, slopes, bedding, backfill for structures, and for other purposes as shown on the plans.
- 305 - Embankment construction shall consist of the placement of excavated materials, backfilling, leveling, grading, compaction, and other earth-moving work necessary for the construction of the temporary routes and landings in accordance with these specifications and conforming to the typical cross sections shown on the plans.
- 305a - Material used in the construction of embankment sections shall be free of stumps, cull logs, brush, muck, sod, roots, frozen material, and other deleterious materials and shall be placed and compacted as specified.
- 305b - Embankment materials shall be placed in successive parallel layers on areas cleared of stumps, cull logs, brush, sod, and other vegetative and deleterious materials, except as provided under Subsection 204. Temporary route embankments of earth material shall be placed in horizontal layers not exceeding 8 inches in depth.
- 306a - Minimum compaction for each layer of embankment and selected temporary route excavation material placed at optimum moisture shall be 6 passes over each full-width layer or fraction thereof.
- 306e - The final roadway subgrade and turnaround areas shall be compacted to full width with compacting equipment conforming to the requirements of Subsections 103f, 103g, and 103i. Minimum compaction shall be 1 hour of continuous compacting for each 6 stations of road or a fraction of as measured along the center line of the constructed road.

TIMBER SALE ROAD SPECIFICATIONS

- 306g - All fill slopes shall be compacted to 85% of maximum density, either by walking with cat/excavator or by pressing with excavator bucket, to prevent surface erosion and raveling.
- 309 - The top of cut slopes shall be rounded by blending into the adjacent terrain for a distance not less than 1 foot and not more than 3 feet beyond the top of the cut. Rounding shall be performed in soils that can be shaped without ripping or blasting.
- 314 - When heavy clays, muck, clay shale, or other deleterious material for forming the temporary route roadbed is encountered in cuts at subgrade, it shall be excavated to a minimum depth of 2 feet below the subgrade elevation and the excavated area backfilled with a selected excavated material approved by the Authorized Officer. The backfill material shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density in accordance with the requirements of Subsection 306g. Unsuitable material shall be disposed of as directed by the Authorized Officer.
- 321 - Excess excavated, unsuitable, or slide materials shall not be disposed of on areas where the material will encroach on a stream course or other body of water. Such materials shall be end dumped and disposed of as directed by the Authorized Officer.
- 321c - End-dumping will be permitted for the placement of excess materials under Subsection 321 in designated disposal areas or within areas approved by the Authorized Officer. Watering, rolling, and placement in layers are not required. Materials placed shall be sloped, shaped, and otherwise brought to a visible condition acceptable to the Authorized Officer.
- 324 - Excavated material shall not be allowed to cover boles of standing trees to a depth in excess of 2 feet on the uphill side.

TIMBER SALE ROAD SPECIFICATIONS

PIPE CULVERTS - 400

- 401 - This work shall consist of furnishing and installing pipe culverts, full round downspouts and other erosion control devices in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Individual lengths and locations are approximate; final lengths and locations will be determined by the Authorized Officer. Additional pipe and erosion control devices may be required at the option of the Authorized Officer, in which case a reduction in the total purchase price shall be made to offset the cost of furnishing and installing such items. Costs will be based upon the unit prices set forth in the current BLM Timber Appraisal Production Cost Schedule.

- 402 - The culverts located at the following road locations:

Road No.	Sta./M.P.
32-8-10.2	4.40
32-8-10.2	4.68

as shown on the plans, shall be installed in such a manner as not to impede fish passage. Installation shall conform to the lines, grades, dimensions, and typical cross sections shown on the plans.

- 403 - Grade culverts shall have a gradient of from 2 percent to 4 percent greater than the adjacent road grade, except grades shall not exceed 10 percent. Grade culverts shall be skewed down grade 30 degrees as measured from the perpendicular to the centerline unless otherwise specified on the plans.
- 404 - Damage to the spelter, or burn back in excess of 3/8 inch, shall be wire brushed and painted with two coats of zinc-rich paint on zinc-coated, steel pipe and aluminum-rich paint on aluminum or aluminum-coated pipe.
- 405a - Corrugated-aluminized steel-welded pipe culverts and pipe-arch culverts and special sections shall conform to the requirements of AASHTO M 274.
- 406a - "Hugger"-type coupling bands shall only be used with annular corrugated pipe and pipe-arch culverts, or helically corrugated pipe and pipe-arch culverts having annular reformed ends. Annular reformed ends shall consist of two annular corrugations.
- 406d - Pipe culverts at the following locations:

TIMBER SALE ROAD SPECIFICATIONS

Road No.	Sta./M.P.
32-8-10.2	4.40
32-8-10.2	4.68

shall be connected with "Hugger"-type coupling bands as shown on the plans.

NOTE: History shows that leakage at elbow joints can cause fill failure.

- 408 - Pipe culverts and pipe-arch culverts shall be placed on the bed starting at the downstream end with the inside circumferential laps pointing downstream and with the longitudinal laps at the side or quarter points. Coupling bands of the type required under these specifications shall be installed so as to provide the circumferential and longitudinal strength necessary to preserve the pipe alignment, prevent separation of the pipe sections, and minimize infiltration of fill material.
- 410 - Pipe shall be unloaded and handled with reasonable care. If the Authorized Officer determines any structure is damaged to the extent that it is unsuitable for use in the road construction, it shall be replaced at the Purchaser's expense.
- 411 - Trenches necessary for the installation of pipe culverts shall conform to the typical diagram included in the plans and the Culvert Installation Detail Sheet.
- 412 - Where ledge rock, boulders, soft, or spongy soils are encountered, they shall be excavated a minimum of 24 inches below the invert grade for a width of at least one pipe diameter or span on each side of the pipe and shall be backfilled with selected granular or fine readily compactable soil material.
- 413 - Pipe culverts shall be bedded on a fine readily compactable soil material having a depth of not less than 10 percent of the diameter or height of the drainage structure concerned or a minimum depth of:

Pipe Corrugation Depth	Minimum Bedding Depth
1/2 inch	1 inch
1 inch	2 inches
2 inches	3 inches

Foundation material shall be of uniform density throughout the length of the

TIMBER SALE ROAD SPECIFICATIONS

structure and shall be shaped to fit the pipe.

- 414 - The invert grade of the bedding shall be cambered in accordance with the requirements and details shown on the plans and as directed by the Authorized Officer.
- 416 - Side-fill material for pipe culverts shall be placed within 1 pipe diameter, or a minimum of 2 feet, of the sides of the pipe barrel, and to 1 foot over the pipe with fine, readily compactable soil or granular fill material free of excess moisture, muck, frozen material, roots, sod, or other deleterious or caustic material and devoid of rocks or stones of sizes which may impinge upon and damage the pipe or otherwise interfere with proper compaction.
- 417 - For pipe culverts, side-fill material conforming to the requirements of Subsection 416 shall be placed and compacted under the haunches of the pipe, and shall be brought up evenly and simultaneously on both sides of the pipe to 1 foot above the pipe, in layers not exceeding 6 inches in depth and 1 pipe diameter/span, or a minimum of 2 feet in width each side of, and adjacent to, the full length of the pipe barrel. Each layer shall be moistened or dried to a uniform moisture content suitable for maximum compaction and immediately compacted by approved hand or pneumatic tampers until a uniform density of 85 percent of the maximum density.
- 418 - Side fills beyond the compaction limits specified under Subsection 417 shall be compacted as specified under Section 300.
- 419 - The pipe culverts after being bedded and backfilled as required by these specifications shall be protected by a 2-foot cover of fill before heavy equipment is permitted to cross the drainage structures. Removal of the protection fill shall be as directed by the Authorized Officer.
- 422 - Construction of each culverts catch basin shall conform to the lines, grades, dimensions, and typical diagrams included in the plans.
- 427 - The Purchaser shall record culvert sizes, lengths and location actually installed, where they vary from the plans, on a copy of the Culvert List, Exhibit C8.
- 428 - The Purchaser shall be responsible for removal and disposal of the old culverts in a legal manner, and for any fees required. The Purchaser shall remove the old culverts from the project site prior to acceptance of road construction for each road renovation.

TIMBER SALE ROAD SPECIFICATIONS

- 429 - Dewatering: Keep excavation site dewatered so that installation of culverts are completed under dry conditions. Dispose of excess water by using pumping or natural drainage ways near the site and in a manner that will avoid damage to adjacent property. Provide for downstream water flow with no more that 10% increase in natural stream turbidity due to transport of excavated material or sediment during construction. Diversion streams shall not be returned to the natural channel until all in stream work has been completed.

TIMBER SALE ROAD SPECIFICATIONS

RENOVATION AND IMPROVEMENT OF EXISTING ROADS - 500

- 501 - This work shall consist of reconditioning and preparing the roadbed and shoulders, 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 and as marked on the ground with stakes.
- 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 moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width with equipment conforming to requirements of Subsections 103c, 103f, 103g, and 103i and in accordance with the following table:

Road No.	From Sta./M.P.	To Sta./M.P.	Subsection 504
31-8-31.1	0.00	1.61	504a
31-8-31.2	0.00	1.00	504a
31-8-31.3	0.00	1.00	504a
31-8-31.5	0.00	0.16	504a
32-8-9.1	0.00	1.18	504a
32-8-10.2	0.00	4.87	504a
32-8-11.0	0.00	1.15	504a

- 504a - Minimum compaction required shall be 6 passes over each full-width layer, or fraction thereof, as measured along the centerline per layer of material.
- 506 - The inlet end of existing drainage structures shall be cleared of vegetative debris and boulders that are of sufficient size to obstruct normal stream flow. Pipe inverts 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.

TIMBER SALE ROAD SPECIFICATIONS

- 507 - Existing drainage structures at the following locations:

Road No.	Sta./M.P.
32-8-10.2	4.68

shall be replaced with structures of the type, gauge, diameter, and length shown on the plans and in accordance with the placement requirements set forth under section 400 of these specifications.

- 508 - Vegetation encroaching on the roadbed and the drainage ditches of existing roads at the following locations:

Road No.	From Sta./M.P.	To Sta./M.P.
31-8-31.1	0.00	1.61
31-8-31.2	0.00	1.00
31-8-31.3	0.00	1.00
31-8-31.5	0.00	0.16
32-8-9.1	0.00	1.18
32-8-10.2	0.00	4.87
32-8-11.0	0.00	1.15

shall be removed by cutting and disposed of in accordance with Subsection 2100 of these specifications.

- 509 - The finished grading shall be approved in writing by the Authorized Officer 2 days prior to surfacing operations. 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 compaction of roadbeds, backfills, surface courses, 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.
- 605 - The Purchaser shall secure the necessary water permits and pay all required water fees for use of water sources selected by the Purchaser and approved by the Authorized Officer.

TIMBER SALE ROAD SPECIFICATIONS

EROSION CONTROL - 1700

- 1701 - This work shall consist of measures to control soil erosion or water pollution during the construction operation through the use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains, and other erosion control devices or methods in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans.
- 1708a - Road segments not completed during dry weather periods shall be winterized, by providing a well-drained roadway using water bars, maintaining drainage, and performing additional measures necessary to minimize erosion and other damage to the roadway, as directed by the Authorized Officer. Portions of roads not having surface rock in place will be blocked or barricaded to prevent vehicular traffic.
- 1712 - Where shown on the plans, the Purchaser shall provide erosion control measures for newly constructed ditches on steep grades which include but is not limited to, dumped stone, jute mesh, sod, check dams consisting of hay bales, and earth or stone. Width of protective lining or dam should extend far enough up the ditch slopes to effectively contain the runoff and prevent erosion and washout at the edges and prevent sediment from reaching live water.
- 1713 - Where newly constructed logging spur roads join with existing surfaced roads, the Purchaser shall construct a sag in the spur road profile and install a settling basin in accordance with the requirements and details as shown on the plans and directed by the Authorized Officer.

TIMBER SALE ROAD SPECIFICATIONS

SOIL STABILIZATION – 1800

NOTE: The Authorized Officer should work with the appropriate resource specialist (botanist, native plant coordinator, etc.) in advance of projects to ensure that all soil stabilization materials are available.

- 1801 - This work shall consist of seeding and mulching on designated cut, fill, borrow, disposal, and special areas in accordance with these specifications and as shown on the plans. This work is required for road acceptance under Section 18 of this contract.
- 1802a - Soil stabilization work consisting of seeding and mulching shall be performed on new temporary route construction, and reconstruction sites in accordance with these specifications.
- 1803 - Soil stabilization work as specified under Subsection 1802a shall be performed during the following seasonal periods:

From: September 15 th	To: October 31 st
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If soil stabilization of disturbed areas is not completed by the specified fall date, the Purchaser shall treat disturbed areas and then complete the requirements of Soil Stabilization 1800 the next construction season.

The Authorized Officer may modify the above seasonal dates to conform to existing weather conditions and changes in the construction schedule.

- 1803a - The Purchaser shall begin soil stabilization work within 10 days of the starting work date when notified by the Authorized Officer.
- 1806a - Additional soil stabilization work consisting of seeding and mulching may be required at the option of the Authorized Officer. Providing the additional stabilization is not due to Purchaser negligence as specified in Sec. 12 of the contract, a reduction in the total purchased price shall be made to offset the cost of furnishing and applying such additional stabilization material. Cost shall be based upon the unit price set forth in the current BLM Timber Appraisal Production Cost Schedule.
- 1808 - Mulch materials conforming to the requirements of Subsection 1808a shall be furnished by the Purchaser in the amounts specified under Subsection 1811 and applied in accordance with Subsection 1812.

TIMBER SALE ROAD SPECIFICATIONS

- 1808a - Straw mulch shall be certified weed free from commercial grain fields and native grass fields. Straw mulch shall be from oats, wheat, rye, or other approved grain crops and shall be free from, mold, or other objectionable material. Straw mulch shall be in an air-dry condition and suitable for placement.
- 1809 - Mulch material shall be delivered to the work area in a dry state. Material found to be wet will not be accepted. Material to be used in the mulching operation may be stockpiled along the road designated for treatment provided that it is maintained in a dry state and has the approval of the Authorized Officer.
- 1811 - The Purchaser shall apply to approximately 1.80 acres designated for treatment as specified under Subsections 1802a and 1806a, Government furnished native grass seed and Purchaser furnished mulch material at the following rate of application:

a. Two Stage Dry:

Native Grass Seed	10 lbs./acre
Mulch (weed free)	2,000 lbs./acre

The above proportion and application rate are subject to adjustment by the Authorized Officer during the application operation.

- 1812 - The Purchaser shall furnish and apply to the area designated for treatment as shown on the plans and as specified under Subsections 1802a and 1806a, native grass seed and mulch material at the application rate to be determined by the Authorized Officer based on visual observation of trial applications.
- Mulches shall be spread/placed in treatment areas to a depth of 2 inches to allow seed germination or as directed by the Authorized Officer. Treatment area will be covered evenly and completely. Mulch can be broadcast onto the soil surface by hand or with hand/mechanical operated spreaders.
- 1814 - The Purchaser may reduce the application rate on partially covered slopes and refrain from application on areas already well stocked with grass or on rock surfaces as determined by the Authorized Officer.
- 1815 - The seed and mulch materials shall be placed by the dry method in accordance with the requirements set forth in Subsection 1815b.
- 1815b - Dry Method - Blowers, mechanical seeders, seed drills, landscape seeders, cultipacker seeders, or other approved mechanical seeding equipment may be used when seed are to be applied in dry form.

TIMBER SALE ROAD SPECIFICATIONS

- 1819 - The Purchaser shall notify the Authorized Officer at least 3 days in advance of date he intends to commence the specified soil stabilization work.
- 1821 - Mulch that collects at the end of culverts or accumulates to excessive depths on the slopes shall be evenly spread by hand methods, as directed by the Authorized Officer.
- 1824 - Twine, rope, sacks, and other debris resulting from the soil-stabilization operations shall be picked up and disposed of to the satisfaction of the Authorized Officer.

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 or manually with hand tools, including chain saws.
- 2103 - Vegetation cut manually and/or mechanically less than 6 inches in diameter when measured at DBH shall be cut to a maximum height of 1 inch above the ground surface or above obstructions such as rocks or stumps on cut and fill slopes and all limbs below the 1 inch area 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. Limbs below the 1 inch area 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 DBH shall be limbed, so that no limbs extend into the treated area or over the roadbed to a height of 14 feet above the running surface 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 14 feet in elevation above the running surface 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.
- 2107 - Inside curves shall be brushed out for a sight distance of 200 feet chord distance or a middle ordinate distance of 25 feet, whichever is achieved first. Overhanging limbs and vegetation in excess of 1 foot in height, shall be cut within these areas.
- 2108 - Self-propelled equipment shall not be permitted on cut and fill slopes or in ditches.

TIMBER SALE ROAD SPECIFICATIONS

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 shown on the plans and as listed below:

Road No.	From Sta./M.P.	To Sta./M.P.
31-8-31.1	0.00	1.61
31-8-31.2	0.00	1.00
31-8-31.3	0.00	1.00
31-8-31.5	0.00	0.16
32-8-9.1	0.00	1.18
32-8-10.2	0.00	4.87
32-8-11.0	0.00	1.15

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.

SPECIAL PROVISIONS

1. Before the initial start of road renovation, construction, reconstruction, or surfacing operations, or after a shutdown of 7 or more days, the Purchaser shall notify the Authorized Officer 48 hours in advance of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer if they intend to cease operations for any period of 30 or more days.
2. The Purchaser shall protect, and is responsible for, any damage to existing telephone lines, transmission lines, fiber optic lines, fences, ditches, and other existing improvements as required in Section 14. Damage to utilities and existing improvements shall be promptly paid for or repaired to a condition which is, in the opinion of the Authorized Officer and the governing utility company, as good or better condition than just prior to such damage occurring.
3. All disturbed soil shall be seeded and mulched. The Purchaser shall furnish and apply native grass seed and certified weed free straw mulch for soil stabilization operations. Seed and mulch shall be acquired from a BLM approved source.
4. All stream channel culverts and inlets shall be cleared and cleaned between **June 15th and September 15th** in accordance with Oregon Department of Fish and Wildlife (ODFW) in-stream work period guidelines.
5. Ensure that all large wood is retained in the stream channel during culvert cleaning activities by moving logs which had accumulated on the upstream side of a culvert to the downstream side of the culvert.
6. While roadside brushing, there shall be no scarring or any other damage of the tree trunk or bole allowed. Remove vegetation by cutting rather than uprooting. All debris resulting from roadside brushing activities shall be manually cut and chipped. **All culvert inlets and outlets shall be brushed for a radius of 4 feet.**
7. While roadside brushing through private industry lands, conifer trees at the edges of the cleared area (see cutting limit, Exhibit C6) shall have the branches pruned rather than being felled.
8. Roadside brushing specifications and vegetation removal limits on road 31-8-31.5 shall be as shown on Exhibit C6-2
9. All stumps, designated by the Authorized Officer, which would interfere with normal blading and road renovation operations (including turnouts), shall be removed in such a way as to not cause damage to the drainage ditch or the road bed. Stumps that are ground-down, shall be ground to a minimum of 3 inches below existing grade.

UNITED STATES
DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT

ROAD MAINTENANCE SPECIFICATIONS

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GENERAL MAINTENANCE – 3000

- 3001 The Purchaser shall be required to maintain all roads listed and/or referenced in section 41, as shown on the Exhibit D maps of this contract in accordance with Sections 3000, 3100, 3200, 3300, and 3400 of this exhibit.
- 3002 The Purchaser shall maintain the cross section of existing dirt or graveled roads to the existing geometric standards. Any roads required to be reconstructed, improved, or 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 road(s) 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.
- 3104a Removal of bank slough and slide material includes placement of material at the nearest designated and suitable disposal site, where material cannot erode into streams, lakes, or reservoirs or cause undue damage to road fill slopes which have been planted or mulched to control soil erosion as directed by the Authorized Officer.
- 3104b The Purchaser shall be responsible for removal of all slides or slough, up to fifteen station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the purchaser.

Prior to removal of any slough or slide material exceeding 15 station yards at any one site, the Purchaser and the Authorized Officer or their Authorized Representatives shall agree in writing, in the field, to the quantity of material, method of disposal, and the disposal site. Work may commence immediately after agreement.

Upon completion of agreed upon work, a reduction in timber sale purchase price will be made to offset the cost of the work, based on the current BLM Road Cost Guide. Adjustments in purchase price for completed work shall be made, as necessary, and no less than once per year when actual work is ongoing.

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.

3106 The Purchaser shall be responsible for repair and replacement of all materials eroded from road shoulders and fill slopes, up to 15 station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the Purchaser. Prior to repair and replacement of eroded material exceeding 15 station yards at any one site, the Purchaser and the Authorized Officer or their Authorized Representatives shall agree in writing, in the field, to the quantity of material, borrow source and method of repair. Work may commence immediately after agreement.

Upon completion of agreed upon work, a reduction in timber sale purchase price will be made to offset the cost of the work based upon current BLM Road Cost Guide. Adjustments in purchase price for completed work shall be made, as necessary, and no less than once per year when actual work is ongoing.

3107 The Purchaser shall cut or trim trees and brush which obstructs vision or prevents the safe passage of traffic along the traveled way when directed by the Authorized Officer.

The Purchaser shall also remove 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 by cutting and chipping in accordance with Section 2100 of the Exhibit C-11 Specifications.

3108 The Purchaser shall avoid fouling gravel 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. Repairs required, that were caused by such skidding activities, are not considered maintenance and shall be repaired at the Purchaser's expense.

- 3108a The Purchaser shall perform logging operations on gravel roadways only where the locations have been marked on the ground and/or approved by the Authorized Officer.

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 1st 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 preceding 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 expiration of Purchaser's right to cut and remove timber (Sec. 4) and in accordance with Sec. 16(b) 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.

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. 16(b), 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 and 3108a. 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.

- 3403 The Purchaser shall be required to furnish and apply non-saline water during dry hauling periods, when directed by the Authorized Officer, for the purpose of laying dust and to prevent loss of surface material. The first application of water shall be made at the rate of one-half gallon per yd² of road surface traveled. Subsequent applications shall be made for each 40 MBF of timber or 120 yds³ of rock hauled. Subsequent watering may be done at a rate less than one-half gallon per yd² when a specified lesser rate is approved by the Authorized Officer.

The Purchaser shall secure any necessary water permits and pay all required water fees for use of the water source(s) selected by the Purchaser.

During drought periods when the transportation of water from the source to the roads noted above exceeds (20) miles, a reduction shall be made in the total purchase price to reflect the additional haul or the substitution of other acceptable dust palliatives in lieu of watering based on equipment rental rates from the current BLM Road Cost Guide.

- Adjustments to the above schedules may be made by the Authorized Officer at his option as hauling conditions improve. The Purchaser, at his option and expense, may elect to substitute watering or other dust palliatives in lieu of the above hauling requirements provided that written approval is received from the Authorized Officer. Such authorization shall include the approval of product specifications for the application and the product to be used.
- 3404 The Purchaser may at his option and expense substitute lignin sulfonate or magnesium chloride for water on any or all road segments listed in Subsection 3403 or 3403a provided that written approval is received from the Authorized Officer. Such authorization shall include the approval of product specifications for the application of the product to be used. Multiple applications may be required to maintain the conditions specified in Subsection 3403.
- 3405b The Purchaser shall notify affected residents along the roads to be treated of the planned application of lignin sulfonate or magnesium chloride dust palliatives at least (3) days prior to the work. Warning signs shall be posted at key intersections to alert users that the road is being treated. All signs shall be removed by the Purchaser within thirty (30) days of treatment.
- 3406 Prior to the application of lignin sulfonate or magnesium chloride dust palliatives, the roadbed shall be bladed and shaped to remove surface irregularities and excess loose material. The prepared surface must be visibly moist and drying.
- 3406b A light application of water to promote penetration shall be made in advance of the application of the specified dust palliative to allow the drying process to begin and to eliminate any saturated surface conditions.
- 3406c The prepared roadbed shall be approved by the Authorized Officer prior to application of the specified dust palliative.
- 3407 The Purchaser shall furnish in duplicate, commercial certification signed by vendor of compliance with the lignin sulfonate or magnesium chloride dust palliatives material requirements specified under Subsection (3412b) (3412c). Commercial certification includes the date, identification number of truck or trailer, net mass, and brand name with each shipment. Also provide the net volume and specific gravity at 60 degrees F, percent solids by mass, and PH.
- 3408 Dust palliatives shall be applied with standard commercial distribution equipment operated in a manner that the material is uniformly applied on variable widths of surface at controlled rates.
- 3409 The Purchaser shall notify the Authorized Officer a minimum of (3) days in advance of application of required dust palliative.

- 3410 The Purchaser shall submit an application schedule for all dust palliative work to the Authorized Officer for approval. All work shall be in accordance with the approved plan.
- 3411 If used, lignin sulfonate or magnesium chloride dust palliatives shall only be applied when the atmospheric temperature is 45° F and steady or rising and when the weather is not foggy or rainy. Do not apply dust palliative if rain is anticipated within 24 hours of application or when the ground is frozen.

- 3412 If used, the Purchaser shall apply to the prepared roadbed specified under Subsection 3406, a lignin sulfonate or magnesium chloride dust palliative conforming to the material requirements of Subsection (3412b) (3412c). The rate of application shall be (0.5) gallons per yd² surface.

Applied materials not penetrating the road surface shall be blade mixed with additional water into the top 1 to 1½ inches of the surfacing at the Contractor's expense.

- 3412a If required, the lignin sulfonate or magnesium chloride shall be field diluted within the application vehicle and be circulated at least 5 minutes to assure mixing. An air gap shall be provided between any water source and the materials being diluted. Accidental spills shall be contained to prevent entry in water courses or ponded water. The surface of adjacent structures and trees shall be protected from spattering or marring.

A wetting agent may be used in addition to the certified compound or mixed with the road surface preparation watering. A mix of less than 1:6000 is recommended.

Water used to dilute lignin sulfonate or magnesium chloride concentrate shall be clean and free of oil, salt, acid, alkali, vegetable matter, or any other substance that contaminates the finished product.

- 3412b Specifications for Lignin Sulfonate:

Lignin sulfonate shall be the chemical residue produced as a byproduct of the acid sulfite pulping process and supplied as a water solution. The base cation shall be ammonia, calcium, or sodium. The product shall be water soluble to allow field dilution. Dilute with water until the mixture contains a minimum 48 percent concentration with the following properties:

Solids	50%
Specific gravity	1.25
PH, AASHTO T289	4.5 min.

Ensure that the material does not exceed the following chemical constituents:

phosphorous	25.00 ppm
cyanide	0.20 ppm
arsenic	5.00 ppm
copper	0.20 ppm
lead	1.00 ppm
mercury	0.05 ppm
chromium	0.50 ppm
cadmium	0.20 ppm
barium	10.00 ppm
selenium	5.00 ppm
zinc	10.00 ppm

Apply when the ambient air temperature is 45° F or above.

3412c Specifications for magnesium chloride:

The material shall consist of a brine containing 29 to 35 percent (magnesium chloride) (calcium chloride) by weight and 62 to 72 percent water by weight. Ensure that the material does not exceed the following chemical constituents:

phosphorous	25.00 ppm
cyanide	0.20 ppm
arsenic	5.00 ppm
copper	0.20 ppm
lead	1.00 ppm
mercury	0.05 ppm
chromium	0.50 ppm
cadmium	0.20 ppm
barium	10.00 ppm
selenium	5.00 ppm
zinc	10.00 ppm
sulfate	4.3 percent maximum
nitrate	5.0 percent maximum.

Concentration specifications for Magnesium chloride

Exhibit D1

Sale Name: Elk Stew

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- | | |
|---|-------------------------|
| (1) Magnesium chloride by mass | 28% minimum |
| (2) Water by mass | 72% maximum |
| (3) Specific gravity, AASHTO T 227 | 1.290 to 1.330) |

Apply when the ambient air temperature is 45° F or above.

3413 Sampling of lignin sulfonate or magnesium chloride material may be required to validate certificates furnished by the Purchaser. When sampling is directed by the Government, the actual samples will be taken by the Purchaser or his representative in the presence of the Authorized Officer.

LEGEND

BLM OWNERSHIP

NON-BLM

TIMBERSALE UNITS

BITUMINOUS

AGGREGATE

NATURAL

PURCHASER
MAINTENANCEBLM MAINTENANCE

33-7-2A,B

30-6-32D

32-8-1.1A,B

REV. NO.	DESCRIPTION	DATE	APPROV.	

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

ELK STEW TIMBER SALE
ROAD MAINTENANCE MAP

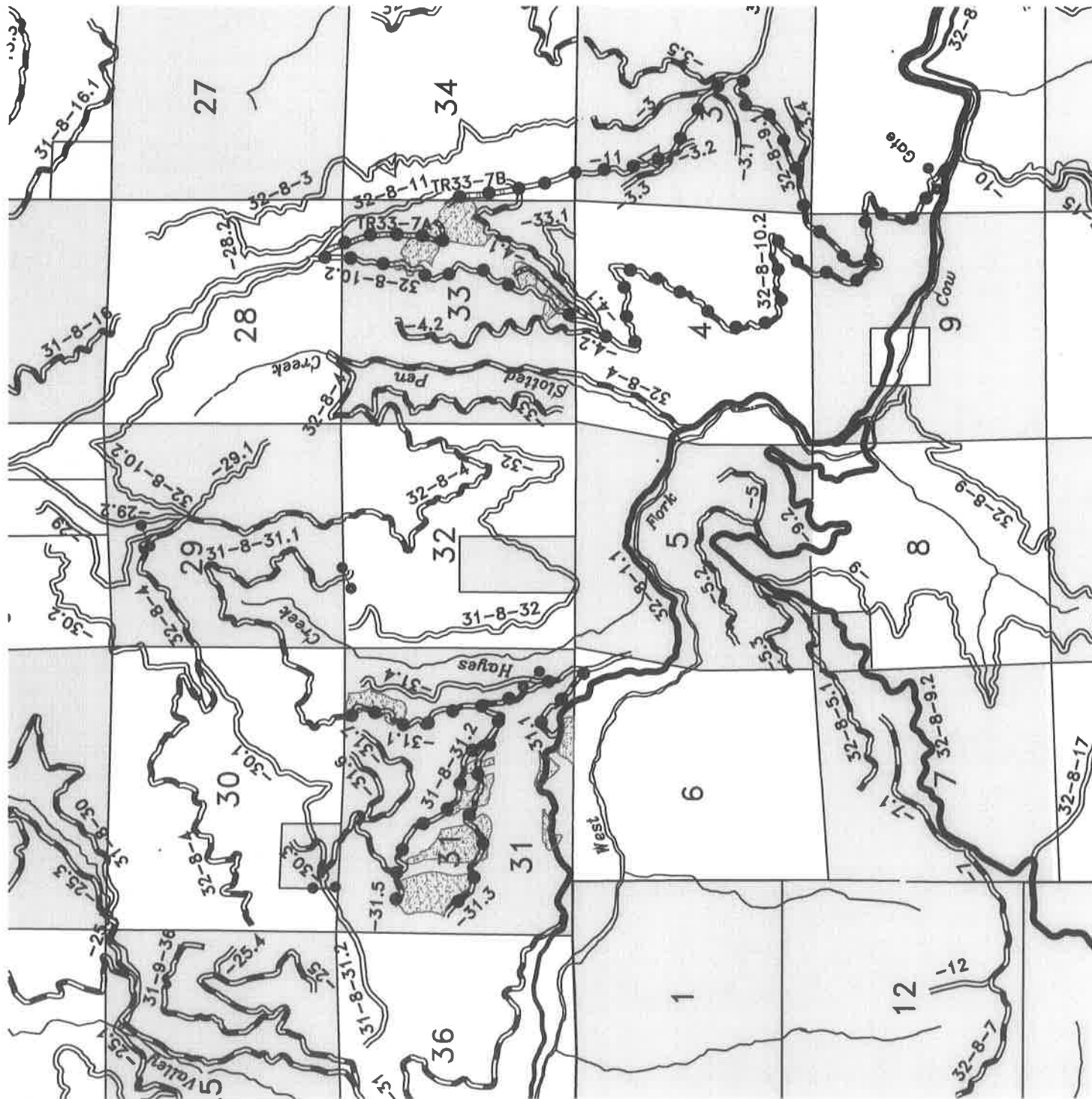
DESIGNED:

REVIEWED:

APPROVED:

DRAFTED BY: ELF

DATE: JUN 2018	SHEET: 1 OF 1
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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sale: Elk Stew
Sale Date:
Prep. By : R Bryan
Tract No: TS 18-17

ROAD MAINTENANCE AND ROAD USE APPRAISAL WORK SHEET

Summary of Costs

1.1) Road Use - Amortization: \$0.00/1158 MBF = \$0.00/MBF

Road Maintenance Obligation:

(2.1) BLM Maintenance		\$15,893.99
(2.2) BLM Rockwear	\$0.00	
(5.1) Purchaser Maintenance Rockwear	\$796.80	
Total Rockwear Payable to BLM		\$796.80
(3.1) 3rd Party Maintenance		\$0.00
(3.2) 3rd Party Rockwear		\$879.63
(4.1) Other Maintenance Payments		\$0.00
Total Maintenance Fee Obligation (2.1-5.1)		<u>\$17,570.42</u>

Purchaser Maintenance Allowances:

(5.2A) Move In	\$6,520.00
(5.2B) Culverts, Catch Basins, Downspouts	\$3,658.20
(5.2C) Grading, Ditching	\$6,945.00
(5.2D) Slide Removal and Slump Repair	\$281.92
(5.2E) Dust Palliative (Water)	\$2,364.30
(5.2F) Surface Repair (Aggregate)	\$0.00
(5.2G) Other	\$0.00
Total Purchaser Maintenance Allowances (5.2A-5.2G)	<u>\$19,769.42</u>

(2.1-5.2G) Cost (\$17,570.42 + \$19,769.42) = \$37,339.84
Cost/MBF \$37,339.84 / 1158 MBF = \$32.25/MBF \$32.25/MBF

(5.2H) Decommissioning \$0.00

(5.2H) Cost/MBF \$0.00/1158 MBF = \$0.00/MBF

(2.1-5.2H) Cost (\$17,570.42 + \$19,769.42 + \$0.00) = \$37,339.84

Total Cost/MBF (Excluding Road Use) \$37,339.84/1158 MBF = \$32.25/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 and Segment	A Surf N Type	Mi	Maint x Fee x	Vol MBF =	Maint	Fee x	MBF =	Rkwear	
33-7-2 AB	A BST	10.10	0.92	1158	\$10,760.14	0.00	1158	\$0.00	
30-6-32 D	A BST	0.30	0.92	1158	\$319.61	0.00	1158	\$0.00	
32-8-1.1 A	A BST	2.40	0.92	1158	\$2,556.86	0.00	1158	\$0.00	
32-8-1.1	A BST	4.01	0.92	608	\$2,243.03	0.00	608	\$0.00	
32-8-1.1 C	A BST	0.15	0.92	41	\$5.66	0.00	41	\$0.00	
32-8-1.1 C	A BST	0.45	0.92	21	\$8.69	0.00	21	\$0.00	

(2.1) Subtotal \$15,893.99

(2.2) Subtotal \$0.00

3) Third Party Maintenance and Rockwear

MAINTENANCE (3.1)						ROCKWEAR (3.2)		
Agmmt Number	Surface Type	Road Number	Mi	x Fee x	MBF =	Maint	Fee x	MBF = Rkwear
M-605	NAT	32-8-10.2 C	0.80				0.00	455 \$0.00
M-605	AGG	32-8-10.2 A	0.44				0.60	455 \$120.12
M-700	AGG	32-8-11.0 A	0.02				0.60	320 \$3.84
M-700	AGG	32-8-11.0 B	0.47				0.60	95 \$26.79
M-700	AGG	32-8-11.0 A	0.67				0.60	95 \$38.19
M-700	AGG	32-8-10.2 B2	1.84				0.60	455 \$502.32
M-700	AGG	32-8-10.2 B1	0.69				0.60	455 \$188.37

Subtotal of maintenance fees by agreement number:

Subtotal of rockwear fees by agreement number:

M-605	\$120.12
M-700	\$759.51

(3.1) Subtotal \$0.00

(3.2) Subtotal \$879.63

4) Other Maintenance Payments - USFS or Others Perform Maintenance

Agency	Road Number	Miles (Log)	Vol x (mbf)	Fee x MBF/MI =	Cost
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(4.1) Subtotal \$0.00

5) Purchaser Maintenance - Rock Wear

TIMBER HAUL (5.1)

Road No and Segment	A N	Mi	RkWear x Fee x	Vol MBF =	Total RkWear
31-8-31.1 A1A2A	A	0.84	0.60	530	\$267.12
31-8-31.1 A2	A	0.77	0.60	109	\$50.36
31-8-31.2	A	1.00	0.60	5	\$3.00
31-8-31.5	A	0.16	0.60	5	\$0.48
31-8-31.3	A	0.25	0.60	416	\$62.40
31-8-31.3	A	0.30	0.60	352	\$63.36
31-8-31.3	A	0.45	0.60	182	\$49.14
32-8-10.2 D	A	0.30	0.60	493	\$88.74
32-8-10.2 D	A	0.80	0.60	358	\$171.84
32-8-9.1	A	1.18	0.60	57	\$40.36

(5.1) Subtotal \$796.80

Purchaser Operational Maintenance

Move In

Equipment	No Units	Move x in x	Cost/ 50 Mi x	Dist Factor =	Sub- total
Motor Grader:	1	4	\$410.00	1.00	\$1,640.00
Back Hoe:	1	4	\$305.00	1.00	\$1,220.00
Loader:			\$410.00	0.63	\$0.00
Water Truck:	1	4	\$95.00	1.00	\$380.00
Dump Truck:			\$89.00	0.63	\$0.00
Excavator:	1	4	\$410.00	1.00	\$1,640.00
Roller:	1	4	\$410.00	1.00	\$1,640.00

(5.2A) Total \$6,520.00

Culvert Maintenance - Including Catch basins and Downpipes

Miles	x	Cost/Mi	=	Subtotal
10		\$365.82		\$3,658.20

(5.2B) Total \$3,658.20

Grading (Includes Ditches and Shoulders)

Miles	x	Cost/Mi	x	Freq	=	Subtotal
Blade w/ Ditch:	10.00		\$694.50	1		\$6,945.00
Blade w/o Ditch:	0.00		\$428.91	0		\$0.00

(5.2C) Total \$6,945.00

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

Type Equipment	No Slides /Slumps	Hours x Each x	Equip Cost =	Subtotal
Grader:	1	2	\$140.96	\$281.92
Loader:	0	0	\$101.17	\$0.00
Backhoe:	0	0	\$85.84	\$0.00

(5.2D) Total \$281.92

Dust Palliative (Water)

Spreading Hours

No Miles	Freq / MPH	Truck = Hours	x	Days	x	/Day	=	Hours
5.00	10	0.5		30		2		30

Load & Haul = 0.0 0 0 0

Total Hours =

30

Truck Cost: \$78.81/Hr. x 30.0 Hours = \$2,364.30

(5.2E) Total \$2,364.30

Surface Repair (Aggregate)

Production Cost:	0.0 CY x \$0.00/CY	=	\$0.00
Haul to Stockpile:	0.0 CY x ((\$1.75/CY x 0.00 Mi) + \$0.99)	=	\$0.00
Stockpile:	0.0 CY x \$1.07/CY	=	\$0.00
Load from Stockpile:	0.0 CY x \$1.05/CY	=	\$0.00
Haul from Stockpile:	0.0 CY x ((\$1.75/CY x 0.00 Mi) + \$0.99)	=	\$0.00
Process with Grader:	0.0 CY x \$0.88/CY	=	\$0.00
Compaction:	0.0 CY x \$1.08/CY	=	\$0.00

(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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Version: 5.2.0.123
Updated: 6/14/2017

Summary of All Roads and Projects

T.S. Contract Name: Elk Stew Tract No: TS 18-17 Sale Date:
Prepared by: R Bryan Ph: 2477 Print Date: 8/2/2018 11:59:39 AM
Construction: 0.00 sta
Improve: 0.00 sta Renov: 579.22 sta Decom: 0.00 sta Temp: 49.11 sta

200 Clearing and Grubbing: 2.3 acres	\$4,730.25
300 Excavation: 4,100 cy	\$13,430.04
Haul < 500 ft: 0 sta-yds	
Haul > 500 ft: 0 yd-mi	
400 Drainage:	\$3,223.37
Culvert: 67 lf	DownSpout: 0 lf
PolyPipe: 0 lf	
500 Renovation:	\$16,950.90
Blading 10.97 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 1.8 acres	\$1,813.40
Includes Small Quantity Factor of 1.49	
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing:	\$9,353.53
Mechanical Brushing: 14.1 acres	
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$8,529.76
Mobilization: Const. \$10,438.80 Surf. \$0.00	\$10,438.80
Quarry Development:	\$0.00

Total: 1,158 mbf @ \$59.128/mbf = \$68,470.04

Notes:

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Stew Sale Date:

Road Number: 31-8-31.1 Road Name: Hayes Creek Road

Road Renovation: 1.61 mi 14 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:	\$2,358.01
Blading 1.61 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): 2.3 acres	\$926.19
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$590.77 Surf. \$0.00.....	\$590.77
Quarry Development:	\$0.00
Total:	\$3,874.96

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 31-8-31.1 Road Name: Hayes Creek Road

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: $\$694.50/\text{mi} \times 1.61 \text{ mi} = \$1,118.15$

Compaction: $\$325.47/\text{mi} \times 1.61 \text{ mi} = \524.01

Clean Culverts: $\$365.82/\text{mi} \times 1.61 \text{ mi} = \588.97

Water for Road Compaction

Water Truck 3000 Gal 1.61 hr x $\$78.81/\text{hr} = \126.88

Subtotal: \$2,358.01

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

RoadSide Brushing Medium: $\$402.69/\text{acre} \times 2.30 \text{ acres} = \926.19

Subtotal: \$926.19

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 5.66% of total Costs = \$590.77

surfacing = 0% \$0.00

Subtotal: \$590.77

Quarry Development:

Subtotal: \$0.00

Road Number: 31-8-31.1 Hayes Creek Road Continued

Total: \$3,874.96

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Stew Sale Date:

Road Number: 31-8-31.2 Road Name: Hayes Creek Spur

Road Renovation: 1.00 mi 14 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:	\$1,464.60
Blading 1.00 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):1.5 acres	\$604.04
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$372.11 Surf. \$0.00.....	\$372.11
Quarry Development:	\$0.00

Total: \$2,440.75

Notes:

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

Road Construction Worksheet

Road Number: 31-8-31.2 Road Name: Hayes Creek Spur

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: $\$694.50/\text{mi} \times 1.00 \text{ mi} = \694.50

Compaction: $\$325.47/\text{mi} \times 1.00 \text{ mi} = \325.47

Clean Culverts: $\$365.82/\text{mi} \times 1.00 \text{ mi} = \365.82

Water for Road Renovation

Water Truck 3000 Gal 1 hr x $\$78.81/\text{hr} = \78.81

Subtotal: \$1,464.60

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

RoadSide Brushing Medium: $\$402.69/\text{acre} \times 1.50 \text{ acres} = \604.04

Subtotal: \$604.04

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 3.56% of total Costs = \$372.11

surfacing = 0% \$0.00

Subtotal: \$372.11

Quarry Development:

Subtotal: \$0.00

Road Number: 31-8-31.2 Hayes Creek Spur Continued

Total: \$2,440.75

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Stew Sale Date:

Road Number: 31-8-31.3 Road Name: Hayes Ridge Spur

Road Renovation: 1.00 mi 14 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:	\$1,448.84
Blading 1.00 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): 1.5 acres	\$604.04
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$500.00
Mobilization: Const. \$459.22 Surf. \$0.00.....	\$459.22
Quarry Development:	\$0.00

Total: \$3,012.09

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 31-8-31.3 Road Name: Hayes Ridge Spur

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: \$694.50/mi x 1.00 mi = \$694.50

Compaction: \$325.47/mi x 1.00 mi = \$325.47

Clean Culverts: \$365.82/mi x 1.00 mi = \$365.82

Water for Road compaction

Water Truck 3000 Gal 0.8 hr x \$78.81/hr = \$63.05

Subtotal: \$1,448.84

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

RoadSide Brushing Medium: \$402.69/acre x 1.50 acres = \$604.04

Subtotal: \$604.04

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Install Hay Bale Check Dams

Hay Bale Check Dams 4 ea x \$125.00/ea = \$500.00

Subtotal: \$500.00

Mobilization:

Construction - 4.40% of total Costs = \$459.22

surfacing = 0% \$0.00

Subtotal: \$459.22

Road Number: 31-8-31.3 Hayes Ridge Spur Continued

Quarry Development:

Subtotal: \$0.00

Total: \$3,012.09

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Stew Sale Date:

Road Number: 31-8-31.5 Road Name: Hayes Ck B Spur

Road Renovation: 0.16 mi 14 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:	\$234.34
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 (NONE):0.0 acres	\$3,675.60
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$703.33 Surf. \$0.00.....	\$703.33
Quarry Development:	\$0.00

Total: \$4,613.26

Notes:

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

Road Construction Worksheet

Road Number: 31-8-31.5 Road Name: Hayes Ck B Spur

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: \$694.50/mi x 0.16 mi = \$111.12

Compaction: \$325.47/mi x 0.16 mi = \$52.08

Clean Culverts: \$365.82/mi x 0.16 mi = \$58.53

Water for Road compaction

Water Truck 3000 Gal 0.16 hr x \$78.81/hr = \$12.61

Subtotal: \$234.34

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Roadside Brushing - Extra Heav

Brush 15' left and right - Brush Cutter

24 hr x \$153.15/hr = \$3,675.60

Subtotal: \$3,675.60

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 6.74% of total Costs = \$703.33

surfacing = 0% \$0.00

Subtotal: \$703.33

Quarry Development:

Road Number: 31-8-31.5 Hayes Ck B Spur Continued

Subtotal: \$0.00

Total: \$4,613.26

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Stew Sale Date:

Road Number: 32-8-10.2 Road Name: Honeysuckle

Road Renovation: 4.87 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$3,223.37
Culvert: 67 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$7,832.60
Blading 4.87 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):7.1 acres	\$2,859.10
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$375.00
Mobilization: Const. \$2,570.53 Surf. \$0.00.....	\$2,570.53
Quarry Development:	\$0.00
Total:	\$16,860.60

Notes:

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

Road Construction Worksheet

Road Number: 32-8-10.2 Road Name: Honeysuckle

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Aluminized	18 inch 16 ga 3 lf x \$48.11/lf = \$144.33
Aluminized	18 inch 16 ga 32 lf x \$48.11/lf = \$1,539.52
Aluminized	18 inch 16 ga 32 lf x \$48.11/lf = \$1,539.52
	Subtotal: \$3,223.37

Section 500 Renovation:

Blading: \$694.50/mi x 4.87 mi = \$3,382.22	
Compaction: \$325.47/mi x 4.87 mi = \$1,585.04	
Clean Culverts: \$365.82/mi x 4.87 mi = \$1,781.54	
Water for Road Compaction	
Water Truck 3000 Gal 4.87 hr x \$78.81/hr = \$383.80	
Remove slump	
Endhaul 15 cy material to mp 1.27 1 ea x \$300.00/ea = \$300.00	
Remove Tree	
Remove 30" x 20' downed tree place on outside edge	
1 ea x \$200.00/ea = \$200.00	
Remove tree wad and place on outside edge	
1 ea x \$200.00/ea = \$200.00	
	Subtotal: \$7,832.60

Section 700-1200 Surfacing: Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing: Mechanical Brushing

RoadSide Brushing Medium: \$402.69/acre x 7.10 acres = \$2,859.10	
	Subtotal: \$2,859.10

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Road Number: 32-8-10.2 Honeysuckle Continued

Section 8000 Miscellaneous:

Install Hay Bale Check dam

Hay Bale Check dams 3 ea x \$125.00/ea = \$375.00

Subtotal: \$375.00

Mobilization:

Construction - 24.62% of total Costs = \$2,570.53

surfacing = 0% \$0.00

Subtotal: \$2,570.53

Quarry Development:

Subtotal: \$0.00

Total: \$16,860.60

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Stew Sale Date:

Road Number: 32-8-11.0 Road Name: Multnomaw W Fk Ridge

Road Renovation: 1.15 mi 14 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: \$1,684.29

Blading 1.15 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. \$302.97 Surf. \$0.00..... \$302.97

Quarry Development: \$0.00

Total: \$1,987.26

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 32-8-11.0 Road Name: Multnomaw W Fk Ridge

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: $\$694.50/\text{mi} \times 1.15 \text{ mi} = \798.68

Compaction: $\$325.47/\text{mi} \times 1.15 \text{ mi} = \374.29

Clean Culverts: $\$365.82/\text{mi} \times 1.15 \text{ mi} = \420.69

Water for Road Compaction

Water Truck 3000 Gal 1.15 hr x $\$78.81/\text{hr} = \90.63

Subtotal: \$1,684.29

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 2.90% of total Costs = \$302.97

surfacing = 0% \$0.00

Subtotal: \$302.97

Quarry Development:

Subtotal: \$0.00

Total: \$1,987.26

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Stew Sale Date:

Road Number: 32-8-9.1 Road Name: Jackass Prairie

Road Renovation: 1.18 mi 14 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:	\$1,928.23
Blading 1.18 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	\$684.57
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$125.00
Mobilization: Const. \$492.48 Surf. \$0.00.....	\$492.48
Quarry Development:	\$0.00

Total: \$3,230.28

Notes:

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

Road Construction Worksheet

Road Number: 32-8-9.1 Road Name: Jackass Prairie

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: $\$694.50/\text{mi} \times 1.18 \text{ mi} = \819.51

Compaction: $\$325.47/\text{mi} \times 1.18 \text{ mi} = \384.05

Clean Culverts: $\$365.82/\text{mi} \times 1.18 \text{ mi} = \431.67

Water for Road Compaction

Water Truck 3000 Gal 1.18 hr x $\$78.81/\text{hr} = \93.00

Remove slash

Remove slash from road shoulder 1 ea x $\$200.00/\text{ea} = \200.00

Subtotal: \$1,928.23

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

RoadSide Brushing Medium: $\$402.69/\text{acre} \times 1.70 \text{ acres} = \684.57

Subtotal: \$684.57

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Install Hay Bale Check Dam

Hay Bale Check Dam 1 ea x $\$125.00/\text{ea} = \125.00

Subtotal: \$125.00

Mobilization:

Construction - 4.72% of total Costs = $\$492.48$

surfacing = 0% \$0.00

Road Number: 32-8-9.1 Jackass Prairie Continued

Subtotal: \$492.48

Quarry Development:

Subtotal: \$0.00

Total: \$3,230.28

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Stew Sale Date:

Road Number: TR 33-07A1 Road Name: Temp Route

Temporary Road: 0.41 mi 12 ft Subgrade ft ditch

200 Clearing and Grubbing: 1.0 acres	\$1,114.36
300 Excavation: 500 cy	\$2,262.12
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.8 acres	\$805.95
Includes Small Quantity Factor of 1.49	
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:	\$3,398.66
Mobilization: Const. \$1,363.71 Surf. \$0.00.....	\$1,363.71
Quarry Development:	\$0.00
Total:	\$8,944.80

Notes:

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

Road Construction Worksheet

Road Number: TR 33-07A1 Road Name: Temp Route

Section 200 Clearing and Grubbing:

Clearing - Brush (Clearing): Adjustment Factor (0)

1-15% (Avg Side Slopes): Adjustment Factor (0)

Scatter (Slash): Adjustment Factor (1)

less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)

Total Adjustment Factor: $0 + 0 + 1 + 0.25 = 1.25$

Base Cost/Acre: \$891.49 x Adjustment Factor: 1.25 x Total Acres: 1 = \$1,114.36

Subtotal: \$1,114.36

Section 300 Excavation:

Excavation - Common: $\$2.01/\text{cy} \times 500 \text{ cy} = \$1,005.00$

Subgrade Compaction: 4 Sta/hr $\$27.12/\text{sta.} \times 22.0 \text{ sta} = \596.64

Embankment Placement & Compaction 306.a - Common: $\$0.80/\text{cy} \times 500 \text{ cy} = \400.00

Blading without ditch: $\$11.84/\text{station} \times 22.00 \text{ stations} = \260.48

Subtotal: \$2,262.12

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Dry Method with Mulch: $\$555.44/\text{acre} \times 0.80 \text{ acres} = \444.35

Includes Small Quantity Factor of 1.49

+ Seed Cost: $\$132.00/\text{acre} \times 0.80 \text{ acres} = \105.60

+ Mulch Cost: $\$320.00/\text{acre} \times 0.80 \text{ acres} = \256.00

Subtotal: \$805.95

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Decommission after Use

Rip Subgrade - Tractor: D7 with rippers

Road Number: TR 33-07A1 Temp Route Continued

6 hr x \$158.11/hr = \$948.66

Construct waterbars 22 ea x \$100.00/ea = \$2,200.00

Construct Barricade 1 ea x \$250.00/ea = \$250.00

Subtotal: \$3,398.66

Mobilization:

Construction - 13.06% of total Costs = \$1,363.71

surfacing = 0% \$0.00

Subtotal: \$1,363.71

Quarry Development:

Subtotal: \$0.00

Total: \$8,944.80

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Stew Sale Date:

Road Number: TR33-07A2 Road Name: Temp Route

Temporary Road: 0.17 mi 12 ft Subgrade ft ditch

200 Clearing and Grubbing: 0.5 acres	\$1,390.72
300 Excavation: 1,800 cy	\$5,408.64
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.3 acres	\$302.23
Includes Small Quantity Factor of 1.49	
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:	\$816.22
Mobilization: Const. \$1,424.28 Surf. \$0.00.....	\$1,424.28
Quarry Development:	\$0.00
Total:	\$9,342.09

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: TR33-07A2 Road Name: Temp Route

Section 200 Clearing and Grubbing:

Clearing - Medium (Clearing): Adjustment Factor (1.67)

31-45% (Avg Side Slopes): Adjustment Factor (0.2)

Scatter (Slash): Adjustment Factor (1)

less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)

Total Adjustment Factor: $1.67 + 0.2 + 1 + 0.25 = 3.12$

Base Cost/Acre: \$891.49 x Adjustment Factor: 3.12 x Total Acres: 0.5 = \$1,390.72

Subtotal: \$1,390.72

Section 300 Excavation:

Excavation - Common: $\$2.01/\text{cy} \times 1,800 \text{ cy} = \$3,618.00$

Subgrade Compaction: 4 Sta/hr $\$27.12/\text{sta.} \times 9.0 \text{ sta} = \244.08

Embankment Placement & Compaction 306.a - Common: $\$0.80/\text{cy} \times 1,800 \text{ cy} = \$1,440.00$

Blading without ditch: $\$11.84/\text{station} \times 9.00 \text{ stations} = \106.56

Subtotal: \$5,408.64

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Dry Method with Mulch: $\$555.44/\text{acre} \times 0.30 \text{ acres} = \166.63

Includes Small Quantity Factor of 1.49

+ Seed Cost: $\$132.00/\text{acre} \times 0.30 \text{ acres} = \39.60

+ Mulch Cost: $\$320.00/\text{acre} \times 0.30 \text{ acres} = \96.00

Subtotal: \$302.23

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Decommission after use

Rip Subgrade - Tractor: D7 with rippers

Road Number: TR33-07A2 Temp Route Continued

2 hr x \$158.11/hr = \$316.22
Construct Waterbars 5 ea x \$100.00/ea = \$500.00

Subtotal: \$816.22

Mobilization:

Construction - 13.64% of total Costs = \$1,424.28
surfacing = 0% \$0.00

Subtotal: \$1,424.28

Quarry Development:

Subtotal: \$0.00

Total: \$9,342.09

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Stew Sale Date:

Road Number: TR33-07B Road Name: Temp Route

Temporary Road: 0.35 mi 12 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.8 acres	\$2,225.16
300 Excavation: 1,800 cy	\$5,759.28
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.7 acres	\$705.21
Includes Small Quantity Factor of 1.49	
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:	\$3,314.88
Mobilization: Const. \$2,159.40 Surf. \$0.00.....	\$2,159.40
Quarry Development:	\$0.00
Total:	\$14,163.93

Notes:

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

Road Construction Worksheet

Road Number: TR33-07B Road Name: Temp Route

Section 200 Clearing and Grubbing:

Clearing - Medium (Clearing): Adjustment Factor (1.67)

31-45% (Avg Side Slopes): Adjustment Factor (0.2)

Scatter (Slash): Adjustment Factor (1)

less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)

Total Adjustment Factor: $1.67 + 0.2 + 1 + 0.25 = 3.12$

Base Cost/Acre: \$891.49 x Adjustment Factor: 3.12 x Total Acres: 0.8 = \$2,225.16

Subtotal: \$2,225.16

Section 300 Excavation:

Excavation - Common: $\$2.01/\text{cy} \times 1,800 \text{ cy} = \$3,618.00$

Subgrade Compaction: 4 Sta/hr $\$27.12/\text{sta.} \times 18.0 \text{ sta} = \488.16

Embankment Placement & Compaction 306.a - Common: $\$0.80/\text{cy} \times 1,800 \text{ cy} = \$1,440.00$

Blading without ditch: $\$11.84/\text{station} \times 18.00 \text{ stations} = \213.12

Subtotal: \$5,759.28

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Dry Method with Mulch: $\$555.44/\text{acre} \times 0.70 \text{ acres} = \388.81

Includes Small Quantity Factor of 1.49

+ Seed Cost: $\$132.00/\text{acre} \times 0.70 \text{ acres} = \92.40

+ Mulch Cost: $\$320.00/\text{acre} \times 0.70 \text{ acres} = \224.00

Subtotal: \$705.21

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Decommission after use

Rip subgrade - Tractor: D7 with rippers

Road Number: TR33-07B Temp Route Continued

8 hr x \$158.11/hr = \$1,264.88

Construct waterbars 18 ea x \$100.00/ea = \$1,800.00

Construct Barricade 1 ea x \$250.00/ea = \$250.00

Subtotal: \$3,314.88

Mobilization:

Construction - 20.69% of total Costs = \$2,159.40

surfacing = 0% \$0.00

Subtotal: \$2,159.40

Quarry Development:

Subtotal: \$0.00

Total: \$14,163.93

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Mobilization Costs - Construction and Surfacing

T.S. Contract Name: Elk Stew Sale Date:

Average Mobilization distance = 50 miles Factor = 1.00

Mobilization: Construction

Graders-all:	1 ea x (1.00 x \$410.00/ea + 80 mi x \$14.10/mi)= \$1,538.00
Rollers & Comp:	1 ea x (1.00 x \$410.00/ea + 80 mi x \$21.70/mi)= \$2,146.00
Tractors <= D7:	1 ea x (1.00 x \$635.00/ea + 80 mi x \$31.00/mi)= \$3,115.00
Water Truck:	1 ea x (1.00 x \$95.00/ea + 80 mi x \$3.94/mi)= \$410.20
Excavators(Small):	1 ea x (1.00 x \$410.00/ea + 80 mi x \$19.62/mi)= \$1,979.60
Equipment Washing:	5 ea x (\$250.00) /ea = \$1,250.00

Subtotal: \$10,438.80

Mobilization: Surfacing

Subtotal: \$0.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Summary of Construction Quantities

T.S. Contract Name: Elk Stew Sale Date:

Road Number	Const	Improv	Renov	Decomm	Temp
31-8-31.1			85.01		
31-8-31.2			52.80		
31-8-31.3			52.80		
31-8-31.5			8.45		
32-8-10.2			257.14		
32-8-11.0			60.72		
32-8-9.1			62.30		
TR 33-07A1					21.65
TR33-07A2					8.98
TR33-07B					18.48
Total Sta:			579.22		49.11

200 Clearing and Grubbing	Clearing acres
31-8-31.1	0.0
31-8-31.2	0.0
31-8-31.3	0.0
31-8-31.5	0.0
32-8-10.2	0.0
32-8-11.0	0.0
32-8-9.1	0.0
TR 33-07A1	1.0
TR33-07A2	0.5
TR33-07B	0.8
Totals:	2.3

300 Excavation	Excav LCY.s	Haul sta-yds	Haul yd-mi
TR 33-07A1	500	0	0
TR33-07A2	1,800	0	0
TR33-07B	1,800	0	0
Totals:	4,100	0	0

400 Drainage

Road Number	Culvert	Polypipe	Downspout
32-8-10.2	67 lf	0 lf	0 lf
Total Drainage:	67 lf		

500 Renovation	Blade Miles	Slide cy
31-8-31.1	1.61	0
31-8-31.2	1.00	0
31-8-31.3	1.00	0
31-8-31.5	0.16	0
32-8-10.2	4.87	0

Continuation of Construction Quantities

32-8-11.0	1.15	0
32-8-9.1	1.18	0

Totals:	<u>10.97</u>	<u>0</u>
---------	--------------	----------

Remove slash	32-8-9.1	
Remove slash from road shoulder		1 ea
Remove slump	32-8-10.2	
Endhaul 15 cy material to mp 1.27		1 ea
Remove Tree	32-8-10.2	
Remove 30" x 20' downed tree place on outside edge		1 ea
Remove tree wad and place on outside edge		1 ea
Water for Road Compaction	32-8-9.1	
Water Truck 3000 Gal		1.18 hr
Water for Road Compaction	32-8-11.0	
Water Truck 3000 Gal		1.15 hr
Water for Road Compaction	32-8-10.2	
Water Truck 3000 Gal		4.87 hr
Water for Road compaction	31-8-31.5	
Water Truck 3000 Gal		0.16 hr
Water for Road compaction	31-8-31.3	
Water Truck 3000 Gal		0.8 hr
Water for Road Compaction	31-8-31.1	
Water Truck 3000 Gal		1.61 hr
Water for Road Renovation	31-8-31.2	
Water Truck 3000 Gal		1 hr

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

Totals: No Quantities

1400 Slope Protection

Totals: 0 cyTotals: 0

1800 Soil stabilization - acres	Dry W/O Mulch	Dry/with Mulch	Hydro Mulch
TR 33-07A1	0.0	0.8	
TR33-07A2	0.0	0.3	
TR33-07B	0.0	0.7	

Totals: 0.0 1.8 0.0

Small Quantity Factor of 1.49 used

1900 Cattleguards

Totals: No Quantities

2100 RoadSide Brushing	acres
31-8-31.1 - Mechanical Brushing	2.3
31-8-31.2 - Mechanical Brushing	1.5
31-8-31.3 - Mechanical Brushing	1.5

Continuation of Construction Quantities

32-8-10.2 - Mechanical Brushing	7.1
32-8-9.1 - Mechanical Brushing	1.7

Totals:	14.1
---------	------

Roadside Brushing - Extra Heav 31-8-31.5

Brush 15' left and right - Brush Cutter 24 hr

2300 Engineering stations

Totals:	0.00
---------	------

2400 Minor Concrete

Totals: No Quantities

2500 Gabions

Totals: No Quantities

8000 Miscellaneous

Decommission after use TR33-07B

Rip subgrade - Tractor: D7 with rippers 8 hr

Construct waterbars 18 ea

Construct Barricade 1 ea

Decommission after use TR33-07A2

Rip Subgrade - Tractor: D7 with rippers 2 hr

Construct Waterbars 5 ea

Decommission after Use TR 33-07A1

Rip Subgrade - Tractor: D7 with rippers 6 hr

Construct waterbars 22 ea

Construct Barricade 1 ea

Install Hay Bale Check Dam 32-8-9.1

Hay Bale Check Dam 1 ea

Install Hay Bale Check dam 32-8-10.2

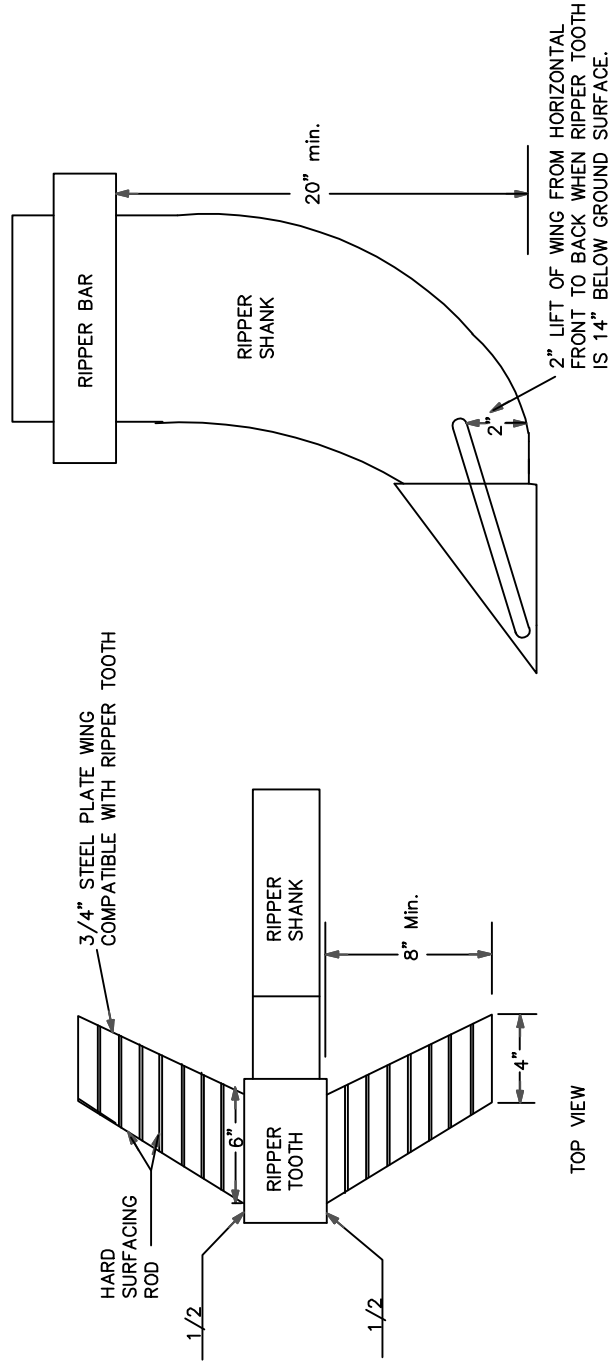
Hay Bale Check dams 3 ea

Install Hay Bale Check Dams 31-8-31.3

Hay Bale Check Dams 4 ea

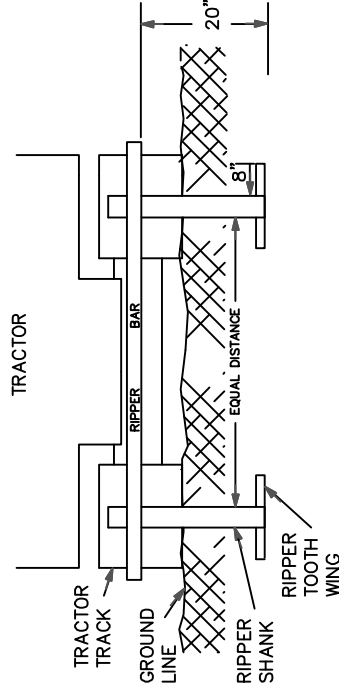
EXHIBIT R

SHEET 1 OF 1



SIDE VIEW

TYPICAL RIPPER POSITION



NOTES: TYPICAL RIPPER TOOTH CONSTRUCTION

1. USE HARD SURFACING ROD FOR ALL EDGE AND SURFACE REINFORCEMENT.
2. WELD THAT ATTACHES WINGS TO RIPPER TEETH MUST BE COMPATIBLE WITH METAL IN TEETH AND WINGS.
3. RIPPER SHANKS AND RIPPER TEETH MAY BE NEW OR USED.
4. WINGS SHALL PROVIDE TWO (2) INCHES OF LIFT FROM THE HORIZONTAL WHEN TEETH ARE EXTENDED FOURTEEN (14) INCHES BELOW THE GROUND SURFACE.

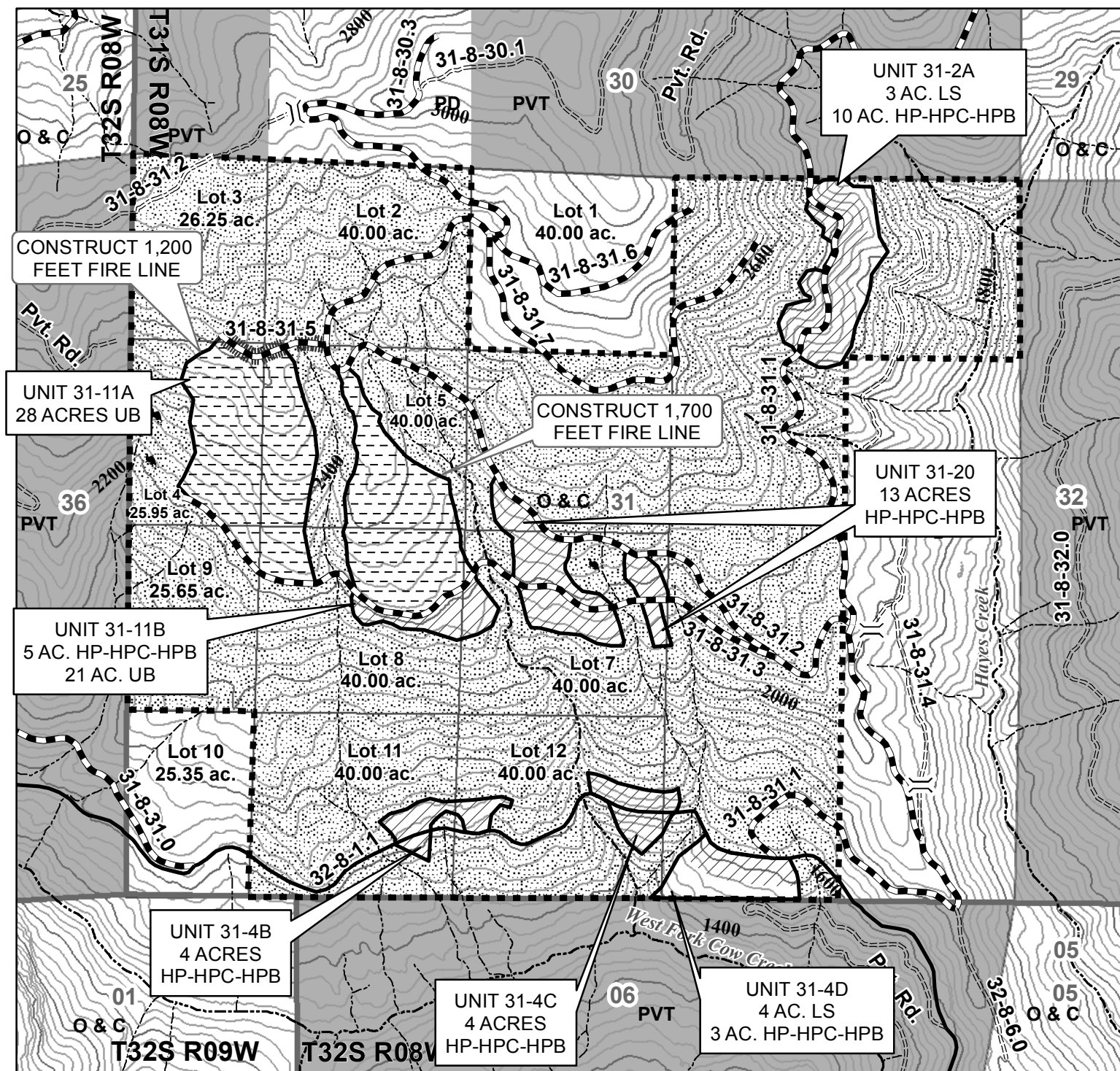
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ASHLAND RESOURCE AREA MEDFORD DISTRICT

WING RIPPER DETAIL

DESIGNED
REVIEWED
APPROVED

DRAWN: JWR
DATE: October 2009
DRAWING NO.

SCALE: NONE
SHEET 1 OF 1



0 750 1,500 3,000 Feet

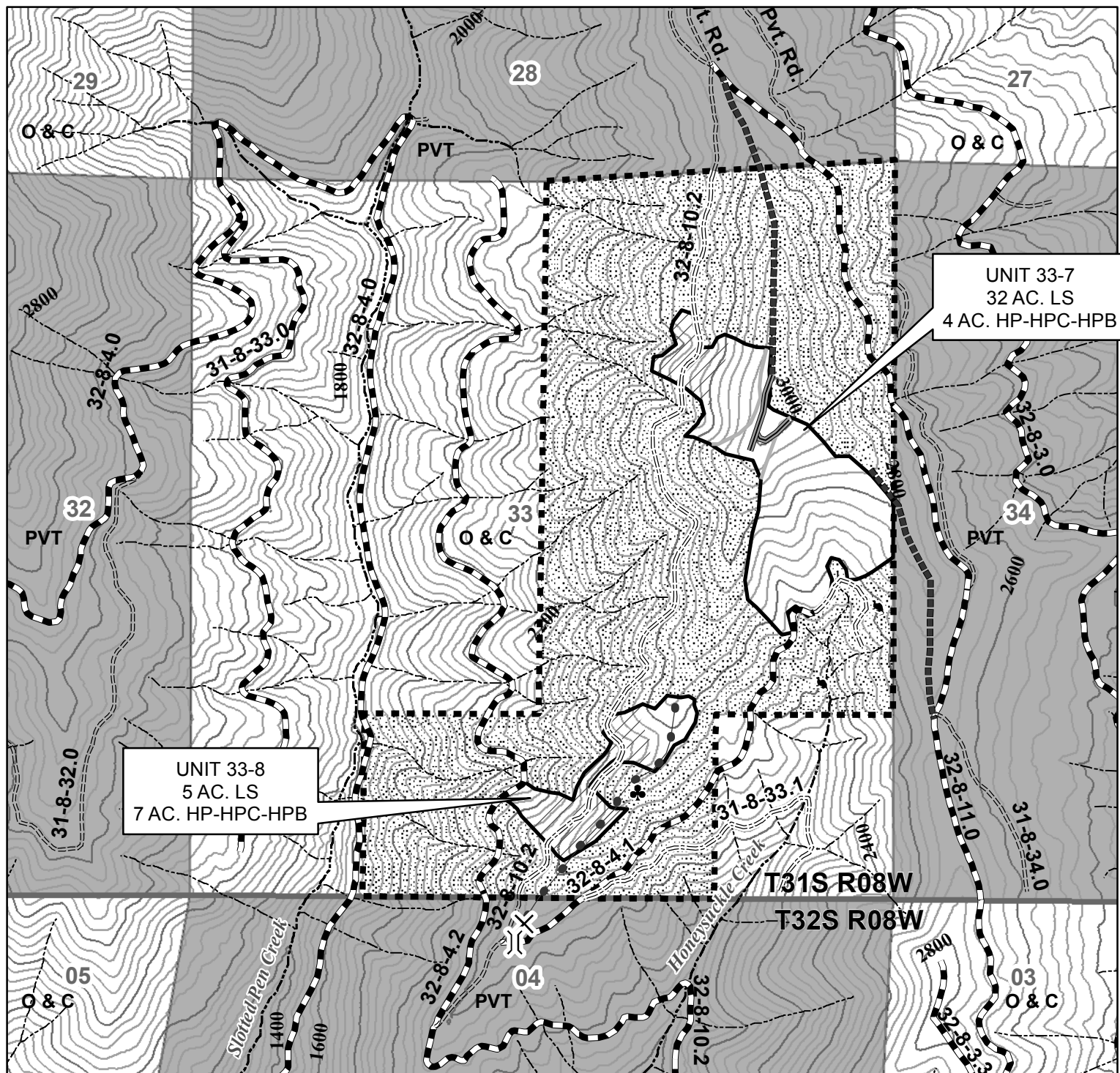
40 FOOT CONTOUR INTERVAL 1 inch = 1,000 feet

Map created 7/9/2018

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.

United States Department of the Interior
Bureau of Land Management
Medford District Office
3040 Biddle Road
Medford, OR 97504
(541) 618-2200










Map created 7/9/2018

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Legend

-  Red Tree Vole Buffer
-  Plant Buffer
-  Designated Landing
-  Gate
-  Barricade




Temporary Routes

Type



-  Temp. Road Construction
-  Temp. Road Reconstruction
-  Tractor Swing Route

Roads




Surface Type

-  Paved
-  Rocked
-  Natural

Contours










-  Intermediate 40-ft
-  Index 200-ft

Streams




-  Perennial
-  Intermittent
-  Silviculture Rx Change Line (flagged in yellow and white)

Elk Stew Timber Sale Units

Slash Disposal Rx

-  Roadside Management Unit-Landing Deck Cover, Landing Deck Burn
-  Lop and Scatter
-  Handpile, Handpile Cover, Handpile Burn
-  Underburn
-  Reserve Area
-  Contract Area Boundary
-  Lots
-  Sections
-  Township and Range

Ownership

-  Bureau of Land Management O & C Land
-  Bureau of Land Management Public Domain Land
-  Private Land

UNIT	ACRES	SLASH DISPOSAL PRESCRIPTION
31-2A	13	LS/HP-HPC-HPB
31-4B	4	HP-HPC-HPB
31-4C	4	HP-HPC-HPB
31-4D	7	LS/HP-HPC-HPB
31-11A	28	UB
31-8-31.5		RSM-CLD-BLD
31-11B	26	HP-HPC-HPB/UB
31-20	13	HP-HPC-HPB
33-7	36	LS/HP-HPC-HPB
33-8	12	LS/HP-HPC-HPB
TOTAL	143	

ALL ACRES COMPUTED BY GPS TRAVERSE
BOUNDARIES OF HARVEST UNITS ARE
POSTED AND PAINTED IN ORANGE





LS = LOP & SCATTER
HP-HPC-HPB = HAND PILE-HAND PILE COVER-
HAND PILE BURN
UB = UNDERBURN
RSM-CLD-BLD = ROADSIDE MANAGEMENT COVER
LANDING DECKS-BURN LANDING DECKS

Map created 7/9/2018

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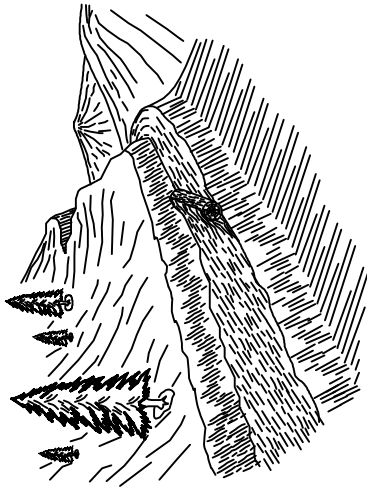
SUMMARY

HP-HPC-HPB	HAND PILE-HAND PILE COVER-HAND PILE BURN (UNITS 31-4B, 31-4C, 31-20)	21 ACRES
HP-HPC-HPB/UB	HAND PILE-HAND PILE COVER-HAND PILE BURN/UNDERBURN (UNIT 31-11B)	26 ACRES
LS/HP-HPC-HPB	LOP & SCATTER/HAND PILE-HAND PILE COVER-HAND PILE BURN (UNITS 31-2A, 31-4D, 33-7, 33-8)	68 ACRES
UB	UNDERBURN (UNIT 31-11A)	28 ACRES
RSM-CLD-BLD	ROADSIDE MANAGEMENT-COVER LANDING DECKS-BURN LANDING DECKS (ROAD 31-8-31.5)	ACRES INCLUDED WITH UNIT 31-11A
 	TOTAL TIMBER SALE UNIT AREA	143 ACRES
	RESERVE AREA	734.85 ACRES
	TOTAL CONTRACT AREA	877.85 ACRES

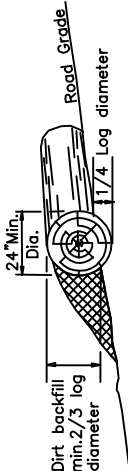
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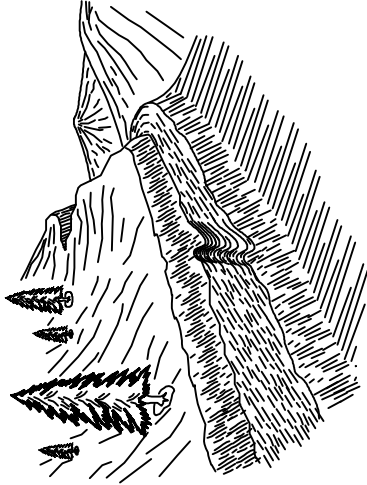




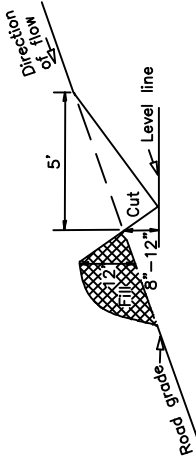
LOG BARRICADE



1. LOG BARRICADE SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL BARRICADES SHALL BE SKEWED 30 DEGREES
4. THE LENGTH SHALL BE SUFFICIENT TO EXTEND FROM THE CUT BANK TO THE FILL SLOPE.
5. THE MINIMUM SMALL END DIAMETER OF THE LOG BARRICADE SHALL BE 24".

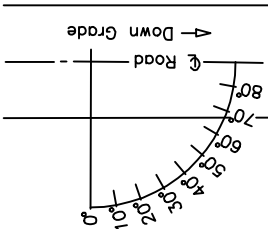


WATER BAR



1. WATER BARS SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL WATER BARS SHALL BE SKEWED 30 DEGREES
4. UPON COMPLETION OF SKIDDING LOGS, FOR THE LOGGING SEASON, EACH SKID ROAD WILL HAVE CROSS DRAINAGE CONSTRUCTED AS SHOWN ABOVE.
5. PRIOR TO BLOCKING, EACH ROAD WILL HAVE CROSS DRAINAGE CONSTRUCTED AS SHOWN ABOVE.

SKEW DIAGRAM



WATER BAR SPACING *

ROAD GRADE	LOAM OR CLAY	DECOMPOSED LOAM GRANITE
%	FEET	FEET
4-6	400	300
7-9	300**	200**
10-14	200	150
15-20	150	90
21-40	90	50
41-60	50	25

* DISTANCES ARE MAXIMUM.

** ON GRADES IN EXCESS OF 10% CONSTRUCT WATER BARS.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

DEPOSIT AND BID FOR ☒ **TIMBER***
☐ **VEGETATIVE RESOURCE**
(Other Than Timber)

LUMP SUM SALE

Name of Bidder
Tract Number ORM07-TS-2018.0017
Sale Name Elk Stew Timber Sale
Sale Notice (dated) September 13, 2018
BLM District Medford

<input type="checkbox"/> Sealed Bid for Sealed Bid Sale	<input checked="" type="checkbox"/> Written Bid for Oral Auction Sale
---	---

In response to the above dated Sale Notice, the required deposit and bid are hereby submitted for the purchase of designated timber/vegetative resource on the tract specified above.

Required bid deposited is \$ **24,800.00** and is enclosed in the form of ☐ cash ☐ money order ☐ bank draft ☐ cashier's check ☐ certified check ☐ bid bond of corporate surety on approved list of the United States Treasury ☐ guaranteed remittance approved by the authorized officer.

IT IS AGREED That the bid deposit shall be retained by the United States as liquidated damages if the bid is accepted and the undersigned fails to execute and return the contract, together with any required performance bond and any required payment within 30 days after the contract is received by the successful bidder. It is understood that no bid for less than the appraised price on a unit basis per species will be considered. If the bid is rejected the deposit will be returned.

BID SCHEDULE – LUMP SUM SALE

NOTE: Bidders should carefully check computations in completing the Bid Schedule

BID SUBMITTED					ORAL BID MADE	
PRODUCT SPECIES	UNIT	ESTIMATED VOLUME OR QUANTITY	UNIT PRICE	TOTAL VALUE	UNIT PRICE	TOTAL VALUE
Douglas-fir	MBF	1,100	X	=	X	=
ponderosa pine	MBF	41	X\$40.30	=\$1,652.30	X	=
white fir	MBF	15	X\$53.50	=\$802.50	X	=
incense-cedar	MBF	1	X\$93.50	=\$93.50	X	=
sugar pine	MBF	1	X\$42.00	=\$42.00	X	=
Total		1,158	X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
TOTAL PURCHASE PRICE						

(Continued on reverse)

If sale contract is executed, undersigned is liable for total purchase price even though the quantity cut, removed, or designated for taking is more or less than the total estimated volume or quantity shown above. Undersigned certifies bid was arrived at by bidder or offeror independently, and was tendered without collusion with any other bidder or offeror. In submitting or confirming this bid, undersigned agrees to the foregoing provisions, applicable regulations, and certifies that he is authorized to act as, or on behalf of, the bidder.

Bid submitted on *(date)*

(Check appropriate box, sign in ink, and complete the following)

<input type="checkbox"/>	Signature, if firm is individually owned	Name of firm <i>(type or print)</i>
<input type="checkbox"/>	Signatures, if firm is a partnership or L.L.C.	Business address, include zip code <i>(type or print)</i>
<input type="checkbox"/>	Corporation organized under the state laws of	<i>(To be completed following oral bidding)</i>
	Signature of Authorized Corporate Signing Officer	I HEREBY confirm the above oral bid By <i>(signature)</i>
	Title	Date
Submit bid, in <i>duplicate</i> , to qualify for either an oral auction or sealed bid sale together with the required bid deposit made payable to the Department of the Interior – BLM. Oral Auction – Submit to Sales Supervisor prior to closing of qualifying period for tract.		Sealed Bid – Send to District Manager, who issued the sale notice, in a sealed envelope marked on the outside: (1) “Bid for Timber” (2) Vegetative Resource Other Than Timber (3) Time bids are to be opened (4) Legal description

NOTICE

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 38 FR 6280 and 43 CFR 5442.1

PURPOSE: To qualify an oral auction bidder, and then if successful, to bind bidder to certain contract conditions.

ROUTINE USE: To determine that an individual is qualified to participate in oral auction bidding, and, as surety that bidder will fulfill contract requirements.

EFFECT OF NOT PROVIDING INFORMATION: Filing this deposit and bid information is necessary only when an individual wishes to participate in a sealed or auction bid sale for timber or vegetative resources.

INSTRUCTIONS TO BIDDERS

1. **AUTHORITY** – Timber located on the revested Oregon and California Railroad Grant Lands and on the reconveyed Coos Bay Wagon Road Grant Lands is administered and sold pursuant to authority of the Act of August 28, 1937 (50 Stat. 874; 43 U.S.C. 1181a); timber located on other lands and other vegetative resources on all public lands of the United States under jurisdiction of the Bureau of Land Management are administered and sold pursuant to authority of the Act of July 31, 1947 (61 Stat. 681), as amended, by the Act of July 23, 1955 (69 Stat. 367; 30 U.S.C. 601 et. seq.). Regulations of the Secretary of the Interior governing sale of timber are codified in 43 CFR Group 5400.

2. **QUALIFICATIONS OF BIDDERS** – A bidder for sale of timber/vegetative resources must be either (a) a citizen of the United States, (b) a partnership composed wholly of such citizens, (c) an unincorporated association composed wholly of such citizens, or (d) a corporation authorized to transact business in the State in which the timber/vegetative resource is located.

3. **INSPECTION OF TIMBER/VEGETATIVE RESOURCES** – Bidder is invited, urged, and cautioned to inspect the timber/vegetative resource prior to submitting a bid. By executing the timber/vegetative resource sale contract, bidder warrants that the contract is accepted on the basis of his examination and inspection of the timber/vegetative resource and his opinion of its value.

4. **DISCLAIMER OF WARRANTY** – Government expressly disclaims any warranty of the fitness of the designated timber/vegetative resource for any purpose of the bidder; all timber/vegetative resources are to be sold “As Is” without any warranty of merchantability by Government. Any warranty as to the quantity or quality of timber/vegetative resource to be sold is expressly disclaimed by Government.

5. **BIDS** – Sealed or written bids for not less than the advertised appraised price, per timber/vegetative resource must be submitted in duplicate to the District Manager who issued *Timber/Vegetative Resource Sale Notice*.

(a) **Sealed Bid Sales** – Bids will be received until time for opening which is set out in the Notice. Enclose both copies of bid with required bid deposit in a sealed envelope marked on the outside *Bid for Timber/Vegetative Resource*, time bid is to be opened, tract number, and legal description of land on which timber/vegetative resource is located. In event of a tie, the high bidder shall be determined by lot from among those who submitted the tie bids.

(b) **Auction Sales** – Submission of the required bid deposit and a written bid is required to qualify for oral bidding. Oral bidding shall begin from the highest written bid. No oral bid will be considered which is not higher than the preceding bid. In the event there is a tie in high written bids, and no oral bidding occurs, the bidder who was the first to submit his bid deposit and written bid shall be declared the high bidder. If the officer conducting the sale cannot determine who made the first submission of high tie written bids, the high bidder shall be determined by lot. High bidder must confirm his bid, in writing, immediately upon being declared high bidder.

(c) Except as otherwise provided in 43 CFR 5442.2, bids will not be considered in resale of timber/vegetative resource remaining from an uncompleted contract from any person or affiliate of such person who failed to complete the original contract because of (1) cancellation for the purchaser's breach or (2) through failure to complete payment by expiration date.

(d) When it is in the interest of the Government to do so, it may reject any and all bids and may waive minor deficiencies in bids or in sale advertisement.

6. **BID FORMS** – All sealed, written bids, and confirmation of oral bids shall be submitted on forms provided by Government.

(a) **Lump Sum Sales** – Bids shall specify (1) Bureau of Land Management estimated volume, (2) price per unit, and (3) total purchase price. Estimated volume and price per unit are to be used for administrative and appraisal purposes only. Upon award of contract, high bidder shall be liable for total purchase price, including any adjustment which may be made as a result of reappraisal if an extension of time is granted, even though quantity of timber/vegetative resource actually cut, removed, or designated for taking is more or less than the estimated volume or quantity listed.

(b) **Timber Scale Sales** – Bids must state price per thousand board feet that will be paid for each species. High bidder will be determined by multiplying bid price per thousand board feet per species by Bureau of Land Management estimate of volume of each species. Purchaser shall be liable for purchase price of all merchantable timber sold under contract even though all such timber is not actually cut

and removed prior to expiration of time for cutting and removal as specified in contract.*

7. **BID DEPOSIT** – All bidders must make a deposit of not less than the amount specified in the *Timber/Vegetative Resource Notice*. Deposit may be in the form of cash, money orders, bank drafts, cashiers or certified checks made payable to the Department of the Interior – BLM, bid bonds of a corporate surety shown on the approved list of the United States Treasury Department*, or any approved guaranteed remittance approved by the Authorized Officer. Upon conclusion of bidding, the bid deposit of all bidders, except high bidder, will be returned. The cash deposit of the successful bidder may be applied toward the required sale deposit and/or the purchase price. Cash not applied to the sale deposit or the purchase price, or a corporate surety bid bond, will be returned at the time the contract is signed by the Government.

8. **AWARD OF CONTRACT** – Government may require high bidder to furnish such information as is necessary to determine the ability of bidder to perform the obligation of contract. Contract will be awarded to high bidder, unless he is not qualified or responsible or unless all bids are rejected. If high bidder is not qualified or responsible or fails to sign and return the contract together with required performance bond and any required payment, contract may be offered and awarded to the highest bidders qualified, responsible, and willing to accept the contract.

9. **TIMBER/VEGETATIVE RESOURCE SALE CONTRACT** – To be executed by purchaser, has been prepared by Government, and may be examined in the District Manager's office.

10. PERFORMANCE BOND-

(a) A performance bond in an amount of not less than 20 percent of total purchase price is required, but the amount of the bond shall not be in excess of \$500,000, except when the purchaser opts to increase the minimum bond to permit cutting prior to payment as provided in 43 CFR 5451.2, or in the event the purchaser is a holder of an unresolved default the bond may be increased as provided in 43 CFR 5450.1(b). Performance bond may be (1) bond of a corporate surety shown on approval list issued by the United States Treasury Department and executed on an approved standard form, (2) personal surety bond executed on an approved standard form if Government determines principals and bondsman are capable of carrying out the terms of the contract, (3) cash bonds, (4) negotiable securities of the United States, or (5) any guaranteed remittance approved by the Authorized Officer.

(b) If purchaser elects to cut timber without skidding or yarding it to a loading point or removing it prior to the payment of the second or subsequent installments, Government shall require an increase in amount of performance bond initially required by an amount equal to the value of timber to be cut. Such increase must be on a bond rider form supplied by Government and be approved, in writing, by Government prior to cutting timber covered by the bond increase. This increased amount of bond shall be used to assure payment for timber cut in advance of payment.*

11. **PAYMENT BOND** – If purchaser elects to (a) cut and remove timber, or (b) remove timber already cut which has been secured by an increased performance bond as provided in paragraph 10(b) above, before payment of the second or subsequent installments, Government shall require a payment bond on a form supplied by Government. Purchaser shall obtain written approval from Government of payment bond prior to cutting and/or removal of timber covered by the bond. Payment bond shall be used to assure payment for timber cut and/or removed in advance of payment.*

12. **PAYMENT OF PURCHASE PRICE** – For sales of \$500 or more, Government may allow payment by installments. Except as discussed in paragraphs 10 and 11 above, no part of any timber/vegetative resource sold may be severed, cut, or removed unless advance payment has been made as provided in contract.

13. **LIQUIDATED DAMAGES** – Within thirty (30) days from receipt of *Timber/Vegetative Resource Sale Contract*, the successful bidder shall sign contract and return it to Government, together with required bond and any required payment. If successful bidder fails to comply within the stipulated time, his bid deposit shall be retained by Government as liquidated damages.

14. **NINETY-DAY SALES** – If no bid is received within time specified in the advertisement of sale and if Government determines that there has been no significant rise in the market value of timber/vegetative resource, it may, in its discretion, keep the sale open, not to exceed ninety (90) days.

*Applies to Timber Only

15. **UNAUTHORIZED USE OF GOVERNMENT PROPERTY** – A sale may be refused to high bidder who has been notified that he has failed to make satisfactory arrangements for payment of damages resulting from unauthorized use of, or injury to, property of the United States.

16. **EQUAL OPPORTUNITY CLAUSE** – This contract is subject to the provisions of Executive Order No. 11246 of September 24, 1965, as amended, which sets forth the nondiscrimination clauses. Copies of this order may be obtained from the District Manager. 43 CFR 60-1.7(b) requires that the Equal Opportunity Compliance Report Certification will be completed by prospective contractors. Certification may be obtained from District Manager.

17. **LOG EXPORT** – All timber offered for sale except as noted in the *Timber Sale Notice* is restricted from export from the United States in the form of unprocessed timber and cannot be 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 and specifications suitable for end product use; or (4) western

red cedar lumber which does not meet lumber of American Lumber Standards Grades of Number 3 dimension or better, or Pacific Lumber Inspection Bureau R-List Grades of Number 3 common or better. 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 remanufacture of eight and three quarters (8-3/4) inches in thickness or less; or (6) shakes and shingles. In event purchaser wishes to sell any or all of timber restricted from export in the form of unprocessed timber, the buyer, exchanges, or recipient shall be required to comply with contractual provisions relating to “unprocessed timber”. Special reporting, branding and painting of logs may be included in contract provisions.*

18. **DETAILED INFORMATION** – Detailed information concerning contract provisions, bid, performance bond forms, tract location maps, and access conditions may be obtained from the District Manager. All persons interested in bidding on the products listed are encouraged to familiarize themselves with all such detailed information.