

P R O S P E C T U S

Lump Sum Sale

GRANTS PASS RESOURCE AREA
JOSEPHINE MASTER UNIT

Medford Sale # ORM07-TS-15-3
August 27, 2015 (SQF)

#1. Lower Grave Timber Sale,
Josephine & Jackson Counties, O&C

BID DEPOSIT REQUIRED: \$ 75,400.00

All timber designated for cutting in NE $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 26, SE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 30, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 32, S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 34, E $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 35, T. 33 S., R. 5 W., unnumbered lots in the W $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 7, T. 34 S., R. 4 W., Lot 1, Lot 2, S $\frac{1}{2}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 1, unnumbered lot in NW $\frac{1}{4}$ NE $\frac{1}{4}$, unnumbered lots in N $\frac{1}{2}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$ Sec. 3, S $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ Sec. 15, NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 17, T. 34 S., R. 5 W., unnumbered lots in N $\frac{1}{2}$ NE $\frac{1}{4}$, unnumbered lots in N $\frac{1}{2}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$ Sec. 1, T. 34 S., R. 6 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
47,968	6,444	Douglas-fir	7,992	\$91.10	\$728,071.20
3,874	171	Incense-Cedar	217	\$77.20	\$16,752.40
553	108	Ponderosa Pine	140	\$33.30	\$4,662.00
231	65	Sugar Pine	75	\$35.40	\$2,655.00
344	24	White Fir	31	\$33.50	\$1,038.50
23	3	Western Hemlock	3	\$36.10	\$108.30
52,993	6,815	Totals	8,458		\$753,287.40

*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.

**The purchase of biomass material is optional. If the Purchaser chooses to purchase biomass/firewood, then it will be modified into the timber sale contract and a fair market price will be established at that time.

TIMBER AUCTION LOCATION – The timber auction will be held at the Grants Pass Inter-agency Office, located at 2164 NE Spalding Ave., Grants Pass, Oregon, at 9 a.m. on Thursday, August 27, 2015.

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 timber has been cruised using the PCMTRE sampling method to select sample trees. The sample trees have been cruised with the aid of a Relaskope and their volume expanded to a total sale volume. Maps showing the location and description of these sample trees are available at the Grants Pass Interagency Office.

The timber volumes for units 34-2D, RW-1, and RW-2 were based on 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 nonmerchantable are designated for cutting. With respect to merchantable trees of all conifer species: the average tree is 13.9 inches DBHOB; the average gross merchantable log contains 58 bd. ft.; the total gross volume is approximately 9,446 M bd. ft; and 90% recovery is expected. (Average DF is 13.9 inches DBHOB; average gross merchantable log DF contains 58 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 – Thirty two (32) units containing five hundred eleven (511) acres must be partial cut and three (3) units containing sixty (60) acres must be regeneration harvested. Two (2) right-of-way units containing two (2) acres must be clear-cut and ten (10) temporary route rights-of-way must be clear-cut.

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

ACCESS - Access to the sale area is available via a public road system through the contract area; via existing BLM roads; via Right-of-Way and Road Use Agreement M-660K with Systems Global (Hancock); via Right-of-Way and Road Use Agreement M-660J with AP Systems (Hancock); via Right-of-Way and Road Use Agreement M-660 with Murphy Company; via Right-of-Way and Road Use Agreement M-1182 with Spalding and Sons Inc.; via Right-of-Way and Road Use Agreement M-1538 with Josephine County Department of Forestry. Among other conditions Right-of-Way and Road Use Agreement M-660K with Systems Global (*Hancock*) requires, but is not limited to: payment of a road use fee of \$3,420.00; road maintenance to be completed by the Purchaser; completion of an agreement between the Purchaser and Permittee; arbitration of conditions of road use. The Permittee has indicated they require a rockwear obligation of \$622.84. Among other conditions Right-of-Way and Road Use Agreement M-660J with AP Timber (*Hancock*) requires, but is not limited to: payment of a road use fee of \$2,280.00; road maintenance to be completed by the Purchaser; completion of an agreement between the Purchaser and Permittee; arbitration of conditions of road use. The Permittee has indicated they require a rockwear obligation of \$209.48. Among other conditions Right-of-Way and Road Use Agreement M-660 with Murphy Company requires, but is not limited to: payment of a road use fee of \$730.00; road maintenance to be completed by the Purchaser; completion of an agreement between the Purchaser and Permittee. Among other conditions Right-of-Way and Road Use Agreement M-1182 with Spalding and Sons Inc. requires: payment of a road use fee of \$144.16; road maintenance to be completed by the Purchaser; completion of an agreement between the Purchaser and Permittee. Among other conditions Right-of-Way and Road Use Agreement M-1538 with Josephine County Department of Forestry requires road maintenance to be completed by the Purchaser and completion of an agreement between the Purchaser and Permittee.

ROAD MAINTENANCE - The Purchaser will be required to maintain all of the roads which he constructs plus 14.07 miles of existing BLM and private road. The BLM will maintain 31.05 miles of existing BLM roads. The Purchaser will be required to pay a maintenance and rockwear fee of

\$49,840.01 for the use of these roads maintained by BLM.

ROAD CONSTRUCTION - The contract will require the Purchaser to construct 15.50 stations of new proposed road, renovate 2,035.46 stations of existing road, and construct/decommission 80.15 stations of temporary routes. Additional information is available in the timber sale prospectus.

SOIL DAMAGE PREVENTION - Pursuant to Section 26 of Form 5450-4, Timber Sale Contract, the Purchaser shall not conduct mechanical ground based harvesting, ground based yarding, skid trail and landing rehabilitation, road construction, temporary route construction, temporary route reconstruction, or temporary route and landing decommissioning in all harvest 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.

Pursuant to Section 26 of Form 5450-4, Timber Sale Contract, the Purchaser shall not conduct any haul on natural surface and rocked roads 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.

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. 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 two thousand fifty (2,050) feet slope distance. A helicopter equipped with a dropline with a minimum length of one hundred fifty (150) feet. 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 and regeneration harvest units.

SLASH DISPOSAL - Slash disposal will consist of lop and scatter, selective slashing, machine pile & cover machine piles, hand pile & cover hand piles, pile & cover landing decks, burn & mop up hand piles, machine piles, and landing decks as described in SD-5 of the Special Provisions. Hand pile all slash located within one hundred fifty (150) feet of temp. routes and roads where the route/road coincides with a cable yard harvest unit boundary. Lop and scatter all slash located beyond this one hundred fifty (150) foot hand pile treatment in cable yard portions of units. This lop and scatter and hand pile combination treatment will occur in units 1-1, 1-2, 1-A, 1-A2, 1-A3, 1-C3, 1-C4, 1-C5, 3-2C, 7-2, 7-2C, 15-1, 15-3A, 17-2, 26-1, 32-1E, 32-1F, 32-1H, 34-2B, 35-A, 35-C1, 35-C2, 35-C3, 35-D, and 35-E. Hand pile units 3-2A, 15-2, 30-1, 30-2, and 34-2D. Machine pile all slash located in the ground based portion of units 1-A, 1-C1, 1-C2, 1-C4, 3-2C, 32-1H, RW 1, 35-A, 35-B, 35-E, and RW 2. Machine pile all slash located within two hundred (200) feet of temp. routes and roads where the route/road coincides with a ground based yard harvest unit boundary in units 1-2, 1-A2, 1-A4, 7-2C, 15-3B, and 34-2B. Selectively slash units 3-2A and 34-2D felling all trees between one (1) and eight (8) inches diameter at breast height, spacing live conifers sixteen (16) feet by sixteen (16) feet and hardwoods & shrubs forty (40) feet by forty (40) feet. A post logging assessment shall be conducted to determine treatment needs in all units. The initial appraisal prescribed twenty four (24) acres of selective slashing, three

hundred seventeen (317) acres of lop and scatter, one hundred seventy nine (179) acres of hand pile, cover, burn, and mop-up handpiles, seventy seven (77) acres of machine pile, cover, burn, and mop-up machine piles, and fifty (50) acres of pile, cover, burn, and mop-up landing decks

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

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. Partial cutting and yarding, in units 1-A, 1-A2, 1-A3, 1-A4, 1-C1, 1-C2, 1-C3, 1-C4, and 1-C5, shall be completed in two (2) or more stages over two (2) or more years. Only half of the total acres of these combined units shall be harvested in one calendar year.
3. In all units except 3-2C, 3-2A, 17-2, 34-2B, 34-2D, RW 1, and RW 2 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.
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 and helicopter units. See the Lower Grave Special Provisions for full ground based harvesting restrictions.
5. Cable corridors that are hydrologically connected; or are perpendicular to and within two hundred (200) feet of streams shown on Exhibit A; or are located in the water bar designated areas of units 1-2, 7-2C, and 35-A or the non-whole tree yard designated areas in units 3-2A, 3-2C, and 34-2B 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.
6. Helicopter landings identified on Exhibit A were ground checked as available options. The purchaser can select other sites. Alternative landings sites on BLM lands must have prior approval from the Authorized Officer. Outside of existing road prisms and rock quarries, rip, seed, and mulch constructed helicopter landings.
7. The License Agreement fees and conditions listed in the Prospectus are pending and are not final. Final fees are dependent on final signed License Agreements.

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

To access units 26-1, 30-1, 30-2, 32-1E, 32-1F, 32-1H: From Grants Pass, take Interstate 5 northbound. Take exit 76 to Wolf Creek. At off ramp take a right onto Coyote Creek Road (County Road 1200) and proceed to units.

To access units 1-1 and 1-2: From Grants Pass, take Interstate 5 northbound. Take exit 71 to Sunny Valley. At off ramp turn left onto Sunny Valley Loop. Go over the covered bridge. At the stop sign proceed straight onto Sunny Valley Loop, then turn right onto Salmon Creek Rd (BLM Rd # 34-6-2) and proceed to units.

To access all other units: From Grants Pass, take Interstate 5 northbound. Take exit 71 to Sunny Valley. At off ramp turn left onto Sunny Valley Loop. Go over the covered bridge. Turn right onto Placer road and proceed to units.

ENVIRONMENTAL ASSESSMENT - An environmental assessment DOI-BLM-OR-M070-2013-003-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.

Lower Grave T.S.

	Unrestricted Period
	Restricted To Dry Condition
	Restricted To Dry Condition Waiver Required

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

Dry Condition Yarding and Temporary Route work= Ground-based harvesting and 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, and between 15-25% depending on soil type.

[illegible]

[illegible]

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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 trees which are on or mark the boundaries of the Reserve Areas, except approximately forty eight (48) Douglas-fir trees, ten (10) incense-cedar trees, and one (1) ponderosa pine tree within the clearing limits of unit RW 1 permanent road 33-5-34.1 and unit RW 2 temporary route 35-E as shown on Exhibit A.
- (C) IR-1 Approximately twenty one thousand one hundred eighty eight (21,188) Douglas-fir trees, one thousand one hundred (1,100) incense-cedar trees, four hundred ninety seven (497) ponderosa pine trees, two hundred thirteen (213) sugar pine trees, one hundred fifteen (115) white fir trees, and twenty three (23) western hemlock trees marked with orange paint above and below stump height in units 1-1, 1-2, 1-A, 1-A2, 1-A3, 1-A4, 1-C1, 1-C2, 1-C3, 1-C4, 1-C5, 3-2C, 7-2, 7-2C, 15-2, 32-1E, 32-1F, 32-1H, 34-2B, 35-A, 35-B, 35-C1, 35-C2, 35-C3, 35-D, and 35-E as shown on Exhibit A.
- (D) IR-1 Approximately five thousand five hundred forty five (5,545) conifer trees marked with orange paint above and below stump height in units 15-1, 15-3A, 15-3B, 17-2, 26-1, 30-1, and 30-2 as shown on Exhibit A.
- (E) IR-1 Approximately two hundred sixty nine (269) Douglas-fir trees, fifty eight (58) ponderosa pine trees, thirty (30) incense-cedar trees, and twenty eight (28) sugar pine trees marked with yellow paint above and below stump height in unit 3-2A as shown on Exhibit A.
- (F) IR-2 All timber except approximately two hundred fifty (250) Douglas-fir trees, fourteen (14) incense-cedar trees, and two (2) ponderosa pine trees marked for cutting heretofore by the Government with blue paint above and below stump height in unit 34-2D as shown on Exhibit A.
- (G) IR-6M All hardwood trees and non-hazardous snags in all commercial thin, variable density thin, and regeneration harvest units shown on Exhibit A.

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- (H) IR-6M All pre-existing dead and down wood in all commercial thin, variable density thin, and regeneration harvest units shown on Exhibit A.
- (I) IR-6M All trees outside unit boundaries within riparian buffers, red tree vole buffers, and plant buffers knocked over during falling and yarding in all units shown on Exhibit A.

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Section 42

(A) Log Exports

- (1) LE-1 All timber sold to the Purchaser under the terms of the contract, except exempted species, is restricted from export from the United States in the form of unprocessed timber, and is prohibited from being used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as: (1) any logs except those of utility grade or below, such as sawlogs, peeler logs and pulp logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three-quarters (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.

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

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buying, exchanging, or receiving such timber to execute a Form 5460-16 (Certificate as to Nonsubstitution 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.

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.

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(B) Logging

- (1) L-1 Before beginning operations on the contract area for the first time or after a shutdown of seven (7) or more days, the Purchaser shall notify the Authorized Officer in writing of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if they intend to cease operations for any period of seven (7) or more days.
- (2) L-2 Partial cutting and yarding, in units 1-A, 1-A2, 1-A3, 1-A4, 1-C1, 1-C2, 1-C3, 1-C4, and 1-C5, shall be completed in two (2) or more stages over two (2) or more years. Only half of the total acres of these combined units shall be harvested in one calendar year.
- (3) L-3 All trees designated for cutting 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, or be consistent with OSHA guidelines.
- (4) L-6 In all units except 3-2C, 3-2A, 17-2, 34-2B, 34-2D, RW 1, and RW 2 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 or the resulting continuous slash depth is expected to exceed eighteen (18) inches as determined by the Authorized Officer. If excessive stand damage occurs or continuous slash depth is expected to exceed eighteen (18) inches, all trees shall be bucked into log lengths not to exceed forty one (41) feet prior to being yarded.
- (5) L-7 In the cable yarding areas of harvest units as shown on Exhibit A, all trees designated for cutting shall be manually felled. In ground based and helicopter yarding portions of harvest units as shown on Exhibit A may be felled mechanically using a harvester, feller-processor, or feller-buncher with the approval of the Authorized Officer and in accordance with the following specifications:
 - (a) Mechanized felling operations shall be limited to slopes of thirty-five (35) percent or less.
 - (b) Mechanized felling operations are subject to seasonal operating restrictions as described in Section 42(B)(10)(L-18) of this contract.
 - (c) 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.

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- (d) The harvest equipment shall walk on existing or 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.
- (6) L-7MC Yarding on the areas designated herein and shown on Exhibit A shall be done in accordance with the yarding requirements or limitations for the designated area.

Designated Area	Yarding Requirements or Limitations
<u>CABLE UNITS</u> 1-1, 1-2, 1-A, 1-A2, 1-A3, 1-C3, 1-C4, 1-C5, 3-2C, 7-2, 7-2C, 15-1, 15-2, 15-3A, 17-2, 26-1, 30-1, 30-2, 32-1E, 32-1F, 32-1H, 34-2B, 35-A, 35-C1, 35-C2, 35-C3, 35-D, 35-E	<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 two thousand fifty (2,050) 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 ($\frac{1}{4}$) 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 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 units 1-1, 1-C4, 15-2, 17-2, 26-1, 35-A, and 35-C2. These landings and corridors shall not be located</p>

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<p><u>CABLE UNITS</u> <u>CONTINUED</u></p> <p>1-1, 1-2, 1-A, 1-A2, 1-A3, 1-C3, 1-C4, 1-C5, 3-2C, 7-2, 7-2C, 15-1, 15-2, 15-3A, 17-2, 26-1, 30-1, 30-2, 32-1E, 32-1F, 32-1H, 34-2B, 35-A, 35-C1, 35-C2, 35-C3, 35-D, 35-E</p>	<p>in any of the buffers shown on Exhibit A and shall be approved by the Authorized Officer prior to use.</p> <p>Construction of short purchaser spurs may be needed in units 1-2, 15-3A, 35-A to achieve one-end log suspension. Fully decommission following use.</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 (200) feet of streams shown on Exhibit A; or are located in the water bar designated areas of units 1-2, 7-2C, and 35-A 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 multispan configuration.</p> <p>In unit 34-2B the Purchaser shall be allowed to walk yarder into the unit utilizing a tractor-swing system as approved by the Authorized Officer.</p>
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Designated Area	Yarding Requirements or Limitations
<p><u>GROUND BASED UNITS</u></p> <p>1-2, 1-A, 1-A2, 1-A4, 1-C1, 1-C2, 1-C4, 3-2C, 7-2, 7-2C, 15-3A, 15-3B, 17-2, 32-1H, 34-2B, RW 1, 35-A, 35-B, 35-E, RW 2</p>	<p>Yarding tractor width shall not be greater than nine (9) feet track width and shall be equipped with an integral arch. Skid roads shall not exceed a width of twelve (12) feet on average per unit.</p> <p>Prior to falling any timber in the unit, all new skid roads shall be pre-designated by the Purchaser and approved by the Authorized Officer. Yarding tractors shall operate only on tractor skid roads approved by the Authorized Officer.</p> <p>Existing skid roads shall be used when possible. New skid roads shall be placed at least one hundred fifty (150) feet apart where topography will allow. 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 (200) feet of streams and all utilized skid trails in regeneration harvest unit 3-2C as specified in</p>

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<p><u>GROUND BASED</u> <u>UNITS</u> <u>CONTINUED</u></p> <p>1-2, 1-A, 1-A2, 1-A4, 1-C1, 1-C2, 1-C4, 3-2C, 7-2, 7-2C, 15-3A, 15-3B, 17-2, 32-1H, 34-2B, RW 1, 35-A, 35-B, 35-E, RW 2</p>	<p>Sec. 42 (D)(9)(E-1).</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 existing ground based landing at the bottom of unit 1-A2 can be used if no trees greater than eight (8) inches diameter at breast height need to be cut outside of unit boundaries to access the landing. The landing must be located within unit boundaries and be approved by the Authorized Officer.</p> <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
<p><u>HELICOPTER</u> <u>UNITS</u></p> <p>3-2A, 34-2D</p>	<p>All yarding will be done with an aerial system.</p> <p>Landing size shall not exceed one (1) acre and all landings are to be approved by the Authorized Officer prior to construction.</p> <p>Service pads and helispots cannot be constructed without prior approval of the Contract Administrator and shall not be larger than necessary.</p> <p>A dropline with a minimum length of one hundred fifty (150) feet is required.</p> <p>Logs to be yarded will be lifted vertically to a height above the adjacent leave trees without horizontal movement.</p> <p>All multiple log turns will be vertically lifted from a small enough radius to result in minimal damage to the residual</p>

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<u>HELICOPTER UNITS CONTINUED</u> 3-2A, 34-2D	forest stand as determined by the Authorized Officer. Units may be harvested and/or pre-bunched with mechanized ground based equipment as specified in Sec. 42 (B)(5)(L-7). The ground based harvester shall be allowed to walk through the meadow between units 34-2B and 3-2A/34-2D one-pass in, one-pass out.
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- (7) L-9 No yarding or loading is permitted in or through the streams, seeps, wetlands, or resource buffers as shown on Exhibit A.
- (8) L-11 No landing shall be located in stream buffers, seeps, wetlands, resource buffers, unstable locations, or locations that would deliver sediment to streams as shown on Exhibit A.
- (9) L-12 Helicopter landings shall be placed at the approximate locations as shown on Exhibit A, unless an alternate site is identified by the Purchaser and approved by the Authorized Officer.
- (10) L-18 No mechanical ground based harvesting, ground based yarding, skid trail and landing rehabilitation, machine piling, road and temporary route construction, road and temporary route reconstruction, temporary route decommissioning, or non-emergency road maintenance shall be conducted in units 1-2, 1-A, 1-A2, 1-A4, 1-C1, 1-C2, 1-C3, 1-C4, 1-C5, 3-2A, 3-2C, 7-2, 7-2C, 15-3A, 15-3B, 17-2, 32-1H, 34-2B, RW 1, 34-2D, 35-A, 35-B, 35-E, and RW 2 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.
- (11) L-18 No haul on natural surface and hydrologically connected rocky roads 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.

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- (12) L-20 During logging operations, the Purchaser shall keep the 33-6-24, 33-5-35.1, 34-5-1, 34-5-10, and 34-6-2 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 thirty (30) minutes.
- (13) L-21 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 or hauling operations as required by OSHA regulations.
- (14) L-23 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 assure protection of the environment and watershed. A prework conference between the Purchaser's authorized representative and the Authorized Officer's representative 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 developed by this provision.
- (15) L-25 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 the following conditions must be met:
 - (a) All skid roads and 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 Authorized Officer, the width of each skid road, and 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 this provision unless sufficient installment payments have

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been made in accordance with Sec. 3.(b). of the contract or sufficient bonding has been provided in accordance with Sec. 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.
 - (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 Sec. 8 or Sec. 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, applying orange paint as replacements for additional trees cut and removed for skid roads and/or 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. 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.
- (16) L-28 In cable yard units as shown on Exhibit A, the Purchaser shall make cable yarding road changes by completely spooling the cables and restringing the layout

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from the head spar to the new tailhold to protect advance reproduction and/or reserve trees and snags present on these areas.

(C) Road Construction – Maintenance – Use

- (1) RC-1a The Purchaser shall construct, improve, and renovate all roads in strict accordance with the plans and specifications shown in Exhibit C, which is attached hereto and made a part hereof.
- (2) RC-1b Prior to removal of any timber, except right-of-way timber from the proposed 33-5-34.1 Road and all Temporary Routes, the Purchaser shall complete all construction and/or renovation of roads as specified in Exhibit C.
- (3) RC-1d The Purchaser shall not commence work on road construction, improvements, and renovation until receiving written notice to do so from the Authorized Officer. Work shall be commenced no later than 5 days after such notice, and shall be completed within 1 year after such notice.
- (4) RC-1f Upon completion of logging activities, the Purchaser shall scarify the entire roadway of all temporary roads shown on Exhibit C, in strips of not less than twenty-four (24) inches or more than twenty-eight (28) inches in width to a minimum depth of twelve (12) inches, provided that no scarification shall be required where the road traverses rock outcroppings. All natural water courses shall be opened to prevent erosion of the roadways. Barriers shall be constructed so as to prevent further use of the road by vehicles.
- (5) RC-2 The Purchaser is authorized to use the roads listed below and shown on Exhibit C and 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 and the hauling of rock as required in Exhibit C, provided that the Purchaser pay the required maintenance obligations (includes rockwear) described in Section 42(C)(7). The Purchaser shall pay current Bureau of Land Management maintenance fees for the sale of additional timber under modification to the contract.

Road No. and Segment	Length Miles Used	Road Control	Road Surface Type
34-6-2.0(A-D)	1.96	BLM	PRR
34-6-1.1	1.47	BLM	PRR
34-6-1.0	0.45	BLM	PRR
34-6-1.2	0.05	BLM	NAT
34-5-10.0 (A1-A6)	6.28	BLM	BST

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34-5-9.0 (A)	3.60	BLM	PRR
34-5-15.0	0.99	BLM	ASC
34-4-28.0 (K-J)	1.76	BLM	ASC
34-4-8.0 (A-D)	2.72	BLM	ASC/NAT
34-5-2.0 (C-B)	3.19	BLM	ASC
34-5-1.0 (A-B)	1.99	BLM	ASC
33-5-35.1 (A-B)	1.07	BLM	PRR
33-5-35.2	0.36	BLM	PRR
33-5-35.5	1.20	BLM	PRR
33-5-35.0	0.11	BLM	PRR
34-5-2.1 (A-B)	3.72	BLM	ASC/PRR
34-5-3.2	0.13	BLM	PRR
Total	31.05 miles		

- (6) RC-2a The Purchaser is authorized to use the roads listed below and shown on Exhibit C and D which are under the jurisdiction of the Bureau of Land Management, Josephine County Department of Forestry, Systems Global, AP Systems, and Spalding and Sons Inc., for the removal of Government timber sold under the terms of this contract, provided that the Purchaser comply with the conditions set forth in Section 42(C)(10) and pay the required rockwear obligation described in Section 42(C)(9), Section 42(C)(11), and in Section 42(C)(12). The Purchaser shall pay current Bureau of Land Management rockwear fees for the sale of additional timber under modification to the contract.

Road No. and Segment	Length Miles Used	Road Control	Road Surface Type
34-5-20.0 (F)	0.43	BLM	GRR
34-5-20.0 (E)	0.92	BLM	NAT
34-5-15.1 (A)	0.24	BLM	GRR
34-5-15.1 (B)	0.59	BLM	NAT
34-5-10.2 (A)	0.60	BLM	NAT
34-5-10.2 (B)	0.42	Spalding	NAT
34-5-10.2 (C)	0.45	BLM	NAT
34-5-12.1	0.19	Murphy	NAT

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34-5-12.2	0.20	Murphy	NAT
34-5-7.1	0.16	BLM	NAT
34-5-7.0	0.30	BLM	NAT
34-5-1.3 (A)	0.42	BLM	PRR
34-5-1.3 (B-D1)	2.23	Systems Global (Hancock)	PRR
34-5-1.3 (D2)	0.01	BLM	PRR
34-5-1.3 (D3-E)	0.75	AP Timber (Hancock)	PRR
33-5-27.2 (A)	0.19	BLM	NAT
33-5-27.2 (B1-B2)	0.36	Josephine County	NAT
33-6-24.0 (A-B2)	3.52	BLM	ASC
33-5-31.1	0.64	BLM	ABC
33-5-32.2 (A)	0.06	BLM	NAT
33-5-31.3 (A)	0.47	BLM	ASC
33-5-32.0 (A)	0.63	BLM	ASC
33-5-34.1	0.29	BLM	ASC
Total	14.07 miles		

**No rockwear fees assessed on NAT surfaced roads; listed only for authorization of use.*

- (7) RC-2c The Purchaser shall pay the Government a road maintenance obligation in the amount of **Forty Nine Thousand Eight Hundred Forty and 01/100 dollars (\$49,840.01)** for the transportation of timber included in the contract price required under the terms of the contract over roads listed in Section 42(C)(5).

The above road maintenance amount is for use of **31.05 miles** of road or less. The amount of the road maintenance obligation shown above shall be paid prior to removal of timber from the contract area; however, the Purchaser may elect to make the payment in installments in the same manner as and together with payments required in Section 3 of this contract.

- (8) RC-2f The Authorized 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 fees for the particular surface type of the roads involved. These fees will be applied to the remaining

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contract volume on the sale area to be transported over road or roads listed in Section 42(C)(6). The Purchaser shall pay the total maintenance amount for said roads within thirty (30) days following receipt of written notice; provided, however, that if the total amount exceeds five hundred and no/100 dollars (\$500.00), the Purchaser may elect to make payment in installments in the same manner as and together with payments required in Section 3 of this contract.

- (9) RC-2g The Purchaser shall also pay to the Government a road maintenance obligation for rockwear in the amount of **One Thousand One Hundred Seventy Nine and 81/100 dollars (\$1,179.81)** for the transportation of timber included in the contract price required under terms of the contract over road or roads listed in Section 42(C)(6). The amount of the rockwear shown above shall be paid prior to removal of timber from the contract area; provided, however, that if the total of such amount exceeds five hundred and no/100 dollars (\$500.00), the Purchaser may elect to make the payment in installments in the same manner as and together with payments required in Section 3 of this contract.
- (10) RC-2h The Purchaser shall perform any required road repair and maintenance work on roads used by him, under the terms of Exhibit D, "Road Maintenance Specifications," of this contract, which is attached hereto and made a part hereof.
- (11) RC-3 In the use of road 34-5-1.3 (B-D1), the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-660K between the United States of America and **Systems Global (Hancock)**. These conditions include, but are not limited to: Payment to Systems Global, a road use obligation of **Three Thousand Four Hundred Twenty and 00/100 dollars (\$3,420.00)** and a rockwear obligation of **Six Hundred Twenty Two and 84/100 dollars (\$622.84)** payable at the time indicated in the license agreement. Other special conditions and fees may apply; see the license agreement for additional terms and conditions. This document is available for inspection at the Bureau of Land Management, Medford Interagency Office, 3040 Biddle Road, Medford, Oregon 97504. Prior to the use of said road(s), the Purchaser shall furnish the Authorized Officer a copy of the executed License Agreement. 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.
- (12) RC-3 In the use of road 34-5-1.3 (D3-E), the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-660J between the United States of America and **AP Timber (Hancock)**. These conditions include, but are not limited to: Payment to AP Timber, a road use obligation of **Two Thousand Two Hundred Eighty and 00/100 dollars (\$2,280.00)** and a rockwear obligation of **Two Hundred Nine and 48/100 dollars (\$209.48)** payable at the time indicated in the license agreement. Other special conditions

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and fees may apply; see the license agreement for additional terms and conditions. This document is available for inspection at the Bureau of Land Management, Medford Interagency Office, 3040 Biddle Road, Medford, Oregon 97504. Prior to the use of said road(s), the Purchaser shall furnish the Authorized Officer a copy of the executed License Agreement. 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.

- (13) RC-3 In the use of roads 34-5-12.1 and 34-5-12.2, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-660 between the United States of America and **Murphy Company**. These conditions include, but are not limited to: Payment to Murphy Company, a road use obligation of **Seven Hundred Thirty and 00/100 dollars (\$730.00)** payable at the time indicated in the license agreement. Other special conditions and fees may apply; see the license agreement for additional terms and conditions. This document is available for inspection at the Bureau of Land Management, Medford Interagency Office, 3040 Biddle Road, Medford, Oregon 97504. Prior to the use of said road(s), the Purchaser shall furnish the Authorized Officer a copy of the executed License Agreement. 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.
- (14) RC-3 In the use of road numbers 34-5-10.2 (B), the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-1182 between the United States of America and **Spalding and Sons Inc.**. These conditions include, but are not limited to: Payment to Spalding and Sons Inc., a road use obligation of **One Hundred Forty Four and 16/100 dollars (\$144.16)** payable at the time indicated in the license agreement. Other special conditions and fees may apply; see the license agreement for additional terms and conditions. This document is available for inspection at the Bureau of Land Management, Medford Interagency Office, 3040 Biddle Road, Medford, Oregon 97504. Prior to the use of said road(s), the Purchaser shall furnish the Authorized Officer a copy of the executed License Agreement. 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.
- (15) RC-3 In the use of road numbers 33-5-27.2 (B1-B2), the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-1538 between the United States of America and **Josephine County Department of Forestry**. Special conditions and fees may apply; see the license agreement for

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additional terms and conditions. This document is available for inspection at the Bureau of Land Management, Medford Interagency Office, 3040 Biddle Road, Medford, Oregon 97504. Prior to the use of said road(s), the Purchaser shall furnish the Authorized Officer a copy of the executed License Agreement. 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.

- (16) RC-3d 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, the 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.
- (17) RC-5 In the construction of Temporary Routes 01-A and 01-A2, as shown on Exhibit C, the Purchaser shall comply with the crossing plat terms and conditions of the Right-of-Way and Road Use Agreement No. M-660J between the United States and **AP Timber (Hancock)**. This document is available for inspection at the Bureau of Land Management, Medford Interagency Office, 3040 Biddle Road, Medford, Oregon 97504.
- (18) RC-5 In the construction of Temporary Route 07-2C, as shown on Exhibit C, the Purchaser shall comply with the crossing plat terms and conditions of the Right-of-Way and Road Use Agreement No. M-660 between the United States and **Murphy Company**. This document is available for inspection at the Bureau of Land Management, Medford Interagency Office, 3040 Biddle Road, Medford, Oregon 97504.
- (19) RC-8 The Purchaser shall be required to secure written approval to use vehicles or haul equipment over Government owned or controlled roads and/or structures when that vehicle or equipment exceeds the maximum allowable weights or dimensions established by the State for vehicles operating without a permit.

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

Details shall include:

- (a) Axle weights when fully loaded.
- (b) Axle spacing.
- (c) Transverse wheel spacing.
- (d) Tire size.

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- (e) Outside width of vehicle.
- (f) Operating speed.
- (g) Frequency of use.
- (h) Special features (e.g., running tracks, overhang loads, etc.)

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

(D) Environmental Protection

- (1) E-1 In addition to the 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.
- (2) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall only use certified weed-free hay and native grass seed species approved by the Authorized Officer for rehabilitation activities. All seeding shall be contingent upon seed availability.
- (3) E-1 In addition to the requirement set forth in Sec. 26 of this contract, 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

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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.

- (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 requirement set forth in Sec. 26 of this contract, in units 1-A, 1-A2, 1-A4, 1-C1, 1-C2, 1-C4, 7-2, 7-2C, 15-3A, 15-3B, 32-1H, 34-2B, 35-A, and 35-B the Purchaser shall construct new skid trails within two hundred (200) feet of streams either:
 - (a) during dry conditions and fully rehabilitate these new skid trails following use or;
 - (b) during the driest time of year (August 1st to October 15th of the same calendar year). Equipment shall walk on slash as necessary to prevent offsite erosion and these skid trails shall be scarified, seeded, mulched, covered with slash, and water barred prior to October 15th, as directed by the Authorized Officer.
- (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 existing landings that have the potential to release eroded fines into a stream or wet area, directly or via draws or ditchlines.
- (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, corridors, skidtrails 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

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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.

- (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 (200) feet of streams in units 1-A4, 1-C1, and 1-C2, all ground based skid trails utilized in unit 3-2C, all temporary routes, the cable-tractor swing route, and all landings 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 place material removed during excavation in locations where it cannot enter streams or other water bodies.
- (11) E-2 The water bars to be constructed as required by Sec. 26(c) shall be constructed in accordance with the specifications shown on Exhibit C-8, which is attached hereto and made a part hereof.
- (12) E-4 The Purchaser shall immediately discontinue specified construction or timber harvesting operations upon written notice from the Contracting Officer that:

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- (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;
- (g) 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;
- (h) when, in order to protect species which were identified for protection through survey and manage and/or protection buffer 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

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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.h. of the contract. The Purchaser shall not resume contract operations until the First Installment amount is fully restored.

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

In the event that operating time is lost as a result of the incorporation of additional contract requirements, or delays due to Endangered Species Act consultation with the U.S. Fish and Wildlife Service or U.S. National Marine Fisheries Service, 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

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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 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.

(E) Fire Prevention and Control

- (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 State of Oregon, Department of Forestry.
 - (a) F-1a Fire Prevention and Control. Primarily for purposes of fire prevention and control, the Purchaser shall comply with the following provisions:
 1. 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 State of Oregon, Department of Forestry.
 2. Provide and maintain in good repair, on the contract area, the following equipment for use during closed fire season or periods of fire danger:

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- a. F-2a Fire fighting tools shall be kept at each landing or at such other place as the Authorized Officer shall designate whenever people 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 not be less than four (4) tools in each box nor less than one (1) tool for each person working on the contract area. Three-fourths ($\frac{3}{4}$) of all fire tools shall be shovels, hazel hoes, or other scraping tools. The fire tools shall be used only for fighting fire.

- b. F-2b A round pointed size "0" or larger shovel in good condition shall be within fifty (50) feet of any power saw when in operation.
- c. F-2c At each landing during periods of operation one (1) tank truck. Each truck shall have three hundred (300) gallons minimum capacity with five hundred (500) feet minimum of hose and a nozzle acceptable to the Authorized Officer and a mounted or portable pump conforming to the standards set forth in Oregon Revised Statute ORS 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.410 as amended or be provided with suitable adapters. At the close of each working day, all bulldozers and tank trucks shall be filled with fuel and made ready for immediate use. All tank trucks and portable tanks shall be filled with water and made available for immediate use.
- d. F-2d Serviceable radio or radio-telephone equipment able to provide prompt and reliable communication between the contract area, Medford BLM District Office, and the Oregon Department of Forestry. Such communication shall be available during periods of operation including the time watch-service is required.

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- e. F-2e 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 fire fighting and construction of fire trails at night.
- f. F-2f A headlight for each person in the woods crew adequate to provide sufficient illumination for night fire fighting. A headlight shall be of the type that can be fastened to the head so as to allow independent use of the hands. It shall be equipped with a battery case so designed that it can be either carried in the hip pocket or fastened to the belt. The head of the light and the battery case shall be connected by insulated wires. At least one extra set of batteries shall be provided for each such headlight.
- g. F-2g 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.
- h. F-2h A chemical fire extinguisher of at least eight (8) ounces minimum capacity of a type approved by the Oregon State Forester shall be carried during the closed fire season or periods of fire danger by each saw operator using a power saw 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. A size "0" or larger shovel shall be available with each gas can when refueling. Any fueling of a power saw shall be done in an area which has first been cleared of all flammable material. Power saws shall be moved at least twenty (20) feet from the place of fueling before the engine is started. Each power saw shall be equipped with an exhaust system and a spark arresting device which are of types approved by the Oregon State Forester.
- i. 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.

(F) Slash Disposal and Site Preparation

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

Prior to commencement of any operation under this Section F of the contract, a slash disposal and pre-work conference between the purchaser's representative and the Authorized Officer must be held at a location designated by the Authorized Officer. All slash disposal shall be done in accordance with the plans developed at this pre-work conference. Slash, as defined for this section, shall mean all material (brush, limbs, tops, unmerchantable stems, and chunks) severed or knocked over as a result of purchasers operations under the terms of this contract.

- (a) SD-1a LOP AND SCATTER Lop and scatter all slash located beyond one hundred fifty (150) feet of temporary routes and roads where the road/route coincides with a harvest unit boundary in all cable yard portions of units 1-1, 1-2, 1-A, 1-A2, 1-A3, 1-A4, 1-C3, 1-C4, 1-C5, 7-2, 7-2C, 15-1, 15-3A, 15-3B, 17-2, 26-1, 32-1E, 32-1F, 32-1H, 34-2B, 35-A, 35-B, 35-C1, 35-C2, 35-C3, 35-D, and 35-E as directed by the Authorized Officer. Lop and scatter all slash located beyond two hundred (200) feet of temporary routes and roads where the road/route coincides with a harvest unit boundary in all ground based yard portions of units 1-A2, 1-A4, 7-2C, 15-3B, and 34-2B as directed by the Authorized Officer. All cut slash (any material less than six inches in diameter) shall be lopped to no more than eight (8) feet in length and all top and side branches must be free of the central stem so that slash is reduced to the extent that it is within eighteen (18) inches of the ground at all points. All slash shall be arranged in a discontinuous pattern across the forest floor.
- (b) SD-1b MACHINE PILING Pile all slash and debris in ground based portions of units 1-A, 1-C1, 1-C2, 1-C4, 3-2C, 32-1H, RW 1, 35-A, 35-B, 35-E, and RW 2, and within two hundred (200) feet of temporary routes and roads where the route/road coincides with a harvest unit boundary in units 1-2, 1-A2, 1-A4, 7-2C, 15-3B, 34-2B, and all constructed roads and temporary routes in accordance with the following specifications:
1. Slash, as defined for this section, shall mean all material (brush, limbs, tops, unmerchantable stems, and chunks) severed or knocked over as a result of purchasers operations under the terms of this contract.

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- a. All equipment shall be approved by the Authorized Officer. Piling shall be accomplished using a track mounted hydraulic excavator. The excavator shall be equipped with a hydraulic thumb or rotating controllable grapple head. Finished piles shall be tight and free of earth.
 2. Piling operations are limited to existing skid trails; to slopes less than thirty five (35) percent slope; and to seasonal restrictions described in Sec. 42(B)(10)(L-18).
 3. Machine piles shall be located as far away as possible from green trees, snags, or unit boundaries to minimize damage.
 4. Machine piles shall be kept free of dirt and other non-woody debris and 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. The machine piles shall be adequately covered with a cap ten (10) feet by ten (10) feet of four (4) millimeter black polyethylene plastic 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.
- (c) SD-1c HAND PILING Hand pile all slash situated within one hundred fifty (150) feet of temporary routes and roads where the route/road coincides with a harvest unit boundary in cable yard portions of units 1-1, 1-2, 1-A, 1-A2, 1-A3, 1-C3, 1-C4, 1-C5, 3-2C, 7-2, 7-2C, 15-1, 15-3A, 17-2, 26-1, 32-1E, 32-1F, 32-1H, 34-2B, 35-A, 35-C1, 35-C2, 35-C3, 35-D, 35-E, and the entirety of units 3-2A, 15-2, 30-1, 30-2, and 34-2D in accordance with the following specifications:
1. Slash, as defined for this section, shall mean all material (brush, limbs, tops, unmerchantable stems, and chunks) severed or knocked over as a result of purchasers operations under the terms of this contract.
 2. Piling shall be accomplished by hand. Finished piles shall be tight and free of earth.
 3. 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.

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4. Piles shall be placed within unit boundaries, however, outside of wildlife buffers, roadways, turnouts, shoulders, or cut banks. No piles shall be placed on down logs or stumps. No piles shall be placed adjacent to or within twenty five (25) feet of commercial thin unit boundaries. Finished piles shall be tight and free of earth.
 5. A five (5) foot by five (5) foot cover of 4 mm black plastic shall cap each handpile to maintain a dry ignition point. The cover shall be firmly fixed to the pile to hold it in place. Approximately one third ($\frac{1}{3}$) of the pile shall lie above this plastic cover. The ignition point will consist of fine fuel material such as needles, small limbs, and branches less than one half ($\frac{1}{2}$) inch in diameter and free of dirt. Piles shall be constructed by aligning individual pieces in the same direction and placing the heavier slash on top. Piles shall have a stable base to prevent toppling. The long axis of individual pieces shall be oriented up and down the slope. Protruding pieces shall be trimmed to allow covering in a manner that permits the pile to shed water. Height shall be no less than five (5) feet and no greater than eight (8) feet; width shall be no less than six (6) feet and shall not exceed eight (8) feet; piles shall be circular and not windrowed. No pile shall be located in any stream channel; on down logs or stumps; within ten (10) feet of any other pile or the trunk of the nearest living reserve tree. No portion of the pile will be under the crown of any living tree.
- (d) SD-1d Operations required by this provision shall be kept current with yarding as directed by the Authorized Officer and shall be conducted as follows:
1. Units shall be piled and covered during the same season that they are logged.
 2. Landing piles and handpiles located on temporary routes, skid trails, or landings would be burned, chipped, or otherwise removed from these sites within eighteen (18) months of unit harvest completion.
- (e) SD-1e LANDING SLASH Pile all slash situated in harvest unit landings and within twenty (20) feet of each finished pile. Piles shall be firelined within twenty (20) feet, or within safe working condition, of each finished pile. Fireline shall be to mineral soil and a minimum of eighteen (18) inches wide. A minimum fuel break of two (2) feet on each side of the fireline of removing logging slash greater than one (1) inch diameter at the small end. Slash shall be piled by machine or hand and piles shall be located in tractor skid trails, cable yarding corridor chutes, or on landings

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located away from reserve trees, snags, and coarse woody debris. Finished piles shall be tight and free of earth.

1. A ten (10) foot by ten (10) foot cover of 4 mm black plastic shall cap each pile to maintain a dry ignition point. The cover shall be firmly fixed to each pile to hold it in place.
- (f) L-4 All trees between one (1) inch and eight (8) inches D.B.H.O.B. shall be felled and spaced following logging as directed by the Authorized Officer in units 3-2A and 34-2D as shown on Exhibit A. Space live conifers sixteen (16) feet by sixteen (16) feet, and space hardwoods and shrubs forty (40) feet by forty (40) feet.

Acceptable Leave Tree:

- a. Minimum four (4) inches terminal leader with 30% live crown ratio.
- b. Non-chlorotic, light or dark green with very little or no yellowish tint.
- c. Undamaged top.
- d. Free of visible disease, cankers, fire damage, or blister rust.
- e. Demonstrates good form and vigor.
- f. No multiple tops.

In the absence of trees that meet the above definition for an Acceptable Crop/ Leave Tree, include any live conifer seedling, natural or planted, that has a two (2) inch terminal leader with a 25% crown ratio.

- (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. In accordance with written instructions 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 designated representative, assist in preparing units for burning, mop-up, and patrol by furnishing, at the Purchaser's own expense, the services of personnel and equipment on each unit as shown below.
- (a) Burn and mop-up piled units and landings as shown on Exhibit A in accordance with Section 42(F)(2) and 42(F)(3).
1. Prescribed fire plans shall be prepared for burning activities to ensure that resource and fire management objectives are met by setting parameters under which the burning may take place. Prescribed burning within the harvest units shall be conducted in a manner that will minimize damage to reserve trees, duff and soil, and to avoid loss of large, coarse woody debris and will be consistent with ecosystem management objectives. The Purchaser shall burn ninety (90) percent

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of piles for satisfactory completion of treatment, as directed by the Authorized Officer.

2. Piles shall be burned in the fall to spring season after one or more inches of precipitation has occurred to reduce the potential for fire spread and scorch and mortality to the residual trees and shrubs. Patrol and mop-up of burning piles shall occur when needed to prevent treated areas from re-burning or becoming and escaped fire. The timing of prescribed burns depends on these parameters and the availability of adequate fire suppression resources as a contingency plan in the event of escaped fire.
3. DO NOT BURN Piles located within two hundred (200) feet of plant buffers as shown on Exhibit A.
4. For Igniting and Burning Piles on Units 1-1, 1-2, 1-A, 1-A2, 1-A3, 1-A4, 1-C1, 1-C2, 1-C3, 1-C4, 1-C5, 3-2A, 3-2C, 7-2, 7-2C, 15-1, 15-2, 15-3A, 15-3B, 17-2, 26-1, 30-1, 30-2, 32-1E, 32-1F, 32-1H, 34-2B, RW 1, 34-2D, 35-A, 35-B, 35-C1, 35-C2, 35-C3, 35-D, 35-E, RW 2, and All Landing Piles in All Units as described by the Authorized Officer:
 - a. One (1) person to supervise crew(s) and equipment operators, and to serve as Purchaser's representative.
 - b. One (1) crew with ten (10) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, ten (10) drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
 - c. 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.
 - d. All ignition personnel will be directly supervised by a BLM representative.
5. For Mop-up of Piles on Units 1-1, 1-2, 1-A, 1-A2, 1-A3, 1-A4, 1-C1, 1-C2, 1-C3, 1-C4, 1-C5, 3-2A, 3-2C, 7-2, 7-2C, 15-1, 15-2, 15-3A, 15-3B, 17-2, 26-1, 30-1, 30-2, 32-1E, 32-1F, 32-1H, 34-2B, RW 1, 34-2D, 35-A, 35-B, 35-C1, 35-C2, 35-C3, 35-D, 35-E, RW 2, and All Landing Piles in All Units as described by the Authorized Officer:

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- a. One (1) person to supervise crew(s) and equipment operators, and to serve as Purchaser's representative.
- b. One (1) crew with ten (10) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, ten (10) drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
- c. 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.
- d. All ignition personnel will be directly supervised by a BLM representative.

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 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 unit to be burned as shown on Exhibit A as required in Section 42(G) for four hundred fifty (450) work hours for each piled unit and piled landing as directed by the Authorized Officer within a ten (10) day period for each piled unit and piled landing 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 or designated representative, 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: (1) reimburse Purchaser for

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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 the current Oregon-Washington Interagency Fire Fighting Equipment Rental Rates schedule, until the Purchaser is released from such service by the Government, or (2) 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 (i.e., trail, road, stream, rock formation, etc.), 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 the 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-5 Perform logging residue reduction and site preparation work on approximately eight hundred two (802) acres of harvest area located in Cutting Unit No.s 1-1, 1-2, 1-A, 1-A2, 1-A3, 1-A4, 1-C1, 1-C2, 1-C3, 1-C4, 1-C5, 3-2A, 3-2C, 7-2, 7-2C, 15-1, 15-2, 15-3A, 15-3B, 17-2, 26-1, 30-1, 30-2, 32-1E, 32-1F, 32-1H, 34-2B, RW 1, 34-2D, 35-A, 35-B, 35-C1, 35-C2, 35-C3, 35-D, 35-E, and RW 2 as shown on Exhibit A.
 - (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.

LOWER GRAVE TIMBER SALE

SPECIAL PROVISIONS

Treatment	Description	Cost/Acre
Selective Slashing > 60% Cover	Space conifers 16'x16', space hardwoods 40'x40'	\$310.00
Lop and Scatter	< 20 tons/acre	\$42.00
Handpile and Cover L2	21-40 piles/acre	\$380.00
Handpile and Cover L3	41-60 piles/acre	\$510.00
Hand pile burn and Mop-up L2	21-40 piles/acre	\$42.00
Hand pile burn and Mop-up L3	41-60 piles/acre	\$53.00
Machine pile and Cover	< 8 piles/acre	\$375.00
Machine pile burn and Mop-up	< 8 piles/acre	\$28.00
Cover and Burn Landing Decks	< 12 decks/acre	\$56.00

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

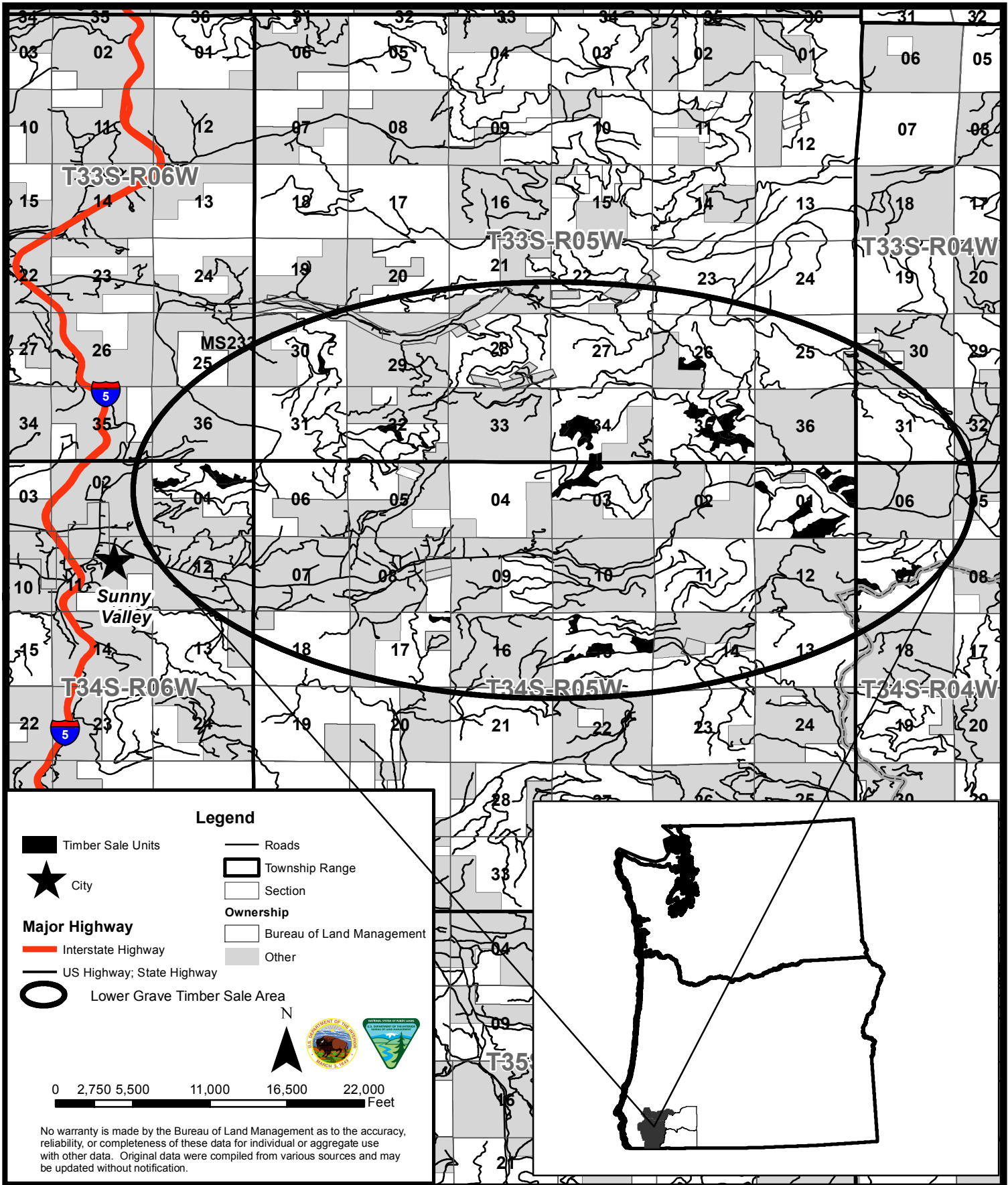
Appraised Treatment	Acres	Cost/Acre	Total Cost Per Treatment
Selective Slashing > 60% Cover	24	\$310.00	\$7,440.00
Lop and Scatter	317	\$42.00	\$13,314.00
Handpile and Cover L2	155	\$380.00	\$58,900.00
Handpile and Cover L3	24	\$510.00	\$12,240.00
Hand pile burn and Mop-up L2	155	\$42.00	\$6,510.00
Hand pile burn and Mop-up L3	24	\$53.00	\$1,272.00
Machine pile and Cover	77	\$375.00	\$28,875.00
Machine pile burn and Mop-up	77	\$28.00	\$2,156.00
Cover and Burn Landing Decks	50	\$56.00	\$2,800.00
Total Appraised Cost			\$133,507.00

- (c) The Total Purchase Price set forth in Section 2 shall be adjusted by the amount that the total cost of the site preparation treatments designated pursuant to Section 42(F)(3)(a) differs from \$133,507.00, as calculated by using the estimated acres determined by the Authorized Officer and the per acre costs listed in Section 42(F)(3)(a).

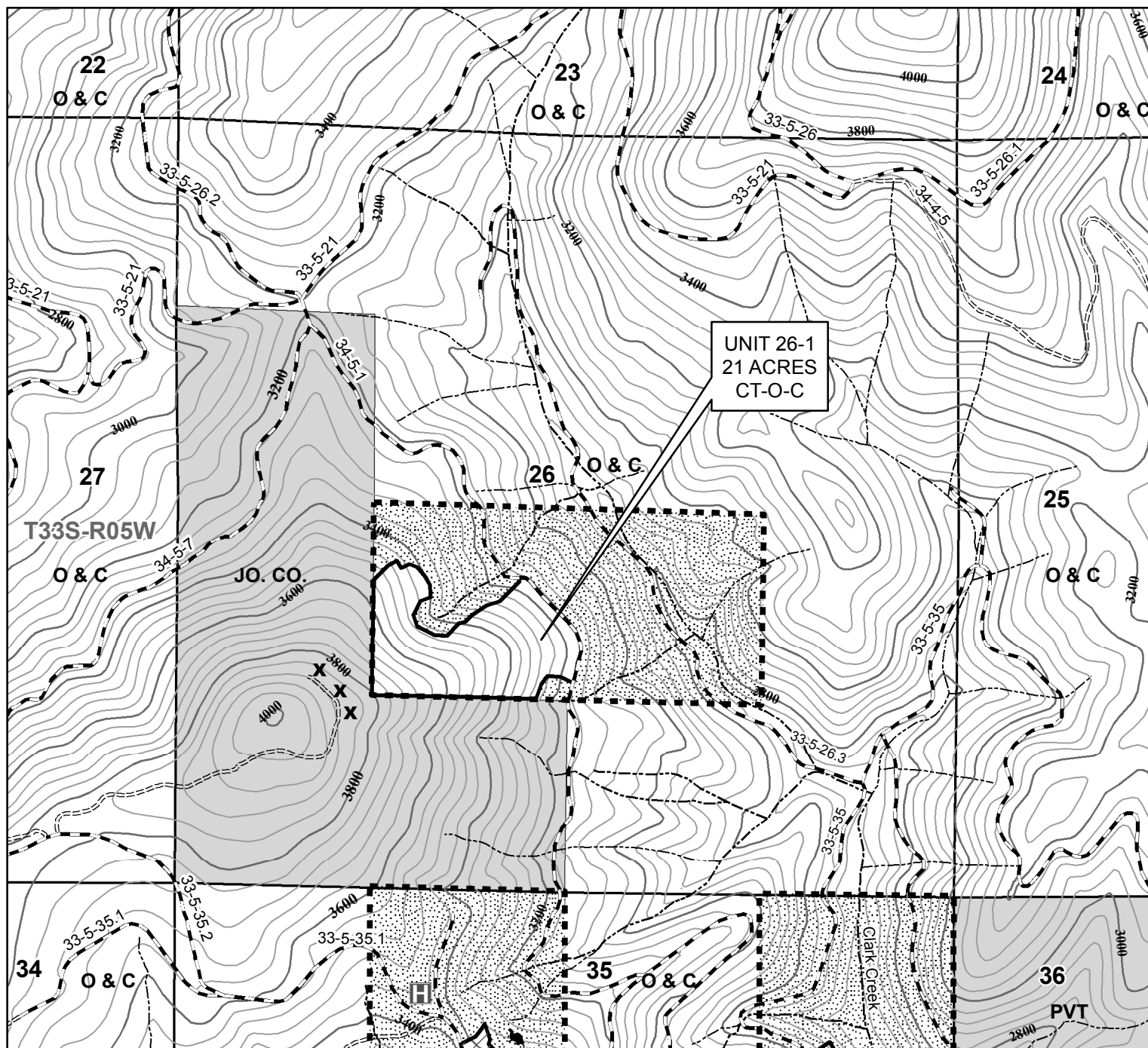
U.S.D.I BLM MEDFORD DISTRICT
T. 33 S., R. 5 W., SEC. 26, 30, 32, 34, 35,
T. 34 S., R. 4 W., SEC. 7,
T. 34 S., R. 5 W., SEC. 1, 3, 15, 17,
T. 34 S., R. 6 W., SEC. 1 WILL. MER.
JOSEPHINE & JACKSON COUNTIES

LOWER GRAVE TIMBER SALE LOCATION MAP
TIMBER SALE # ORM07-TS-15-03
JOSEPHINE & JACKSON COUNTIES

SALE LOCATION MAP



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0 750 1,500 3,000 Feet

1 inch = 1,000 feet

40 FOOT CONTOUR INTERVAL

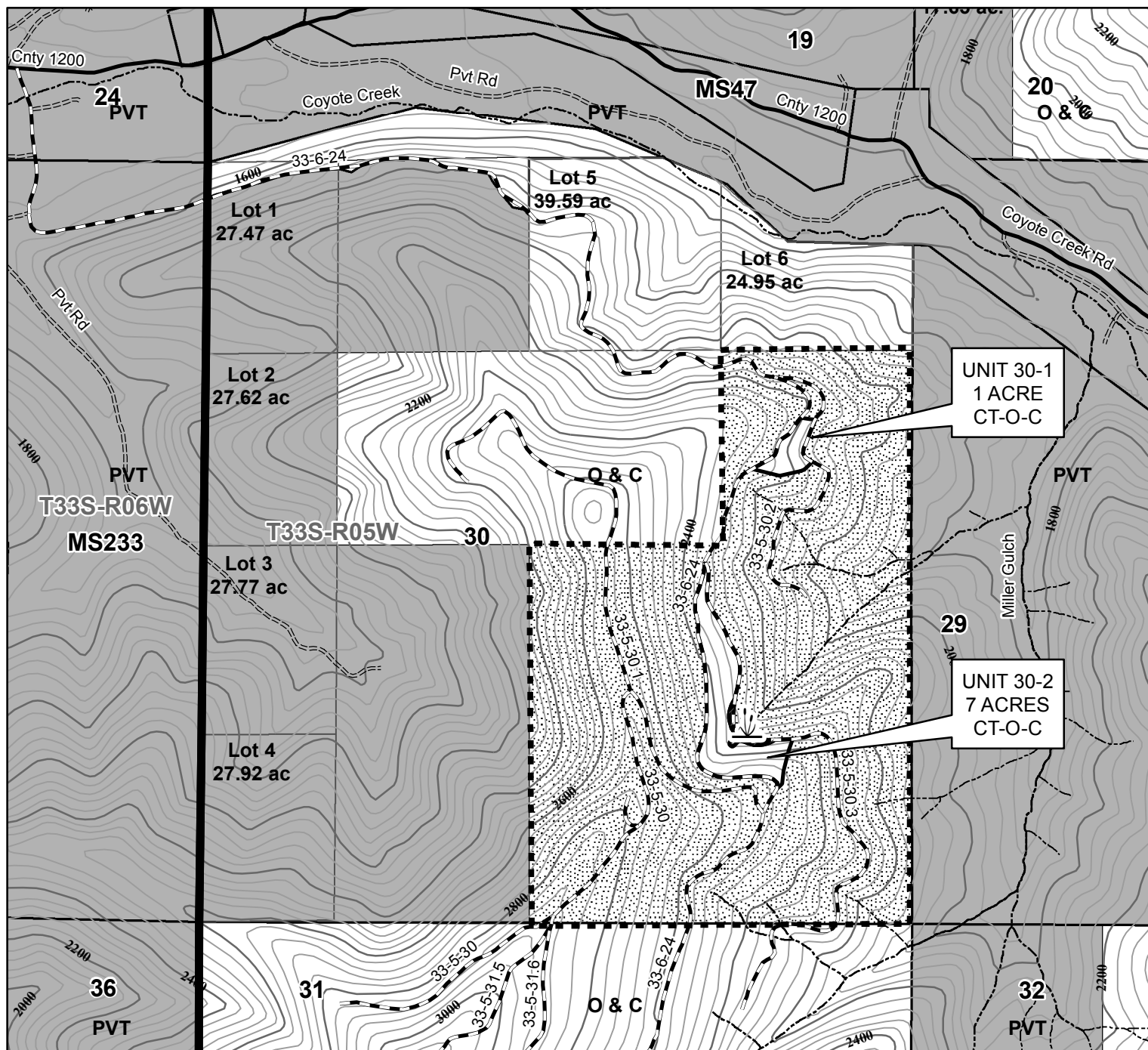


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Medford District Office
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Map created by LS
6/23/2015





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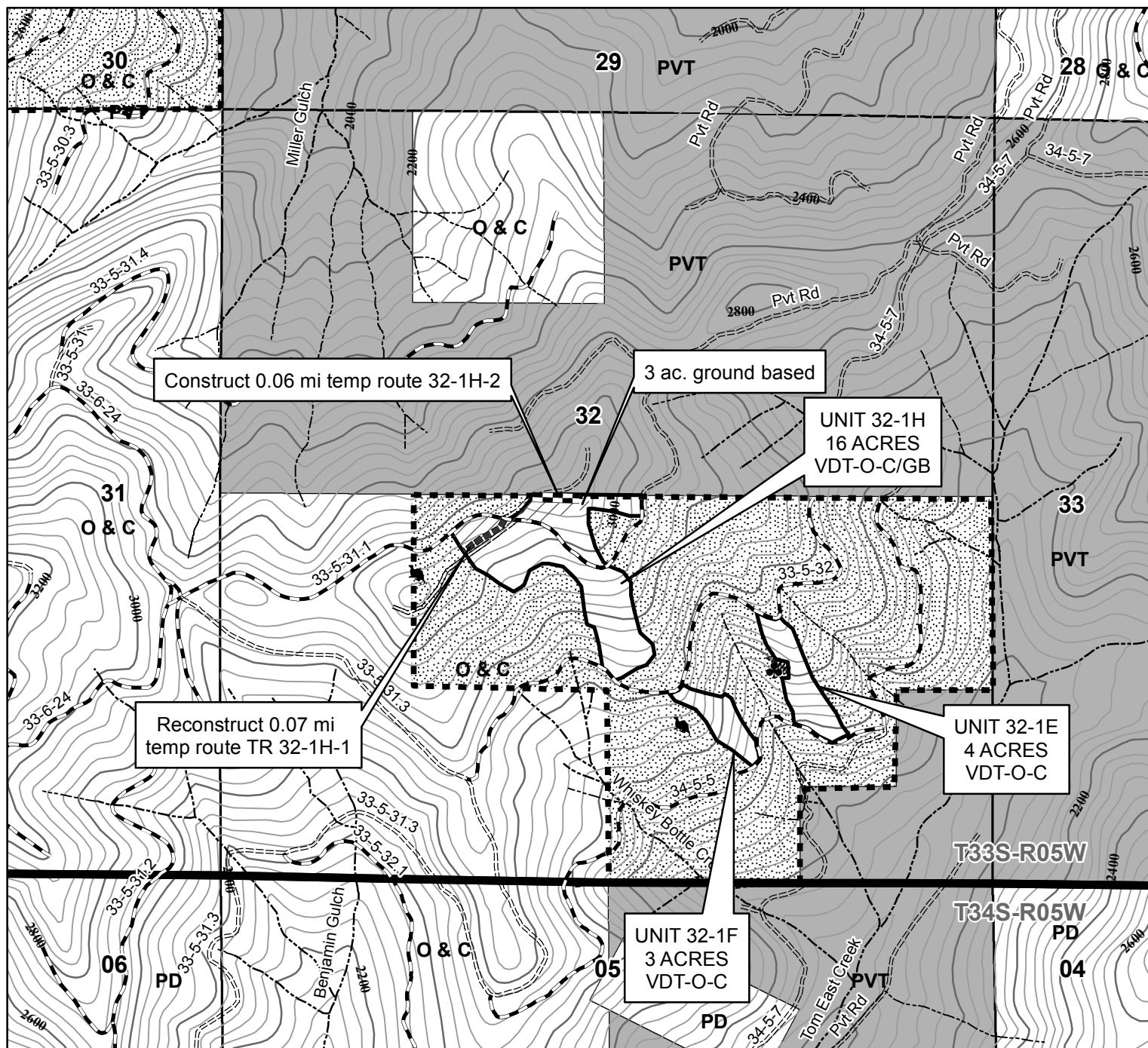


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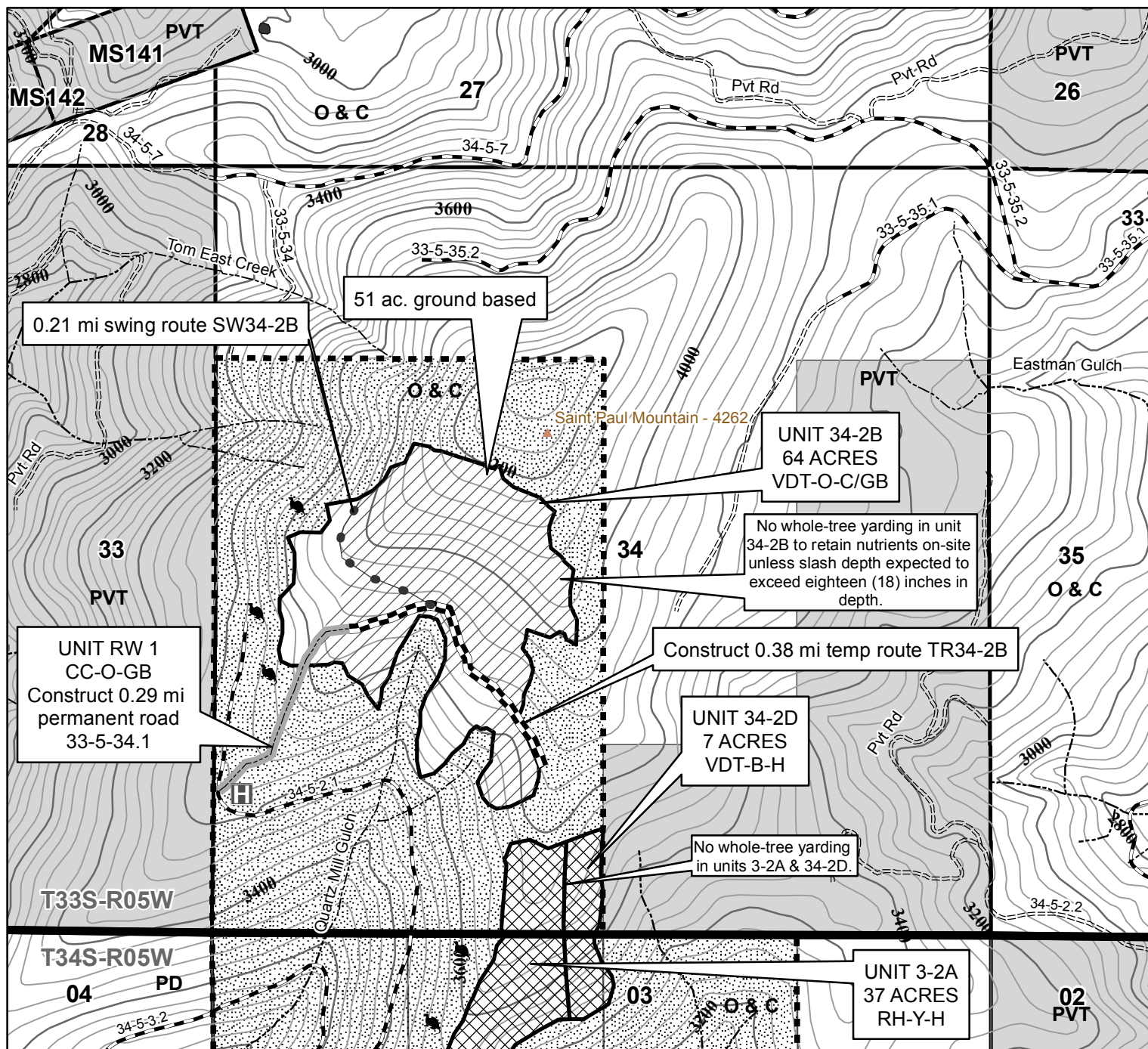


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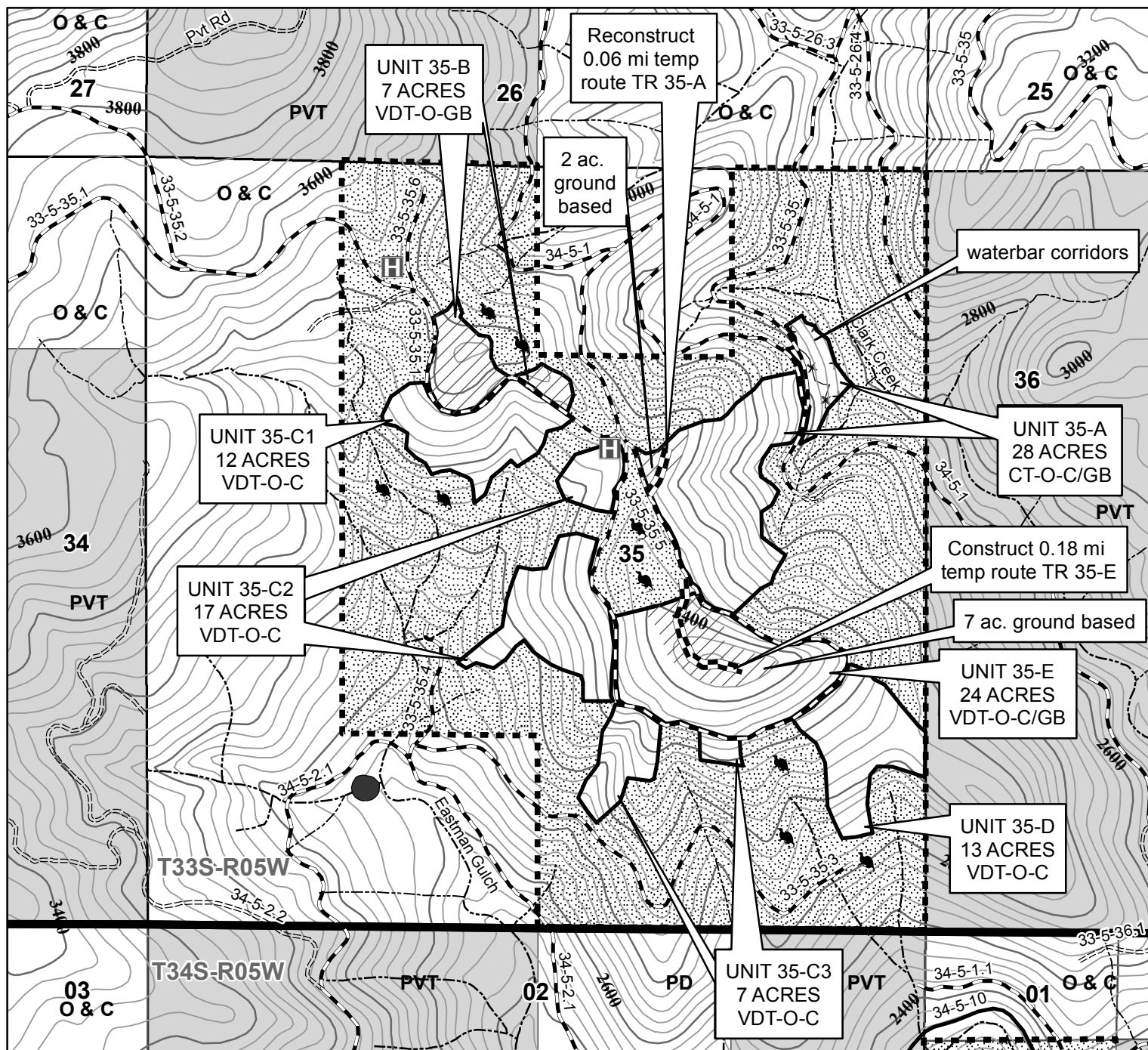


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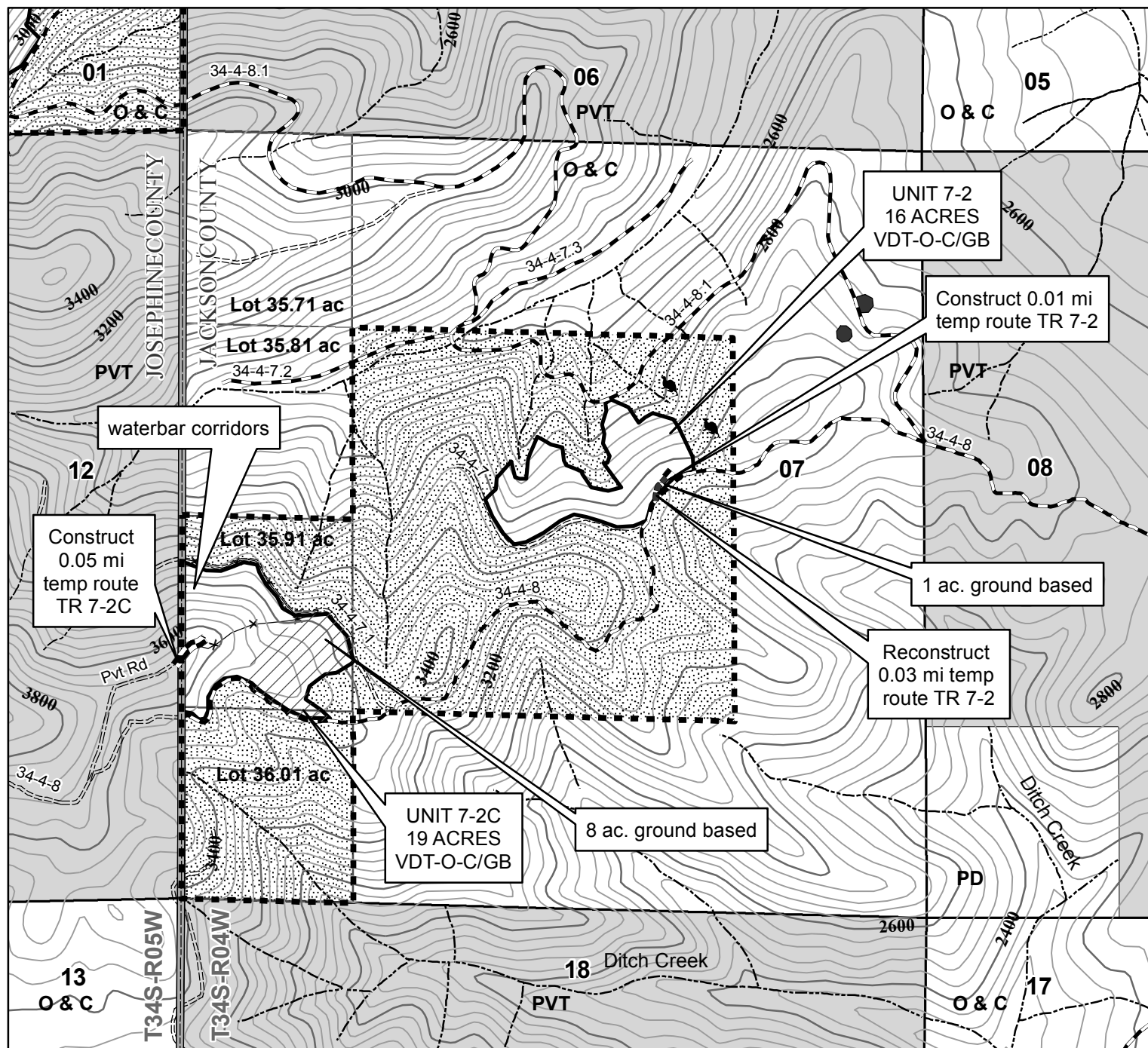


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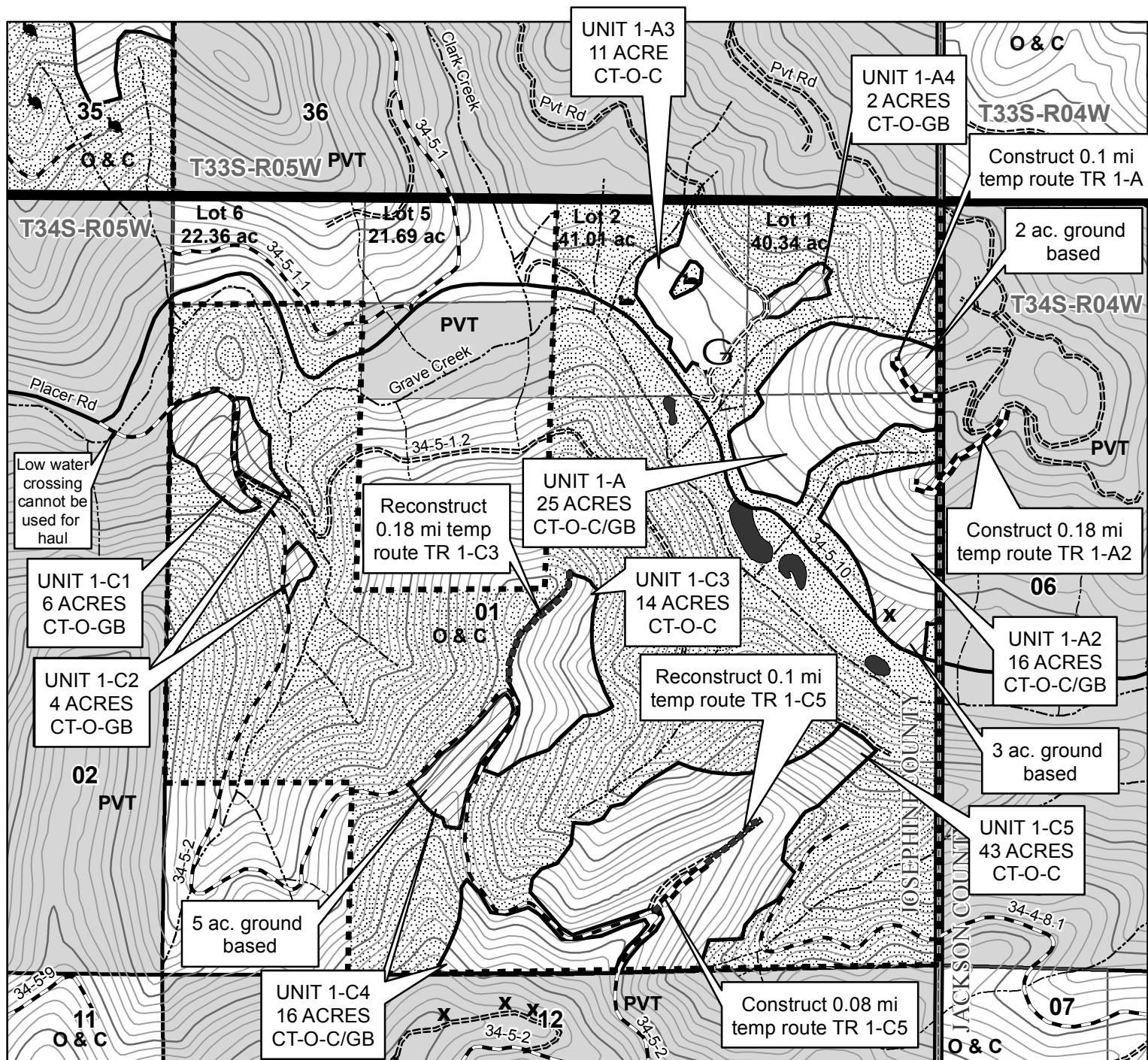
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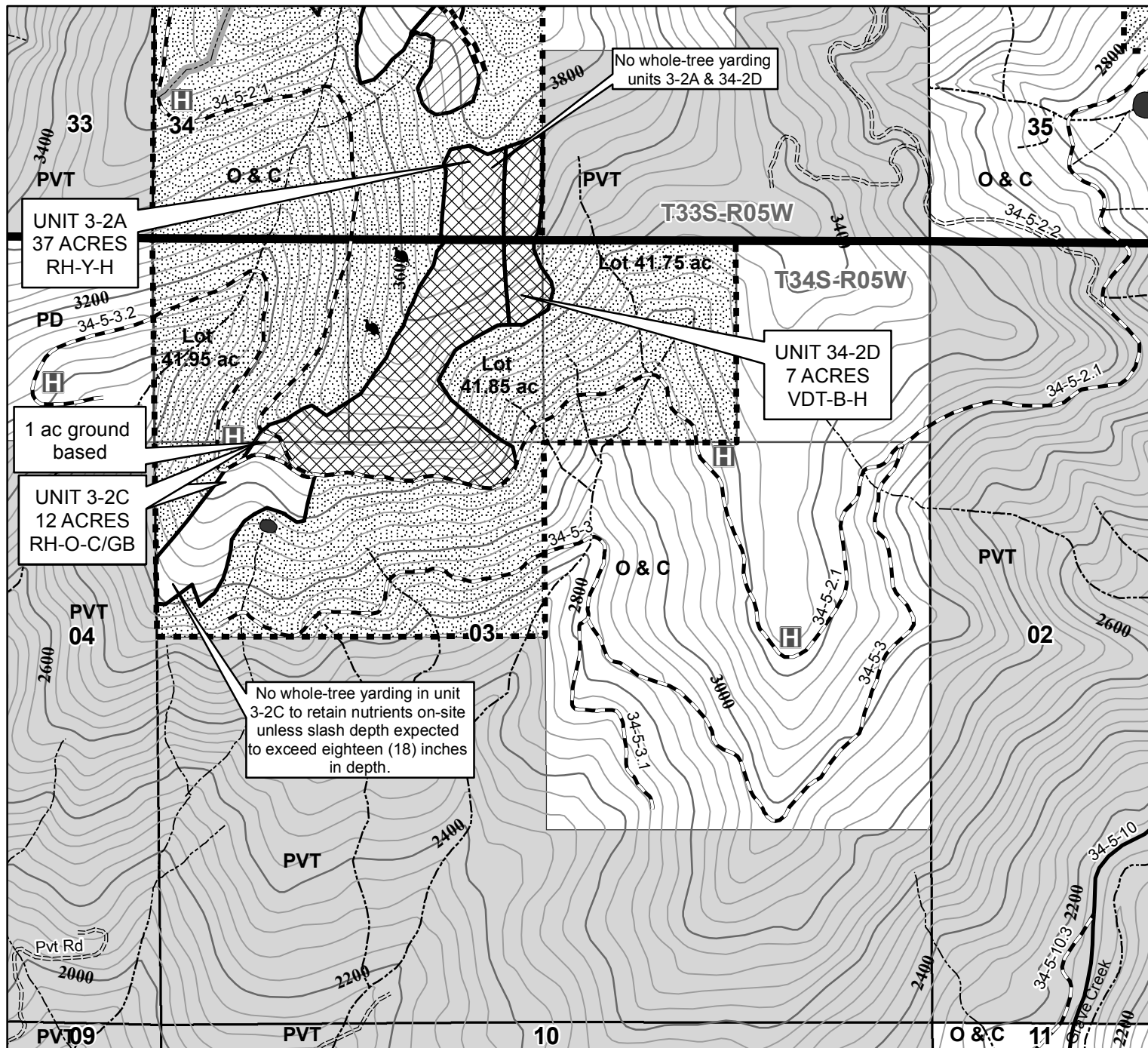
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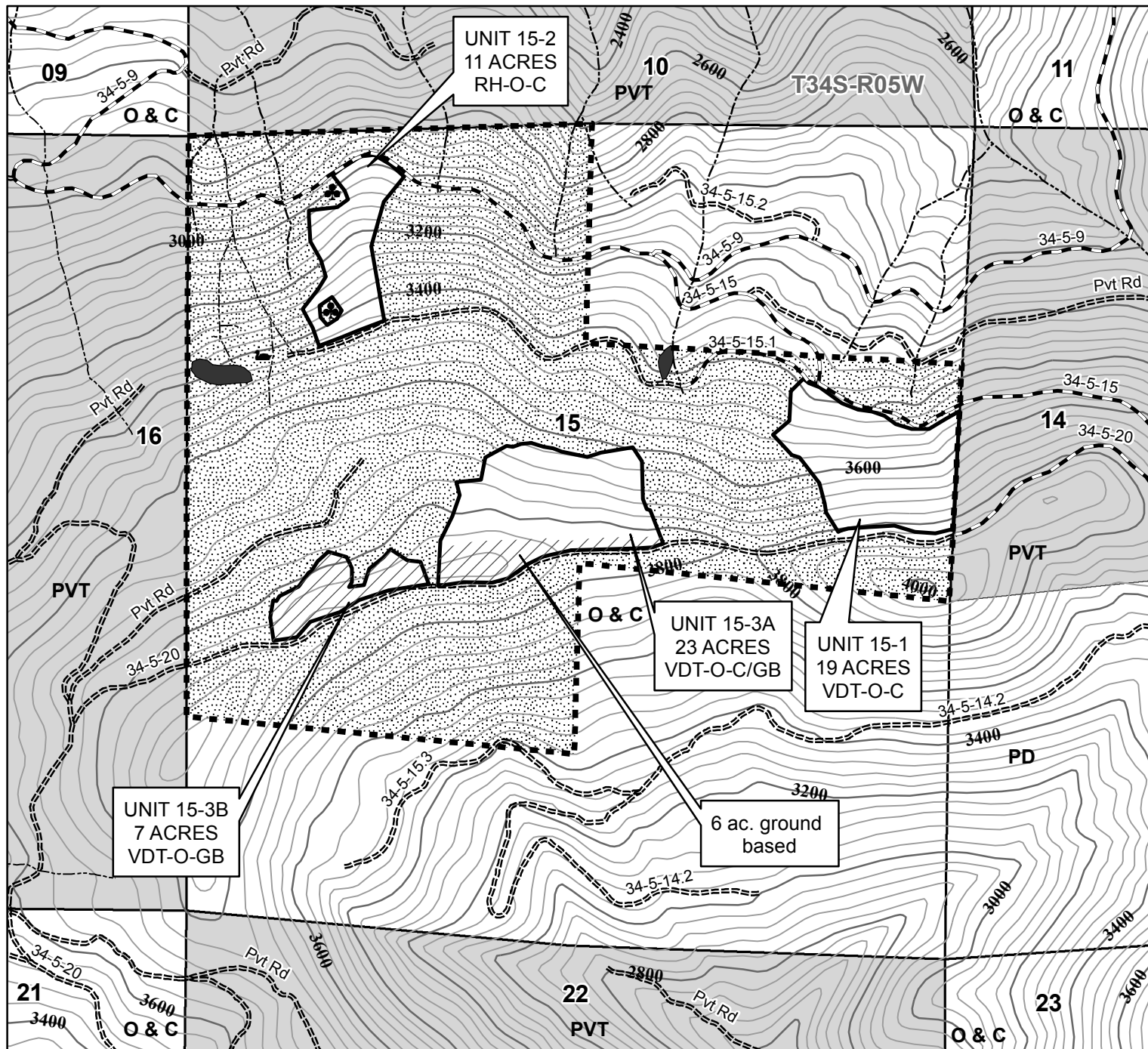
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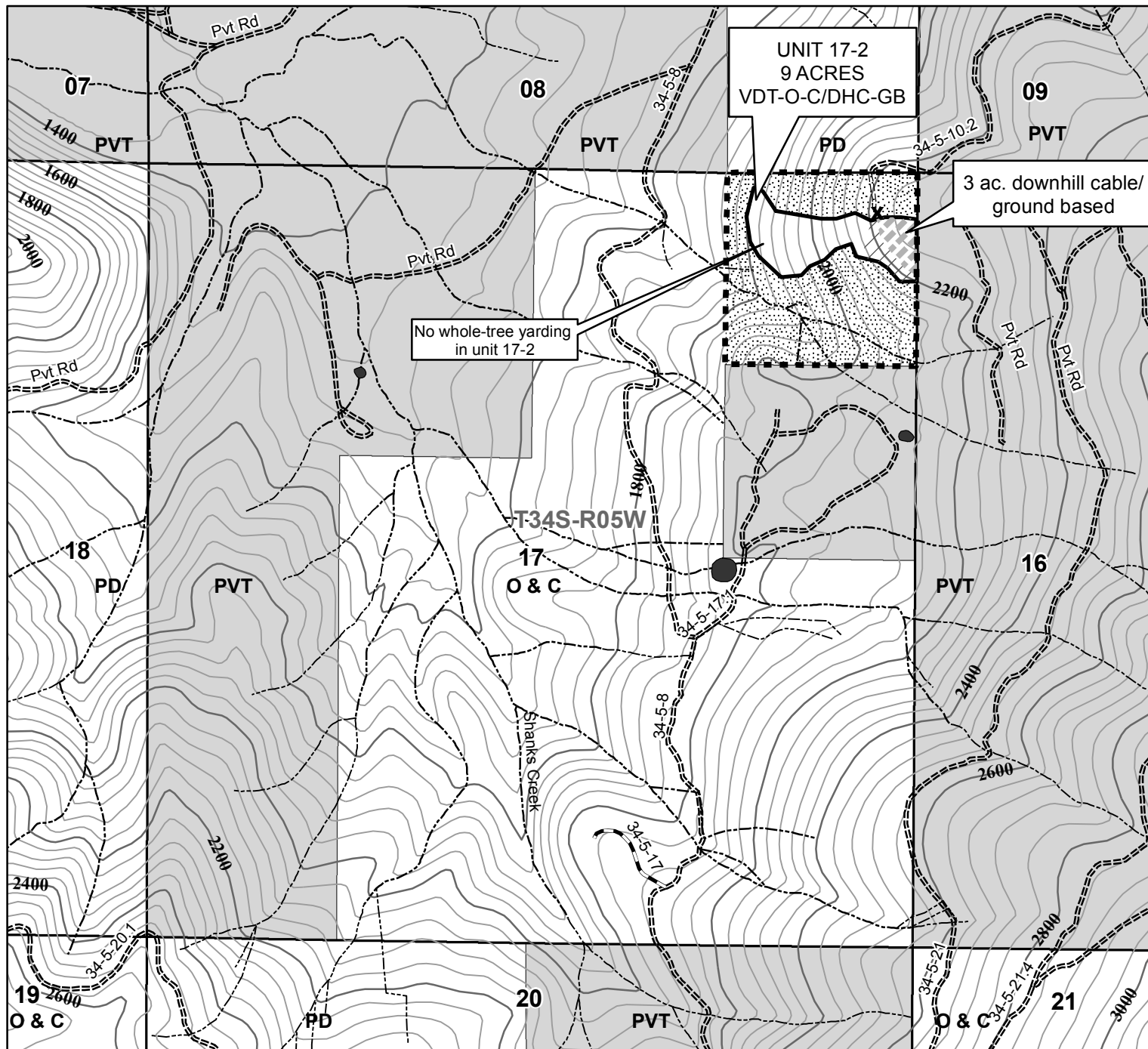


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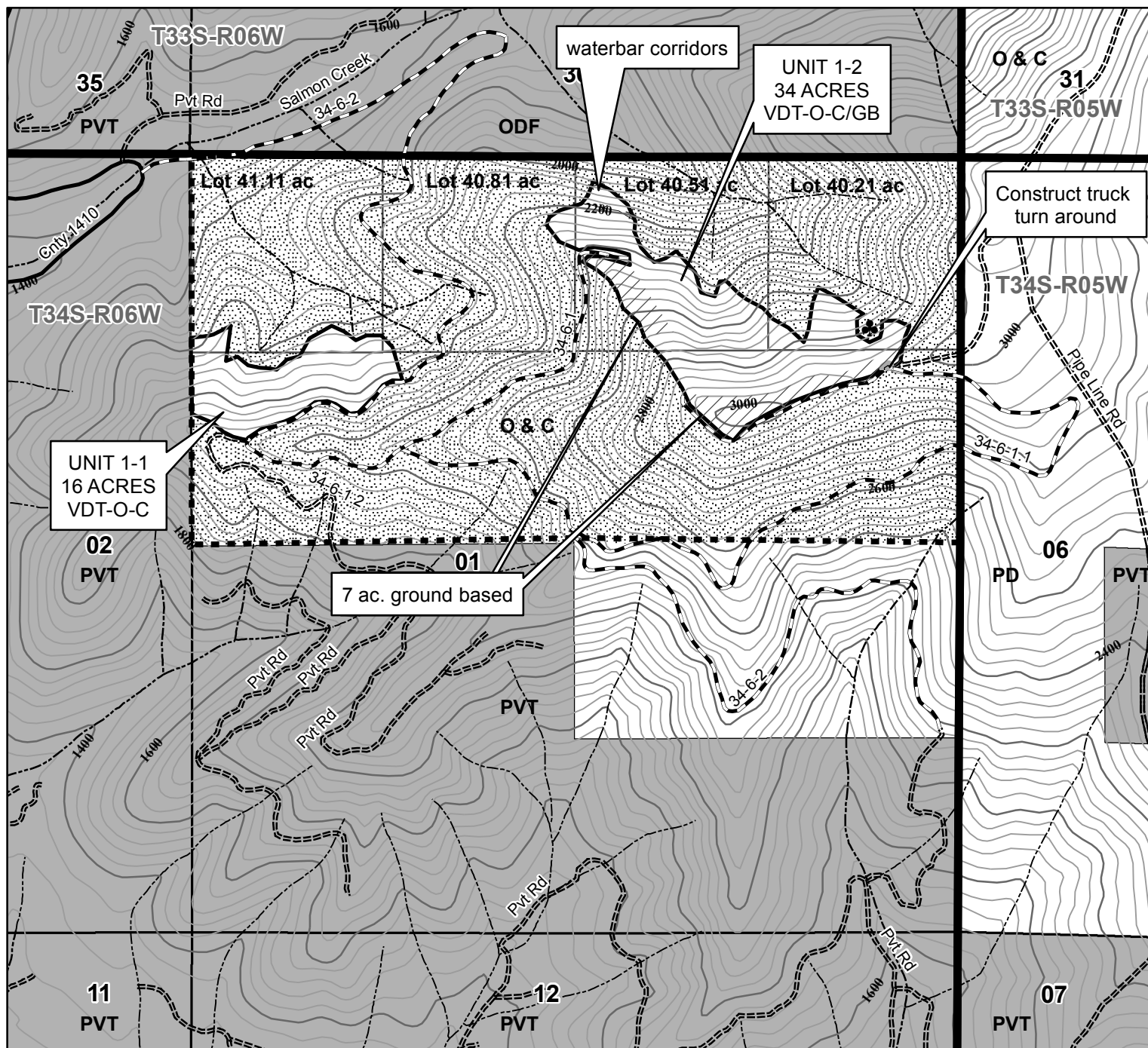


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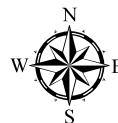
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
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6/23/2015




U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-15-03
T. 33 S., R. 5 W., SEC. 26, 30, 32, 34, 35,
T. 34 S., R. 4 W., SEC. 7,
T. 34 S., R. 5 W., SEC. 1, 3, 15, 17,
T. 34 S., R. 6 W., SEC. 1 WILL. MER.
JOSEPHINE & JACKSON COUNTIES


TIMBER SALE CONTRACT MAP
LOWER GRAVE TIMBER SALE
EXHIBIT A
PAGE 12 OF 13


Legend


 Lower Grave Contract Area Boundary


 Lower Grave Contract Reserve Area


Lower Grave Timber Sale Units

 Cable yard


 Downhill cable yard


 Ground base yard


 Helicopter yard


 Permanent Road Construction


Temporary Routes


 Construction


 Reconstruction


 Swing Road


 Potential Helicopter Landing


 Designated Landings

 Mountain Peaks


 Gates


 Waterbar corridors on fragile gradients


 Red Tree Vole Buffer


 Plant Buffers


Roads


 Paved


 Rocked


 Natural Surface


 Wetlands


 Lakes & Ponds


 Intermittent Streams


 Perennial Streams


 Intermediate 40-ft contour


 Index 200-ft contour


 Lots


 Section


 Township


 Counties

 BLM Ownership - O&C Lands




 BLM Ownership - Public Domain

 Private Ownership

 Oregon Department of Forestry Ownership

 Josephine County Ownership

SUMMARY

VDT-O-C	VARIABLE DENSITY THIN-ORANGE MARK LEAVE TREE-CABLE YARD (UNITS 1-1, 15-1, 32-1E, 32-1F, 35-C1, 35-C2, 35-C3, 35-D)	91 ACRES
VDT-O-GB	VARIABLE DENSITY THIN-ORANGE MARK LEAVE TREE-GROUND BASE YARD (UNITS 15-3B, 35-B)	14 ACRES
VDT-O-C/GB	VARIABLE DENSITY THIN-ORANGE MARK LEAVE TREE-CABLE YARD AND GROUND BASE YARD (UNITS 1-2, 7-2, 7-2C, 15-3A, 32-1H, 34-2B, 35-E)	196 ACRES
VDT-O-C/DHC-GB	VARIABLE DENSITY THIN-ORANGE MARK LEAVE TREE-CABLE YARD AND DOWNHILL CABLE-GROUND BASE YARD (UNIT 17-2)	9 ACRES
VDT-B-H	VARIABLE DENSITY THIN-BLUE MARK CUT TREE-HELICOPTER YARD (UNIT 34-2D)	7 ACRES
CT-O-C	COMMERCIAL THIN-ORANGE MARK LEAVE TREE-CABLE YARD (UNITS 1-A3, 1-C3, 1-C4 south, 1-C5, 26-1, 30-1, 30-2)	108 ACRES
CT-O-GB	COMMERCIAL THIN-ORANGE MARK LEAVE TREE-GROUND BASE YARD (UNITS 1-A4, 1-C1, 1-C2, 1-C4 north)	17 ACRES
CT-O-C/GB	COMMERCIAL THIN-ORANGE MARK LEAVE TREE-CABLE YARD AND GROUND BASE YARD (UNITS 1-A, 1-A2, 35-A)	69 ACRES
RH-O-C	REGENERATION HARVEST-ORANGE MARK LEAVE TREE-CABLE YARD (UNIT 15-2)	11 ACRES
RH-O-C/GB	REGENERATION HARVEST-ORANGE MARK LEAVE TREE-CABLE YARD AND GROUND BASE YARD (UNIT 3-2C)	12 ACRES
RH-Y-H	REGENERATION HARVEST-YELLOW MARK LEAVE TREE-HELICOPTER YARD (UNIT 3-2A)	37 ACRES
CC-O-GG	CLEARCUT-ORANGE MARK LEAVE TREE-GROUND BASE YARD (RW 1, RW 2)	2 ACRES
	TOTAL TIMBER SALE UNIT AREA	573 ACRES
	RESERVE AREA	2,182.51 ACRES
	TOTAL CONTRACT AREA	2,755.51 ACRES

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-15-03
T. 33 S., R. 5 W., SEC. 26, 30, 32, 34, 35,
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T. 34 S., R. 5 W., SEC. 1, 3, 15, 17,
T. 34 S., R. 6 W., SEC. 1 WILL. MER.
JOSEPHINE & JACKSON COUNTIES

TIMBER SALE CONTRACT MAP
LOWER GRAVE TIMBER SALE
EXHIBIT A
PAGE 13 OF 13

LEGEND

UNIT	ACRES	PRESCRIPTION TYPE	PAINT COLOR	LOGGING SYSTEM
1-1	16	VDT	O	C
1-2	34	VDT	O	C/GB
1-A	25	CT	O	C/GB
1-A2	16	CT	O	C/GB
1-A3	11	CT	O	C
1-A4	2	CT	O	GB
1-C1	6	CT	O	GB
1-C2	4	CT	O	GB
1-C3	14	CT	O	C
1-C4	16	CT	O	C/GB
1-C5	43	CT	O	C
3-2A	37	RH	Y	H
3-2C	12	RH	O	C/GB
7-2	16	VDT	O	C/GB
7-2C	19	VDT	O	C/GB
15-1	19	VDT	O	C
15-2	11	RH	O	C
15-3A	23	VDT	O	C/GB
15-3B	7	VDT	O	GB
17-2	9	VDT	O	C/DHC-GB
26-1	21	CT	O	C
30-1	1	CT	O	C
30-2	7	CT	O	C
32-1E	4	VDT	O	C
32-1F	3	VDT	O	C
32-1H	16	VDT	O	C/GB
34-2B	64	VDT	O	C/GB
RW 1	1	CC	O	GB
34-2D	7	VDT	B	H
35-A	28	CT	O	C/GB
35-B	7	VDT	O	GB
35-C1	12	VDT	O	C
35-C2	17	VDT	O	C
35-C3	7	VDT	O	C
35-D	13	VDT	O	C
35-E	24	VDT	O	C/GB
RW 2	1	CC	O	GB

TOTAL 573

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

VDT = VARIABLE DENSITY THIN
CT = COMMERCIAL THIN
RH = REGENERATION HARVEST
CC = CLEAR CUT
O = ORANGE PAINT (LEAVE TREE MARK)
Y = YELLOW PAINT (LEAVE TREE MARK)
B = BLUE PAINT (CUT TREE MARK)
GB = GROUND BASE YARD
C = CABLE YARD
C/GB = CABLE AND GROUND BASE YARD
C/DHC-GB = CABLE AND DOWNHILL CABLE AND GROUND BASE YARD
H = HELICOPTER YARD



United States of America
Department of the Interior
Bureau Of Land Management
Timber Sale Appraisal

District : Medford
Sale Name : Lower Grave
Sale Date : 07/23/2015
Appraisal Method : 16' MBF

Contract # : ORM07-TS-15-3
Job File # : M11313
Master Unit : Josephine
Planning Unit : Grants Pass

Contents

Exhibit B

2

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Exhibit B

The following estimates and calculations of timber sold are made solely as an administrative aid for determining: (1) Adjustments made or credits given in accordance with Sections 6, 9, or 11; (2) When payments are due; and (3) Value of timber subject to any special bonding provisions. The value of timber will be determined by multiplying the value per acre as shown below, times the amount of acreage as determined by the authorized officer, which has been cut or removed or designated for taking.

Except provided in Section 2, Purchaser shall be liable for the total purchase price even though the quantity of timber actually cut or removed or designated for taking is less than the estimated volume or quantity shown. Cutting areas are shown on the Exhibit A.

Sale Totals (16' MBF)

Species	Net Volume	Bid Price	Sale SubTotal
Douglas-fir	7,992		
Incense-cedar	217		
Ponderosa Pine	140		
Sugar Pine	75		
White Fir	31		
Western Hemlock	3		
Sale Totals	8,458		

Unit Details (16' MB)

Unit	1-1	16 Acres	Value per Acre : \$0.00
Species	Net Volume	Bid Price	Species Value
Douglas-fir	210		
Incense-cedar	7		
Ponderosa Pine	2		
Sugar Pine	3		
Western Hemlock			
White Fir			
Unit Totals	222		

Unit	1-2	34 Acres	Value per Acre : \$0.00
Species	Net Volume	Bid Price	Species Value
Douglas-fir	581		
Incense-cedar	1		
White Fir	1		
Unit Totals	583		

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Unit 15-1 19 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	141		
Incense-cedar	1		
Ponderosa Pine	1		
Unit Totals	143		

Unit 15-2 11 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	233		
Incense-cedar	15		
Ponderosa Pine	19		
Sugar Pine	4		
White Fir	4		
Unit Totals	275		

Unit 15-3A 23 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	170		
Incense-cedar	1		
Ponderosa Pine	1		
Unit Totals	172		

Unit 15-3B 7 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	52		
Incense-cedar			
Ponderosa Pine			
Unit Totals	52		

Unit 17-2 9 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	67		
Incense-cedar	1		
Ponderosa Pine			
Unit Totals	68		

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Unit 1-A 25 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	329		
Incense-cedar	11		
Ponderosa Pine	3		
Sugar Pine	5		
Western Hemlock			
White Fir			
Unit Totals	348		

Unit 1-A2 16 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	210		
Incense-cedar	7		
Ponderosa Pine	2		
Sugar Pine	3		
Western Hemlock			
White Fir			
Unit Totals	222		

Unit 1-A3 11 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	145		
Incense-cedar	5		
Ponderosa Pine	1		
Sugar Pine	2		
Western Hemlock			
White Fir			
Unit Totals	153		

Unit 1-A4 2 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	26		
Incense-cedar	1		
Ponderosa Pine			
Sugar Pine			
Western Hemlock			
White Fir			
Unit Totals	27		

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Unit 1-C1 6 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	79		
Incense-cedar	3		
Ponderosa Pine	1		
Sugar Pine	1		
Western Hemlock			
White Fir			
Unit Totals	84		

Unit 1-C2 4 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	53		
Incense-cedar	2		
Ponderosa Pine	1		
Sugar Pine	1		
Western Hemlock			
White Fir			
Unit Totals	57		

Unit 1-C3 14 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	184		
Incense-cedar	6		
Ponderosa Pine	2		
Sugar Pine	3		
Western Hemlock			
White Fir			
Unit Totals	195		

Unit 1-C4 16 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	210		
Incense-cedar	7		
Ponderosa Pine	2		
Sugar Pine	3		
Western Hemlock			
White Fir			
Unit Totals	222		

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Unit 1-C5 43 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	565		
Incense-cedar	19		
Ponderosa Pine	5		
Sugar Pine	8		
Western Hemlock	1		
White Fir			
Unit Totals	598		

Unit 26-1 21 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	276		
Incense-cedar	9		
Ponderosa Pine	3		
Sugar Pine	4		
Western Hemlock			
White Fir			
Unit Totals	292		

Unit 30-1 1 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	13		
Incense-cedar			
Ponderosa Pine			
Sugar Pine			
Western Hemlock			
White Fir			
Unit Totals	13		

Unit 30-2 7 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	92		
Incense-cedar	3		
Ponderosa Pine	1		
Sugar Pine	1		
Western Hemlock			
White Fir			
Unit Totals	97		

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Unit 32-1E 4 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	68		
Incense-cedar			
White Fir			
Unit Totals	68		

Unit 32-1F 3 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	51		
Incense-cedar			
White Fir			
Unit Totals	51		

Unit 32-1H 16 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	273		
Incense-cedar	1		
White Fir	1		
Unit Totals	275		

Unit 3-2A 37 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	784		
Incense-cedar	53		
Ponderosa Pine	63		
Sugar Pine	15		
White Fir	15		
Unit Totals	930		

Unit 3-2C 12 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	254		
Incense-cedar	16		
Ponderosa Pine	20		
Sugar Pine	5		
White Fir	5		
Unit Totals	300		

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Unit 34-2B 64 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	841		
Incense-cedar	28		
Ponderosa Pine	8		
Sugar Pine	12		
Western Hemlock	2		
White Fir	1		
Unit Totals	892		

Unit 34-2D 7 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	80		
Incense-cedar	1		
Ponderosa Pine			
Unit Totals	81		

Unit 35-A 28 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	368		
Incense-cedar	12		
Ponderosa Pine	4		
Sugar Pine	5		
Western Hemlock			
White Fir			
Unit Totals	389		

Unit 35-B 7 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	120		
Incense-cedar			
White Fir			
Unit Totals	120		

Unit 35-C1 12 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	205		
Incense-cedar			
White Fir	1		
Unit Totals	206		

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Unit 35-C2 17 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	290		
Incense-cedar	1		
White Fir	1		
Unit Totals	292		

Unit 35-C3 7 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	120		
Incense-cedar			
White Fir			
Unit Totals	120		

Unit 35-D 13 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	222		
Incense-cedar			
White Fir	1		
Unit Totals	223		

Unit 35-E 24 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	410		
Incense-cedar	1		
White Fir	1		
Unit Totals	412		

Unit 7-2 16 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	119		
Incense-cedar	1		
Ponderosa Pine			
Unit Totals	120		

Medford
Lower Grave
ORM07-TS-15-3

Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	141		
Incense-cedar	1		
Ponderosa Pine	1		
Unit Totals	143		

Value per Acre : \$0.00

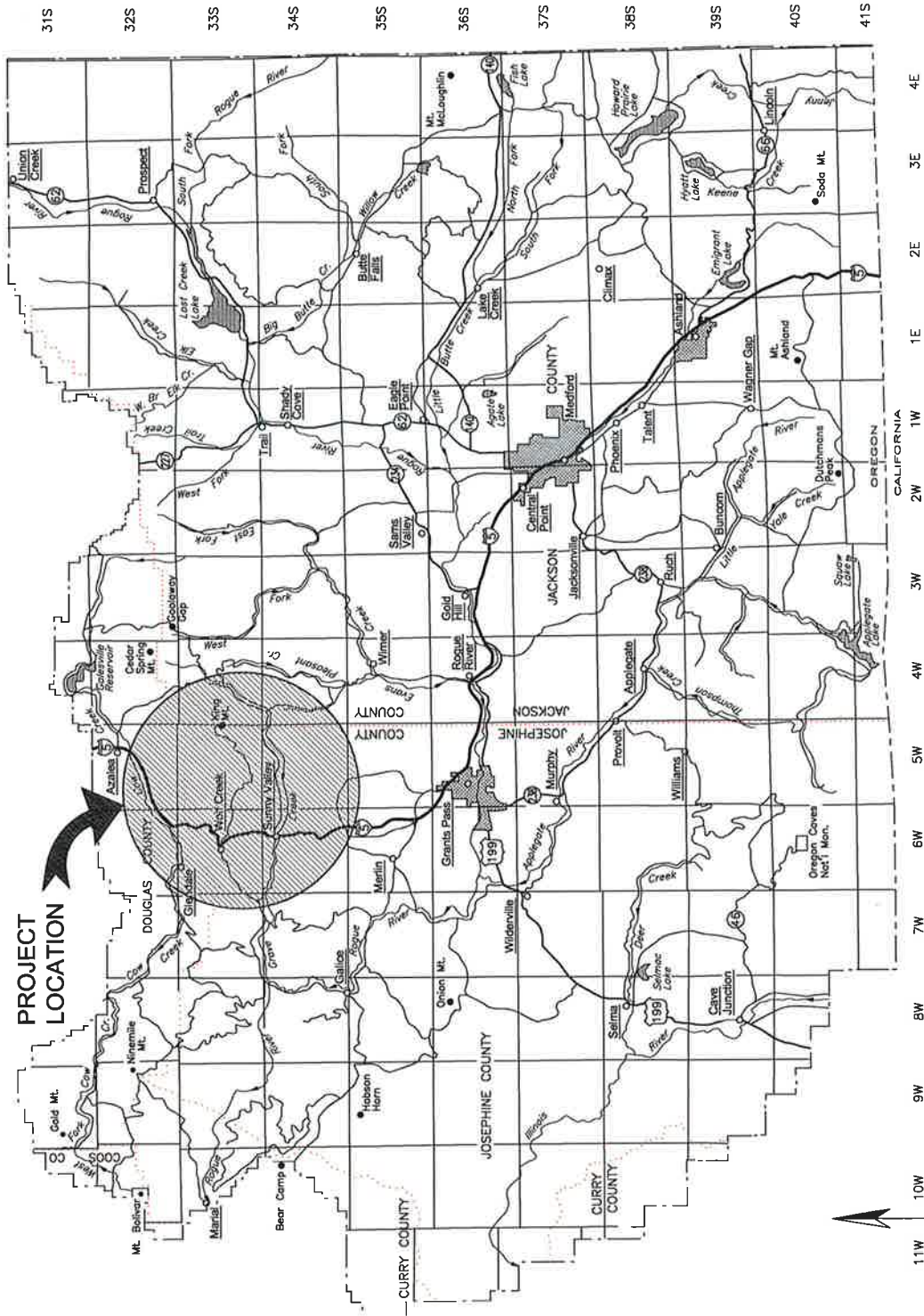
Species	Net Volume	Bid Price	Species Value
Douglas-fir	8		
Incense-cedar	2		
Ponderosa Pine			
Unit Totals	10		

Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	2		
Incense-cedar	1		
Unit Totals	3		

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT

EXHIBIT C1
LOWER GRAVE
TIMBER SALE
TRACT NO. ORM07-TS-15-3



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EXHIBIT NO.	DESCRIPTION
C1	TITLE SHEET
C2	ROAD RENOVATION MAPS
C3	ESTIMATE OF QUANTITIES SHEETS
C4	SPECIFICATION SHEETS
C5	TYPICAL ROAD DATA SHEET
C6	CULVERT INSTALL DETAILS
C7	CULVERT BAND DETAILS
C8	DRAINAGE & EROSION CONTROL DETAILS
C9	ARMORED WATER DIP DETAILS
C10	ROADSIDE BRUSHING DETAILS
C11	PROPOSED 33-5-34.1 ROAD PLAN & PROFILE
C12	PROPOSED 33-5-34.1 ROAD DATA & SECTIONS
C13	TYPICAL SLOPE STAKING
C14	ROADS WORK LIST
C15	WRITTEN SPECIFICATIONS
C16	SPECIAL PROVISIONS
D1	ROAD MAINTENANCE SPECIFICATIONS
D2	ROAD MAINTENANCE MAPS

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

LOWER GRAVE
TIMBER SALE
TITLE SHEET


DESIGNED: _____
REVIEWED: _____
APPROVED: _____
DRAFTED BY: ELF
DATE: MAY 2015
SCALE: 1" = 12 MI
SHEET: 1 OF 1
DRAWING NO.: OR-11-9113.4-1

EXHIBIT C2-1

- BLM LANDS
- NON-FEDERAL LANDS
- TIMBER SALE UNITS
- BST ROAD
- ROCKED ROAD
- NATURAL SURFACE ROAD
- EX. GATE
- EX. BARRICADE
- COUNTY BOUNDARY



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REV. NO.	DESCRIPTION	DATE	APPROV.	
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON				
LOWER GRAVE TIMBER SALE OVERALL SALE AREA MAP				
DESIGNED:				
REVIEWED:				
APPROVED:				
DRAFTED BY: ELF	SCALE: 1" = 1.5 MI			
DATE: MAY 2015	SHEET: 1 OF 7			
DRAWING NO.: OR-11-91134-1				

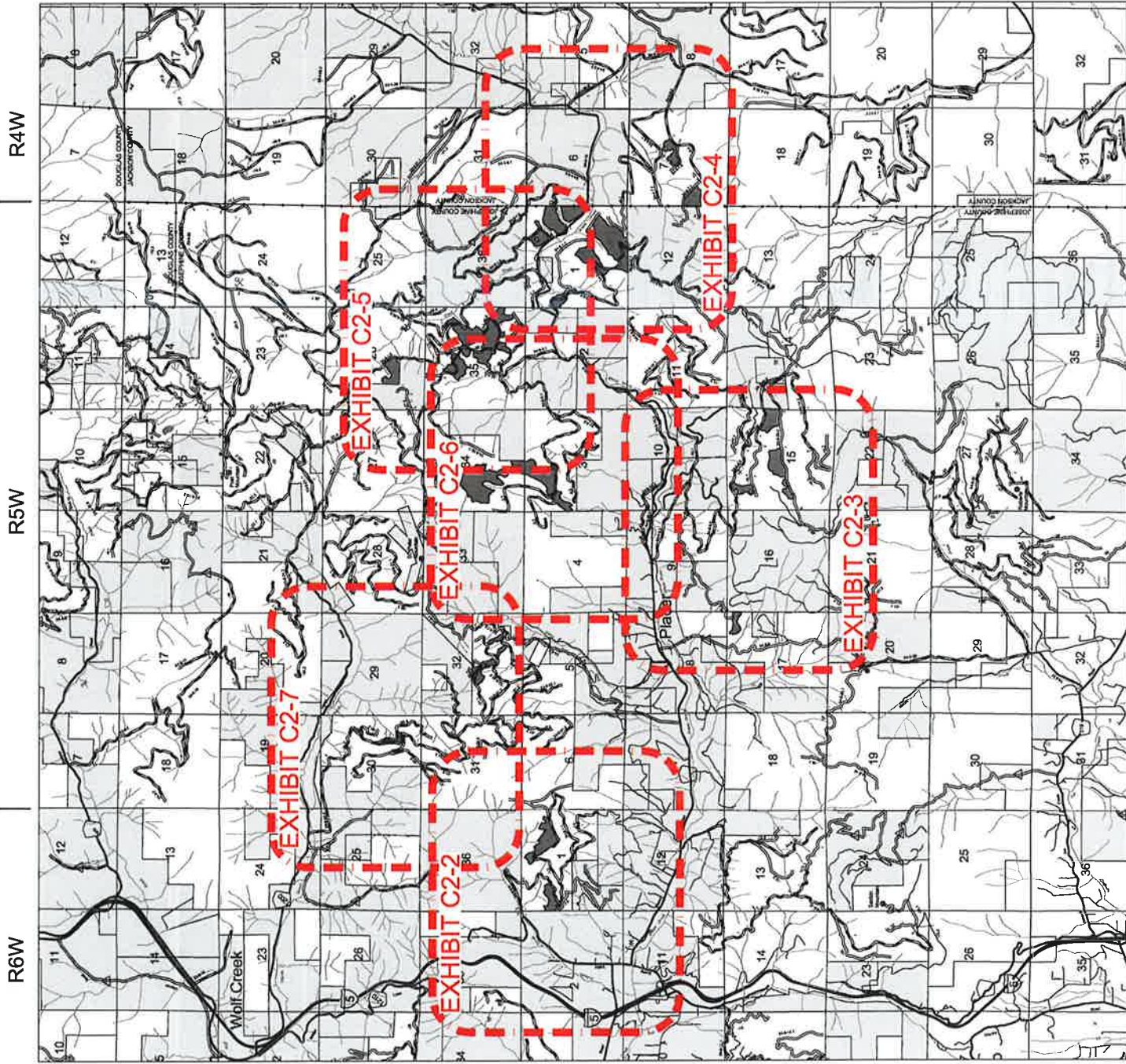


EXHIBIT C2-2

- BLM LANDS
- NON-FEDERAL LANDS
- TIMBER SALE UNITS
- BST ROAD
- CRUSHED ROCKED ROAD
- NATURAL SURFACE ROAD
- EX. GATE
- EX. BARRICADE
- TEMPORARY ROUTES
- COUNTY BOUNDARY
- PURCHASER RENOVATION



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REV. NO.	DESCRIPTION	DATE	APPROV.	
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON				
LOWER GRAVE TIMBER SALE ROAD RENOVATION MAP SALMON CREEK AREA				
DESIGNED: 				
REVIEWED: 				
APPROVED: 				
DRAFTED BY: ELF		SCALE: 1" = 2,000 FT		
DATE: MAY 2015		SHEET: 2 OF 7		
DRAWING NO.: OR-11-9113.4-1				

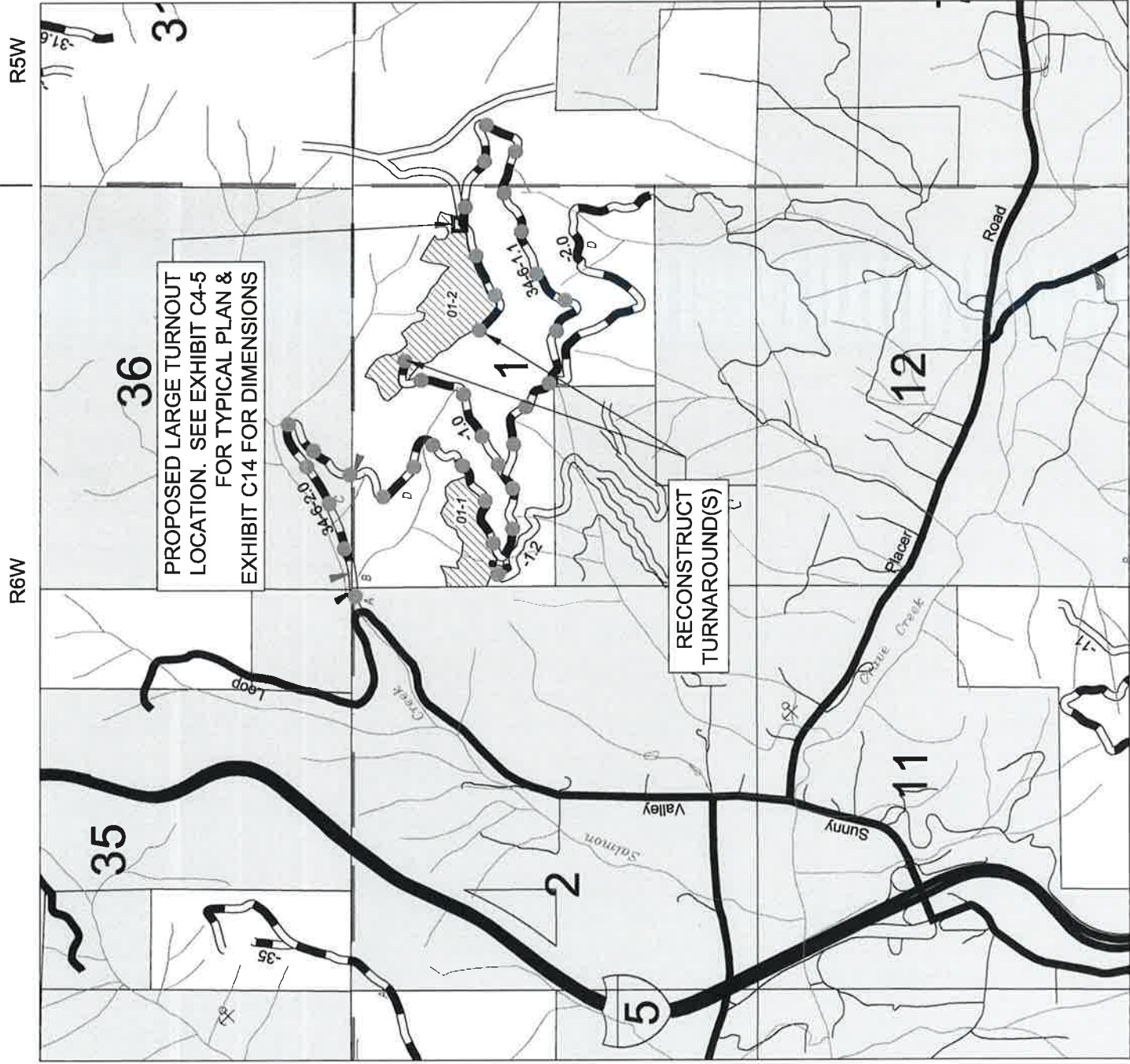
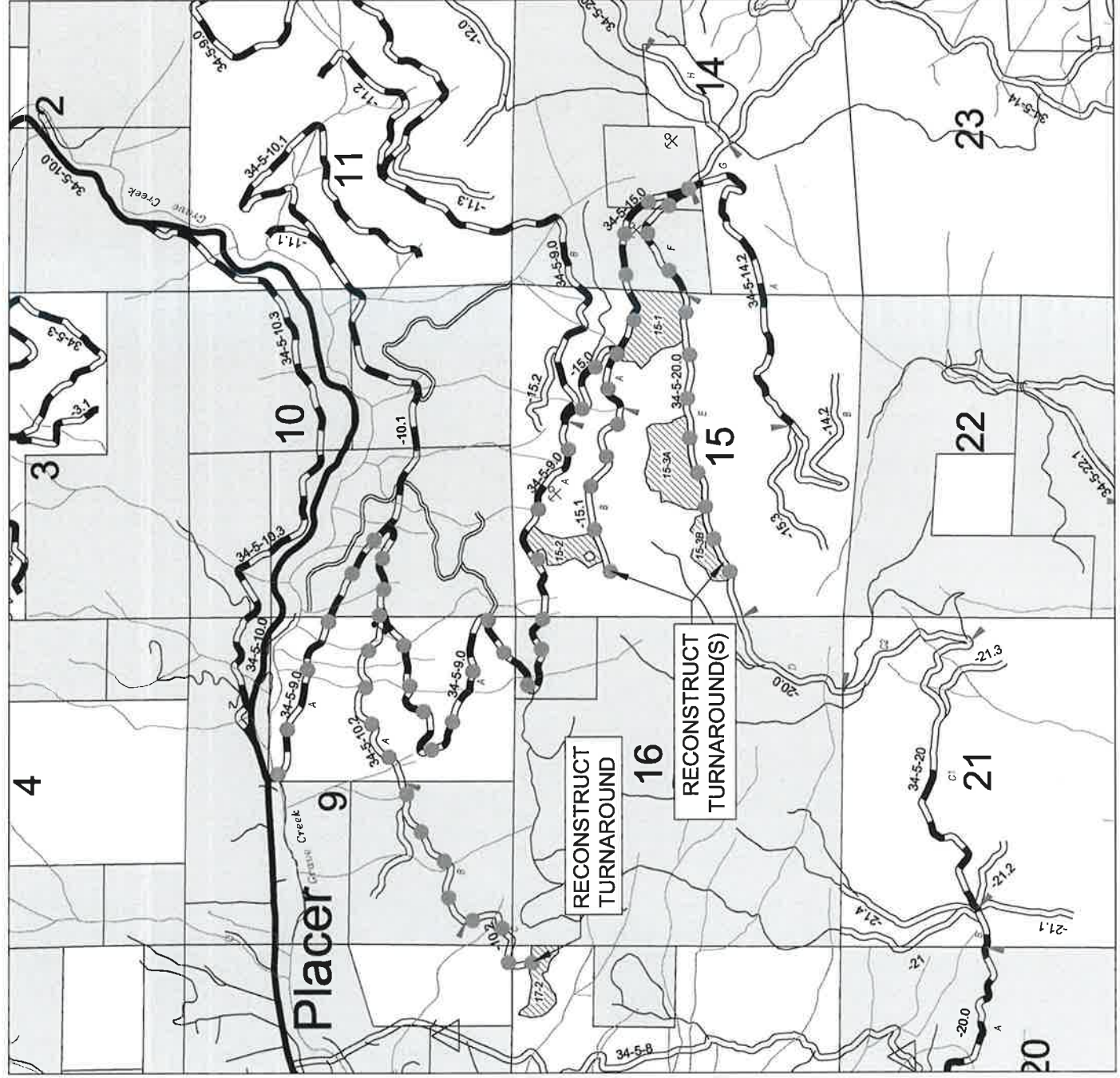


EXHIBIT C2-3

R5W

T34S



- BLM LANDS
- NON-FEDERAL LANDS
- TIMBER SALE UNITS
- BST ROAD
- CRUSHED ROCKED ROAD
- NATURAL SURFACE ROAD
- EX. GATE
- EX. BARRICADE
- TEMPORARY ROUTES
- COUNTY BOUNDARY
- PURCHASER RENOVATION



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REV. NO.	DESCRIPTION	DATE	APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
LOWER GRAVE TIMBER SALE ROAD RENOVATION MAP McCOY CREEK AREA			
DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY: ELF	SCALE: 1" = 2,500 FT		
DATE: MAY 2015	SHEET: 3 OF 7		
DRAWING NO.: OR-11-91134-1			



R5W



T34S

0 1,000 2,000

SCALE IN FEET

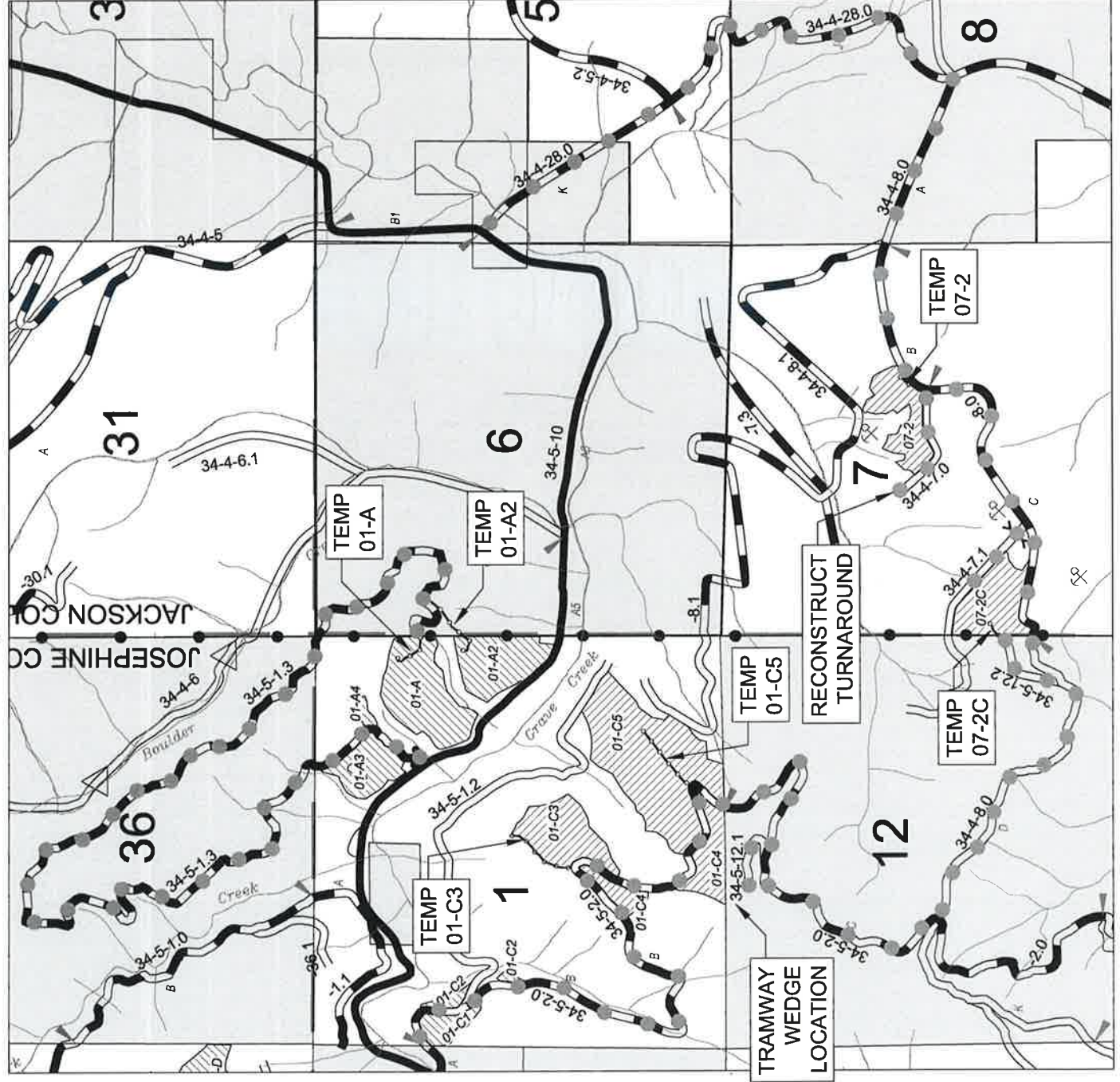


EXHIBIT C2-5

- BLM LANDS
- NON-FEDERAL LANDS
- TIMBER SALE UNITS
- BST ROAD
- CRUSHED ROCKED ROAD
- NATURAL SURFACE ROAD
- EX. GATE
- EX. BARRICADE
- TEMPORARY ROUTES
- COUNTY BOUNDARY
- PURCHASER RENOVATION



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REV. NO.	DESCRIPTION	DATE	APPROV.
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
LOWER GRAVE TIMBER SALE ROAD RENOVATION MAP CLARK CREEK AREA			
DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY:	ELF	SCALE:	1" = 2,000 FT
DATE:	MAY 2015	SHEET:	5 OF 7
DRAWING NO.:	OR-11-9113.4-1		

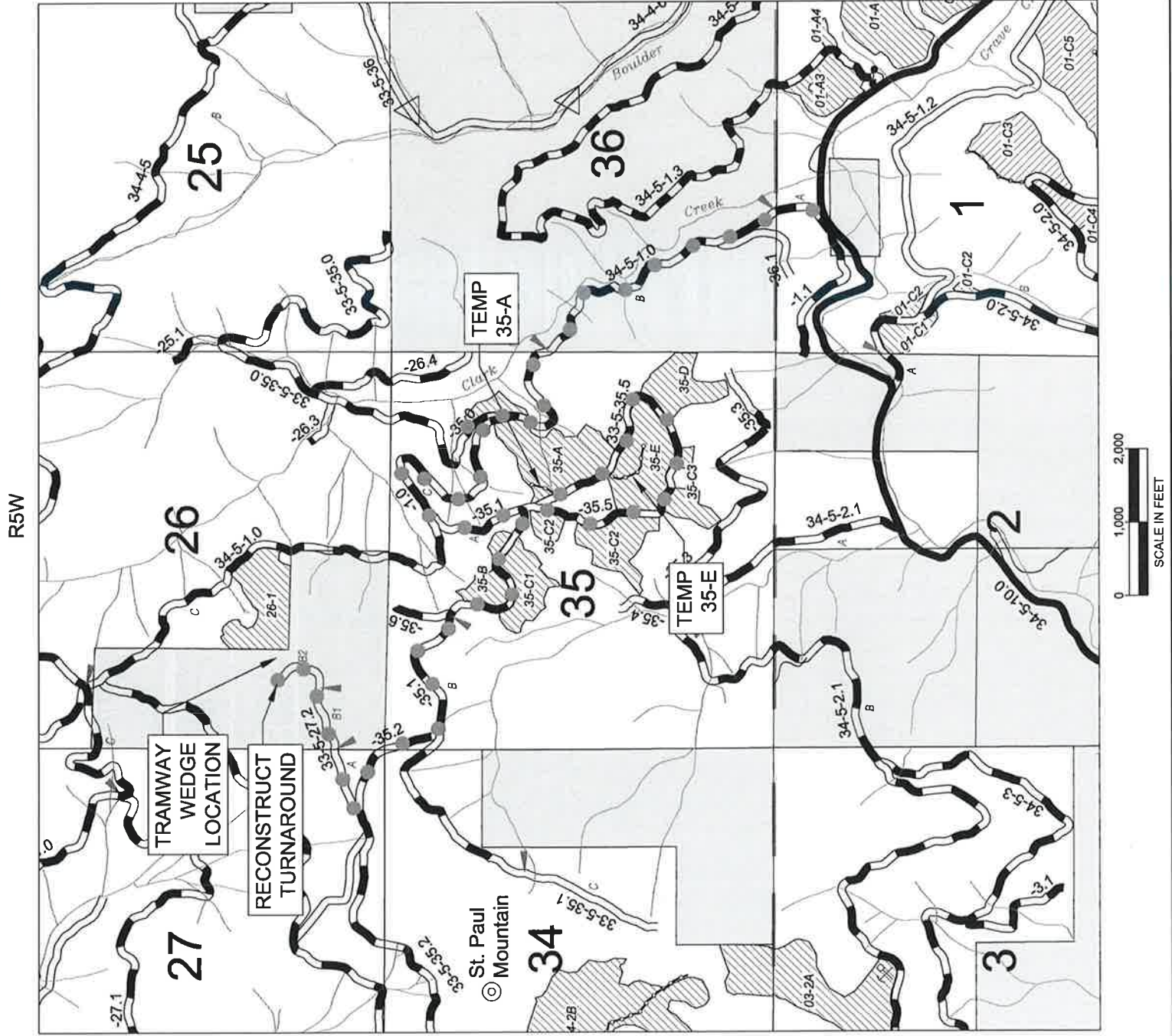



EXHIBIT C2-6

- BLM LANDS
- NON-FEDERAL LANDS
- TIMBER SALE UNITS
- BST ROAD
- CRUSHED ROCKED ROAD
- NATURAL SURFACE ROAD
- EX. GATE
- EX. BARRICADE
- TEMPORARY ROUTES
- COUNTY BOUNDARY
- PURCHASER RENOVATION



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REV. NO.	DESCRIPTION	DATE	APPROV.
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
LOWER GRAVE TIMBER SALE ROAD RENOVATION MAP EASTMAN GULCH AREA			
DESIGNED: 			
REVIEWED:			
APPROVED:			
DRAFTED BY: ELF	SCALE: 1" = 2,000 FT		
DATE: MAY 2015	SHEET: 6 OF 7		
DRAWING NO.: OR-11-91134-1			

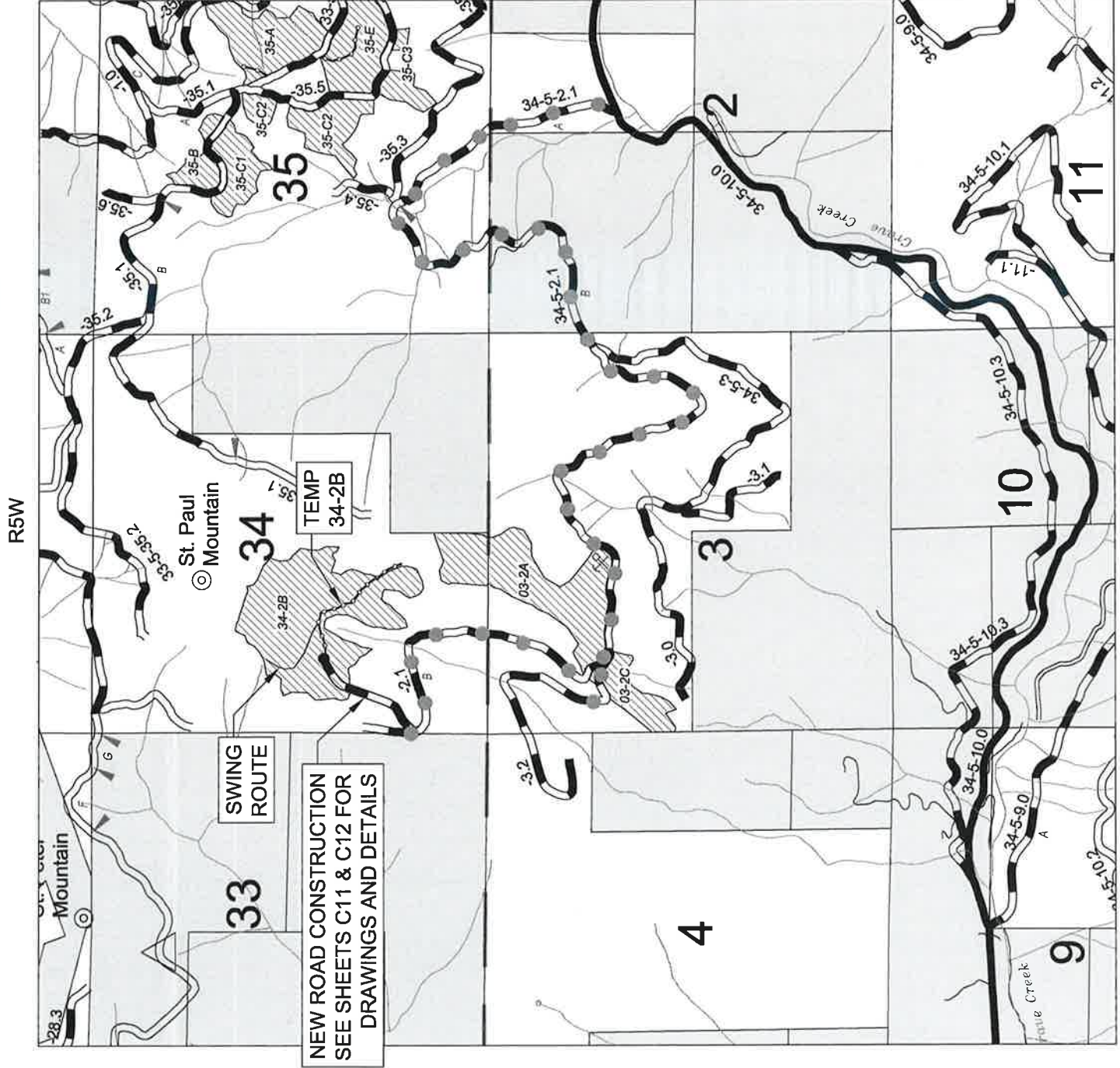
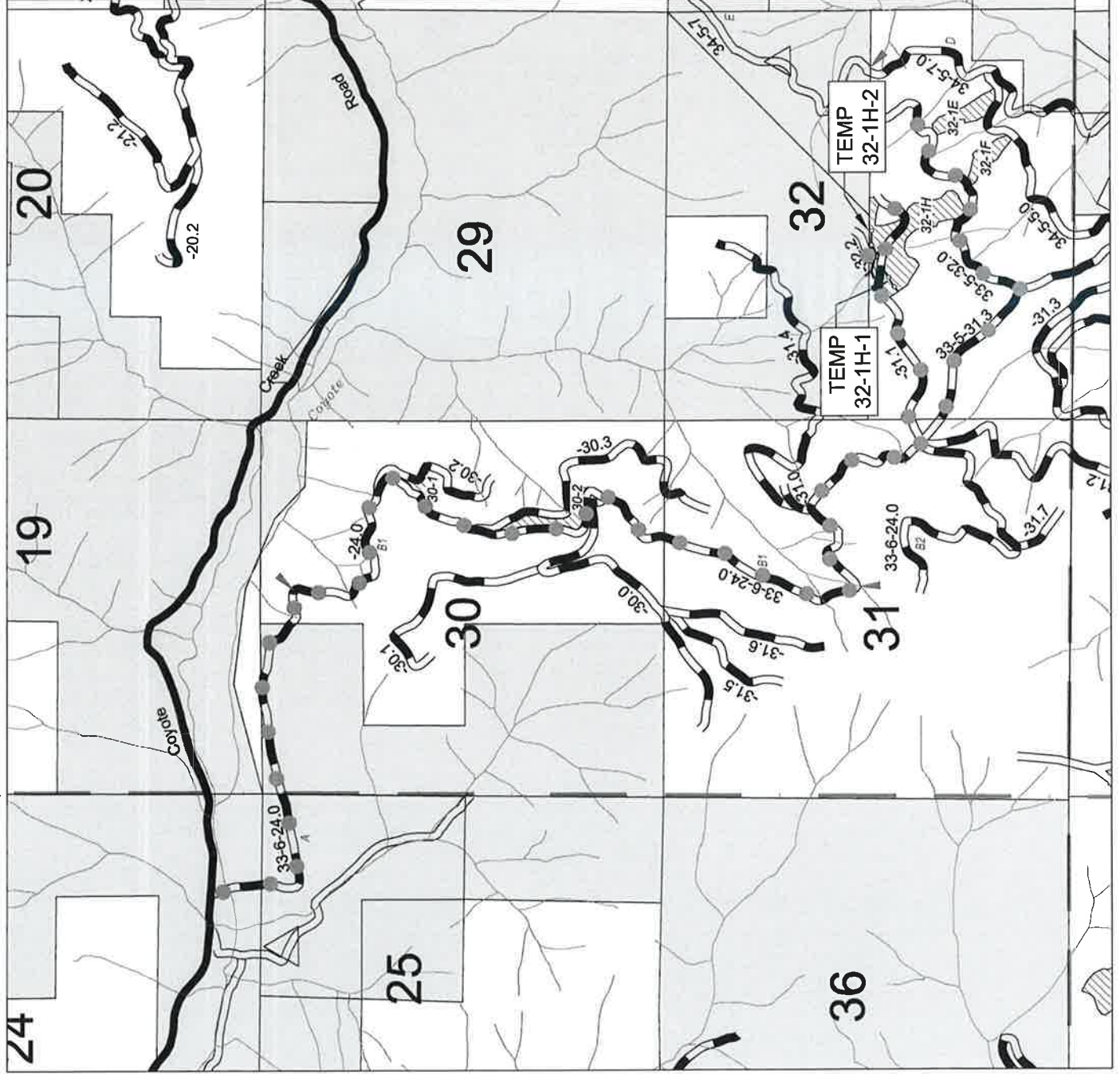


EXHIBIT C2-7

R6W

R5W



T33S

T34S

- BLM LANDS
- NON-FEDERAL LANDS
- TIMBER SALE UNITS
- BST ROAD
- CRUSHED ROCKED ROAD
- NATURAL SURFACE ROAD
- EX. GATE
- EX. BARRICADE
- TEMPORARY ROUTES
- COUNTY BOUNDARY
- PURCHASER RENOVATION



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REV. NO.	DESCRIPTION	DATE	APPROV.	
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON				
LOWER GRAVE TIMBER SALE ROAD RENOVATION MAP MILLER GULCH AREA				
DESIGNED: 				
REVIEWED: 				
APPROVED: 				
DRAFTED BY: ELF		SCALE: 1" = 2,000 FT		
DATE: MAY 2015		SHEET: 7 OF 7		
DRAWING NO.: OR-11-91134-1				

EXHIBIT C3-1

ROAD NUMBER	FROM (M.P.)	TO (M.P.)	LENGTH (MILES)	CLEARING AND GRUBBING	EXCAVATION		DRAINAGE						RENOVATION				AGGREGATE			HAY BALE CHECK	SOIL STABILIZATION	ROADSIDE BRUSHING AND CHIPPING	MISCELLANEOUS													
					ROCK	COMMON	CORRUGATED METAL PIPE 16 GA						500				700		CRUSHED ROCK				BORROW MATERIAL	1700	1800	2100	8000									
							SIZE		ELBOWS		18"	24"	12"	18"	24"	MILE	MILE	MILE									SCARIFICATION AND/OR HEAVY BLADING	SLIDE REMOVAL	PT RUN	RECONSTRUCT WATER DIPS	RECONSTRUCT WATER BARS	CONSTRUCT WATER DIPS	CONSTRUCT WATER BARS	REMOVE/REPLACE EX. BARRICADES	(RE)CONSTRUCT TURNAROUND	CONSTRUCT TURNOUT
							18"	24"	18"	24"																										
SPECIFICATION NO. —————→					200	300	400						500				700	1200		1700	1800	2100														
UNITS —————→	MP	MP	MILE	ACRE	CY	CY	LF	LF	LF	EA	LF	MILE	MILE	MILE	CULVERT CLEANING	DITCH AND/OR BLADING	SCARIFICATION AND/OR HEAVY BLADING	CY	CY	CY	CY	CY	EA	ACRE	MILE	EA	EA	EA	EA	EA	EA	EA	EA			
SALMON CREEK AREA																																				
34-6-2.0 (A-D)	0.00	1.96	1.96									1.96	1.96	0.65 0.12	8									6	0.20	1.96										
34-6-1.1	0.00	1.47	1.47	0.1								1.47	1.47	0.05 0.44	7						20		1	0.10	1.47						1	1				
34-6-1.0	0.00	0.45	0.45									0.45													0.45	3					1					
34-6-1.2	0.00	0.05	0.05									0.05													0.05											
McCOY CREEK AREA																																				
34-5-9.0 (A)	0.00	3.60	3.60									3.60	3.60	0.06									18		3.60											
34-5-15.0	0.00	0.99	0.99									0.99	0.99										2		0.99											
34-5-20.0 (E-E)	4.44	3.09	1.35	0.1								1.35													1.35			3			1					
34-5-15.1 (A-B)	0.00	0.83	0.83									0.83	0.83	0.59 0.09	10								1	0.10	0.83						1					
34-5-10.2 (A-C)	0.00	1.47	1.47					45				1.47	1.47									5	0.20	1.47	4						1					
DITCH CREEK AREA																																				
34-4-28.0 (J-K)	7.27	5.51	1.76									1.76	1.76										6		1.76											
34-4-8.0 (A-D)	0.00	2.72	2.72									2.72	2.72												2.72											
TOTALS																																				
					SEE EXHIBIT C3-3 FOR TOTAL ROAD PROJECT QUANTITIES																							—————→								

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.

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


REV. NO.	DESCRIPTION	DATE	APPROVAL
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
LOWER GRAVE TIMBER SALE ESTIMATE OF QUANTITIES			
DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY:	ELF	SCALE:	NONE
DATE:	JUNE 2015	SHEET:	1 OF 4
DRAWING NO.:	OR-11-91134-1		

EXHIBIT C3-2

ROAD NUMBER	FROM (M.P.)	TO (M.P.)	LENGTH (MILES)	CLEARING AND GRUBBING	EXCAVATION		DRAINAGE						RENOVATION				AGGREGATE			HAY BALE CHECK	SOIL STABILIZATION	ROADSIDE BRUSHING AND CHIPPING	MISCELLANEOUS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
					ROCK	COMMON	CORRUGATED METAL PIPE 16 GA				BLADING, WATERING, & ROLLING	DITCH AND/OR CULVERT CLEANING	SCARIFICATION AND/OR HEAVY BLADING	SLIDE REMOVAL	PT RUN	CRUSHED BASE ROCK	BORROW MATERIAL	RECONSTRUCT WATER DIPS	RECONSTRUCT WATER BARS				CONSTRUCT WATER DIPS	CONSTRUCT WATER BARS	REMOVE/REPLACE EX. BARRICADES	(RE)CONSTRUCT TURNAROUND	CONSTRUCT TURNOUT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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SPECIFICATION NO.					200	300		400						500				700	1200	1700	1800	2100	8000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
UNITS	MP	MP	MILE	ACRE	CY	CY	LF	LF	LF	EA	LF	EA	LF	EA	MILE	MILE	MILE	MILE	CY	CY	CY	CY	CY	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA

RENOVATION NOTES

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

ALWAYS
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SAFETY

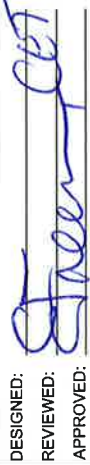
REV. NO.	DESCRIPTION	DATE	APPROVAL
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
LOWER GRAVE TIMBER SALE ESTIMATE OF QUANTITIES			
DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY:	ELF	SCALE:	NONE
DATE:	JUNE 2015	SHEET:	2 OF 4
DRAWING NO.:	OR-11-91134-1		

EXHIBIT C3-3

ROAD NUMBER	FROM (M.P.)	TO (M.P.)	LENGTH (MILES)	CLEARING AND GRUBBING	EXCAVATION		DRAINAGE						RENOVATION				AGGREGATE			HAY BALE CHECK	SOIL STABILIZATION	ROADSIDE BRUSHING AND CHIPPING	MISCELLANEOUS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
					RIPRAPABLE ROCK	COMMON	CORRUGATED METAL PIPE 16 GA						BLADING, WATERING, & ROLLING	DITCH AND/OR CULVERT CLEANING	SCARIFICATION AND/OR HEAVY BLADING	SLIDE REMOVAL	PIT RUN	CRUSHED BASE ROCK	CY				CY	CY	EA	ACRE	MILE	2100	8000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
							SIZE																						18"	24"	12"	ELBOWS		18"	24"	LF	LF	EA	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA</

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.

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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							

ALWAYS

THINK
SAFETY

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

LOWER GRAVE
TIMBER SALE
ESTIMATE OF QUANTITIES

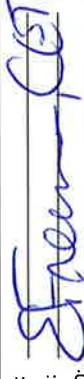
DESIGNED: 
REVIEWED:
APPROVED:
DRAFTED BY: ELF SCALE: NONE
DATE: JUNE 2015 SHEET: 3 OF 4
DRAWING NO.: OR-11-91134-1

EXHIBIT C3-4

ROAD NUMBER	FROM (STA)	TO (STA)	LENGTH (MILES)	CLEARING AND GRUBBING	EXCAVATION		DRAINAGE						RENOVATION				AGGREGATE			SOIL STABILIZATION	CONSTRUCT WATER DIP	DECOMMISSIONING			
					ROCK	COMMON	CORRUGATED METAL PIPE 16 GA						BLADING, WATERING, & ROLLING	(RE)CONSTRUCT TURNAROUND	OPEN FOOTPRINT HEAVY BLADING (DOZER)	SLIDE REMOVAL	PIT RUN	CRUSHED BASE ROCK	BORROW MATERIAL			CONSTRUCT WATER BARS	SUBGRADE	BARRICADES	
							SIZE		ELBOWS		DOWNSPOUT														
							18"	24"	30"	18"	24"	HALF ROUND													24"
SPECIFICATION NO. —————→					200	300	400						500				700	1200	1800	8000	2600				
UNITS —————→	STA	STA	MILE	ACRE	CY	CY	LF	LF	EA	LF	LF	EA	MILE	MILE	EA	MILE	CY	CY	CY	ACRE	EA	EA	MILE	EA	EA
TEMPORARY ROUTES																									
Temp Rte 07-2	0+00	2+45	0.05	0.1		34									1	0.04				0.11	1	0.04	1		
Temp Rte 07-2C	0+00	2+85	0.05	0.2	96										1	0.05				0.16	1	0.05	1		
Temp Rte 01-C5	0+00	9+90	0.19	0.5	196										1	0.19				0.45	4	0.19	1		
Temp Rte 01-C3	0+00	9+35	0.18	0.4	94										1	0.18				0.43	3	0.18	1		
Temp Rte 01-A2	0+00	9+70	0.18	0.7	440										1	0.18				0.67	3	0.05	1		
Temp Rte 01-A	0+00	5+60	0.11	0.3	188										1	0.11				0.32	2	0.11	1		
Temp Rte 35-A	0+00	3+45	0.07	0.2	85											0.07				0.16	1	0.07	1		
Temp Rte 35-E	0+00	9+40	0.18	0.4	230										1	0.18				0.43	3	0.18	1		
Temp Rte 34-2B	0+00	20+60	0.39	1.2	505										1	0.39				1.18	1	0.39	1		
Temp Rte 32-1H-1	0+00	3+65	0.07	0.2	71										1	0.07				0.17	1	0.07	1		
Temp Rte 32-1H-2	0+00	3+20	0.06	0.2	62											0.06				0.15	1	0.06	1		
TEMP ROUTE TOTALS					1.53	4.4	2,001								9	1.52					4.23	1	28	1.39	11

RENOVATION NOTES

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


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2 inch	C					3/4 inch	E,E-1	
1 1/2 inch	D							

ALWAYS
THINK
SAFETY

REV. NO.	DESCRIPTION	DATE	APPROVAL
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
LOWER GRAVE TIMBER SALE ESTIMATE OF QUANTITIES			
DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY:	ELF	SCALE:	NONE
DATE:	JUNE 2015	SHEET:	4 OF 4
DRAWING NO.:	OR-11-91134-1		

ROAD NUMBER	FROM (M.P.)	TO (M.P.)	LENGTH (MILES)	TYPICAL STATION TYPE	ALIGNMENT	ROAD WIDTH ¹⁻³			GRADIENT		BRUSHING WIDTH				SURFACING ³							REMARKS						
						MAXIMUM DEGREE OF CURVE	EXISTING SUBGRADE	DITCH	MAXIMUM FAVORABLE	MAXIMUM ADVERSE	BEYOND		EXISTING ROAD(S)	BASE COURSE			SURFACE COURSE											
											TOP CUT	TOE FILL		L	R	MINIMUM WIDTH	COMPACTION DEPTH	TYPE ²	GRADING	MINIMUM WIDTH	COMPACTION DEPTH		TYPE ²	GRADING				
SALMON CREEK AREA																												
34-6-2.0 (A-D)	0.00	1.96	1.96	6												4	4									A		
34-6-1.1	0.00	1.47	1.47	2				16'	3'							4	4										A	
34-6-1.0	0.00	0.45	0.45	2				16'	-							4	4										A	
34-6-1.2	0.00	0.05	0.05	3				14'	-							4	4										E	
McCOY CREEK AREA																												
34-5-9.0 (A)	0.00	3.60	3.60	6				16'	3'							4	4										A	
34-5-15.0	0.00	0.99	0.99	6				14'	3'							4	4										D	
34-5-20.0 (F-E)	4.44	3.09	1.35	4/3				14'	-							4	4										B/E	
34-5-15.1 (A-B)	0.00	0.83	0.83	6/5				14'	3'							4	4										B/E	
34-5-10.2 (A-C)	0.00	1.47	1.47	5				14'	3'							4	4										E	Segment B is Pvt
DITCH CREEK AREA																												
34-4-28.0 (J-K)	7.27	5.51	1.76	6				18'	3'							4	4										D	
34-4-8.0 (A-D)	0.00	2.72	2.72	6/1				14'	3'/-							4	4										D/E	

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.

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

SEE SUBSECTION 2100

MATERIALS CUT SLOPE FILL SLOPE

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

REV. NO.	DESCRIPTION	DATE	APPROV.

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

LOWER GRAVE
TIMBER SALE
SPECIFICATION SHEET

DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY:			
DATE:	JUN 2015	SCALE:	NONE
DRAWING NO.:	OR-11-91134-1	SHEET:	1 OF 5

EXHIBIT C4-2

ROAD NUMBER	FROM (M.P.)	TO (M.P.)	LENGTH (MILES)	TYPICAL STATION TYPE	MAXIMUM DEGREE OF CURVE	EXISTING SUBGRADE	ROAD WIDTH 1-3		GRADIENT		BRUSHING WIDTH				SURFACING 3						REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
							DITCH	MAXIMUM FAVORABLE	MAXIMUM ADVERSE	BEYOND		EXISTING ROAD(S)	BASE COURSE			SURFACE COURSE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
										TOE CUT	TOE FILL		L	R	MINIMUM WIDTH	COMPACTION DEPTH	TYPE 2	GRADING	MINIMUM WIDTH	COMPACTION DEPTH		TYPE 2	GRADING																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
34-5-2.0 (C-B)	3.31	0.12	3.19	6		14'	3'					4	4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

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.

MATERIALS CUT SLOPE FILL SLOPE

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 SEE SUBSECTION 2100

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SAFETY

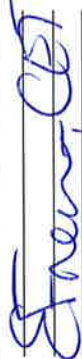


REV. NO.	DESCRIPTION	DATE	APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
LOWER GRAVES TIMBER SALE SPECIFICATION SHEET			
DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY:	ELF	SCALE:	NONE
DATE:	JUN 2015	SHEET:	2 OF 5
DRAWING NO.: OR-11-9113.4-1			

EXHIBIT C4-3

ROAD NUMBER	FROM (M.P.)	TO (M.P.)	LENGTH (MILES)	TYPICAL STATION TYPE	MAXIMUM DEGREE OF CURVE	ROAD WIDTH ¹⁻³			GRADIENT		BRUSHING WIDTH				SURFACING ³						REMARKS			
						EXISTING SUBGRADE	DITCH	MAXIMUM FAVORABLE	MAXIMUM ADVERSE	TOE FILL	TOP CUT	BEYOND		EXISTING ROAD(S)		BASE COURSE			SURFACE COURSE					
												L	R	MINIMUM WIDTH	COMPACTION DEPTH	TYPE ²	GRADING	MINIMUM WIDTH	COMPACTION DEPTH	TYPE ²		GRADING		
33-5-35.0	0.00	0.11	0.11	6		14'	3'					4	4								A			
EASTMAN GULCH AREA																								
34-5-2.1 (A-B)	0.00	3.72	3.72	6		14'	3'					4	4									D/A		
34-5-3.2	0.00	0.13	0.13	6		14'	3'					4	4									A		
MILLER GULCH AREA																								
33-6-24.0 (A-B2)	0.00	3.52	3.52	6		16'	3'					4	4									D		
33-5-31.1	0.00	0.64	0.64	6		14'	3'					4	4									D		
33-5-32.2 (A)	0.00	0.06	0.06	3		14'	-					4	4									E		
33-5-31.3 (A)	0.00	0.47	0.47	6		14'	3'					4	4									D		
33-5-32.0 (A)	0.00	0.63	0.63	6		14'	3'					4	4									D		
PERMANENT ROAD (EASTMAN GULCH AREA)																								
33-5-34.1	0+00	15+50	0.29	2		15'	3'	21%	-												14'	8"		D

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.

MATERIALS CUT SLOPE FILL SLOPE

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 SEE SUBSECTION 2100

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

LOWER GRAVE
TIMBER SALE
SPECIFICATION SHEET

DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY: ELF	SCALE: NONE	SHEET: 3 OF 5	
DATE: JUN 2015			
DRAWING NO.: OR-11-9113.4-1			

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EXHIBIT C4-4

ROAD NUMBER	FROM (STA)	TO (STA)	LENGTH (MILES)	TYPICAL STATION TYPE	ALIGNMENT	ROAD WIDTH ^{1,3}			GRADIENT		BRUSHING WIDTH				SURFACING ³						REMARKS					
						MAXIMUM DEGREE OF CURVE	PROPOSED SUBGRADE	DITCH	MAXIMUM FAVORABLE	MAXIMUM ADVERSE	BEYOND	EXISTING ROAD(S)		BASE COURSE			SURFACE COURSE									
												L	R	TOP CUT	TOE FILL	MINIMUM WIDTH	COMPACTION DEPTH	TYPE ²	GRADING	MINIMUM WIDTH		COMPACTION DEPTH	TYPE ²	GRADING		
TEMPORARY ROUTES																										
Tmp Rte 07-2	0+00	2+45	0.05	3							12'	-	-	5%												
Tmp Rte 07-2C	0+00	2+85	0.05	3							12'	-	-	15%												
Tmp Rte 01-C5	0+00	9+90	0.19	3							12'	-	-	16%												
Tmp Rte 01-C3	0+00	9+35	0.18	3							12'	-	-	10%												
Tmp Rte 01-A2	0+00	9+70	0.18	3							12'	-	-	18%												
Tmp Rte 01-A	0+00	5+60	0.11	3							12'	-	-	5%												
Tmp Rte 35-A	0+00	3+45	0.07	3							12'	-	-	17%												
Tmp Rte 35-E	0+00	9+40	0.18	3							12'	-	19%	12%												
Tmp Rte 34-2B	0+00	20+60	0.39	3							12'	-	8%	9%												
Tmp Rte 32-1H-1	0+00	3+65	0.07	3							12'	-	11%	-												
Tmp Rte 32-1H-2	0+00	3+20	0.06	3							12'	-	4%	7%												

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.

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

- SEE SUBSECTION 2100

MATERIALS CUT SLOPE FILL SLOPE

COMMON 1/2 : 1 1 1/2 : 1

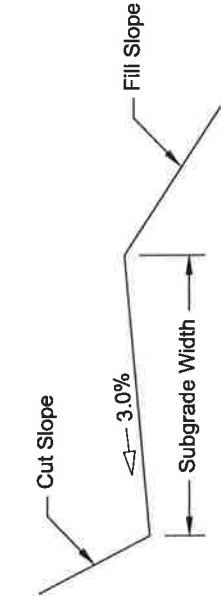
SOFT ROCK & SHALE 1/2 : 1 1 1/2 : 1

SOLID ROCK 1/2 : 1 angle of repose

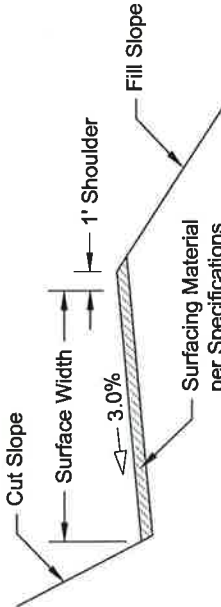
REV. NO.	DESCRIPTION	DATE	APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			

LOWER GRAVE
TIMBER SALE
SPECIFICATION SHEET

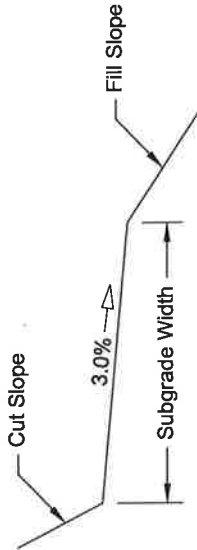
DESIGNED:	
REVIEWED:	
APPROVED:	
DRAFTED BY: ELF	SCALE: NONE
DATE: JUN 2015	SHEET: 4 OF 5
DRAWING NO.: OR-11-9113.4-1	



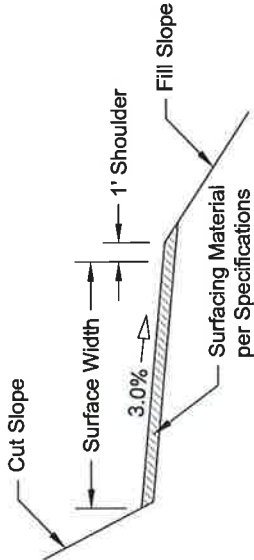
TYPICAL GRADING SECTION
TYPE 1



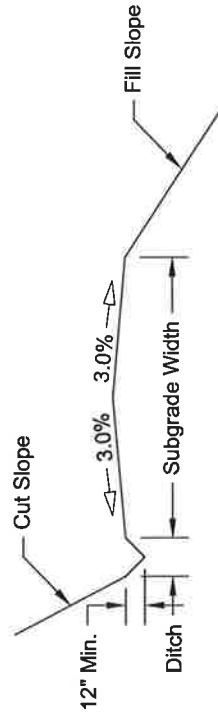
TYPICAL SURFACING SECTION
TYPE 2



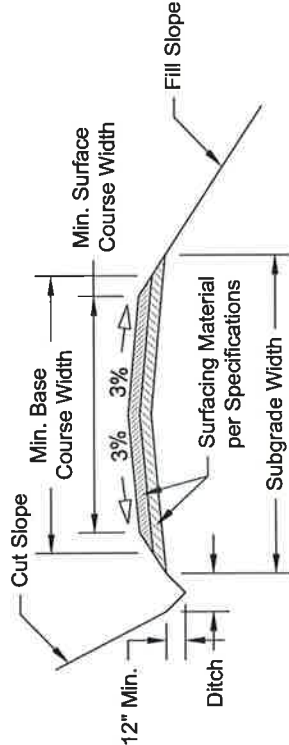
TYPICAL GRADING SECTION
TYPE 3



TYPICAL SURFACING SECTION
TYPE 4

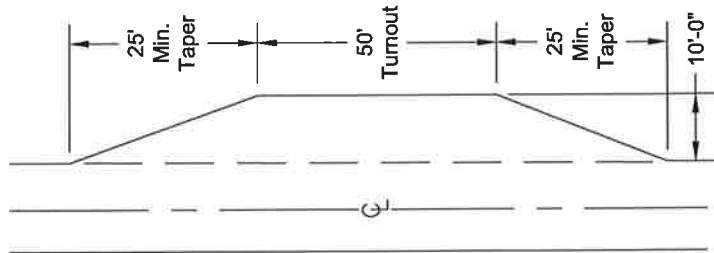


TYPICAL GRADING SECTION
TYPE 5



TYPICAL SURFACING SECTION
TYPE 6

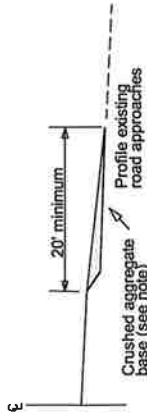
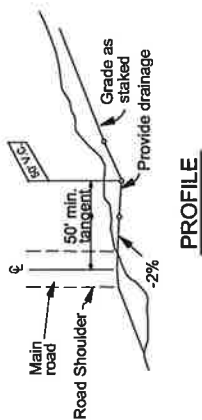
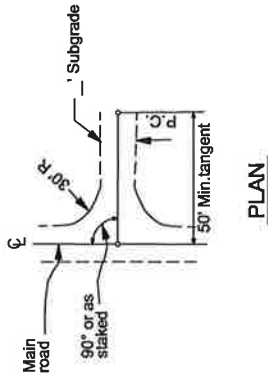
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TYPICAL TURNOUT
PLAN VIEW

REV. NO.	DESCRIPTION	DATE	APPROV.
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
LOWER GRAVE TIMBER SALE SPECIFICATION SHEET			
DESIGNED:	[Signature]		
REVIEWED:	[Signature]		
APPROVED:	[Signature]		
DRAFTED BY:	ELF	SCALE:	NONE
DATE:	JUN 2015	SHEET:	5 OF 5
DRAWING NO.: OR-11-91134-1			

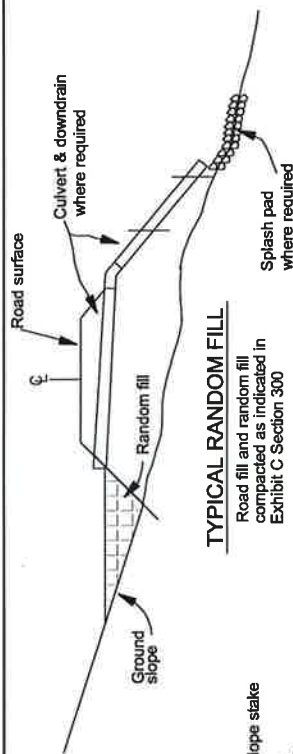
TYPICAL ROAD APPROACHES



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.

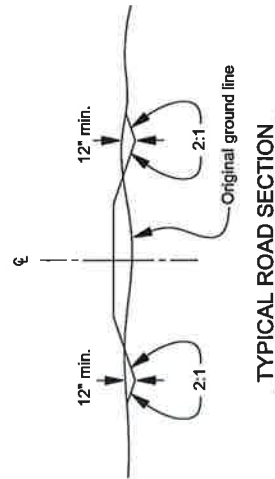


TYPICAL RANDOM FILL

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

Rounding to approximate a parabolic curve

CUT SLOPE ROUNDING



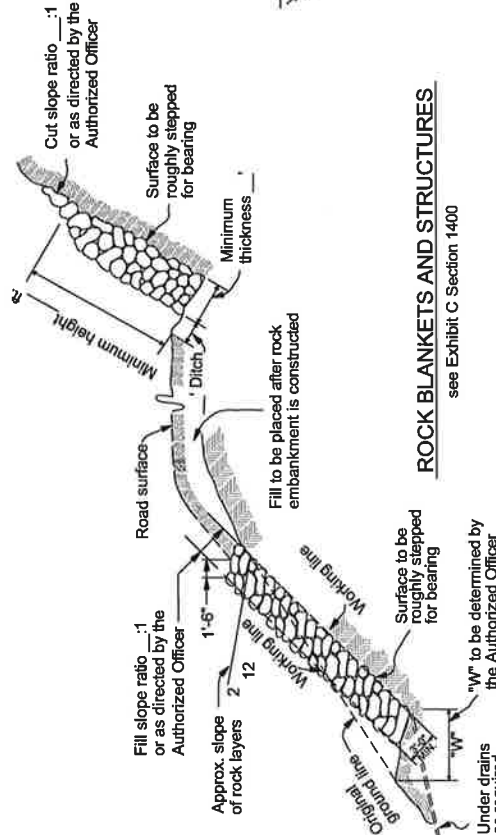
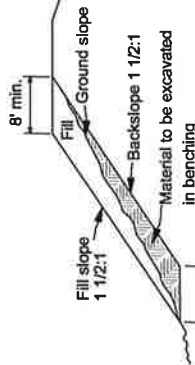
TYPICAL ROAD SECTION FOR TURNPIKE CONSTRUCTION

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.

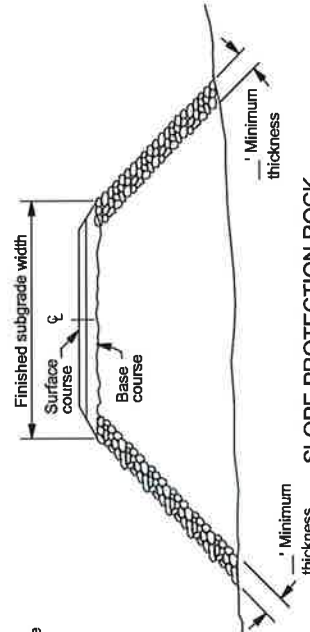
SPECIAL COMPACTION

TYPICAL BENCHING SECTION



ROCK BLANKETS AND STRUCTURES

see Exhibit C Section 1400



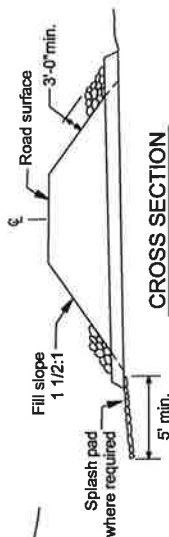
SLOPE PROTECTION ROCK

see Exhibit C Section 1400

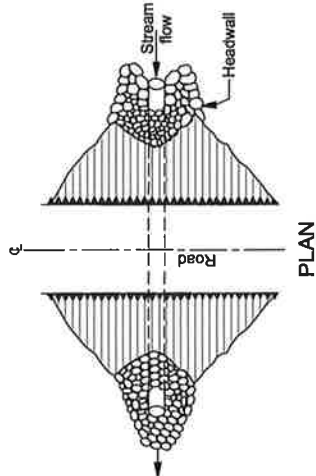
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EXHIBIT C5

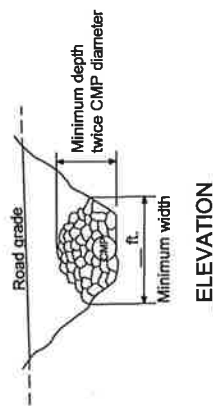
RIPRAP AT CULVERTS



CROSS SECTION



PLAN

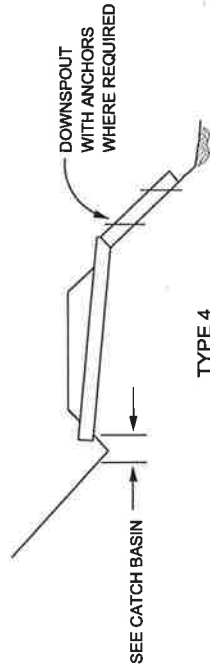
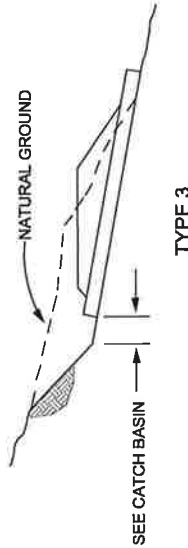
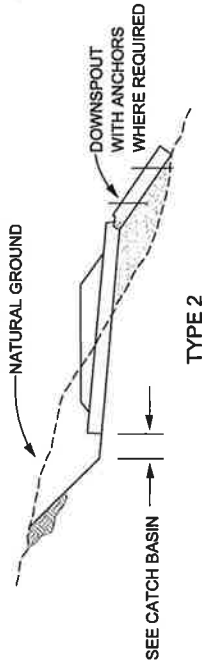
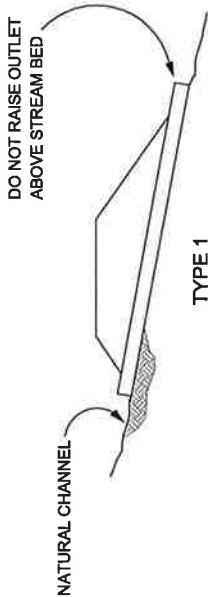


ELEVATION

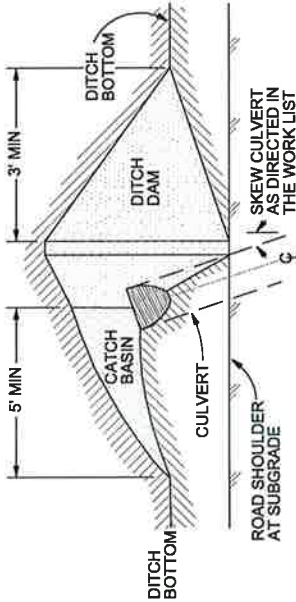
REV. NO.	DESCRIPTION	DATE	APPROV.
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
LOWER GRAVE TIMBER SALE TYPICAL ROAD DATA			
DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY:	ELF	SCALE:	NONE
DATE:	MAY 2015	SHEET:	1 OF 1
DRAWING NO.:	OR-11-91134-4		

EXHIBIT C6-1

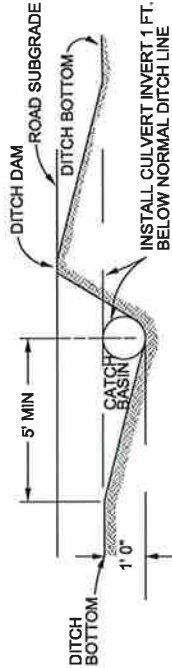
CULVERT INSTALLATION TYPES



CATCH BASIN

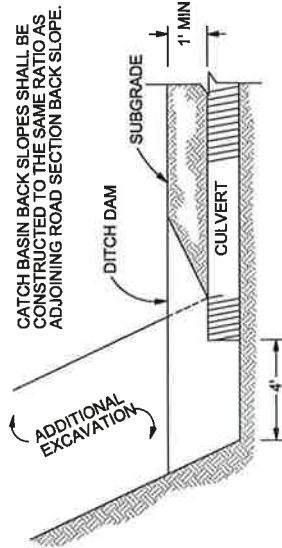


PLAN VIEW



ELEVATION

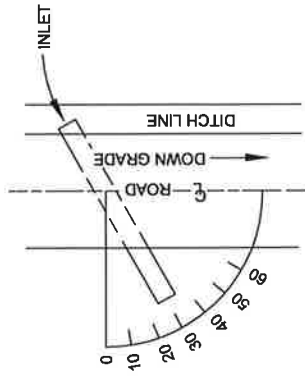
CATCH BASIN BACK SLOPES SHALL BE CONSTRUCTED TO THE SAME RATIO AS ADJOINING ROAD SECTION BACK SLOPE.



CROSS SECTION AT CATCH BASIN

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SKEW DIAGRAM



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

REV. NO.	DESCRIPTION	DATE	APPROV.

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

LOWER GRAVE TIMBER SALE CULVERT INSTALL DETAILS

DESIGNED:

REVIEWED:

APPROVED:

DRAFTED BY: ELF

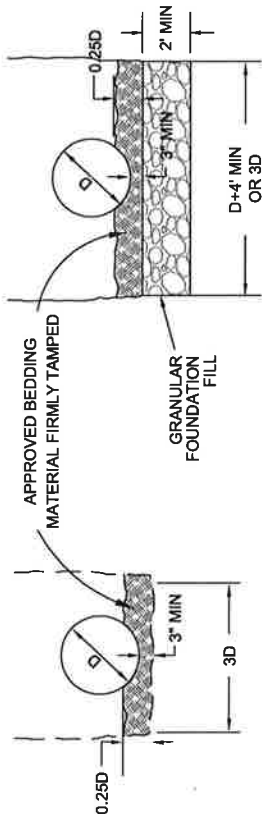
DATE: MAY 2015

SCALE: NONE

SHEET: 1 OF 2

DRAWING NO.: OR-11-9113-4-4

BEDDING OF CULVERTS



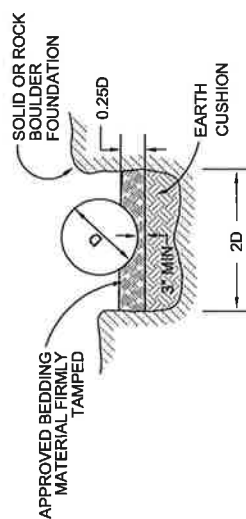
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT.

BEDDING OF CULVERTS ON STABLE NATURAL GROUND FOUNDATION OR COMPACTED EMBANKMENT

BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT.

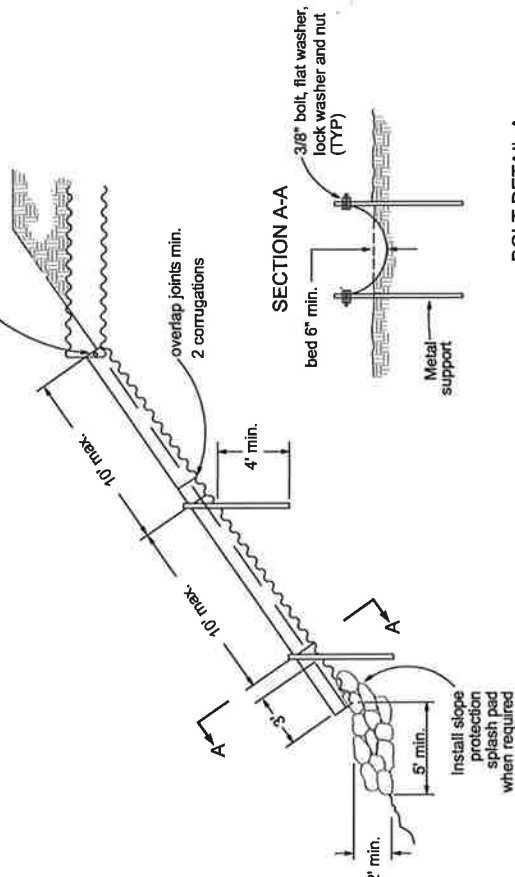
BEDDING OF CULVERTS ON SOFT SPONGY OR UNSTABLE SOIL FOUNDATION

BEDDING OF CULVERT IN SOLID ROCK OR BOULDER FOUNDATION

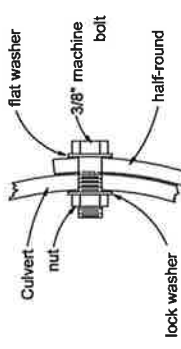


BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT. EARTH CUSHIONING OF SILTY CLAY LOAM OR SAND MAY BE USED IF MATERIAL CAN BE PLACED IN THE DRY CONDITION. IF THE EXCAVATION IS WET, USE GRANULAR FOUNDATION FILL MATERIAL. MAINTAIN 8" DEPTH BETWEEN HIGH POINTS OF ROCKS AND/OR BOULDERS AND THE BOTTOM OF THE CULVERT.

HALF ROUND DOWNSPOUT



BOLT DETAIL A



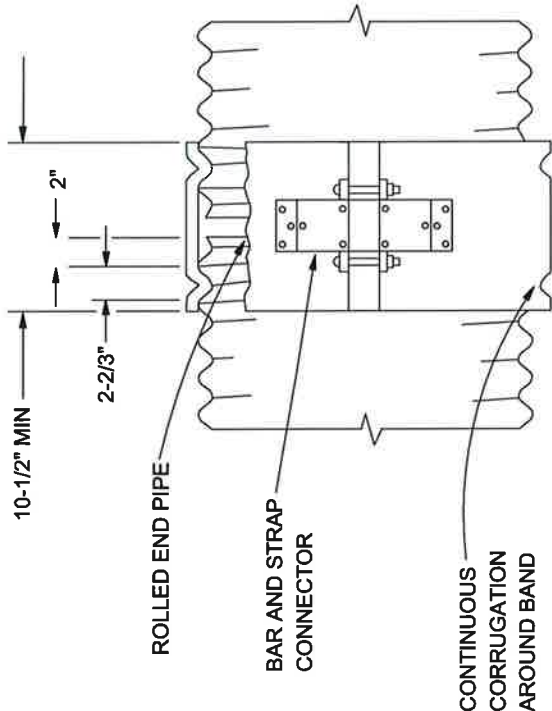
- NOTES:
1. The half round shall be one diameter size larger and of the same material and coating as the culvert it is attached to.
 2. The half round shall be fabricated from 16 gauge metal with 2 2/3" x 1/2" corrugations.
 3. Supports may be steel bar, angle iron, or approved equivalent metal posts.

Join pipe culvert to starter section as shown. Field drill 5/8" dia. thru starter section and culvert and install 3/8" x 2" bolts, flat washers, lock washers and nuts.

REV. NO.	DESCRIPTION	DATE	APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
LOWER GRAVE TIMBER SALE CULVERT INSTALL DETAILS			
DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY:	ELF	SCALE:	NONE
DATE:	MAY 2015	SHEET:	2 OF 2
DRAWING NO.: OR-11-9113.4-4			

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CSP "HUGGER" COUPLER BANDS



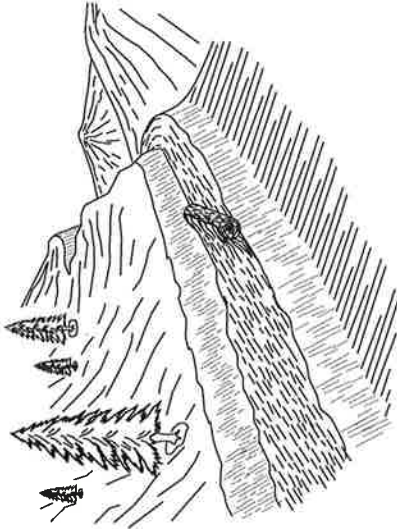
STANDARD CONSTRUCTION IS A ONE PIECE BAND FOR 12" THRU 48" PIPES AND A TWO PIECE BAND FOR 54" PIPES AND ABOVE

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.

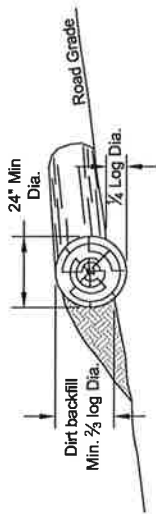
WHEN DESIGNATED ON THE PLANS OR IN THE SPECIAL PROVISIONS, GASKETS SHALL BE INSTALLED WHEN THE "HUGGER" TYPE, OR AN APPROVED EQUIVALENT COUPLER BAND IS INSTALLED ON SPILLWAY, OVERSIDE OR DOWN DRAINS.

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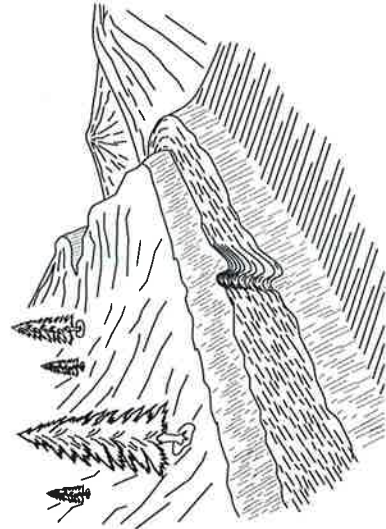
REV. NO.	DESCRIPTION	DATE	APPROV.		
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON					
LOWER GRAVE TIMBER SALE CULVERT BAND DETAIL					
DESIGNED:					
REVIEWED:					
APPROVED:					
DRAFTED BY:	ELF		SCALE:	NONE	
DATE:	MAY 2015		SHEET:	1 OF 1	
DRAWING NO.: OR-11-9113.4.4					



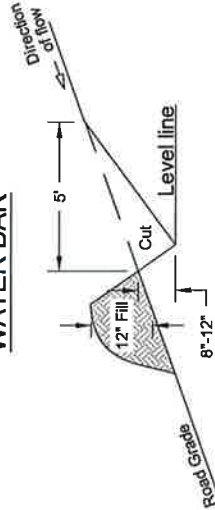
LOG BARRICADE



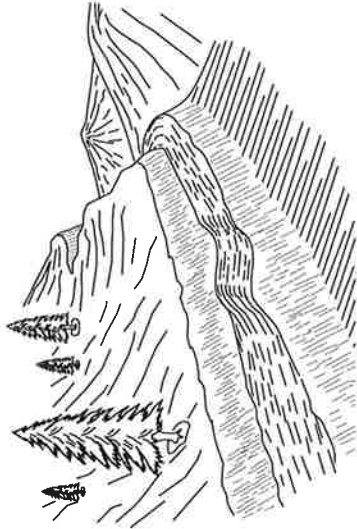
1. Log barricade shall be constructed as shown above.
2. Exact location is listed in Roads Work List, Exhibit C14.
3. All barricades shall be skewed 30 degrees.
4. The length shall be sufficient to extend from the cut bank to the fill slope.
5. The minimum small end diameter of the log barricade shall be 24".



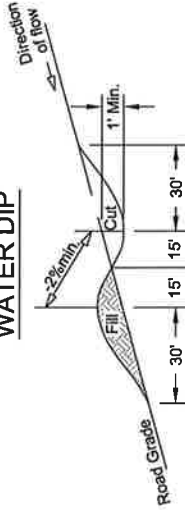
WATER BAR



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.



WATER DIP

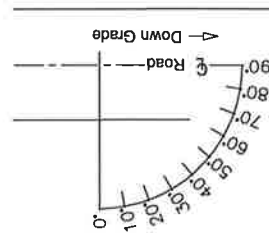


1. Water dips shall be constructed as shown above.
2. Exact location is listed in Roads Work List, Exhibit C14.
3. All water dips shall be skewed 30 degrees.
4. The length shall be sufficient to extend from the cut bank to the fill slope and be readily crossed by passenger type vehicles.
5. Rock outlet of water dip on fill slope. Rock will be placed from outlet to natural ground a minimum of 6 LF wide by 10 LF long by 1 FT depth.

BARRICADE LOCATION

ROAD NUMBER	STATION
Temp Route 07-2	0+25
Temp Route 07-2C	0+25
Temp Route 01-C5	0+25
Temp Route 01-C3	0+25
Temp Route 01-A2	0+25
Temp Route 01-A	0+25
Temp Route 35-A	0+25
Temp Route 35-E	0+25
Temp Route 34-2B	0+25
Temp Route 32-1H-1	0+25
Temp Route 32-1H-2	0+25

SKREW DIAGRAM



WATER DIP/BAR SPACING*

ROAD GRADE	LOAM OR CLAY LOAM	DECOMPOSED 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

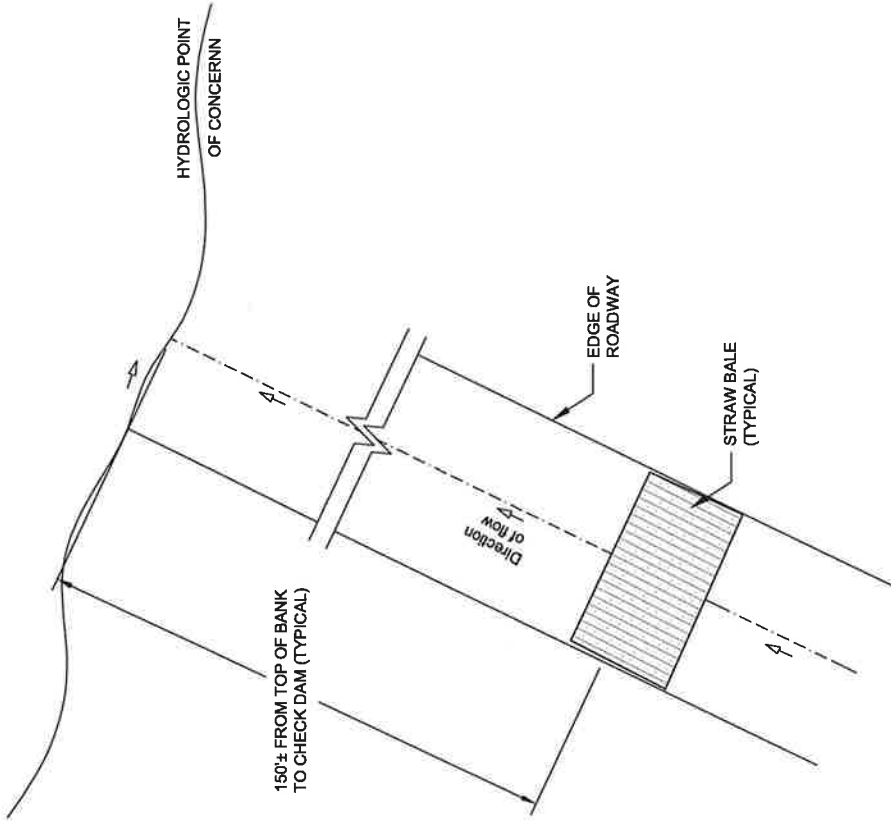
* Distances are maximum.

** On grades in excess of 10%, construct water bars.

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REV. NO.	DESCRIPTION	DATE	APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
LOWER GRAVE TIMBER SALE DRAINAGE & EROSION CONTROL DETAILS			
DESIGNED:	[Signature]		
REVIEWED:	[Signature]		
APPROVED:	[Signature]		
DRAFTED BY:	ELF	SCALE:	NONE
DATE:	MAY 2015	SHEET:	1 OF 2
DRAWING NO.: OR-11-91134-4			

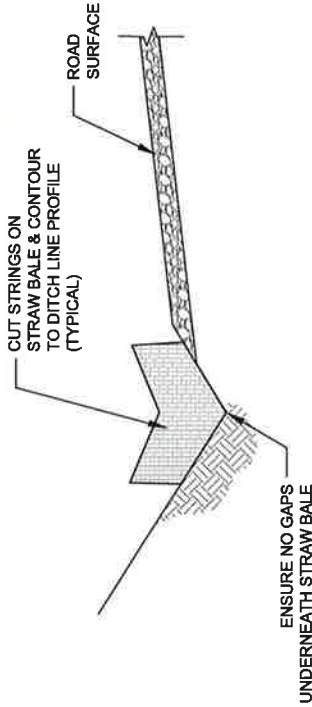
STRAW BALE CHECK DAMS



PLAN

NOTES:

- 1. Hydrologic Points of Concern are natural drainage features (ie. streams, creeks, draws) that intersect with existing or proposed roadways.
- 2. If the hydrologic point of concern is a bridge spanning across a noted or listed critical fish habitat (Coho) waterway, install check dams or approved BMPs in roadway ditch line 150 LF up-grade from top of creek bank or edge of bridge.
- 3. If the hydrologic point of concern is a draw culvert, install check dams or approved BMPs in roadway ditch line 100 LF up-grade from inlet of culvert.



PROFILE

REV. NO.	DESCRIPTION	DATE	APPROV.

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

LOWER GRAVE
TIMBER SALE
DRAINAGE & EROSION
CONTROL INSTALLATION

DESIGNED:

REVIEWED:

APPROVED:

DRAFTED BY: ELF

DATE: MAY 2015

SCALE: NONE

SHEET: 2 OF 2

DRAWING NO.: OR-11-91134-4

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EXHIBIT C9

NOTES

- 1) THE WATER DIP INVERT SHALL BE SMOOTH AND FREE DRAINING.
- 2) THE MINIMUM DIFFERENCE IN ELEVATION BETWEEN THE SAG AND THE CREST OF THE WATER DIP ALONG THE CUTSLOPE HINGE POINT IS 1.0 FEET.
- 3) THE MINIMUM DIFFERENCE IN ELEVATION BETWEEN THE SAG AND THE CREST OF THE WATER DIP ALONG THE FILLSLOPE SHOULDER IS 1.5 FEET.
- 4) SKEW DIP MINIMUM 15-30 DEGREES FROM PERPENDICULAR TO CENTERLINE.
- 5) EXCAVATED MATERIAL SHALL BE UTILIZED IN CONSTRUCTION OF WATER DIP. SIDECASTING IS NOT PERMITTED.
- 6) PIT RUN ROCK MATERIAL SHALL BE PLACED ON FILL SLOPE AND SUBGRADE OF ARMORED WATERDIP.
- 7) SEE ROAD RENOVATION WORKLIST FOR WATER DIPS TO BE ARMORED.
- 8) EACH DIP SHALL BE REINFORCED WITH 40 CUBIC YARDS OF 3" MINUS ROCK, ON ROADWAY AND PIT RUN AT OUTFALL.

LEGEND



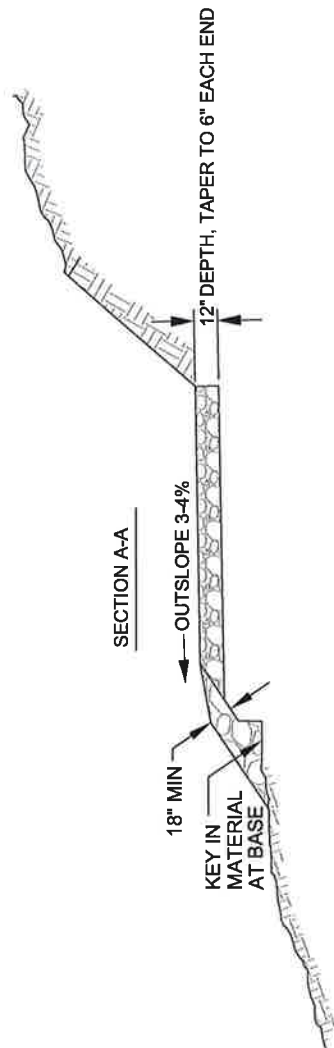
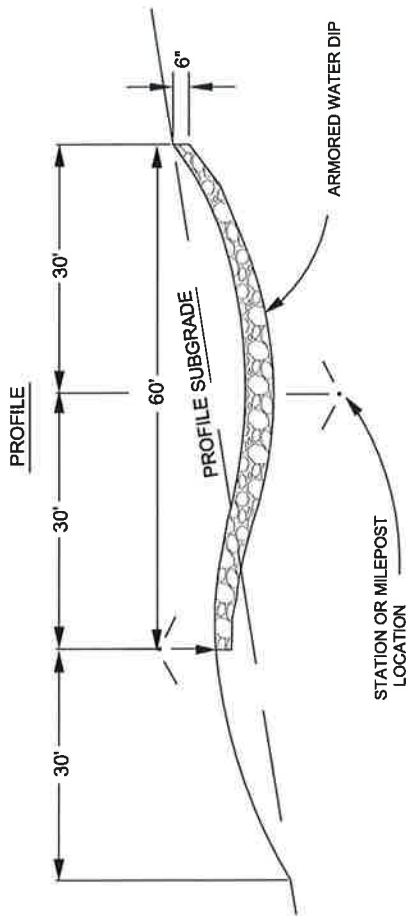
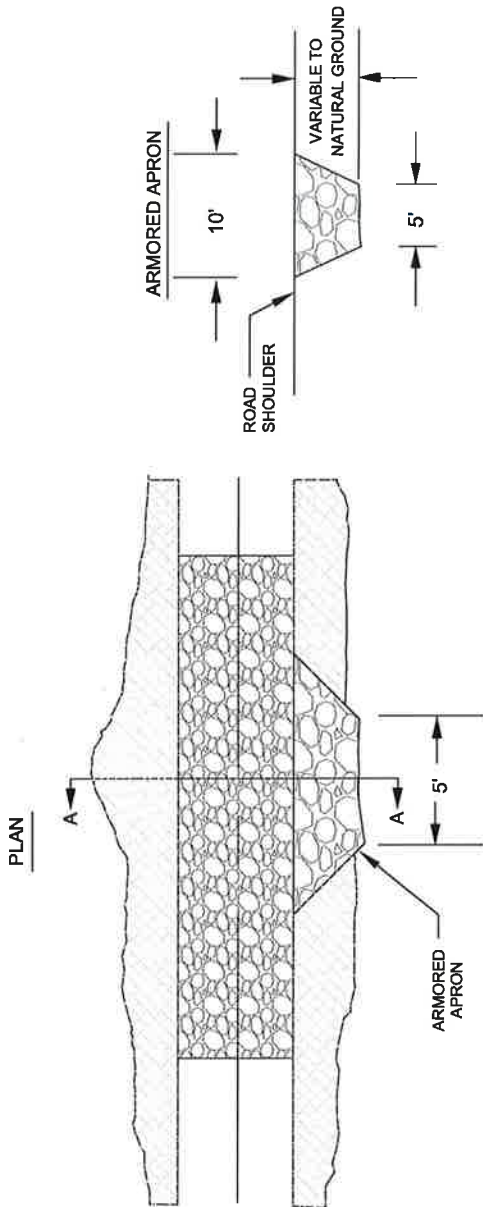
CUT/FILL SLOPES



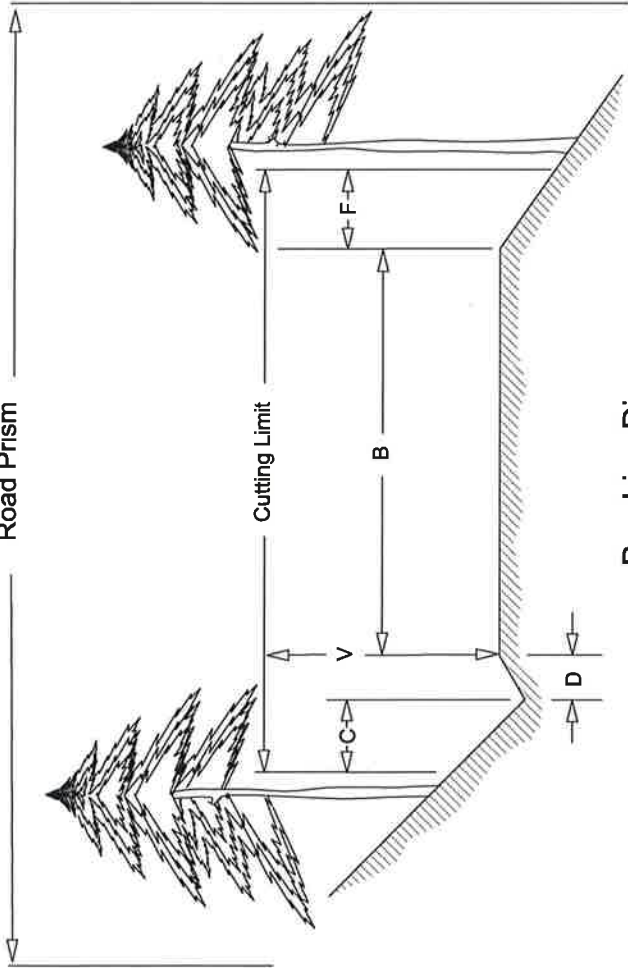
SUBGRADE ARMOR MATERIAL
(3" minus)



FILL SLOPE ARMOR MATERIAL 12" MINUS
OR OTHER APPROVED MATERIAL.



REV. NO.	DESCRIPTION	DATE	APPROV.
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
LOWER GRAVE TIMBER SALE ARMORED WATER DIP			
DESIGNED:	<i>Franklin</i>		
REVIEWED:			
APPROVED:			
DRAFTED BY:	ELF	SCALE:	NONE
DATE:	MAY 2015	SHEET:	1 OF 1
DRAWING NO.: OR-11-91134-1			



Brushing Diagram

Cutting Limit = $C + D + B + F$

B = Road Bed Subgrade (includes turnouts)
Cut all vegetation to maximum height of 1".

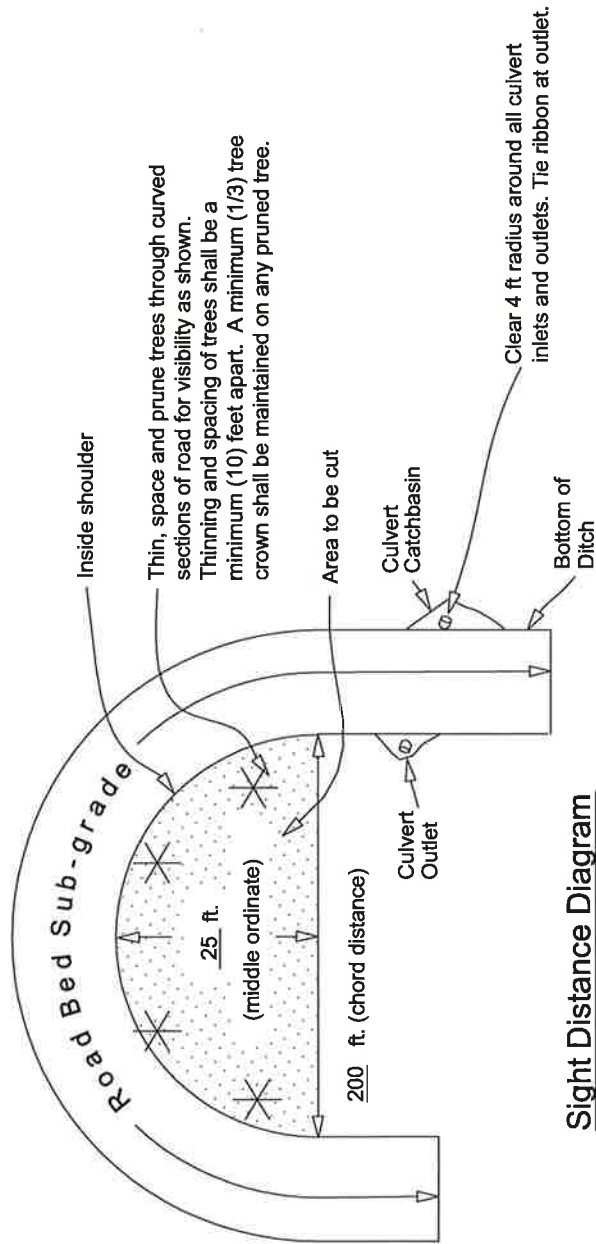
C = $\frac{4}{3}$ ft - Distance to be brushed on cut slope beyond centerline of ditch. Cut all vegetation to maximum height of 6".

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

F = Distance to be brushed on fill slope beyond outside shoulder
Cut all vegetation to maximum height of 6".

V = 14 ft - Height of vertical cutting limit

Inside Corner

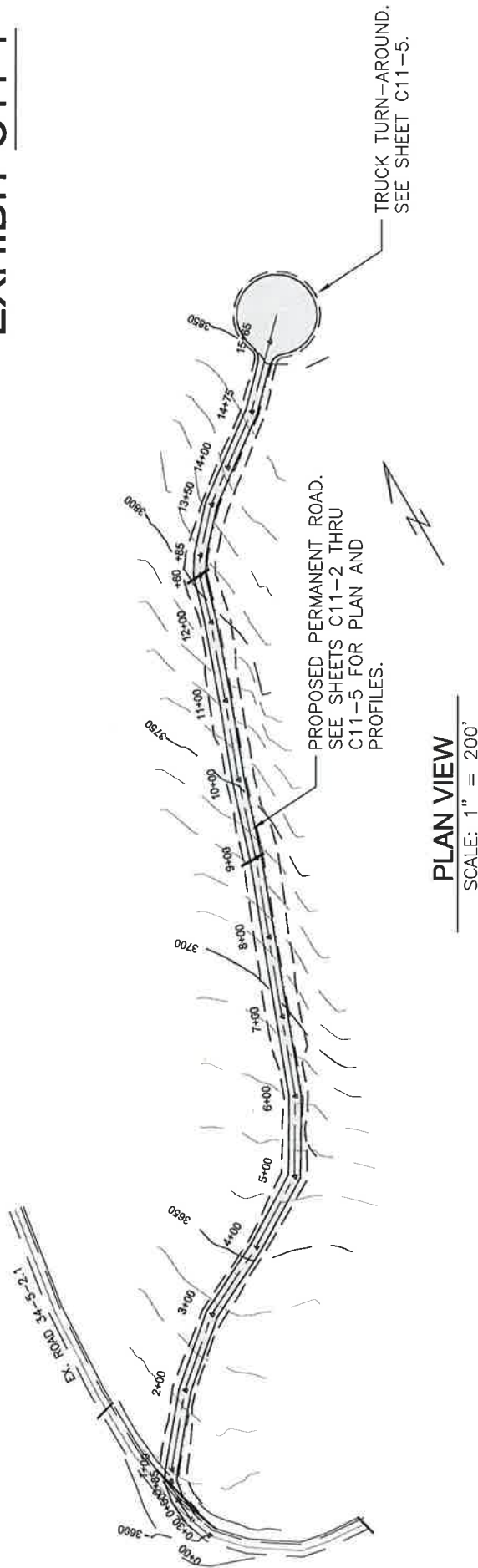


Sight Distance Diagram

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REV. NO.	DESCRIPTION	DATE	APPROV.
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
LOWER GRAVE TIMBER SALE ROADSIDE BRUSHING DETAIL			
DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY:	ELF	SCALE:	NONE
DATE:	MAY 2015	SHEET:	1 OF 1
DRAWING NO.: OR-11-9113.4-4			

EXHIBIT C11-1

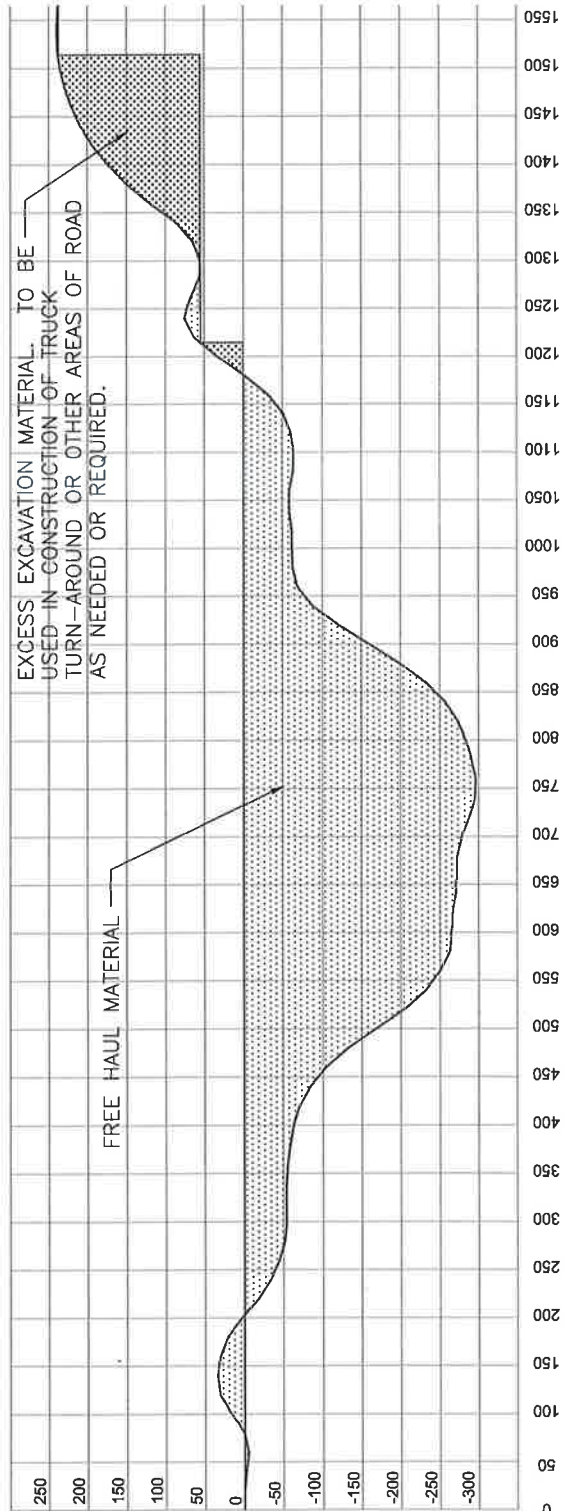


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REV. NO.	DESCRIPTION	DATE	APPROV.

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

DESIGNED: RJS	
REVIEWED: <i>[Signature]</i>	
APPROVED: <i>[Signature]</i>	
DRAFTED BY: RJS	SCALE: 1" = 200'
DATE: JUNE, 2015	SHEET: 1 OF 5
DRAWING NO.: N/A	



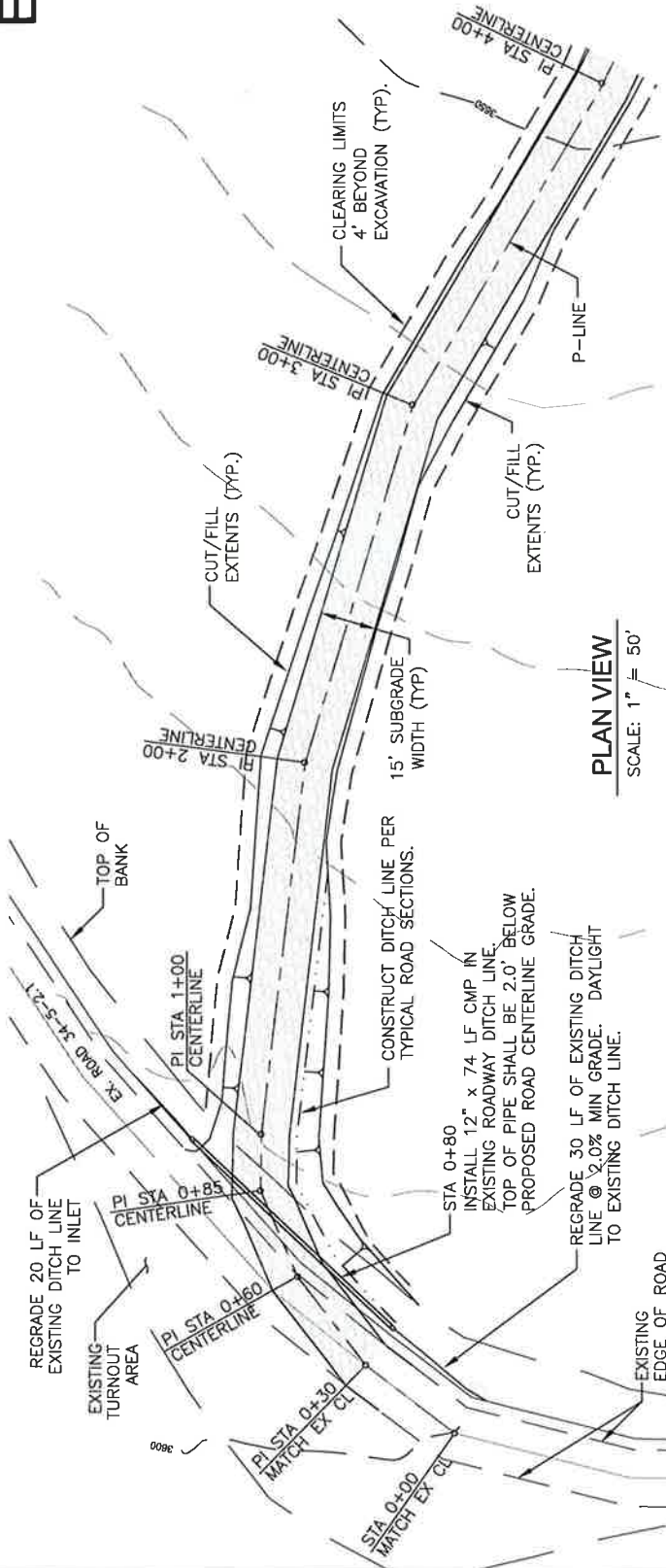
Mass Haul Diagram
HORIZONTAL: 1" = 200'
VERTICAL: CUBIC YARDS

EXHIBIT C11-2

STATION	FORE AZIMUTH
0+00	341
0+30	356
0+60	10
0+85	34
1+00	40
2+00	50
3+00	64

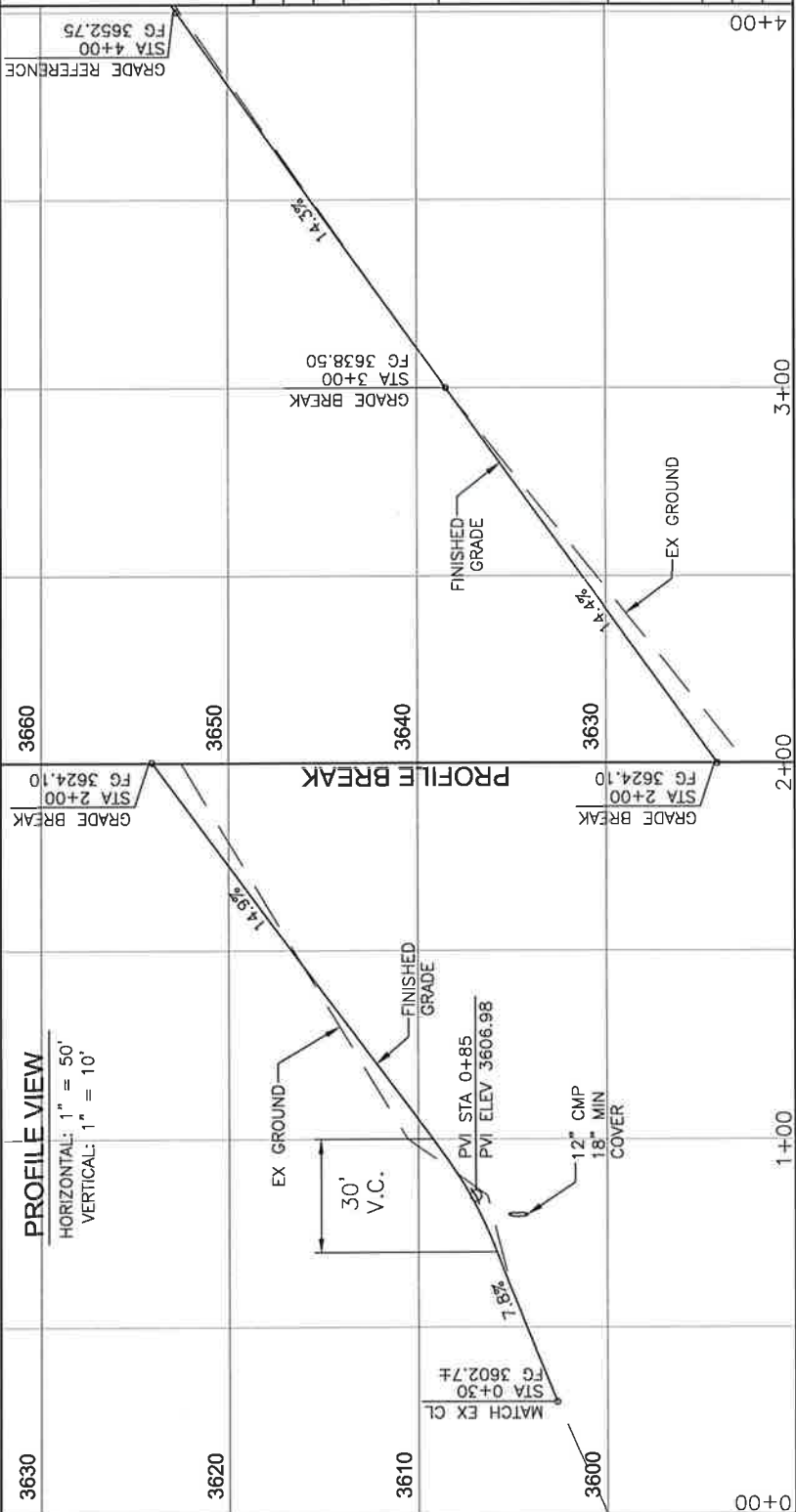


CONTOUR INTERVAL = 10 FT



PROFILE VIEW

HORIZONTAL: 1" = 50'
VERTICAL: 1" = 10'



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REV. NO.	DESCRIPTION	DATE	APPROVAL

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

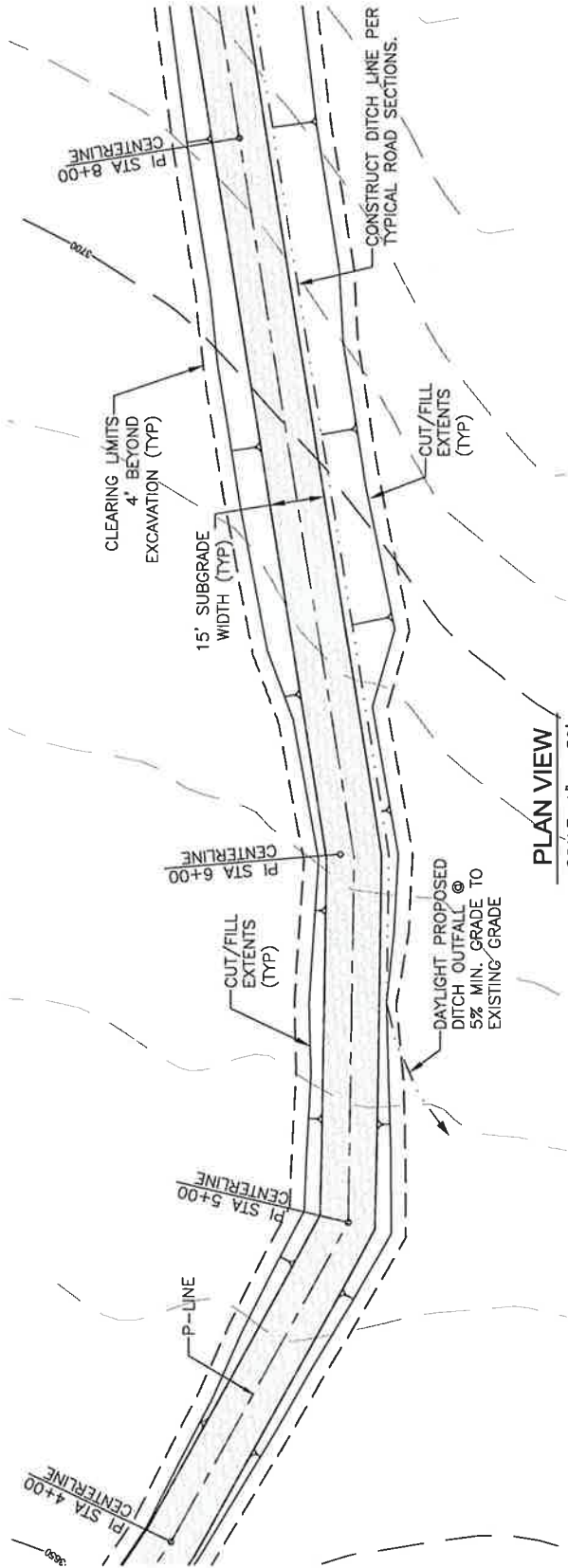
LOWER GRAVE
TIMBER SALE
PROPOSED 33-5-34.1 ROAD
PLAN AND PROFILE SHEET

DESIGNED:	
REVIEWED:	
APPROVED:	
DRAFTED BY: RJS	
DATE: JUNE 2015	
DRAWING NO.: OR-11-9113.4	

SCALE: 1" = 50'
SHEET: 2 OF 5

EXHIBIT C11-3

STATION	FORE	AZIMUTH
4+00	59	
5+00	31	
6+00	21	
7+00	21	
8+00	21	



CONTOUR INTERVAL = 10 FT

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REV. NO.	DESCRIPTION	DATE	APPROVAL

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

LOWER GRAVE
TIMBER SALE
PROPOSED 33-5-34.1 ROAD
PLAN AND PROFILE SHEET

DESIGNED:	
REVIEWED:	
APPROVED:	
DRAFTED BY:	RJS
DATE:	JUNE 2015
DRAWING NO.:	OR-11-9113.4
SCALE:	1" = 50'
SHEET:	3 OF 5

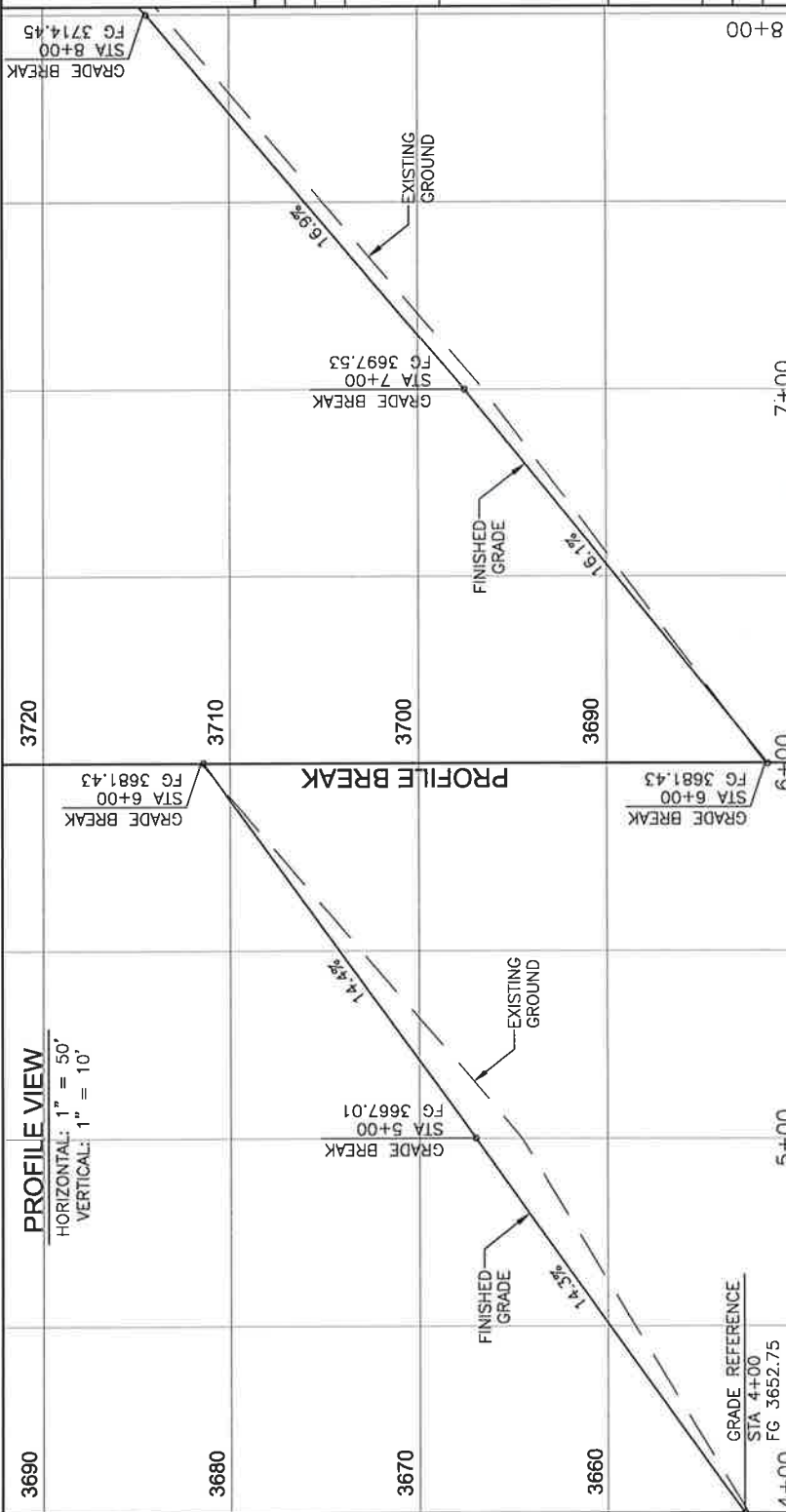
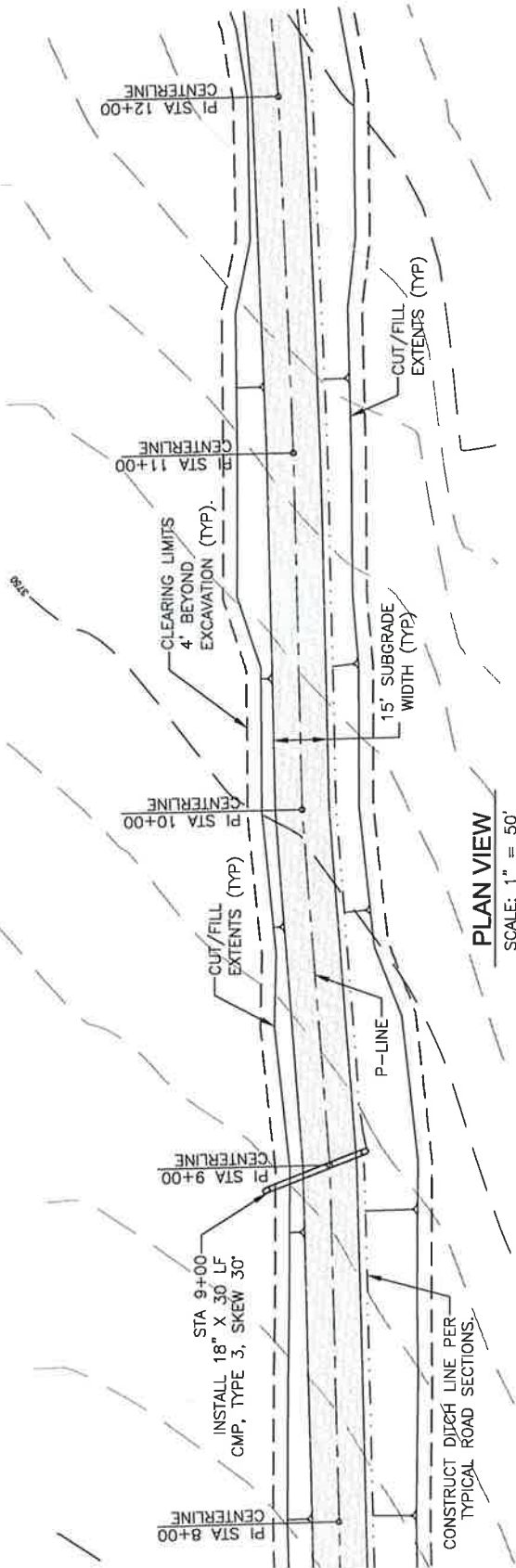


EXHIBIT C11-4

STATION	FORE	AZIMUTH
8+00	21	
9+00	18	
10+00	21	
11+00	20	
12+00		



CONTOUR INTERVAL = 10 FT

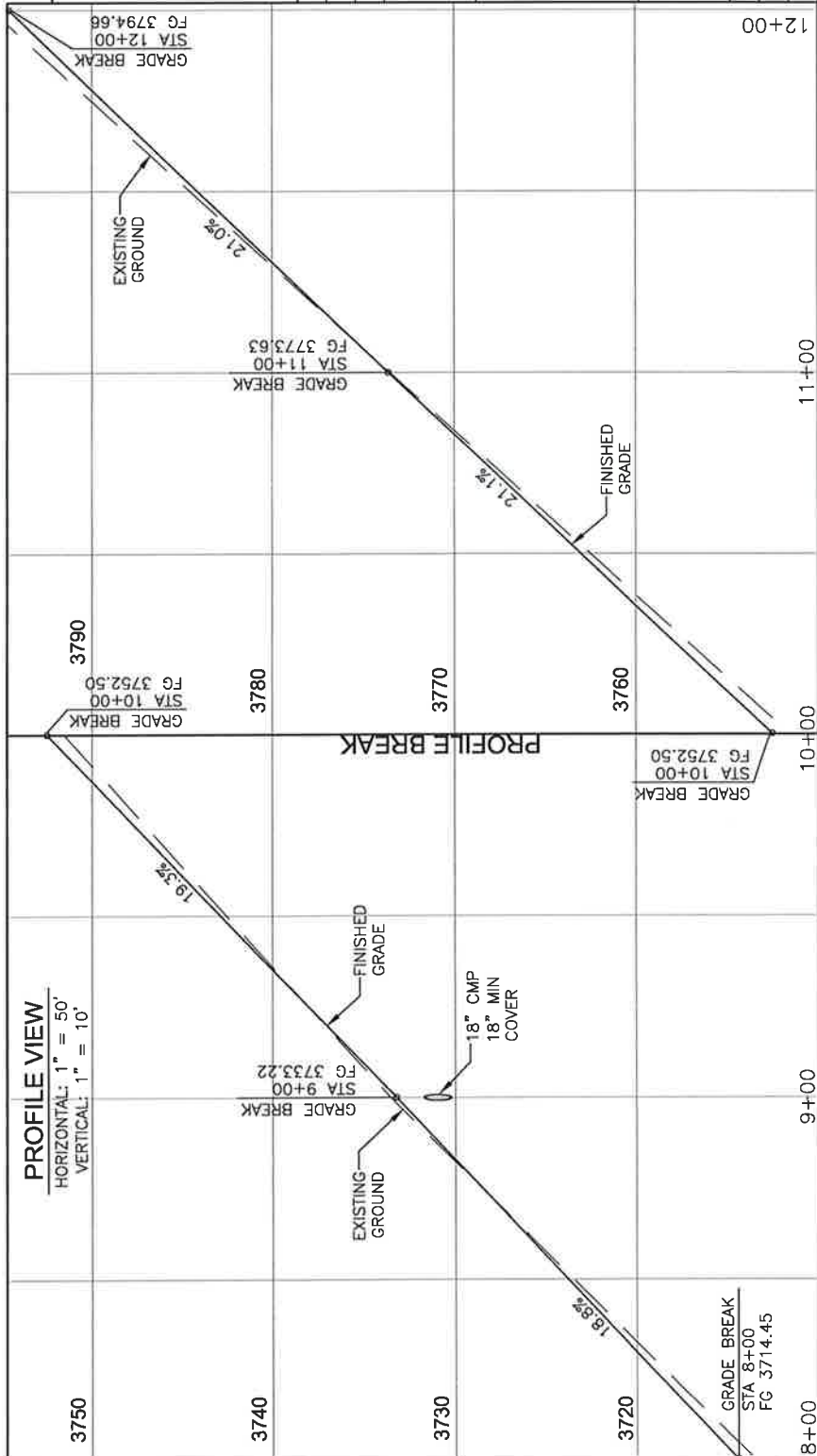
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REV. NO.	DESCRIPTION	DATE	APPROVAL

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

LOWER GRAVE
TIMBER SALE
PROPOSED 33-5-34.1 ROAD
PLAN AND PROFILE SHEET

DESIGNED:	
REVIEWED:	
APPROVED:	
DRAFTED BY:	RJS
DATE:	JUNE 2015
DRAWING NO.:	OR-11-9113.4
SCALE:	1" = 50'
SHEET:	4 OF 5



STATION	FORE AZIMUTH
12+00	17
12+60	32
12+85	43
13+50	54
14+00	54
14+75	45
15+65	



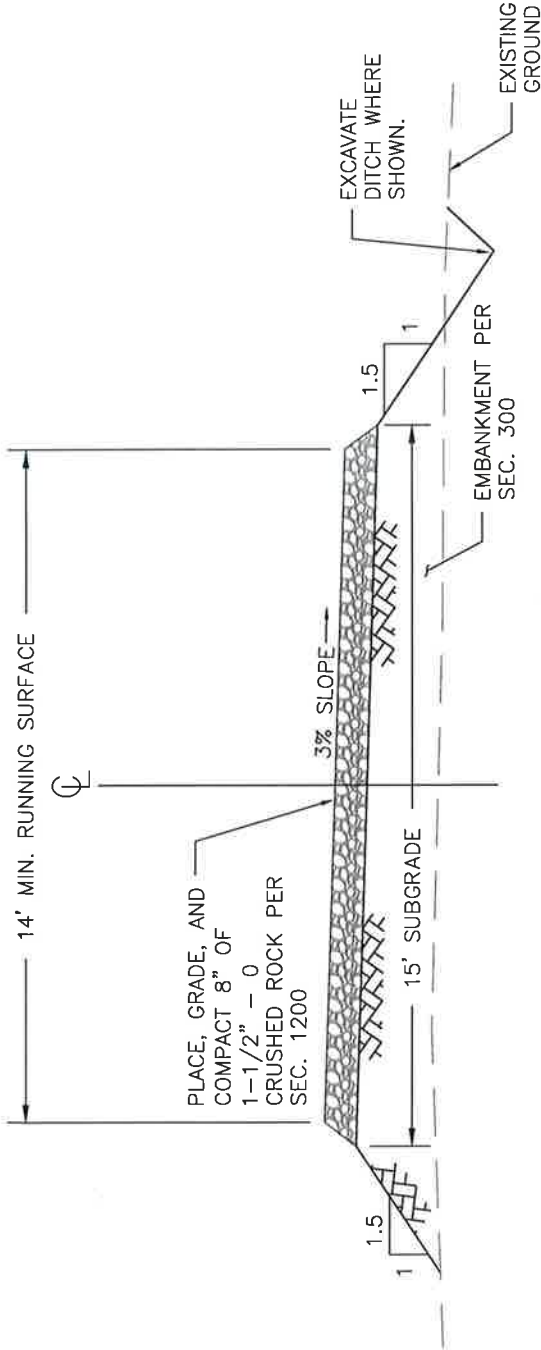
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REV. NO.	DESCRIPTION	DATE	APPROVAL		
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON					
<p style="text-align: center;">LOWER GRAVE TIMBER SALE</p> <p style="text-align: center;">PROPOSED 33-5-34.1 ROAD PLAN AND PROFILE SHEET</p>					
DESIGNED:					
REVIEWED:					
APPROVED:					
DRAFTED BY: RJS	SCALE: 1" = 50'				
DATE: JUNE 2015	SHEET: 5 OF 5				
DRAWING NO.: OR-11-9T113.4					

DESIGNED:
REVIEWED:
APPROVED:
DRAFTED BY:
DATE: JUN 11 2011
DRAWING NUMBER:

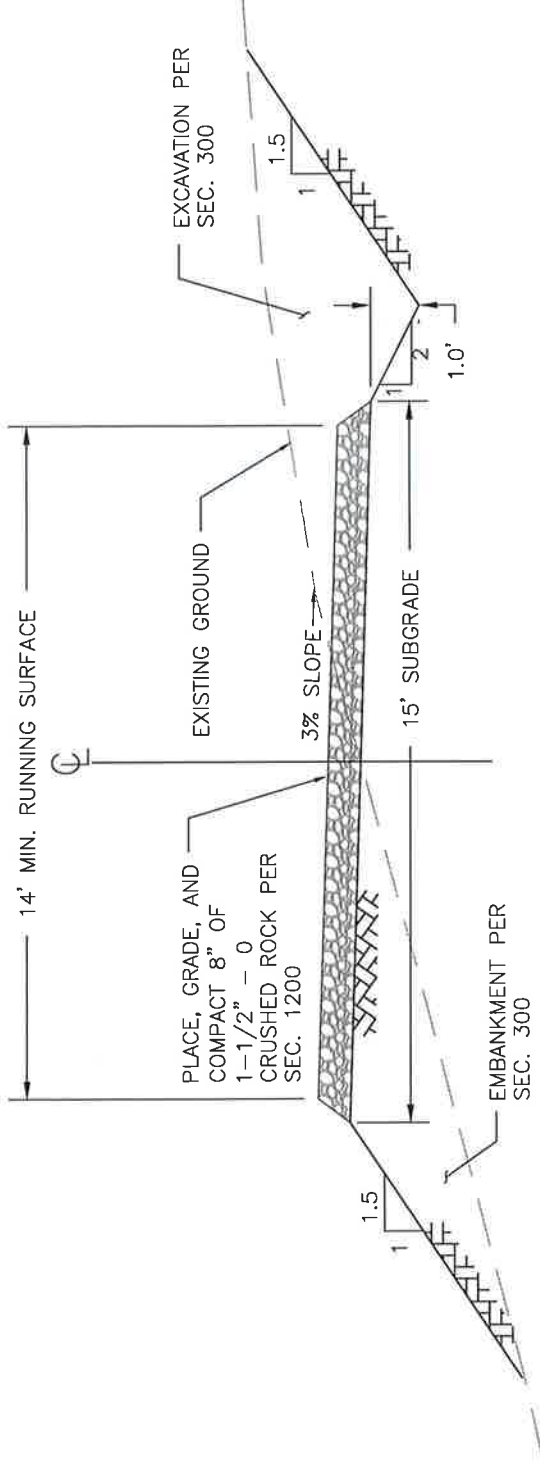


EXHIBIT C12-1



TYPICAL ROAD SECTION

STA 2+75 - 5+50



TYPICAL ROAD SECTION

STA 0+80 - 2+50

STA 5+50 - 15+65

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REV. NO.	DESCRIPTION	DATE	APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
LOWER GRAVE TIMBER SALE PROPOSED ROAD 33-5-34.1 TYPICAL ROAD SECTIONS			
DESIGNED:	RJS		
REVIEWED:			
APPROVED:			
DRAFTED BY:	RJS	SCALE:	NTS
DATE:	MAY 2015	SHEET:	1 OF 2
DRAWING NO.:	N/A		

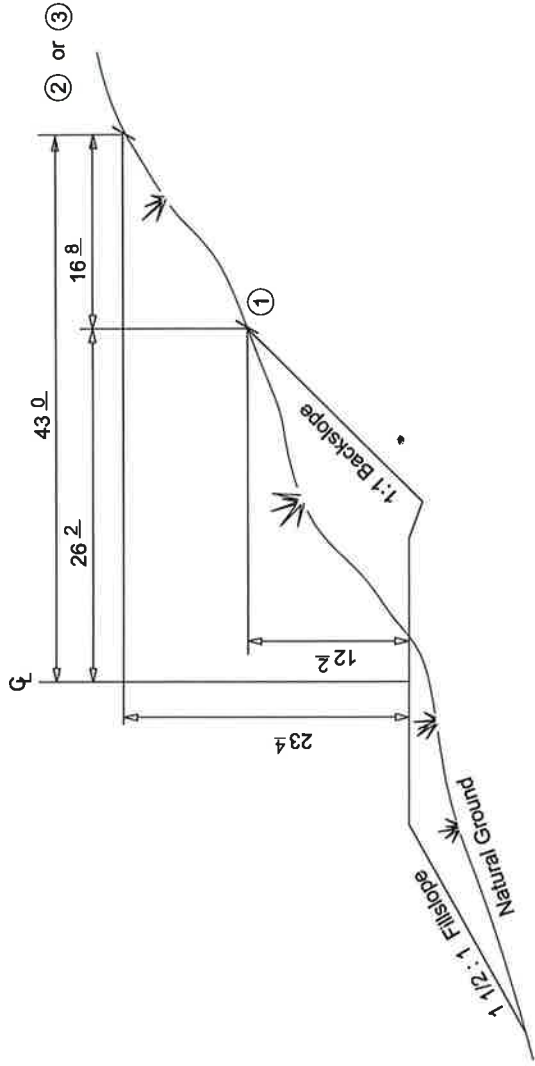
Exhibit C12-2

Sale Name: Lower Grave T.S.

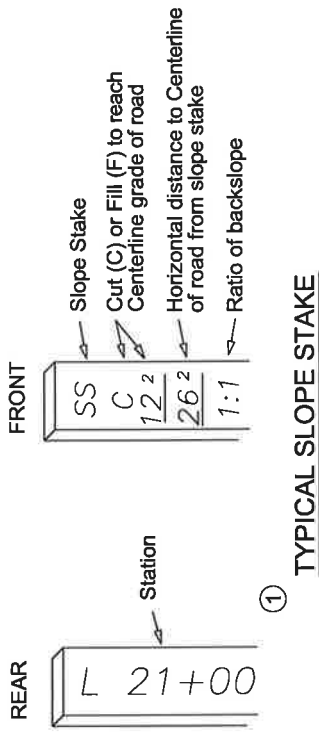
Page 2 of 2

P-Stn ft.	H.Offset ft.	L-Stn ft.	Cut Depth ft.	Grade %	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.	Mass H. Cu. Yd.	Clear L ft.	Clear R ft.
0+00	0	0+00	0				0	10	10
				9	1.6	3.2			
0+30	0	0+30	0				-1.6	10	10
				8	0	3.8			
0+60	0	0+60	0				-5.4	10	10
				8	13.6	4.3			
0+85	0	0+85	-0.6				3.9	10	20
				15	15.3	2.8			
1+00	0	1+00	1.3				16.4	16	20
				15	39.6	53.2			
2+00	0	2+00	-1.6				2.8	16	13
				14	1.5	58.5			
3+00	0	3+00	0.1				-54.2	13	16
				14	6.2	15.2			
4+00	0	4+00	-0.2				-63.1	12	13
				14	0	105.8			
5+00	0	5+00	-2.5				-168.9	17	17
				14	4.1	100.4			
6+00	0	6+00	0.1				-265.2	14	16
				16	50.1	63.3			
7+00	0	7+00	-1				-278.3	21	24
				17	98.5	103.9			
8+00	0	8+00	-0.9				-283.7	19	27
				19	183.9	59.6			
9+00	0	9+00	0.3				-159.4	16	30
				19	142.6	44.9			
10+00	0	10+00	-1				-61.7	16	20
				21	71.5	73.6			
11+00	0	11+00	-0.1				-63.8	21	21
				21	136.7	39.5			
12+00	0	12+00	0.9				33.5	11	24
				17	69.2	33.9			
12+60	0	12+60	-0.9				68.8	22	20
				19	13	26.1			
12+85	0	12+85	-0.7				55.7	19	20
				18	67.9	20.9			
13+50	0	13+50	1.7				102.7	12	23
				18	72.4	1.8			
14+00	0	14+00	1.1				173.3	14	20
				15	59.8	6			
14+75	0	14+75	0.4				227.1	13	17
				13	19.7	9.1			
15+65	0	15+65	-0.1				237.7	13	12
Totals					1067.2	829.8			

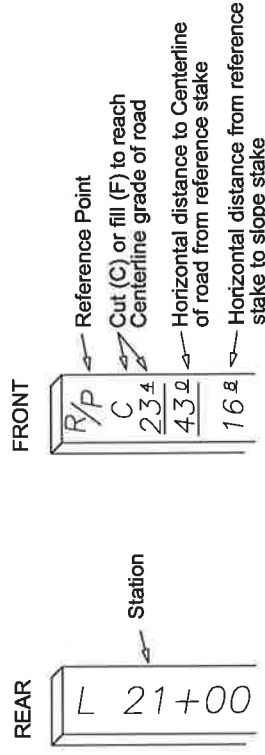
EXHIBIT C13



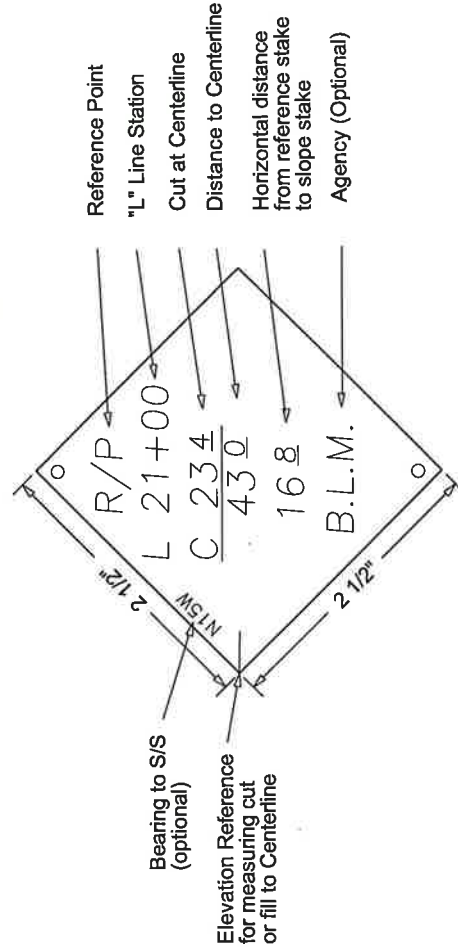
TYPICAL SLOPE STAKED
CROSS SECTION



① TYPICAL SLOPE STAKE



② TYPICAL REFERENCE STAKE



③ TYPICAL REFERENCE TAG

REV. NO.	DESCRIPTION	DATE	APPROV.
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
LOWER GRAVE TIMBER SALE TYPICAL SLOPE STAKING			
DESIGNED:	[Signature]		
REVIEWED:	[Signature]		
APPROVED:	[Signature]		
DRAFTED BY:	ELF	SCALE:	NONE
DATE:	JUN 2015	SHEET:	1 OF 1
DRAWING NO.: OR-11-9113.4-11			

ALWAYS
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Roads Work List

Definitions:

ABC = Aggregate Base Course
 ASC = Aggregate Surface Course
 BST = Bituminous
 CMP = Corrugated Metal Pipe
 CY = Cubic Yard
 GRR = Grid Rolled Rock

Jct = Junction/Intersection
 MP = Mile Post
 NAT = Natural or Native Surface
 PRR = Pit Run Rock
 Pvt = Private
 Seg = Segment

Existing Road Renovation

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

Salmon Creek Area – See Exhibit C2-2 for Map:

Salmon Creek -- 34-6-2.0 Road Seg A-D -- PRR

<u>MP</u>	<u>Description</u>
0.00	Jct w/ Sunny Valley Loop Road (County). Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.07	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.14	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.24	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.41	Existing culvert.
0.52	Jct w/ Pvt Road (ODF) on left.
0.66	Existing culvert.
0.77	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.80	Begin scarification of existing road surface to remove surface rilling.
0.91	Waste Disposal Sight (WDS) on right. Place slump material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
1.04	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
1.14	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
1.19	Cut bank slump. Remove approx. 5 CY's of slump material to the WDS listed on this road system.
1.21	Unit 01-1 Boundary.
1.30	Existing culvert.
1.45	End scarification. Jct w/ 34-6-1.2 Road on right. Unit 01-1 Boundary.
1.46	Waste Disposal Sight (WDS) on right. Place slump material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
1.68	Jct w/ 34-6-1.0 Road on left.
1.83	Existing culvert.
1.84	Begin heavy blading for reestablishing road cross section and reshaping ditch line. End haul excess material to WDS listed on this road system.
1.93	Existing culvert.
1.94	Cut bank slump. Remove approx. 3 CY's of slump material to the WDS listed on this road system.
1.96	End road renovation. Jct w/ 34-6-1.1 Road on left.

Aiko Aiko Road -- 34-6-1.1 Road -- PRR

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-6-2.0 Road. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.04	Existing culvert.
0.13	Cut bank slump. Remove approximately 7 CY's of slump material to the WDS listed on this road system.
0.24	Waste Disposal Sight (WDS) on right. Place slump material on stable area well off of road surface and outside of turnoff area so not to impede drivability of traffic.
0.57	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.61	Begin scarification of existing road surface to remove surface rilling.
0.65	Existing culvert.
0.66	End scarification of existing road surface. Begin heavy blading for reestablishing road cross section. Place any excess material on WDS listed on this road system.
0.73	Existing culvert.
0.75	Waste Disposal Sight (WDS) on right. Place slump or excess material on stable area well off of road surface and outside of turnoff area so not to impede drivability of traffic.
0.83	Existing culvert.
0.92	Existing culvert.
1.10	End heavy blading; continue with standard road renovation.
1.14	Jct w/ jeep road on right.
1.15	Unit 01-2 Boundary on right. Begin construction of large turnout area (80'x15') on right. Clear and grub area and place any excess waste material on stable area well off of the road surface and outside of turnout area so not to impede drivability of traffic. Place, grade, and compact 20 CY's (27.6 Tons) of 1-1/2-minus crushed rock (weed free source) in a 4" lift on turnout area.
1.20	Existing culvert.
1.37	Existing culvert.
1.47	End road renovation. Reconstruct truck turn around area at end of road. Waste Disposal Sight (WDS) on left. Place slump material on stable area well off of road surface and outside of turnaround area so not to impede drivability of traffic.

Salmon Creek Spur -- 34-6-1.0 Road -- PRR

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-6-2.0 Road. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; reconstructing water dips; and roadside brushing and chipping.
0.05	Reconstruct existing water dip.
0.26	Reconstruct existing water dip.
0.34	Reconstruct existing water dip.
0.41	Reconstruct truck turn around area. Waste Disposal Sight (WDS). Place slump material on stable area well off of road surface and outside of turnaround area so not to impede drivability of traffic.
0.45	End road renovation.

Salmon School Road -- 34-6-1.2 Road -- NAT

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-6-2.0 Road. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications and roadside brushing and chipping.
0.005	Gate (closed but not locked - green)
0.01	Jct w/ private driveway on right. This driveway leads to a turnaround/parking area constructed on BLM land. Land owners are cooperative, but would like coordination if using the 'parking area' for a

- landing. They have water delivered every 2 weeks by semi-truck and would rather this service/supply not be interrupted.
- 0.02 Gate posts but no gate.
- 0.05 End road renovation at proposed landing on knob to right.

McCoy Creek Area – See Exhibit C2-3 for Map:**McCoy Creek -- 34-5-9.0 Road Seg A -- PRR**

<u>MP</u>	<u>Description</u>
0.00	Jct w/ Placer Road (County) on right and 34-5-10.0 Road (BLM) on left. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.01	Existing base of an old cattle guard crossing remains in road bed. Use caution when grading.
0.02-0.04	Bridge across Grave Creek. This creek crossing is noted for critical fish habitat (<i>Coho</i>). Contractor shall ensure all erosion and sediment control measures (BMP's) are in place per contract specifications and inspected/accepted by the Contracting Officer or Project Engineer. See Exhibit C8-2 for details.
0.09	Begin scarification of existing road surface to remove old oiled surfacing and pot holes.
0.15	Existing culvert. End scarification of existing road surface.
0.19	Existing culvert.
0.21	Jct w/ an old Jeep Road on left.
0.23	Existing culvert.
0.26	Existing culvert.
0.31	Existing culvert.
0.33	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.36	Existing culvert.
0.39	Existing culvert.
0.46	Existing culvert.
0.50	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.54	Existing culvert.
0.59	Existing culvert.
0.65	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.66	Jct w/ private road on right.
0.71	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.75	Existing culvert.
0.82	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.84	Existing culvert.
0.89	Existing culvert.
0.91	Jct w/ 34-5-10.1 Road on left.
0.98	Existing culvert.
1.06	Jct w/ private road on left.
1.10	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
1.19	Jct w/ 34-5-10.2 Road on right.
1.22	Existing culvert.
1.28	Existing culvert.

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- 1.31 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 1.33 Existing culvert.
- 1.35 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 1.47 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 1.50 Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
- 1.53 Existing culvert.
- 1.57 Existing culvert.
- 1.63 Existing culvert.
- 1.82 Existing culvert.
- 1.88 Existing culvert.
- 1.98 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 2.04 Existing culvert.
- 2.08 Existing culvert.
- 2.14 Existing culvert.
- 2.26 Jct w/ private road on left.
- 2.40 Existing culvert.
- 2.42 Existing culvert.
- 2.46 Existing culvert.
- 2.47 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 2.50 Existing culvert.
- 2.54 Jct w/ private road on right.
- 2.59 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 2.64 Existing culvert.
- 2.68 Existing culvert.
- 2.78 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 2.85 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 2.89 Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
- 2.92 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 2.97 Existing culvert.
- 3.05 Existing culvert.
- 3.12 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 3.23 Existing culvert.
- 3.32 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 3.44 Existing culvert.
- 3.60 End road renovation. Jct w/ 34-5-15.0 Road on right.

McCoy Creek Spur -- 34-5-15.0 Road -- ASC

- | <u>MP</u> | <u>Description</u> |
|-----------|---|
| 0.00 | Jct w/ 34-5-9.0 Road on left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping |

- ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
- 0.09 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 0.17 Existing culvert.
- 0.18 Jct w/ private road on left.
- 0.22 Existing culvert.
- 0.27 Existing culvert.
- 0.335 Jct w/ 34-5-15.1 Road on right.
- 0.34 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 0.38 Existing culvert.
- 0.44 Existing culvert.
- 0.48 Existing culvert.
- 0.57 Existing culvert.
- 0.70 Existing culvert.
- 0.83 Existing culvert.
- 0.91 Existing culvert.
- 0.99 End road renovation. Jct w/ 34-5-20.0 Road on left and right, and 34-5-14.2 Road ahead.

Daisy Mine -- 34-5-20.0 Road Seg F&E -- GRR/NAT

MP Description

**Mileposts are listed in reverse order - following access route to timber units*

- 4.44 Jct w/ 34-5-15.0 Road on right and 34-5-14.2 Road on left. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; reshape existing water dips with lead-out ditches; and roadside brushing and chipping.
- 4.43 Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic as well as out of the lead-out ditch extents so not to disrupt drainage path.
- 4.35 Existing water dip.
- 4.26 Existing water dip.
- 4.17 Existing water dip.
- 4.01 End Seg F (rocked surface) and begin Seg E (native surface). Unit 15-1 boundary on right. Begin heavy blading for reestablishing road cross section.
- 3.86 Unit 15-1 boundary on right.
- 3.79 Construct water dip with a lead-out ditch.
- 3.63 Unit 15-3A boundary on right.
- 3.50 Construct water dip with a lead-out ditch.
- 3.32 Unit 15-3A boundary on right.
- 3.315 Large pot hole in road surface within a thru-cut area. Construct a lead-out ditch on either side of the road to drain.
- 3.31 Unit 15-3B boundary on right.
- 3.22 Construct water dip with a lead-out ditch.
- 3.12 Begin construction of truck (empty) turnaround area (50'x50') centered on road. Clear and grub area and place any excess waste material on stable area well off of the road surface and outside of turnout area so not to impede drivability of traffic.
- 3.09 End road renovation. Unit 15-3B boundary on right.

McCoy Creek Spur #2 -- 34-5-15.1 Road Seg A&B -- GRR/NAT

MP Description

- 0.00 Jct w/ 34-5-15.0 Road on left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping

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	ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.02	Cut bank slump. Remove approximately 10 CY's of slump material to the WDS at MP 0.14 on this road.
0.06	Existing culvert.
0.14	Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
0.18	Existing culvert.
0.24	End Seg A, rocked surface, and begin Seg B, native surface. Begin heavy blading for reestablishing road cross section.
0.26	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.41	Existing culvert.
0.54	Existing culvert.
0.63	Existing culvert.
0.66	Unit 15-2 boundary on right.
0.80	Unit 15-2 boundary on right.
0.81	Existing culvert.
0.83	End road renovation. Reconstruct truck turn around area at end of road. Waste Disposal Sight (WDS). Place material on stable area well off of road surface and outside of turnaround area so not to impede truck traffic.

McCoy Creek Spur #1 -- 34-5-10.2 Road Seg A-C -- NAT

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-5-9.0 Road on left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.05	Existing gate posts. Gate arm missing.
0.07	Existing culvert.
0.10	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.14	Existing culvert.
0.16	Sag in road grade. Install 24" x 45' CMP, Type 3, per specifications and details. Redefine and regrade ditch lines to ensure drainage flows to culvert inlet.
0.22	Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
0.24	Existing culvert.
0.25	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.30	Construct water dip with lead-out ditch.
0.43	Existing culvert.
0.51	Existing culvert.
0.59	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.69	Existing culvert.
0.72	Existing culvert.
0.73	Jct w/ private road on right. Begin scarification of existing road surface to remove rilling and rutting on road from water damage.
0.78	Existing culvert. End scarification of existing road surface.
0.79	Existing culvert.
0.82	Reconstruct existing water dip.
0.88	Reconstruct existing water dip.

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- 0.89 Existing culvert.
- 0.92 Existing culvert.
- 0.95 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 0.97 Reconstruct existing water dip.
- 1.00 Cut bank slump. Remove approximately 12 CY's of slump material to the WDS at MP 1.04 on this road.
- 1.04 Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
- 1.05 Begin scarification of existing road surface to remove rilling and rutting on road from water damage.
- 1.09 End scarification of existing road surface.
- 1.22 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 1.27 Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnaround area so not to impede passing ability of traffic.
- 1.28 Large woody debris on road and small snag on immediate uphill area.
- 1.35 Cut bank slump. Remove approximately 10 CY's of slump material to the WDS at MP 1.27 on this road or end haul to truck turnaround area at end of road.
- 1.42 Reconstruct existing water dip.
- 1.47 End road renovation at Unit 17-2 boundary. Reconstruct truck turnaround/landing area at end of road.

Ditch Creek Area – See Exhibit C2-4 for Map:

Ditch Creek -- 34-4-28.0 Road Seg K&J -- ASC

<u>MP</u>	<u>Description</u>
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**Mileposts are listed in reverse order - following access route to timber units*

- | | |
|-----------|--|
| 7.27 | Jct w/ 34-5-10.0 Road, left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. |
| 7.16-7.14 | Bridge across Grave Creek. This creek crossing is noted for critical fish habitat (<i>Coho</i>). Contractor shall ensure all erosion and sediment control measures (BMP's) are in place per contract specifications and inspected/accepted by the Contracting Officer or Project Engineer. See Exhibit C8-2 for details. |
| 7.14 | Jct w/ an old jeep road on left. |
| 7.13 | Existing culvert. |
| 7.04 | Existing culvert. |
| 6.92 | Existing culvert. |
| 6.85 | Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications. |
| 6.80 | Existing culvert. |
| 6.66 | Jct w/ 34-4-5.2 Road on left. Waste Disposal Sight (WDS) and staging area/large turnout on left. Place material on stable area well off of road surface and outside of turnaround area so not to impede truck traffic. |
| 6.64 | Existing culvert. |
| 6.51 | Existing culvert. |
| 6.38 | Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications. |
| 6.27 | Existing culvert. |
| 6.14 | Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications. |
| 6.00 | Existing culvert. |

- 5.90 Existing culvert.
- 5.81 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 5.77 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 5.61 Existing culvert.
- 5.51 End road renovation. Jct w/ 34-4-8.0 Road on right and 34-4-8.2 Road on left.

Ditch Creek Summit -- 34-4-8.0 Road Seg A-D -- ASC/NAT

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-4-28.0 Road, left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.09	Existing culvert.
0.24	Existing culvert.
0.31	Existing culvert.
0.46	Jct w/ 34-4-8.1 Road on right.
0.60	Existing culvert.
0.79	Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
0.80	Unit 07-2 boundary on right.
0.86	Jct w/ proposed Temp Route 07-2 on right.
0.89	Jct w/ 34-4-7.0 Road on right.
0.91	Existing culvert.
0.99	Existing culvert.
1.07	Existing culvert.
1.14	Existing culvert.
1.26	Existing culvert.
1.37	Existing culvert.
1.47	Jct w/ unknown road on right.
1.48	Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic. Jct w/ old temp spur on left.
1.49	Jct w/ 34-4-7.1 Road on right.
1.56	Jct w/ unknown road on left.
1.58	Unit 07-2C boundary on right.
1.66	Existing culvert.
1.83	Existing culvert. Unit 07-2C boundary on right. End road Seg C (rocked surface/crowned section) and begin road Seg D (native surface/insloped section -- some areas had spot rock placed for industry winter operations).
1.90	Existing culvert.
1.98	Jct w/ 34-5-12.2 Road on right.
1.99	Existing culvert.
2.21	Existing culvert.
2.30	Existing culvert.
2.43	Jct w/ private road on right.
2.72	End road renovation. Jct w/ 34-5-2.0 Road left & right and 34-5-20.0 Road straight ahead.

Daisy Cutoff (aka Sec 1) -- 34-5-2.0 Road Seg C&B -- ASC

<u>MP</u>	<u>Description</u>
<i>*Mileposts are listed in reverse order - following access route to timber units</i>	
3.31	Jct w/ 34-4-8.0 Road on right and 34-5-20.0 Road on left. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications;

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- cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; and cleaning all debris or obstructions from inside culverts. Roadside brushing and chipping begins at MP 2.20, at the clear-cut boundary.
- 3.18 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 2.84 Existing culvert.
- 2.71 Jct w/ 34-5-12.1 Road on left. Begin heavy blading for reestablishing road cross section.
- 2.68 Reconstruct existing water dip.
- 2.42 Jct w/ private road on right. End heavy blading.
- 2.25 Remove damaged culvert and install a 24" x 35' CMP, Type 3, per specifications and details. Place, grade, and properly compact 18 CY's (24.8 Tons) of 1-1/2-minus crushed rock (weed free source) in a 6" lift over culvert replacement. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 2.20 Boundary line between Section 12 (Murphy Company) and Section 01 (BLM). **Begin roadside brushing and chipping.**
- 2.19 Unit 01-C4 boundary on left and Unit 01-C5 boundary on right.
- 2.11 Existing culvert.
- 2.10 Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
- 2.09 Jct w/ proposed Temp Route 01-C5 on right.
- 1.96 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 1.89 Unit 01-C5 boundary on right.
- 1.85 Existing culvert.
- 1.80 Unit 01-C4 boundary on left.
- 1.79 Existing culvert.
- 1.73 Unit 01-C4 boundary on left.
- 1.68 Existing culvert.
- 1.64 Unit 01-C3 boundary on right.
- 1.53 Existing culvert.
- 1.52 Jct w/ proposed Temp Route 01-C3 on right.
- 1.51 Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
- 1.44 Existing culvert.
- 1.33 Unit 01-C4 boundary on left.
- 1.31 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 1.20 Existing culvert.
- 1.10 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 1.08 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 1.02 Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
- 1.00 Existing culvert.
- 0.93 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 0.89 Existing culvert.
- 0.85 Existing culvert.
- 0.79 Existing culvert.
- 0.67 Existing culvert.
- 0.60 Existing culvert.
- 0.55 Existing culvert.

0.51	Unit 01-C2 boundary on right.
0.50	Existing culvert.
0.48	Existing culvert.
0.45	Unit 01-C2 boundary on right.
0.38	Existing culvert.
0.37	Unit 01-C1 boundary on left.
0.34	Existing culvert.
0.33	Jct w/ 34-5-1.2 Road on right.
0.32	Unit 01-C2 boundary on right.
0.27	Existing culvert.
0.21	Unit 01-C2 boundary on right. Truck (empty) turnaround area. Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
0.13	Existing culvert.
0.12	End road renovation. Unit 01-C1 boundary on left.

Murphy North Spur -- 34-5-12.1 Road (Prvt) -- NAT

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-5-2.0 Road, left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications.
0.19	End existing private road renovation.

Murphy Southeast Spur -- 34-5-12.2 Road (Prvt) -- NAT

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-4-8.0 Road, left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications and roadside brushing and chipping.
0.11	Jct w/ private spur on left.
0.20	End existing private road renovation. Begin construction of proposed Temp Route 07-2C straight ahead.

Coffin Creek -- 34-4-7.1 Road -- NAT

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-4-8.0 Road, left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications and roadside brushing and chipping.
0.03	Remove existing earthen barricade. Construct earthen barricade upon completion of timber operations.
0.07	Jct w/ spur road on left.
0.08	Reconstruct water bar upon completion of timber operations.
0.09	Unit 07-2C boundary on left.
0.12	Reconstruct water bar upon completion of timber operations.
0.15	Jct w/ spur road on left. Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
0.16	End road renovation. Reconstruct water bar upon completion of timber operations.

Daisy Mine Spur -- 34-4-7.0 Road -- NAT

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-4-8.0 Road, left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.06	Existing culvert.

- 0.22 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 0.27 Unit 07-2 boundary on right.
- 0.30 End road renovation. Reconstruct truck turnaround at end of road. Waste Disposal Sight (WDS). Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.

Boulder Creek Area – See Exhibit C2-4 for Map:

Hancock Ridgeline Road -- 34-5-1.3 Road Seg A-E (BLM/Prvt) -- PRR

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-5-10.0 Road, left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.01	Existing culvert.
0.03	Existing culvert.
0.05	Private gate.
0.06	Unit 01-A3 boundary on left.
0.17	Unit 01-A4 boundary on right.
0.20	Unit 01-A4 boundary on right.
0.40	Unit 01-A3 boundary on left.
0.43	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.56	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
0.59	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.95	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
1.07	Existing culvert.
1.10	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
1.17	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
1.27	Existing culvert.
1.32	Existing culvert.
1.35	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
1.49	Existing culvert.
1.52	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
1.77	Jct w/ private spur road on left.
2.25	Jct w/ private spur road on right.
2.72	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
2.84	Jct w/ private spur road on right.
3.16	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
3.20	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
3.22	Jct w/ private spur on left.
3.25	Jct w/ proposed location of Temp Route 01-A2 on left.

- 3.31 Jct w/ private spur on right.
- 3.37 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 3.41 End existing private road renovation. Begin construction of proposed Temp Route 01-A straight ahead.

Clark Creek Area – See Exhibit C2-5 for Map:

Clark Creek -- 34-5-1.0 Road Seg A-B -- ASC

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-5-10.0 Road, left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.11	Existing culvert.
0.22	Existing culvert.
0.33	Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
0.34	Jct w/ 33-5-36.1 Road on left.
0.35	Existing culvert.
0.56	Existing culvert.
0.79	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.92	Existing culvert.
1.05	Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
1.07	Existing culvert.
1.16	Jct w/ spur road on left.
1.17	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
1.22	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
1.25	Unit 35-A boundary on left and right.
1.29	Existing culvert.
1.30	Jct w/ 33-5-35.0 Road on right.
1.33	Existing culvert.
1.35	Unit 35-A boundary on left.
1.38	Unit 35-A boundary on right.
1.45	Existing culvert.
1.48	Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
1.54	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
1.60	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
1.64	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
1.77	Existing culvert.
1.83	Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
1.86	Existing culvert.
1.99	End road renovation. Jct w/ 33-5-35.1 Road on left.

St Paul Mtn -- 33-5-35.1 Road Seg A-B -- PRR

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-5-1.0 Road on left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.14	Existing culvert.
0.27	Jct w/ 33-5-35.5 Road (loop road) on left.
0.29	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
0.32	Existing culvert.
0.33	Unit 35-1C boundary on left.
0.34	Unit 35-B boundary on right.
0.41	Unit 35-B boundary on right.
0.42	Unit 35-B boundary on right.
0.43	Existing culvert.
0.55	Existing culvert.
0.56	Unit 35-C1 boundary on left.
0.67	Unit 35-B boundary on right.
0.69	Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
0.71	Jct w/ 33-5-35.6 Road on right and old spur road on left.
0.83	Existing culvert.
0.91	Existing culvert.
1.04	Existing culvert.
1.07	End road renovation. Jct w/ 33-5-35.2 Road on right.

St Paul Mtn Spur -- 33-5-35.2 Road -- PRR

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-5-1.0 Road on left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.08	Existing culvert.
0.18	Existing culvert.
0.36	End road renovation. Jct w/ 33-5-27.2 Road on right.

JoCo Forestry Spur -- 33-5-27.2 Road Seg A-B2 -- NAT

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 33-5-35.2 Road on left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; reshaping existing water dips; redefining lead-out ditches; and roadside brushing and chipping.
0.12	Existing water dip. Redefine lead-out ditch.
0.19	Existing water dip. Redefine lead-out ditch. Boundary line between Section 27 (BLM) and Section 26 (Josephine County). End Seg A and begin Seg B1.
0.28	Existing water dip. Redefine lead-out ditch.
0.31	Existing water dip. Redefine lead-out ditch.
0.33	Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
0.34	End existing road renovation and begin existing road reconstruction/widening of Seg B2. Existing native road running surface is 10 foot wide. Reconstruct road to have a 12 foot in-sloped running surface with water dips. Additional stipulations may be required per the license agreement with Josephine County Department of Forestry.

- 0.37 Construct water dip.
- 0.45 Construct water dip.
- 0.55 End road reconstruction. Reconstruct truck turnaround at end of road.

Bobs Boot -- 33-5-35.5 Road -- PRR

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 33-5-35.2 Road on left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; reshaping existing water dips; clearing the one culvert inlet and outlet; cleaning all debris or obstructions from inside the culvert; and roadside brushing and chipping.
0.02	Jct w/ 33-5-35.5 Road (end of the loop) on right.
0.03	Unit 35-A boundary on left.
0.09	Jct w/ proposed location of Temp Route 35-A on left.
0.21	Jct w/ proposed location of Temp Route 35-E on right.
0.24	Unit 35-E boundary on right.
0.30	Unit 35-A boundary on left.
0.46	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
0.48	Unit 35-D boundary on left.
0.59	Unit 35-D boundary on left.
0.66	Unit 35-C3 boundary on left.
0.72	Unit 35-C3 boundary on left.
0.76	Unit 35-C3 boundary on left.
0.80	Existing culvert.
0.83	Unit 35-C3 boundary on left.
0.835	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
0.84	Unit 35-C2 boundary on left.
0.95	Unit 35-E boundary on right.
1.06	Unit 35-C2 boundary on left.
1.10	Unit 35-C2 boundary on left.
1.19	Unit 35-C2 boundary on left.
1.20	End road renovation. Jct w/ 35-5-35.5 Road (beginning of loop) on left and right.

St Paul Mtn Road -- 33-5-35.0 Road -- PRR

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-5-1.0 Road on left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; and roadside brushing and chipping.
0.11	End road renovation. Unit 35-A boundary on right.

Eastman Gulch Area – See Exhibit C2-6 for Map:**Eastman Gulch -- 34-5-2.1 Road Seg A-B -- ASC/PRR**

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-5-10.0 Road, left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.07	Existing culvert.
0.13	Existing culvert.
0.22	Existing culvert.
0.31	Existing culvert.

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0.37	Existing culvert.
0.45	Existing culvert.
0.56	Existing culvert.
0.63	End Seg A w/ ASC surface course and begin Seg B w/ PRR surface course. Jct w/ 33-5-35.3 Road on right.
0.67	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.70	Existing culvert.
0.77	Existing culvert.
0.84	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.89	Existing culvert.
0.92	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
1.00	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
1.05	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
1.13	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
1.15	Jct w/ 34-5-2.2 Road on right.
1.22	Existing culvert.
1.31	Existing culvert.
1.38	Existing culvert.
1.44	Existing culvert.
1.50	Existing culvert.
1.58	Jct w/ 34-5-3.0 Road on left.
1.64	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
1.71	Existing culvert.
1.78	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
1.81	Existing culvert.
2.03	Existing culvert.
2.09	Existing culvert.
2.18	Existing culvert.
2.24	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
2.27	Existing culvert.
2.35	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
2.46	Existing culvert.
2.53	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
2.59	Unit 03-2A boundary on right.
2.63	Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
2.66	Existing culvert.
2.73	Existing culvert.
2.82	Existing culvert.
2.88	Jct w/ 34-5-3.2 Road on left.
2.95	Existing culvert.
2.97	Unit 03-2A boundary on right and Unit 03-2C boundary on left.

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- 2.98 Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
- 3.00 Existing culvert.
- 3.07 Existing culvert.
- 3.15 Existing culvert.
- 3.22 Existing culvert.
- 3.28 Existing culvert.
- 3.36 Existing culvert.
- 3.43 Existing culvert.
- 3.48 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
- 3.56 Existing culvert.
- 3.67 Existing culvert.
- 3.70 Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
- 3.72 End road renovation. Jct w/ proposed new permanent road construction for BLM Road 33-5-34.1 on right.

Wide Open -- 34-5-3.2 Road -- PRR

- | <u>MP</u> | <u>Description</u> |
|-----------|---|
| 0.00 | Jct w/ 34-5-2.1 Road, left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. |
| 0.01 | Unit 03-2C boundary on left and right. |
| 0.11 | Existing culvert. |
| 0.13 | End road renovation at Unit 03-2C boundary. Truck (empty) turnaround area. Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic. |

Miller Gulch Area -- See Exhibit C2-7 for Map:

Miller Gulch -- 33-6-24.0 Road Seg A-B2 -- ASC

- | <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Jct w/ Coyote Creek Road (County) on left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. |
| 0.03-0.05 | Bridge across Coyote Creek. This creek crossing is noted for critical fish habitat (<i>Coho</i>). Contractor shall ensure all erosion and sediment control measures (BMP's) are in place per contract specifications and inspected/accepted by the Contracting Officer or Project Engineer. See Exhibit C8-2 for details. |
| 0.06 | Jct w/ private driveway on left. |
| 0.11 | Jct w/ private driveway on right. |
| 0.19 | Jct w/ private driveway on right. |
| 0.24 | Existing culvert. |
| 0.31 | Existing culvert. |
| 0.40 | Existing culvert. |
| 0.45 | Existing culvert. |
| 0.50 | Existing culvert. |
| 0.55 | Existing culvert. |
| 0.62 | Existing culvert. |
| 0.66 | Jct w/ old spur road on right. |

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0.67	Existing culvert.
0.74	Existing culvert.
0.80	Existing culvert.
0.85	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
0.88	Existing culvert.
0.93	Existing culvert.
1.03	Existing culvert.
1.08	Existing culvert.
1.14	Existing culvert.
1.21	Existing culvert.
1.30	Existing culvert.
1.39	Existing culvert.
1.46	Existing culvert.
1.47	Jct w/ 33-5-30.2 Road on left.
1.50	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
1.52	Unit 30-1 boundary on left.
1.53	Existing culvert.
1.58	Existing culvert.
1.62	Unit 30-1 boundary on left.
1.64	Existing culvert.
1.70	Existing culvert.
1.76	Existing culvert.
1.77	Jct w/ 33-5-30.3 Road on left.
1.78	Unit 30-2 boundary on left.
1.84	Existing culvert.
1.88	Existing culvert.
1.96	Existing culvert.
2.00	Existing culvert.
2.10	Existing culvert.
2.14	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
2.15	Unit 30-2 boundary on left.
2.16	Existing culvert.
2.19	Jct w/ 33-5-30.0 Road on right.
2.22	Existing culvert.
2.27	Existing culvert.
2.36	Existing culvert.
2.43	Existing culvert.
2.53	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
2.55	Existing culvert.
2.70	Existing culvert.
2.82	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
2.92	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
2.99	Existing culvert.
3.02	Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic.
3.06	Existing culvert.
3.09	Existing culvert.

- 3.18 Jct w/ 33-5-31.0 Road on left.
- 3.22 Existing culvert.
- 3.29 Existing culvert.
- 3.39 Existing culvert.
- 3.47 Existing culvert.
- 3.50 Y-intersection; stay to the left.
- 3.52 End road renovation at spider junction. Jct w/ 33-5-31.1 Road on left. Jct w/ 33-5-31.3 Road straight ahead. Jct w/ 33-5-31.2 Road on right.

Miller Gulch South Spur -- 33-5-31.1 Road -- ABC

- | <u>MP</u> | <u>Description</u> |
|-----------|---|
| 0.00 | Jct w/ 33-6-24.0 Road on left and 33-5-31.3 Road and 33-5-31.2 Road on right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. |
| 0.04 | Existing culvert. |
| 0.08 | Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic. |
| 0.10 | Existing culvert. |
| 0.27 | Existing culvert. |
| 0.34 | Existing culvert. |
| 0.39 | Unit 32-1H boundary on right. |
| 0.47 | Jct w/ 33-5-32.2 Road on left. Unit 32-1H boundary on left |
| 0.48 | Jct w/ proposed Temp Route 32-1H-1 on right. |
| 0.52 | Existing culvert. |
| 0.61 | Existing culvert. |
| 0.64 | End road renovation at Unit 32-1H boundary on left and right. |

Redboy Miller Spur -- 33-5-32.2 Road Seg A -- NAT

- | <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Jct w/ 33-5-31.1 Road on left and right. Begin heavy road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; clearing and grubbing; and roadside brushing and chipping. |
| 0.01 | Remove existing barricade. Replace with a log barricade upon completion of timber operations. |
| 0.06 | End road renovation at property line. Unit 32-1H boundary on right. Jct w/ proposed Temp Route 32-1H-2 on right. |

Miller Benjamin Road -- 33-5-31.3 Road Seg A -- ASC

- | <u>MP</u> | <u>Description</u> |
|-----------|---|
| 0.00 | Jct w/ 33-6-24.0 Road and 33-5-31.1 Road on left and 33-5-31.2 Road on right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. |
| 0.02 | Existing culvert. |
| 0.13 | Existing culvert. |
| 0.18 | Existing culvert. |
| 0.23 | Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications. |
| 0.35 | Existing culvert. |
| 0.45 | Existing culvert. |
| 0.47 | End road renovation. Jct w/ 33-5-32.0 Road on left. Waste Disposal Sight (WDS) on right. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic. |

Miller Gulch X Spur -- 33-5-32.0 Road Seg A-- ASC

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 33-5-31.3 Road on left and right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road cross section listed in specifications; cleaning and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.09	Existing culvert.
0.14	Existing culvert.
0.23	Existing culvert. Hydrologic point of concern. Install check dams or other approved BMP's per Exhibit C8-2 details and specifications.
0.32	Existing culvert.
0.37	Unit 32-1F boundary on right. Quarry area on left. Waste Disposal Sight (WDS) on left. Place material on stable area well off of road surface and outside of turnout area so not to impede passing ability of traffic, as well as on edge of quarry area so not to contaminate quarry material.
0.39	Unit 32-1F boundary on right.
0.44	Existing culvert.
0.51	Existing culvert.
0.58	Unit 32-1E boundary on right.
0.59	Existing culvert.
0.63	End road renovation at Unit 32-1E boundary (on right).

Permanent Road Construction

See Exhibits C11 and C12 for drawings and details.

Upper Eastman Spur -- 33-5-34.1 Road -- ASC

<u>STA</u>	<u>Description</u>
0+00	Begin stationing on the 34-5-2.1 Road. Reference point staked 21' left and spike nail set in centerline location of existing road. Following existing road centerline.
0+30	Reference point staked 20' left and spike nail set in centerline location of existing road. Begin deflection off existing road centerline to proposed P-Line.
0+80	Install 12" x 74' CMP within existing road (34-5-2.1) ditch line. Regrade existing ditch to provide proper cover over pipe and so not to impede existing drainage flows.
5+60	Daylight inboard roadside ditch on right to existing terrain as shown on drawings.
9+00	Install 18" x 30' CMP, Type 3, per specifications and details.
12+60	Install 18" x 32' CMP, Type 3, per specifications and details.
15+50	End permanent road cross section construction; begin turnaround area.
16+00	Center of truck turnaround area.

Temporary Routes

*All Temporary Routes are NAT surface, unless noted otherwise. Upon completion of timber extraction, all Temporary Routes associated with each Unit are to be decommissioned. **Decommissioning** consists of ripping the subgrade, installation of water bars, placing of seed and mulch or slash, and constructing earthen or log barricade at the entrance.*

Temp Route 07-2

<u>STA</u>	<u>Description</u>
0+00	Begin temporary route reconstruction within existing footprint. Jct w/ 34-4-8.0 Road on left and right.
0+25	Construct earthen or log barricade upon completion of timber operations and decommissioning requirements.
1+84	Existing footprint ends here; start of new temporary route construction.
2+45	End temp route construction. Construct truck turnaround area.

Temp Route 07-2C

<u>STA</u>	<u>Description</u>
0+00	Begin temporary route new construction off the end of 34-5-12.2 Road (Murphy Company road).
0+25	Construct earthen or log barricade upon completion of timber operations and decommissioning requirements.
0+80	Property line between Section 12 (Murphy Company) and Section 07 (BLM).
2+85	End temp route construction. Construct truck turnaround area.

Temp Route 01-C5

<u>STA</u>	<u>Description</u>
0+00	Begin temporary route new construction. Jct w/ 34-5-2.0 Road on left and right.
0+25	Construct earthen or log barricade upon completion of timber operations and decommissioning requirements.
6+65	Start of temporary route reconstruction within existing footprint.
9+90	End temp route reconstruction at existing landing. Reconstruct truck turnaround area.

Temp Route 01-C3

<u>STA</u>	<u>Description</u>
0+00	Begin temporary route reconstruction within existing footprint. Jct w/ 34-5-2.0 Road on left and right.
0+25	Construct earthen or log barricade upon completion of timber operations and decommissioning requirements.
9+35	End temp route reconstruction at existing landing. Reconstruct truck turnaround area.

Temp Route 01-A2

<u>STA</u>	<u>Description</u>
0+00	Begin temporary route new construction. Jct w/ 34-5-1.3 Road on left and right (Hancock Forest Management road).
0+25	Construct earthen or log barricade upon completion of timber operations and decommissioning requirements.
6+85	Property line between Section 06 (Hancock Forest Management) and Section 01 (BLM).
9+70	End temp route construction. Construct truck turnaround area.

Temp Route 01-A

<u>STA</u>	<u>Description</u>
0+00	Begin temporary route new construction off the end of 34-5-1.3 Road (Hancock Forest Management road).

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0+20	Property line between Section 06 (Hancock Forest Management) and Section 01 (BLM).
0+25	Construct earthen or log barricade upon completion of timber operations and decommissioning requirements.
5+60	End temp route construction. Construct truck turnaround area.

Temp Route 35-A

<u>STA</u>	<u>Description</u>
0+00	Begin temporary route new construction. Jct w/ 33-5-35.5 Road on left and right.
0+25	Construct earthen or log barricade upon completion of timber operations and decommissioning requirements.
3+45	End temp route construction.

Temp Route 35-E

<u>STA</u>	<u>Description</u>
0+00	Begin temporary route new construction. Jct w/ 33-5-35.5 Road on left and right.
0+25	Construct earthen or log barricade upon completion of timber operations and decommissioning requirements.
9+40	End temp route construction. Construct truck turnaround area.

Temp Route 34-2B

<u>STA</u>	<u>Description</u>
0+00	Begin temporary route new construction at the end of the proposed permanent road (33-5-34.1 Road).
0+25	Construct earthen or log barricade upon completion of timber operations and decommissioning requirements.
6+30	Jct w/ swing road on left.
6+40	Construct water dip in temp route for natural drainage path.
20+60	End temp route construction. Construct truck turnaround area.

Temp Route 32-1H-1 (to south portion of the unit)

<u>STA</u>	<u>Description</u>
0+00	Begin temporary route reconstruction within existing footprint. Jct w/ 33-5-31.1 Road on left and right.
0+25	Remove existing barricade. Construct earthen or log barricade upon completion of timber operations and decommissioning requirements.
1+70	Construct truck turnaround area.
3+65	End temp route reconstruction.

Temp Route 32-1H-2(to north portion of the unit)

<u>STA</u>	<u>Description</u>
0+00	Begin temporary route new construction. Jct w/ 33-5-32.2 Road on left and right.
0+25	Construct earthen or log barricade upon completion of timber operations and decommissioning requirements.
3+20	End temp route construction.

WRITTEN SPECIFICATIONS

GENERAL – 100

101 - Pework Conference(s):

A prework conference will be held prior to the start of any work or harvesting 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 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.

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 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 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.

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:

AASHTO T 11 Quantity of rock finer than No. 200 sieve.

AASHTO T 27 Sieve analysis of fine and coarse aggregate using sieves with square openings; gradation.

AASHTO T 89 Liquid limit of material passing the No. 40 sieve. Water content at which the soil passes from a plastic to a liquid state.

AASHTO T 90 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.

AASHTO T 96 Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.

AASHTO T 99 Relationship between soil moisture and maximum density of soil.
Method A - 4" mold, soil passing a No. 4 Sieve.
25 blows/layer & 3 layers.
Method D - 6" mold, soil passing a 19.00mm (3/4 inches) sieve. 56 blows/layer & 5 layers.

AASHTO T 176 Shows relative portions of fine dust or claylike materials in soil or graded aggregate.

AASHTO T 180 (OSHD 106-71) moisture density relationship of soil same as AASHTO T 99

proctor but uses a 10-lb rammer & 18-inch drop.

- AASHTO T 191 Sand Cone. 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.
- AASHTO T 205 Rubber balloon. Density of soil in place. Use for compacted or firmly bonded soil.
- AASHTO T 210 Durability of aggregates based on resistance to produce fines.
- AASHTO T 224 Correction for coarse particles in the soil.
- AASHTO T 310 Determination of density of soil and soil-aggregates in place by nuclear methods.
- AASHTO T 248 Reducing field samples of aggregate to testing size by mechanical splitter, quartering, or miniature stockpile sampling.
- ASTM D 4564 Determination of relative density of cohesionless soils.

DMSO (dimethyl sulfide) - Determines volume of expanding clays in aggregates. Usually 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.

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.

202 - Where clearing limits have not been posted, established by these specifications or shown on the plans, the limits shall extend 5 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, the limits shall extend 10 feet out from the outside edge of the structure.

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- 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.
- 203b - Standing trees and snags to be cleared shall be felled within the limits established for clearing, unless otherwise authorized.
- 203c - Disposal of logs from private timber cleared within the limits established shall consist of decking at a location designated by the Authorized Officer.
- 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 as shown on the plans.
- 206a - Notwithstanding Subsections 204 and 205, clearing and grubbing debris resulting from landing construction as shown on Exhibit A, shall be placed at disposal sites and shall not be covered with excavated material. Location of disposal sites are shown and listed on the plans and/or determined by the Authorized Officer.
- 208 - Trees and limbs 4 inches in diameter and smaller, and rotten logs and similarly decomposed, degradable vegetation shall be broken down into pieces not larger than 4 inches in diameter and 3 feet in length, and shall be distributed in thin layers throughout those embankment portions which are 3 feet or more below subgrade elevation. The debris shall be placed in a manner to prevent bunching or nesting and be clear of culvert pipe and structures.
- 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.

EXCAVATION AND EMBANKMENT - 300

- 301 - This work shall consist of excavating; overhaul, placement of embankments, backfilling, leveling, ditching, grading, insloping, outsloping, crowning 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 road, temporary route, turnaround area, and landing cut sections, backfilling, leveling, grading, compaction, and other earth moving work necessary for the construction of the roadway and temporary route 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 roadway, temporary routes, turnaround areas, and landings in accordance with these specifications and conforming to the lines, grades, dimensions, and 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. Roadway and temporary route embankments of earth material shall be placed in horizontal layers not exceeding 8 inches in depth for each lift.
- 305c - Embankments formed of material containing less than 25 percent rock not larger than 8 inches in the greatest dimension shall be placed in 12-inch layers. Material containing more than 25 percent rock not larger than 12 inches in the greatest dimension shall be placed in successive layers not exceeding 18 inches in thickness. Individual rocks and boulders greater than 12 inches in diameter may be used to construct embankment layers, provided they are carefully distributed, with interstices filled with fine material to form a dense and compact mass.
- 306a - Minimum compaction for each layer of temporary route embankment and selected excavation material placed at optimum moisture shall be 6 passes over each full-width layer or fraction thereof.

- 306c - Compacted roadway materials shall have a uniform density of not less than 85 percent of the maximum density as determined by AASHTO T 99, Method A or Method D.
- 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.
- 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.
- 320 - Ditches shall conform to the slope, grade, dimensions, and shape of the required cross section shown on the plans. Roots, stumps, rocks, and other projections shall be removed to form smooth, even slopes.
- 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.

PIPE CULVERTS - 400

- 401 - This work shall consist of furnishing and installing pipe culverts in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.
- 402 - The pipe culverts shall be installed on the following roads and location locations:

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Road No.	MP/Sta
34-5-10.2 (A)	0.16
34-5-2.0 (B)	2.25
33-5-34.1	0+80, 9+00, & 12+60

- 403 - Grade culverts (cross drains) 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 shall conform to the requirements of AASHTO M 274.
- 406a - "Hugger"-type coupling bands shall only be used with annular corrugated pipe culverts, or helically corrugated pipe culverts having annular reformed ends. Annular reformed ends shall consist of 2 annular corrugations.
- 408 - Pipe 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 per table below. Foundation material shall be of uniform density throughout the length of the structure and shall be shaped to fit the pipe.

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

- 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.
- 423 - Construction of each culverts catch basin shall conform to 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. This culvert list shall be furnished to the Authorized Officer or Project Engineer.
- 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.
- 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.

RENOVATION 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.
- 501 - Work also includes the removal and disposal of slide material in accordance with these specifications.
- 502 - The existing road surface shall be scarified to its full width and to a depth of 6 inches to eliminate surface irregularities, bladed, shaped, watered, and rolled to the lines, grades, dimensions, and typical cross sections shown on the plans at the following location(s):

Road No.	From M.P.	To M.P.
34-6-2.0	0.80	1.45
34-6-1.1	0.61	0.66
34-5-9.0	0.09	0.15
34-5-10.2	0.73	0.78

- 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 103f, 103g, and 103i.
- 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 all existing drainage structures shall be cleared of vegetative debris and boulders that 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 all 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.
- 507 - Existing drainage structures 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. See table below for locations:

Road No.	MP/Sta
34-5-10.2 (A)	0.16
34-5-2.0 (B)	2.25

- 508 - Vegetation within the drainage ditches of existing roads 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.

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.

AGGREGATE SURFACE COURSE - 1200 **CRUSHED ROCK MATERIAL**

- 1201 - This work shall consist of furnishing, hauling, and placing one or more layers of crushed rock material on roadbeds approved for placing crushed rock material in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans. Material not conforming to these specifications will be rejected, and shall be removed from the road.
- 1202a - Crushed rock materials used in this work may be obtained from commercial sources selected by the Purchaser at his option and expense, providing the rock materials furnished comply with the specifications.
- 1204 - Crushed rock material shall consist of hard durable rock fragments conforming to the following gradation requirements (see table below):

AGGREGATE SURFACE COURSECRUSHED ROCK MATERIAL

Percentage by weight passing square mesh sieves

AASHTO T 11 & T 27

Sieve Designation	C	C-1	D	D-1	E	E-1
1-1/2-inch	100	100	-	-	-	-
1-inch	-	-	100	100	-	-
3/4-inch	50-90	60-90	-	70-98	100	100
1/2-inch	-	-	-	-	-	70-98
No. 4	25-50	30-55	30-60	36-60	40-75	44-70
No. 8	-	22-43	-	25-47	-	30-54
No. 30	-	11-27	-	12-31	-	15-34
No. 40	5-25	-	5-30	-	5-35	-
No. 200	2-15	3-15	3-15	3-15	2-15	3-15

- 1205 - Crushed rock material retained on the No. 4 sieve shall have a percentage of loss of not more than 35 at 500 revolutions, as determined by AASHTO T 96.
- 1206 - Crushed rock material shall show a durability value of not less than 35 as determined by AASHTO T210.
- 1207 - That portion of crushed rock material passing the No. 40 sieve, including blending filler, shall have a liquid limit of not more than 35 and a plasticity index of not less than 4 and not more than 12 as determined by AASHTO T 89 and AASHTO T 90.
- 1207a - That portion of crushed rock material passing No. 4 sieve, including blending filler, shall have a sand equivalent of not less than 35, as determined by AASHTO T 176, except where that portion exhibits a sand equivalence of less than 35, the aggregate will be accepted if it complies with the additional requirement as follows:

Sand Equivalent	Percent Passing #200 Sieve AASHTO T 27
34	9
33	8
32	7
31	6
30	5
29 or less	4

- 1209 - Shaping and compacting of roadbed shall be completed and approved in writing, prior to placing crushed rock material, in accordance to the requirements of Subsections 300 and 500. Notification for final inspection prior to rocking shall be 72 hours prior to the inspection and shall be 10 days prior to start of surfacing operations.

- 1210 - Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Compacted layers shall not exceed 4 inches in depth. When more than one layer is required, each shall be shaped, processed, compacted, and approved by the Authorized Officer before the succeeding layer is placed. Irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and then adding or removing crushed rock material until the surface is smooth and uniform.
- 1210a - Crushed rock material used to repair or reinforce soft, muddy, frozen, yielding, or rutted roadbed shall not be construed as surfacing required by this specification.
- 1212 - Each layer of crushed rock material placed, processed, and shaped as specified shall be moistened or dried to a uniform moisture content suitable for maximum compaction and compacted to full width by compacting equipment conforming to the requirements of Subsections 103f, 103g, or 103i. Minimum compaction shall be 6 passes over each full-width layer, or fraction thereof.
- 1213a - Each layer of crushed aggregate surface rock placed, processed, and shaped in accordance with these specifications shall be uniformly moistened or dried to the optimum moisture content suitable for maximum compaction and compacted to full width until a uniform density of not less than 85 percent of the maximum density is attained.

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 details 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.
- 1711 - The Purchaser shall construct sediment check dams or other approved erosion control devices conforming to the requirements, locations, and details shown on the respective exhibits and on the plans.

SOIL STABILIZATION – 1800

- 1801 - This work shall consist of seeding and mulching on designated cut, fill, 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 road construction, temporary route construction, road renovation, disturbed areas, and disposal 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: November 15 th
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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.
- 1804 - The BLM shall provide native grass/forb seed or other plant materials (plugs, waddles, bulbs, etc.) for this project.
- 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 Section 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 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.
- 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 the areas designated for treatment as specified under Subsections 1802a and 1806a, Government furnished native grass seed and Purchaser furnished mulch material at the following "Two Stage Dry" rate of application:

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.
- 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.

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 manually with hand tools, including chain saws.
- 2103 - Vegetation cut 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 sloped 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 within road surface, including shoulders and turnout areas. 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.
- 2110 - Vegetation 6 inches and smaller in diameter shall be chipped. Chips are to be scattered downslope from the roadway. **Chips are never allowed on the road surface.**
- 2117 - Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the current version of the Manual on Uniform Traffic Devices.

SLOPE STAKING – 2300

- 2301 - This work shall consist of slope staking (and referencing) road locations from notes furnished by the BLM in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.
- 2302 - Slope stakes shall consist of 1-3/4 inch x 1/4 inch smooth-finished wood slats of good quality, approximately 18 inches in length and tipped with red luminous paint.
- 2303 - Slope stakes shall be set as follows:
 - (a) A slope stake shall be set at the top of the cut slope for cut and fill and full bench sections as shown on the typical road sections sheet included in the plans.
 - (b) For through cut sections exceeding 2 feet in depth at the centerline both sides of the road shall be staked. There shall be a ditch on the downhill side of the road per the road sections and plans.
 - (c) For fill sections, only the uphill side shall be staked, unless otherwise specified.
 - (d) For through fill sections exceeding 2 feet in depth at the centerline, both sides of the road shall be staked.

(e) For balanced sections both sides of the road shall be staked.

(f) Stakes shall be set at every tangent or angle point and at every 100 foot station.

(g) The slope stakes shall be left in the slope stake location or moved back to a reference stake at the time of staking. The Purchaser shall reset the slope stakes after completion of clearing and grubbing operations, where needed.

2303a - Road prism clearing limits shall be set per the Exhibit C12-2 stake notes.

2305 - Slope stakes and reference stakes shall be marked as shown on the plans.

2306 - Locations in which the stakes are placed in heavy brush and are difficult to see shall have the brush flagged with flagging identified by the Purchaser in such a manner as to facilitate relocation of the stakes.

2307 - Culvert locations shall be identified with a stake meeting the requirements of Subsection 2302 placed alongside the reference stake or slope stake.

2308 - Culvert locations shall have widening added to the catch basin side of the roadway based on 1-1/2 times the culvert diameter.

2309 - Stationing used is "L" or final location stationing.

2310 - Stakes shall be marked with black-lumber crayon or with a permanent waterproof felt-tip marker.

2311 - Slope and reference stakes shall be set to the following standards of accuracy:

maximum allowable horizontal error	+/-	1 foot
maximum allowable vertical error	+/-	1 foot

2312 - The Purchaser shall complete the required slope staking a minimum of 5 days in advance of construction, unless otherwise agreed. Staking, and slope staking notes, shall be approved in writing by the Authorized Officer prior to right-of-way clearing, timber falling, and construction.

2313 - The Purchaser will slope stake and furnish the BLM the resulting notes in advance of construction on the proposed road, BLM 33-5-34.1 Road.

DECOMMISSIONING – 2600

2601 - Decommissioning shall consist of removing draw crossings by excavating fill material and placing in locations to form partially re-contoured roadway sections. Work includes ripping, installing water bars, placement of slash and placement of soil stabilization material, and blocking road from access by vehicles. This work is required for road acceptance under Section 18 of this contract.

2603 - Decommissioning shall be performed on all temporary routes in accordance with these specifications.

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- 2604 - Decommissioning work shall be completed after timber extraction, logging activities, and after road use.
- 2605- Where draw crossing fill material is to be excavated and removed, the finished bottom of draw profile shall be re-established to its original channel grade and resulting adjacent banks shall be re-established to their original back slope ratios.
- 2606 - Stockpiled slash shall be used to protect exposed areas created by the Purchaser's decommissioning operations described in these sections. Slash shall be uniformly spread and placed without bunching. The operation shall produce a dense, uniform mat. All slash stockpiles created by the purchaser shall be utilized for decommissioning operations. Where slash is not available or no longer remaining, exposed soil areas shall be stabilized in accordance with section 1800 – Soil Stabilization.
- 2608 - Protect areas mulched and treated with slash placement from damage by Purchaser traffic or construction equipment. Damaged areas shall be repaired by the Purchaser.
- 2609 - Access shall be blocked with barricades as shown on the typical detail sheet and at locations listed on Exhibit C14.
- 2611 - Ripping and water barring shall be done on all temporary routes, disturbed areas, and landings.
- 2612 - Draw crossing fill material shall be excavated and placed in designated locations for use in accomplishing partial re-contouring. Placement of materials shall produce well-drained, uniform re-contoured terrain. The finished draw excavation shall meet requirements of section 2605.
- 2613 - Water bars shall be installed across full width of temporary routes. Water bars shall be constructed as shown on Exhibit C8.
- 2614 - Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with section 1800 and placement of slash described in section 2606 on temporary routes, disturbed areas, landings, cut banks, fill slopes and other areas disturbed by the purchaser's decommissioning operations in accordance with these specifications and as shown in the plans.

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, or the Purchasers Representative, 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 Purchasers Representative/Contractor 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 Purchasers Representative/Contractor shall apply native grass seed and Certified Weed Free straw mulch for soil stabilization operations. BLM will furnish native grass seed, **if available**. Acquiring certified weed free straw mulch is the responsibility of the Purchasers Representative.
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. Roadside brushing cutting limits beneath or adjacent to bridges shall extend 8 feet horizontally from each side of the outermost projected line of the bridge including abutments, curbs, rails or decks. Cut brush and trees shall be removed from beneath the bridge and from the stream channel.
7. While roadside brushing, there shall be no scarring or any other damage of the tree trunk or bole allowed. All debris resulting from roadside brushing activities shall be scattered downslope. Use of Excavators for brush removal will be at the discretion of the Authorized Officer. **All culvert inlets and outlets shall be brushed for a radius of 4 feet.**
8. While roadside brushing through private industry lands, conifer trees at the edges of the cleared area (see cutting limit, Exhibit C10) shall have the branches pruned rather than being felled.
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.

ROAD MAINTENANCE SPECIFICATIONS

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

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

GENERAL - 3000

- 3001 - The Purchaser shall be required to maintain all roads listed and/or as shown in Exhibit D of this contract in accordance with Sections 3000, 3100, 3200, 3300, 3400, and 3500 of this exhibit.
- 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.
- 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, 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.
- 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 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 repair and replacement of eroded material exceeding fifteen 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 cut trees or brush encroaching on the road prism that are a result of his activities or winter damage during the contract period. Disposal of such vegetative material shall be in accordance with Section 2100 of Exhibit C.

- 3108 - The Purchaser shall avoid fouling gravel or bituminous surfaces. The Purchaser shall also avoid blading surfacing material off the running surface of the roadway. Skidding of logs on the roadway in or outside designated logging units is not authorized without prior written approval by the Authorized Officer. Repair required caused by such skidding activity is not considered maintenance and shall be repaired at the Purchaser's expense.
- 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. The Purchaser shall furnish gravel for necessary repairs at designated locations. Repair of the road(s) is not considered maintenance and shall be repaired at the Purchaser's expense.

SEASONAL MAINTENANCE - 3200

- 3201 - The Purchaser shall perform preventative maintenance at the end of Purchaser's hauling each season and during non-hauling periods which occur between other operations on the contract area. This includes requirements specified in Section 3100.
- 3202 - The purchaser shall perform and complete maintenance specified in Sections 3000, 3100, and 3200 on all roads maintained by him, prior to October 1st of each year, except as specified in Subsection 3203, after initial commencement of construction or logging operations. Thereafter, all roads shall have continuous preventive maintenance and road cleanup until suspension of seasonal operations. This includes all roads used and not used during the proceeding operating seasons.
- 3203 - The Purchaser shall complete road cleanup and maintenance, as specified in Section 3100, at the completion of logging operations on any roads located in an area separate from the area where logging activities will resume.
- 3204 - The Purchaser shall be responsible for performing post storm inspections and maintenance during the winter season to minimize erosion and potential road or watershed damage.

FINAL MAINTENANCE - 3300

- 3301 - The Purchaser shall complete final maintenance and/or damage repairs on all roads used under terms of their contract within thirty 30 calendar days following the completion of hauling and in accordance with Section 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 Section 16(b), Special Provisions, and 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.
- 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 following roads shall be watered:

Road Number	From MP	To MP
34-6-2.0 (A)	0.00	0.50
34-5-9.0 (A)	0.00	0.50
34-4-28.0 (K)	7.27	6.77
33-6-24.0 (A)	0.00	0.50

The Purchaser shall secure any necessary water permits and pay all required water fees for use of the water sources approved by the Authorized Officer.

- 3404 - The Purchaser may at his option and expense substitute magnesium chloride for water on any or all road segments listed in Subsection 3403 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 magnesium chloride dust palliatives at least 3 days prior to the work by posting warning signs at key intersections to alert users that the road is being treated. All signs shall be removed by the Purchaser within thirty days of treatment.
- 3406 - Prior to the application of magnesium chloride dust palliative, 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

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- with the magnesium chloride dust palliative material requirements specified under Subsection 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°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 - Required magnesium chloride dust palliative 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 - The Purchaser shall apply to the prepared roadbed specified under Subsection 3405, a magnesium chloride dust palliative conforming to the material requirements of Subsection 3412c. The rate of application shall be 0.5 gallons per yd² surface. A second application at the rate of 0.3 gallons per yd² shall be applied at a time designated by the Authorized Officer.

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

- 3412c - Specifications for magnesium chloride:

The material shall consist of a brine containing 29 to 35 percent magnesium 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.

DECOMMISSIONING – 3500

- 3501 - Decommissioning shall consist of removing draw crossings by excavating fill material and placing in locations to form partially recontoured roadway sections. Work includes ripping, installing water bars, placement of slash and placement of soil stabilization material, and blocking road from access by vehicles. This work is required for road acceptance under Section 18 of this contract.
- 3503 Decommissioning shall be performed on all temporary routes in accordance with these specifications.
- 3504 - Decommissioning work shall be completed after timber extraction, logging activities, and after road use.
- 3505- Where draw crossing fill material is to be excavated and removed, the finished bottom of draw profile shall be re-established to its original channel grade and resulting adjacent banks shall be re-established to their original backslope ratios.
- 3506 - Stockpiled slash shall be used to protect exposed areas created by the Purchaser's decommissioning operations described in these sections. Slash shall be uniformly spread and placed without bunching. The operation shall produce a dense, uniform mat. All slash stockpiles created by the purchaser shall be utilized for decommissioning operations. Where slash is not available or no longer remaining, exposed soil areas shall be stabilized in accordance with section 1800 – Soil Stabilization.
- 3508 - Protect areas mulched and treated with slash placement from damage by Purchaser traffic or construction equipment. Damaged areas shall be repaired by the Purchaser.
- 3509 - Access shall be blocked with barricades as shown on the typical detail sheet and at locations listed on Exhibit C14.
- 3511 - Ripping and water barring shall be done on all temporary routes, disturbed areas, and landings.
- 3512 - Draw crossing fill material shall be excavated and placed in designated locations for use in accomplishing partial recontouring. Placement of materials shall produce well-drained, uniform recontoured terrain. The finished draw excavation shall meet requirements of section 2605.
- 3513 - Water bars shall be installed across full width of temporary routes. Water bars shall be constructed as shown on Exhibit C8.
- 3514 - Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with section 1800 and placement of slash described in section 2606 on temporary routes, disturbed areas, landings, cut banks, fill slopes and other areas disturbed by the purchaser's decommissioning operations in accordance with these specifications and as shown in the plans.

R6W

R5W

R4W

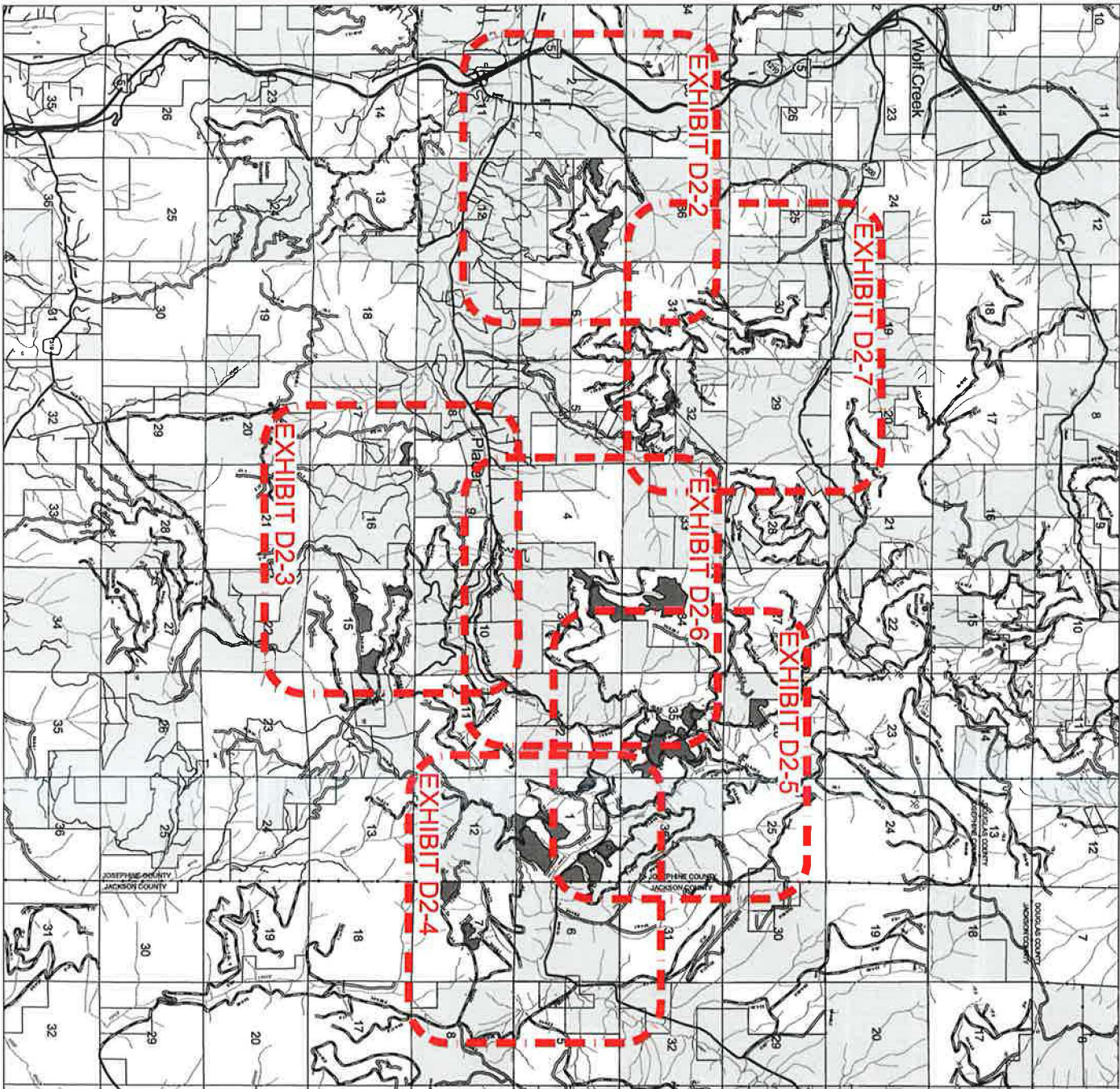


EXHIBIT D2-1

- BLM LANDS
- NON-FEDERAL LANDS
- TIMBER SALE UNITS
- BST ROAD
- ROCKED ROAD
- NATURAL SURFACE ROAD
- EX. GATE
- EX. BARRICADE
- COUNTY BOUNDARY

ALWAYS
THINK
SAFETY

T34S

T33S

REV. NO.	DESCRIPTION	DATE	APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
LOWER GRAVE TIMBER SALE OVERALL SALE AREA MAP			
DESIGNED BY:	[Signature]		
REVIEWED BY:	[Signature]		
APPROVED BY:	[Signature]		
DRAFTED BY: ELF	SCALE: 1" = 1.5 MI		
DATE: JUN 2015	SHEET: 1 OF 7		
DRAWING NO.: OR-11-9113.4-1			

EXHIBIT D2-2

- BLM LANDS
- NON-FEDERAL LANDS
- TIMBER SALE UNITS
- BST ROAD
- CRUSHED ROCKED ROAD
- NATURAL SURFACE ROAD
- EX. GATE
- EX. BARRICADE
- TEMPORARY ROUTES
- COUNTY BOUNDARY
- BLM MAINTENANCE
- PURCHASER MAINTENANCE

ALWAYS
THINK
SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.

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

LOWER GRAVE
TIMBER SALE
ROAD MAINTENANCE MAP
SALMON CREEK AREA

DESIGNED: [Signature]
REVIEWED: [Signature]
APPROVED: [Signature]
DRAFTED BY: ELF
DATE: JUN 2015
SCALE: 1" = 2,000 FT
SHEET: 2 OF 7
DRAWING NO.: OR-11-91134-1

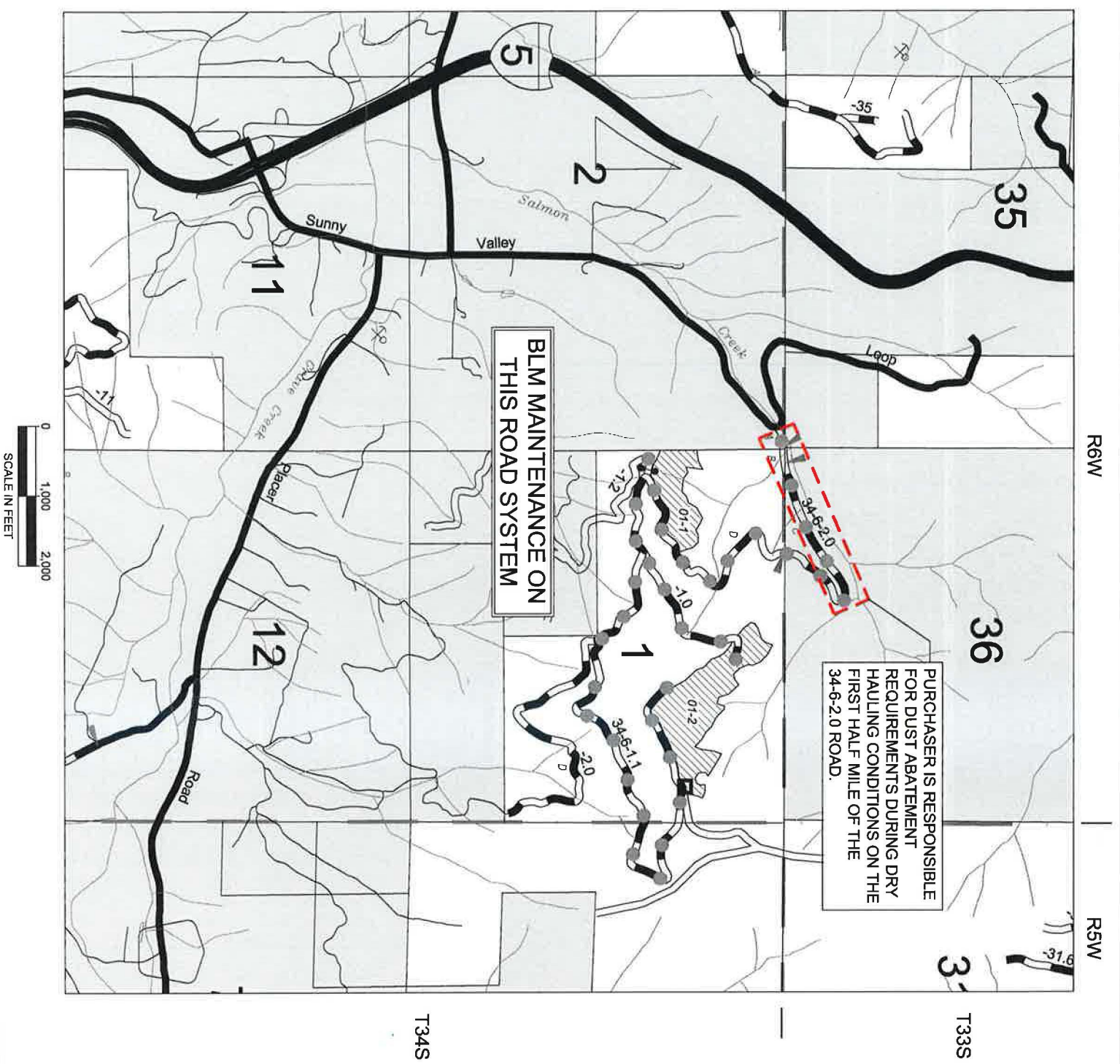


EXHIBIT D2-3

- BLM LANDS
- NON-FEDERAL LANDS
- TIMBER SALE UNITS
- BST ROAD
- CRUSHED ROCKED ROAD
- NATURAL SURFACE ROAD
- EX. GATE
- EX. BARRICADE
- TEMPORARY ROUTES
- COUNTY BOUNDARY
- BLM MAINTENANCE
- PURCHASER MAINTENANCE

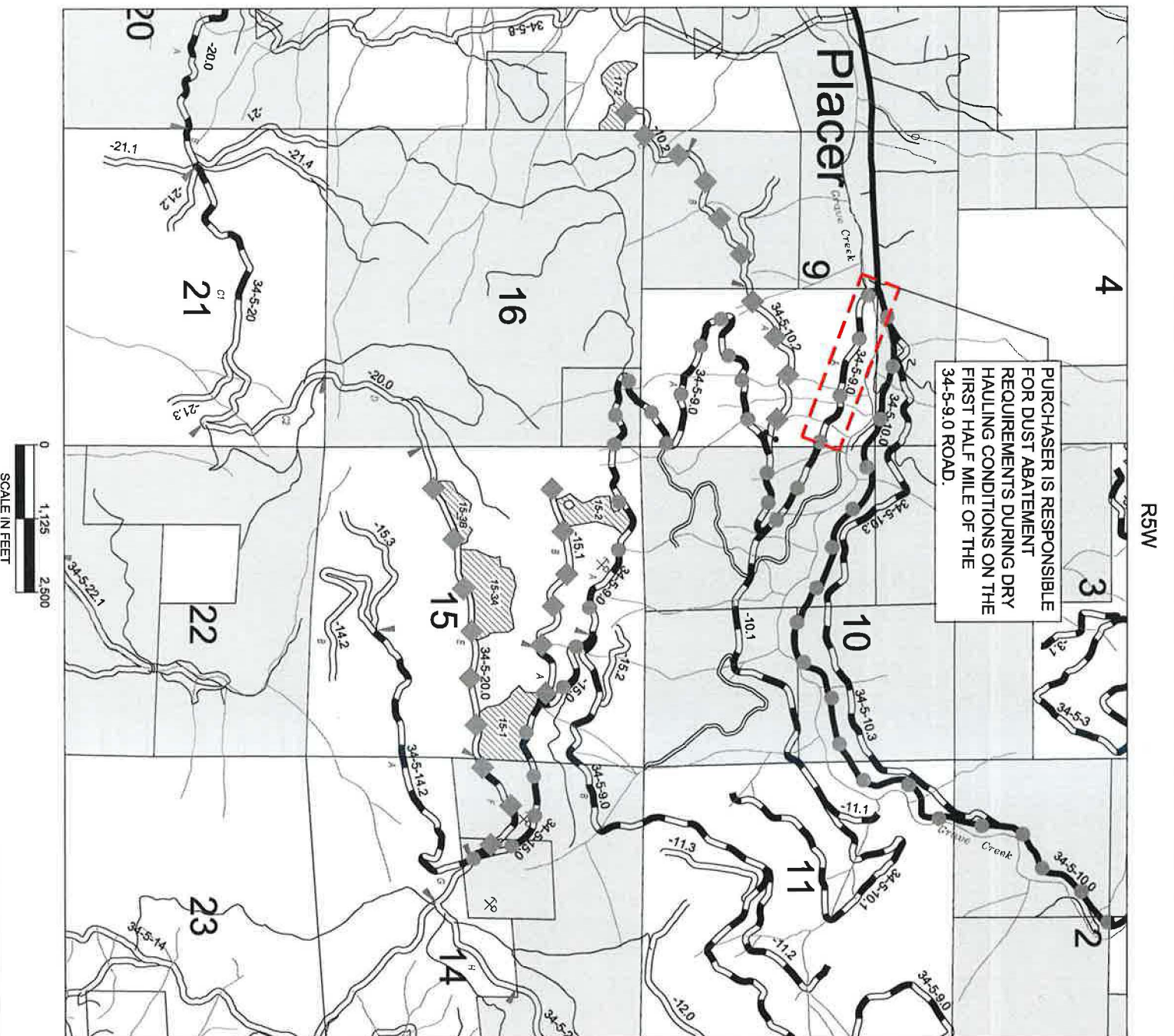
ALWAYS
THINK
SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.

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

LOWER GRAVE
TIMBER SALE
ROAD MAINTENANCE MAP
MCCOY CREEK AREA

DESIGNED: *[Signature]*
REVIEWED: *[Signature]*
APPROVED: *[Signature]*
DRAFTED BY: ELF
DATE: JUN 2015
SCALE: 1" = 2,500 FT
SHEET: 3 OF 7
DRAWING NO.: OR-11-9113.4-1



T34S

RAW

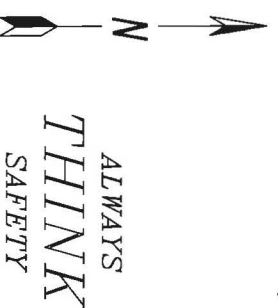
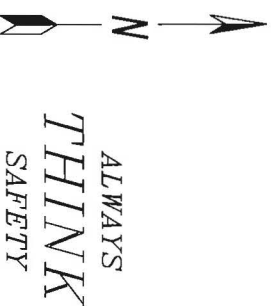


EXHIBIT D2-5

- BLM LANDS
- NON-FEDERAL LANDS
- TIMBER SALE UNITS
- BST ROAD
- CRUSHED ROCKED ROAD
- NATURAL SURFACE ROAD
- EX. GATE
- EX. BARRICADE
- TEMPORARY ROUTES
- COUNTY BOUNDARY
- BLM MAINTENANCE
- PURCHASER MAINTENANCE



REV. NO.	DESCRIPTION	DATE	APPROV.

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

LOWER GRAVE TIMBER SALE ROAD MAINTENANCE MAP CLARK CREEK AREA

DESIGNED: *[Signature]*
REVIEWED: *[Signature]*
APPROVED: *[Signature]*
DRAFTED BY: ELF
DATE: JUN 2015
SCALE: 1" = 2,000 FT
SHEET: 5 OF 7
DRAWING NO.: OR-11-91134-1

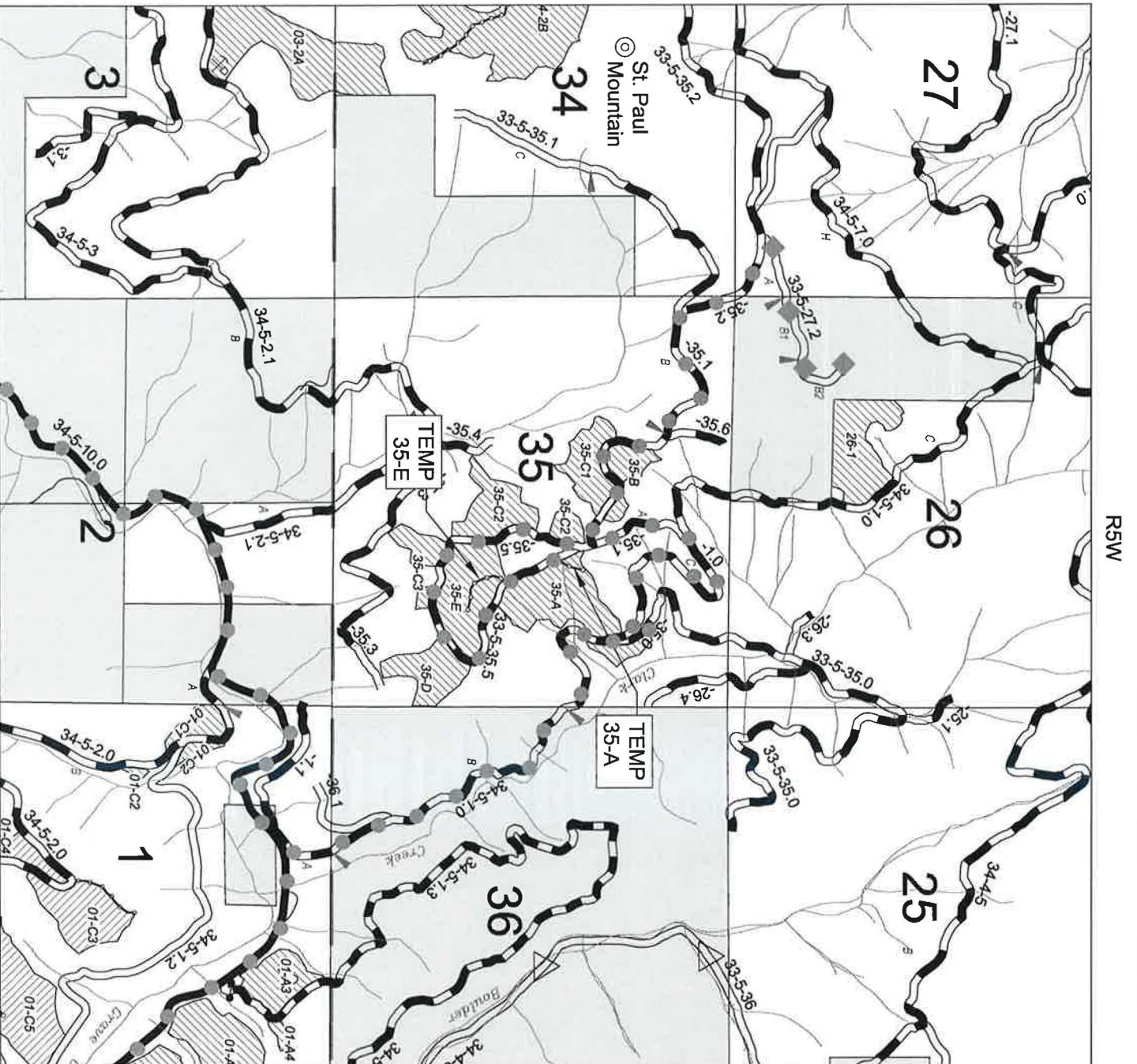
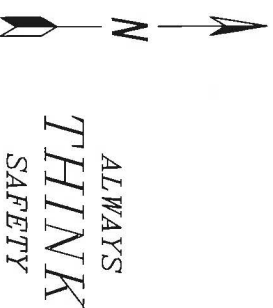


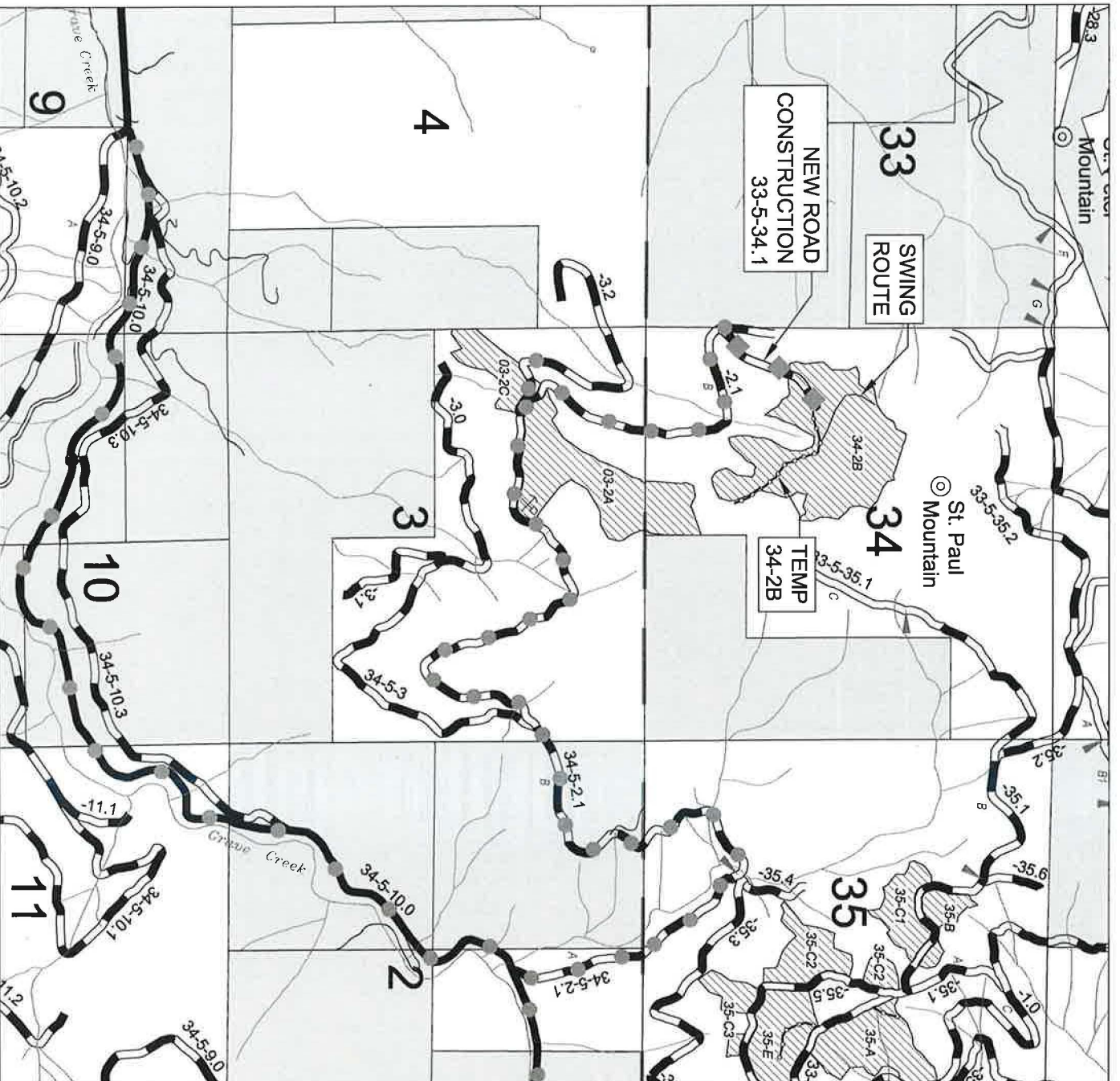
EXHIBIT D2-6

- BLM LANDS
- NON-FEDERAL LANDS
- TIMBER SALE UNITS
- BST ROAD
- CRUSHED ROCKED ROAD
- NATURAL SURFACE ROAD
- EX. GATE
- EX. BARRICADE
- TEMPORARY ROUTES
- COUNTY BOUNDARY
- BLM MAINTENANCE
- PURCHASER MAINTENANCE



T34S

T33S



REV. NO.	DESCRIPTION	DATE	APPROV.

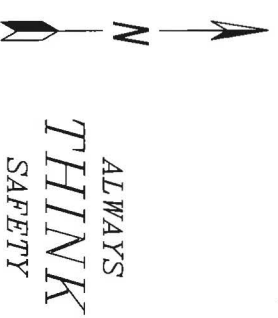
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

LOWER GRAVE
TIMBER SALE
ROAD MAINTENANCE MAP
EASTMAN GULCH AREA

DESIGNED: *Steven T. C.*
 REVIEWED: *Steven T. C.*
 APPROVED: *Steven T. C.*
 DRAFTED BY: ELF
 DATE: JUN 2015
 SCALE: 1" = 2,000 FT
 SHEET: 6 OF 7
 DRAWING NO.: OR-11-9134-1

EXHIBIT D2-7

- BLM LANDS
- NON-FEDERAL LANDS
- TIMBER SALE UNITS
- BST ROAD
- CRUSHED ROCKED ROAD
- NATURAL SURFACE ROAD
- EX. GATE
- EX. BARRICADE
- TEMPORARY ROUTES
- COUNTY BOUNDARY
- BLM MAINTENANCE
- PURCHASER MAINTENANCE



REV. NO.	DESCRIPTION	DATE	APPROV.

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

DESIGNED: _____

REVIEWED: _____

APPROVED: *[Signature]*

DRAFTED BY: ELF

DATE: JUN 2015

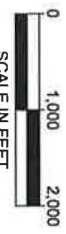
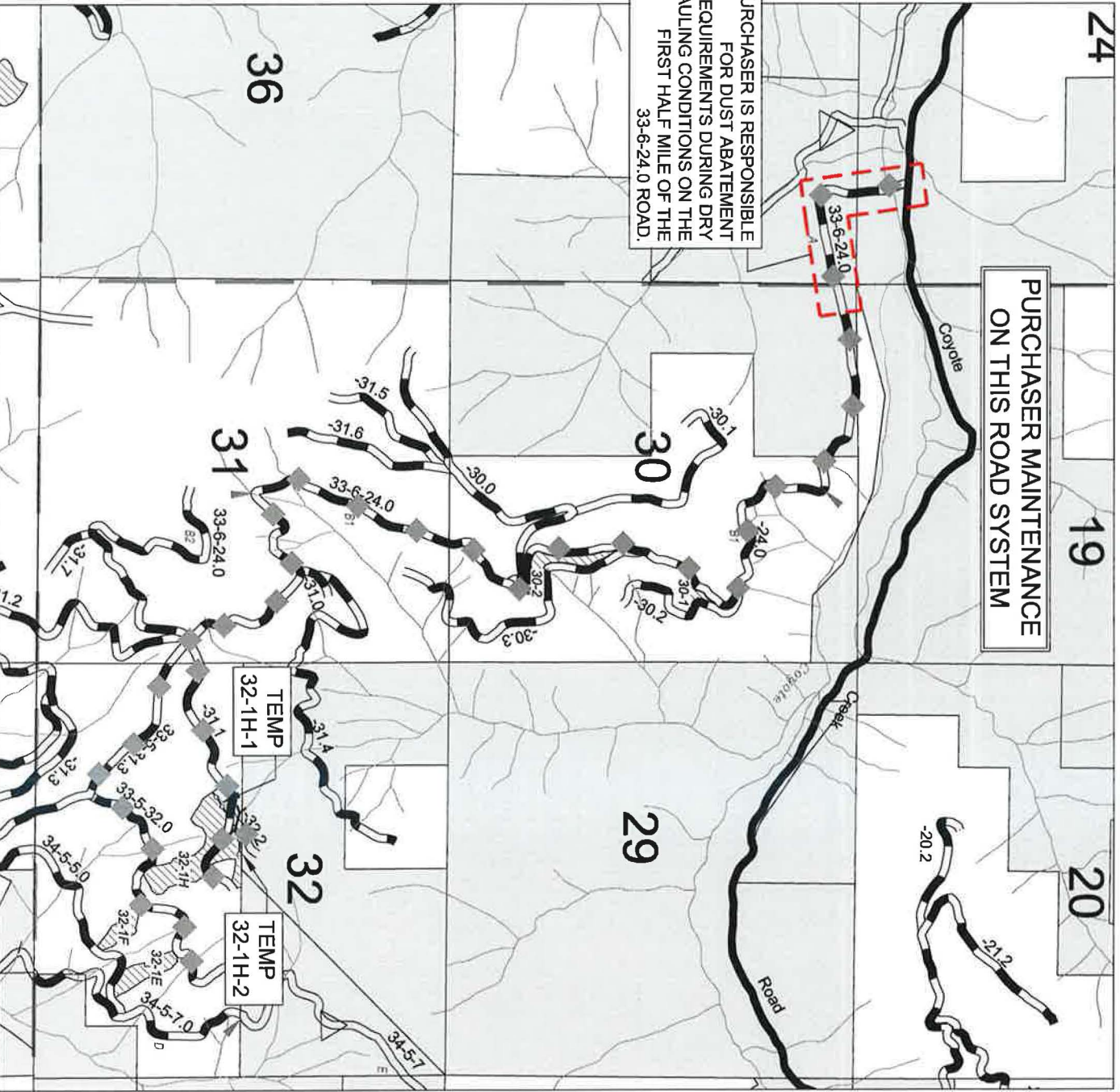
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SHEET: 7 OF 7

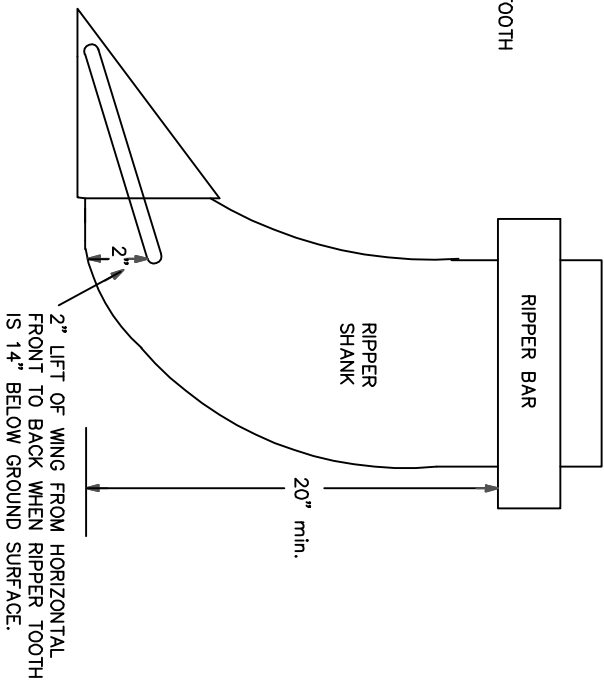
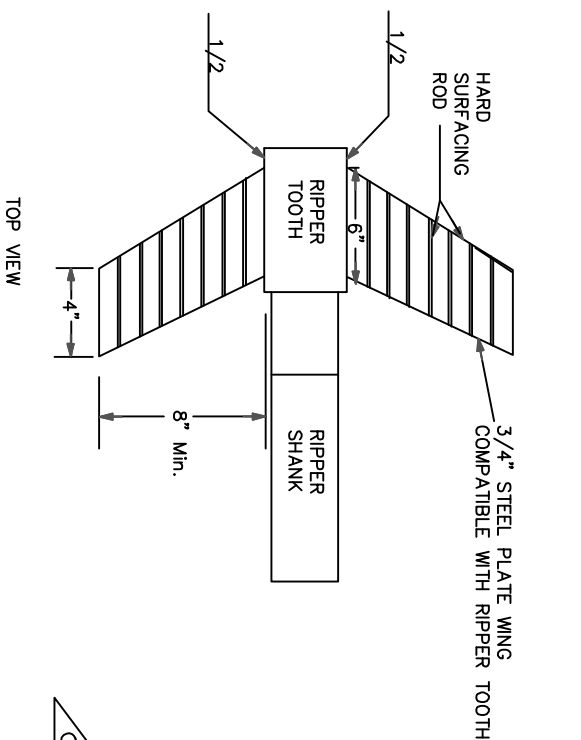
DRAWING NO.: OR-11-9113.4-1

PURCHASER MAINTENANCE ON THIS ROAD SYSTEM

PURCHASER IS RESPONSIBLE FOR DUST ABATEMENT REQUIREMENTS DURING DRY HAULING CONDITIONS ON THE FIRST HALF MILE OF THE 33-6-24.0 ROAD.

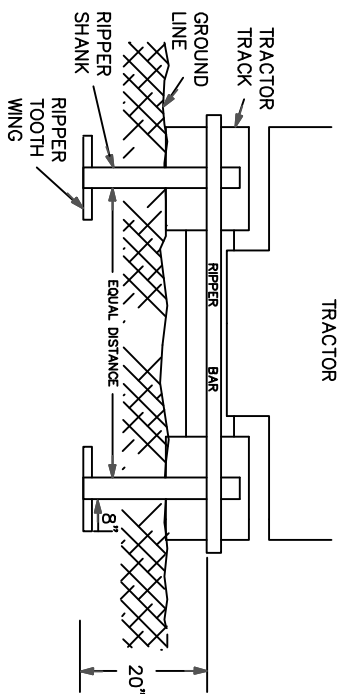


T34S T33S



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.

WING RIPPER DETAIL

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

DESIGNED _____

REVIEWED _____

APPROVED _____

DATE: October 2009

DRAWN: JWR

DRAWING NO.

SCALE: NONE

SHEET 1 OF 1



United States of America
Department of the Interior
Bureau Of Land Management
Timber Sale Appraisal

District : Medford
Sale Name : Lower Grave
Sale Date : 07/23/2015
Appraisal Method : 16' MBF

Contract # : ORM07-TS-15-3
Job File # : M11313
Master Unit : Josephine
Planning Unit : Grants Pass

Contents

Timber Sale Summary	2
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Prospectus	6
Exhibit B	8
Volume Summary	17
Stump to Truck Costs	26
Other Allowances Costs	27
Consolidated Comments	28

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Timber - Sale - Summary**

Medford
Lower Grave
ORM07-TS-15-3

Legal Description

Forest Type	Township	Range	Section	Subdivision
O&C	T33S	5W	26	NE1/4SW1/4, NW1/4SE1/4
O&C	T33S	5W	30	SE1/4NE1/4, SE1/4
O&C	T33S	5W	32	NE1/4SW1/4, SE1/4
O&C	T33S	5W	34	S1/2NW1/4, SW1/4
O&C	T33S	5W	35	E1/2NE1/4, SW1/4NE1/4, E1/2NW1/4, NE1/4SW1/4, SE1/4
O&C	T34S	4W	7	Unnumbered lots in W1/2SW1/4, SW1/4NE1/4, SE1/4NW1/4, NE1/4SW1/4, NW1/4SE1/4
O&C	T34S	5W	1	Lot 1, 2, S1/2NE1/4, W1/2NW1/4, N1/2SW1/4, SE1/4SW1/4, SE1/4
O&C	T34S	5W	3	Unnumbered lot in NW1/4NE1/4, unnumbered lots in N1/2NW1/4, S1/2NW1/4
O&C	T34	5W	15	S1/2NE1/4, NW1/4, N1/2SW1/4
O&C	T34	6W	1	Unnumbered lots in N1/2NE1/4, unnumbered lots in N1/2NW1/4, S1/2NW1/4, S1/2N

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Cutting Volume (16' MBF)

Unit	DF	IC	PP	SP	WF	WH			Total	Regen	Partial	ROW
1-1	210	7	2	3	0	0			222	0	16	0
1-2	581	1			1				583	0	34	0
1-A	329	11	3	5	0	0			348	0	25	0
1-A2	210	7	2	3	0	0			222	0	16	0
1-A3	145	5	1	2	0	0			153	0	11	0
1-A4	26	1	0	0	0	0			27	0	2	0
1-C1	79	3	1	1	0	0			84	0	6	0
1-C2	53	2	1	1	0	0			57	0	4	0
1-C3	184	6	2	3	0	0			195	0	14	0
1-C4	210	7	2	3	0	0			222	0	16	0
1-C5	565	19	5	8	0	1			598	0	43	0
15-1	141	1	1						143	0	19	0
15-2	233	15	19	4	4				275	11	0	0
15-3A	170	1	1						172	0	23	0
15-3B	52	0	0						52	0	7	0
17-2	67	1	0						68	0	9	0
26-1	276	9	3	4	0	0			292	0	21	0
3-2A	784	53	63	15	15				930	37	0	0
3-2C	254	16	20	5	5				300	12	0	0
30-1	13	0	0	0	0	0			13	0	1	0
30-2	92	3	1	1	0	0			97	0	7	0
32-1E	68	0			0				68	0	4	0
32-1F	51	0			0				51	0	3	0
32-1H	273	1			1				275	0	16	0
34-2B	841	28	8	12	1	2			892	0	64	0
34-2D	80	1	0						81	0	7	0
35-A	368	12	4	5	0	0			389	0	28	0
35-B	120	0			0				120	0	7	0
35-C1	205	0			1				206	0	12	0
35-C2	290	1			1				292	0	17	0
35-C3	120	0			0				120	0	7	0
35-D	222	0			1				223	0	13	0
35-E	410	1			1				412	0	24	0
7-2	119	1	0						120	0	16	0
7-2C	141	1	1						143	0	19	0
RW-1	8	2	0						10	0	0	1
RW-2	2	1							3	0	0	1
Totals	7,992	217	140	75	31	3			8,458	60	511	2

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Logging Costs per 16' MBF

Stump to Truck	\$	232.56
Transportation	\$	38.97
Road Construction	\$	22.82
Road Amortization	\$	0.78
Road Maintenance	\$	9.97

Other Allowances :

Fuels Treatment	\$ 15.78
Misc	\$ 0.08
Other Costs	\$ 5.85
Total Other Allowances :	\$ 21.71

Total Logging Costs per 16' MBF

\$ 326.80

Utilization Centers

Center #1 : Glendale, OR 22 Miles
Center #2 0 Miles
Weighted distance to Utilization Centers 22

Length of Contract

Cutting and Removal Time 36 Months
Personal Property Removal Time 1 Months

Profit & Risk

Total Profit & Risk 11 %
Basic Profit & Risk 11 % + Additional Risk 0 %
Back Off 0 %

Tract Features

Avg Log Douglas-fir : 58 bf All : 58 bf
Recovery Douglas-fir : 90 % All : 90 %
Salvage Douglas-fir : 0 % All : 0 %
Avg Volume (16' MBF per Acre) 15
Avg Yarding Slope 50 %
Avg Yarding Distance (feet) 350
Avg Age 80
Volume Cable 66 %
Volume Ground 21 %
Volume Aerial 12 %
Road Construction Stations 0.00
Road Improvement Stations 0.00
Road Renovation Stations 0.00
Road Decommission Stations 0.00

Cruise

Cruised By Caulfield, Cannon
Date 02/01/2015
Type of Cruise PCMTRE
County, State Josephine, OR

Net Volume

Green (16' MBF) 8,458
Salvage (16' MBF) 0
Douglas-fir Peeler 0
Export Volume 0
Scaling Allowance (\$0.75 per 16' MBF) \$6,343.50

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Stumpage Summary

Stumpage Computation (16' MBF)

Species	Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Cost	(+) Marginal Log Value	(-) Back Off	Appraised Price	Appraised Value
DF	47,968	7,992	\$ 469.51	\$ 51.65	\$ 326.80			\$ 91.10	\$ 728,071.20
IC	3,874	217	\$ 453.89	\$ 49.93	\$ 326.80			\$ 77.20	\$ 16,752.40
PP	553	140	\$ 333.44	\$ 36.68	\$ 326.80			\$ 33.30	\$ 4,662.00
SP	231	75	\$ 354.44	\$ 38.99	\$ 326.80			\$ 35.40	\$ 2,655.00
WF	344	31	\$ 334.53	\$ 36.80	\$ 326.80			\$ 33.50	\$ 1,038.50
WH	23	3	\$ 361.00	\$ 39.71	\$ 326.80			\$ 36.10	\$ 108.30
Totals	52,993	8,458							\$ 753,287.40

Log Code by Percent

Species	Code #1	Code #2	Code #3	Code #4	Code #5	Code #6
White Fir				22.0	68.0	10.0
Incense-cedar				24.0	46.0	30.0
Sugar Pine			7.0	64.0	26.0	3.0
Ponderosa Pine				53.0	43.0	4.0
Douglas-fir			2.0	44.0	46.0	8.0
Western Hemlock					100.0	

Marginal Log Volume

Species	Grade #7	Grade #8
White Fir		
Incense-cedar		
Sugar Pine		
Ponderosa Pine		
Douglas-fir		
Western Hemlock		

Appraised By : Caulfield, Dave

Date : 06/25/2015

Area Approval By :

Date :

District Approval By :

Date :

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Prospectus

Appraisal Method : (16' MBF)

Species	Trees	Net Volume 16' MBF	Net Volume 32' MBF	Net Volume CCF
Douglas-fir	47,968	7,992	6,444	
Incense-cedar	3,874	217	171	
Ponderosa Pine	553	140	108	
Sugar Pine	231	75	65	
White Fir	344	31	24	
Western Hemlock	23	3	3	
Total	52,993	8,458	6,815	

All Species

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
9,446	52,993	178	13.9	9,291	159,544	58

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
159,544	3,466	163,010	3.1	8,458	9,446	90 %

Douglas-fir

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
8,886	47,968	185	13.9	8,759	149,897	58

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
149,897	2,804	152,701	3.2	7,992	8,886	90 %

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Cutting Areas

Unit	Regen Acres	Partial Cut Acres	Right Of Way Acres	Total Acres
1-1		16		16
1-2		34		34
1-A		25		25
1-A2		16		16
1-A3		11		11
1-A4		2		2
1-C1		6		6
1-C2		4		4
1-C3		14		14
1-C4		16		16
1-C5		43		43
15-1		19		19
15-2	11			11
15-3A		23		23
15-3B		7		7
17-2		9		9
26-1		21		21
3-2A	37			37
3-2C	12			12
30-1		1		1
30-2		7		7
32-1E		4		4
32-1F		3		3
32-1H		16		16
34-2B		64		64
34-2D		7		7
35-A		28		28
35-B		7		7
35-C1		12		12
35-C2		17		17
35-C3		7		7
35-D		13		13
35-E		24		24
7-2		16		16
7-2C		19		19
RW-1			1	1
RW-2			1	1
Totals :	60	511	2	573

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Exhibit B

The following estimates and calculations of timber sold are made solely as an administrative aid for determining: (1) Adjustments made or credits given in accordance with Sections 6, 9, or 11; (2) When payments are due; and (3) Value of timber subject to any special bonding provisions. The value of timber will be determined by multiplying the value per acre as shown below, times the amount of acreage as determined by the authorized officer, which has been cut or removed or designated for taking.

Except provided in Section 2, Purchaser shall be liable for the total purchase price even though the quantity of timber actually cut or removed or designated for taking is less than the estimated volume or quantity shown. Cutting areas are shown on the Exhibit A.

Sale Totals (16' MBF)

Species	Net Volume	Bid Price	Sale SubTotal
Douglas-fir	7,992		
Incense-cedar	217		
Ponderosa Pine	140		
Sugar Pine	75		
White Fir	31		
Western Hemlock	3		
Sale Totals	8,458		

Unit Details (16' MB)

Unit	1-1	16 Acres	Value per Acre : \$0.00
Species	Net Volume	Bid Price	Species Value
Douglas-fir	210		
Incense-cedar	7		
Ponderosa Pine	2		
Sugar Pine	3		
Western Hemlock			
White Fir			
Unit Totals	222		

Unit	1-2	34 Acres	Value per Acre : \$0.00
Species	Net Volume	Bid Price	Species Value
Douglas-fir	581		
Incense-cedar	1		
White Fir	1		
Unit Totals	583		

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Unit 15-1 19 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	141		
Incense-cedar	1		
Ponderosa Pine	1		
Unit Totals	143		

Unit 15-2 11 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	233		
Incense-cedar	15		
Ponderosa Pine	19		
Sugar Pine	4		
White Fir	4		
Unit Totals	275		

Unit 15-3A 23 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	170		
Incense-cedar	1		
Ponderosa Pine	1		
Unit Totals	172		

Unit 15-3B 7 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	52		
Incense-cedar			
Ponderosa Pine			
Unit Totals	52		

Unit 17-2 9 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	67		
Incense-cedar	1		
Ponderosa Pine			
Unit Totals	68		

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Medford
Lower Grave
ORM07-TS-15-3

Unit 1-A 25 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	329		
Incense-cedar	11		
Ponderosa Pine	3		
Sugar Pine	5		
Western Hemlock			
White Fir			
Unit Totals	348		

Unit 1-A2 16 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	210		
Incense-cedar	7		
Ponderosa Pine	2		
Sugar Pine	3		
Western Hemlock			
White Fir			
Unit Totals	222		

Unit 1-A3 11 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	145		
Incense-cedar	5		
Ponderosa Pine	1		
Sugar Pine	2		
Western Hemlock			
White Fir			
Unit Totals	153		

Unit 1-A4 2 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	26		
Incense-cedar	1		
Ponderosa Pine			
Sugar Pine			
Western Hemlock			
White Fir			
Unit Totals	27		

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Unit 1-C1 6 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	79		
Incense-cedar	3		
Ponderosa Pine	1		
Sugar Pine	1		
Western Hemlock			
White Fir			
Unit Totals	84		

Unit 1-C2 4 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	53		
Incense-cedar	2		
Ponderosa Pine	1		
Sugar Pine	1		
Western Hemlock			
White Fir			
Unit Totals	57		

Unit 1-C3 14 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	184		
Incense-cedar	6		
Ponderosa Pine	2		
Sugar Pine	3		
Western Hemlock			
White Fir			
Unit Totals	195		

Unit 1-C4 16 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	210		
Incense-cedar	7		
Ponderosa Pine	2		
Sugar Pine	3		
Western Hemlock			
White Fir			
Unit Totals	222		

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Unit 1-C5 43 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	565		
Incense-cedar	19		
Ponderosa Pine	5		
Sugar Pine	8		
Western Hemlock	1		
White Fir			
Unit Totals	598		

Unit 26-1 21 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	276		
Incense-cedar	9		
Ponderosa Pine	3		
Sugar Pine	4		
Western Hemlock			
White Fir			
Unit Totals	292		

Unit 30-1 1 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	13		
Incense-cedar			
Ponderosa Pine			
Sugar Pine			
Western Hemlock			
White Fir			
Unit Totals	13		

Unit 30-2 7 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	92		
Incense-cedar	3		
Ponderosa Pine	1		
Sugar Pine	1		
Western Hemlock			
White Fir			
Unit Totals	97		

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Unit 32-1E 4 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	68		
Incense-cedar			
White Fir			
Unit Totals	68		

Unit 32-1F 3 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	51		
Incense-cedar			
White Fir			
Unit Totals	51		

Unit 32-1H 16 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	273		
Incense-cedar	1		
White Fir	1		
Unit Totals	275		

Unit 3-2A 37 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	784		
Incense-cedar	53		
Ponderosa Pine	63		
Sugar Pine	15		
White Fir	15		
Unit Totals	930		

Unit 3-2C 12 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	254		
Incense-cedar	16		
Ponderosa Pine	20		
Sugar Pine	5		
White Fir	5		
Unit Totals	300		

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Unit 34-2B 64 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	841		
Incense-cedar	28		
Ponderosa Pine	8		
Sugar Pine	12		
Western Hemlock	2		
White Fir	1		
Unit Totals	892		

Unit 34-2D 7 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	80		
Incense-cedar	1		
Ponderosa Pine			
Unit Totals	81		

Unit 35-A 28 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	368		
Incense-cedar	12		
Ponderosa Pine	4		
Sugar Pine	5		
Western Hemlock			
White Fir			
Unit Totals	389		

Unit 35-B 7 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	120		
Incense-cedar			
White Fir			
Unit Totals	120		

Unit 35-C1 12 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	205		
Incense-cedar			
White Fir	1		
Unit Totals	206		

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Unit 35-C2 17 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	290		
Incense-cedar	1		
White Fir	1		
Unit Totals	292		

Unit 35-C3 7 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	120		
Incense-cedar			
White Fir			
Unit Totals	120		

Unit 35-D 13 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	222		
Incense-cedar			
White Fir	1		
Unit Totals	223		

Unit 35-E 24 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	410		
Incense-cedar	1		
White Fir	1		
Unit Totals	412		

Unit 7-2 16 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	119		
Incense-cedar	1		
Ponderosa Pine			
Unit Totals	120		

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Unit 7-2C 19 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	141		
Incense-cedar	1		
Ponderosa Pine	1		
Unit Totals	143		

Unit RW-1 1 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	8		
Incense-cedar	2		
Ponderosa Pine			
Unit Totals	10		

Unit RW-2 1 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	2		
Incense-cedar	1		
Unit Totals	3		

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Volume Summary**

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Sale Volume Totals

573 Acres 60 Regen 511 Partial 2 R/W 37 Units

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Net	16' MBF GM	16' MBF Gross	32' MBF Net	32' MBF GM	32' MBF Gross	CCF Net	CCF GM	CCF Gross
Douglas-fir	47,968	149,897	2,804	7,992	8,759	8,886	6,444	7,057	7,162	0	0	0
Incense-cedar	3,874	6,031	327	217	240	247	171	188	195	0	0	0
Ponderosa Pine	553	1,762	212	140	166	172	108	128	133	0	0	0
Sugar Pine	231	971	100	75	88	101	65	75	85	0	0	0
White Fir	344	812	0	31	34	34	24	26	26	0	0	0
Western Hemlock	23	71	23	3	4	6	3	3	5	0	0	0
Totals	52,993	159,544	3,466	8,458	9,291	9,446	6,815	7,477	7,606	0	0	0

Unit Totals

Unit : 1-1 16 Acres 0 Regen 16 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,704	5,094	76	228	226	210
Incense-cedar	144	223	16	8	8	7
Sugar Pine	13	52	5	4	3	3
Ponderosa Pine	10	27	12	3	2	2
Western Hemlock	1	4	1			
White Fir	8	8				
Unit Totals	1,880	5,408	110	243	239	222

Unit : 1-2 34 Acres 0 Regen 34 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	2,444	8,768	32	645	642	581
White Fir	4	18		2	2	1
Incense-cedar	49	49		1	1	1
Unit Totals	2,497	8,835	32	648	645	583

Unit : 1-A 25 Acres 0 Regen 25 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	2,662	7,959	119	356	354	329
Incense-cedar	224	348	25	12	12	11
Sugar Pine	20	82	8	6	5	5

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Ponderosa Pine	16	42	19	4	4	3
Western Hemlock	2	6	2	1		
White Fir	12	12				
Unit Totals	2,936	8,449	173	379	375	348

Unit : 1-A2 16 Acres 0 Regen 16 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,704	5,094	76	228	226	210
Incense-cedar	144	223	16	8	8	7
Sugar Pine	13	52	5	4	3	3
Ponderosa Pine	10	27	12	3	2	2
Western Hemlock	1	4	1			
White Fir	8	8				
Unit Totals	1,880	5,408	110	243	239	222

Unit : 1-A3 11 Acres 0 Regen 11 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,171	3,502	52	157	156	145
Incense-cedar	99	153	11	5	5	5
Ponderosa Pine	7	18	8	2	2	1
Sugar Pine	9	36	4	3	2	2
Western Hemlock	1	3	1			
White Fir	5	5				
Unit Totals	1,292	3,717	76	167	165	153

Unit : 1-A4 2 Acres 0 Regen 2 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	213	637	10	28	28	26
Incense-cedar	18	28	2	1	1	1
White Fir	1	1				
Western Hemlock		1				
Sugar Pine	2	7	1	1		
Ponderosa Pine	1	3	2			
Unit Totals	235	677	15	30	29	27

Unit : 1-C1 6 Acres 0 Regen 6 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	639	1,910	29	85	85	79
Incense-cedar	54	84	6	3	3	3

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Ponderosa Pine	4	10	5	1	1	1
Sugar Pine	5	20	2	2	1	1
Western Hemlock	1	2	1			
White Fir	3	3				
Unit Totals	706	2,029	43	91	90	84

Unit : 1-C2 4 Acres 0 Regen 4 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	426	1,273	19	57	57	53
Incense-cedar	36	56	4	2	2	2
Sugar Pine	3	13	1	1	1	1
Ponderosa Pine	3	7	3	1	1	1
Western Hemlock		1				
White Fir	2	2				
Unit Totals	470	1,352	27	61	61	57

Unit : 1-C3 14 Acres 0 Regen 14 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,491	4,457	67	199	198	184
Incense-cedar	126	195	14	7	7	6
Sugar Pine	11	46	5	3	3	3
Ponderosa Pine	9	23	11	2	2	2
Western Hemlock	1	4	1			
White Fir	7	7				
Unit Totals	1,645	4,732	98	211	210	195

Unit : 1-C4 16 Acres 0 Regen 16 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,704	5,094	76	228	226	210
Incense-cedar	144	223	16	8	8	7
Sugar Pine	13	52	5	4	3	3
Ponderosa Pine	10	27	12	3	2	2
Western Hemlock	1	4	1			
White Fir	8	8				
Unit Totals	1,880	5,408	110	243	239	222

Unit : 1-C5 43 Acres 0 Regen 43 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	4,579	13,690	204	612	608	565

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Incense-cedar	386	599	43	21	20	19
Sugar Pine	34	140	14	11	9	8
Ponderosa Pine	28	72	33	7	6	5
Western Hemlock	4	11	4	1	1	1
White Fir	21	21				
Unit Totals	5,052	14,533	298	652	644	598

Unit : 15-1 19 Acres 0 Regen 19 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,163	3,395	16	156	153	141
Incense-cedar	45	61		1	1	1
Ponderosa Pine	29	29		1	1	1
Unit Totals	1,237	3,485	16	158	155	143

Unit : 15-2 11 Acres 11 Regen 0 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	541	1,768	205	279	266	233
Ponderosa Pine	42	212		23	23	19
Incense-cedar	178	307	8	17	17	15
Sugar Pine	2	14	2	6	6	4
White Fir	35	111		4	4	4
Unit Totals	798	2,412	215	329	316	275

Unit : 15-3A 23 Acres 0 Regen 23 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,408	4,110	20	188	185	170
Incense-cedar	54	74		2	2	1
Ponderosa Pine	35	35		1	1	1
Unit Totals	1,497	4,219	20	191	188	172

Unit : 15-3B 7 Acres 0 Regen 7 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	429	1,251	6	57	56	52
Incense-cedar	17	23				
Ponderosa Pine	11	11				
Unit Totals	457	1,285	6	57	56	52

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Unit : 17-2 9 Acres 0 Regen 9 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	551	1,608	8	74	72	67
Incense-cedar	21	29		1	1	1
Ponderosa Pine	14	14				
Unit Totals	586	1,651	8	75	73	68

Unit : 26-1 21 Acres 0 Regen 21 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	2,236	6,686	100	299	297	276
Incense-cedar	188	292	21	10	10	9
Sugar Pine	17	69	7	5	4	4
Ponderosa Pine	14	35	16	3	3	3
Western Hemlock	2	5	2			
White Fir	10	10				
Unit Totals	2,467	7,097	146	317	314	292

Unit : 3-2A 37 Acres 37 Regen 0 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,819	5,945	691	939	895	784
Ponderosa Pine	142	712		74	75	63
Incense-cedar	600	1,031	28	61	60	53
Sugar Pine	7	47	7	19	22	15
White Fir	119	374		17	17	15
Unit Totals	2,687	8,109	726	1,110	1,069	930

Unit : 3-2C 12 Acres 12 Regen 0 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	590	1,928	224	305	290	254
Ponderosa Pine	46	231		25	25	20
Incense-cedar	194	334	9	19	19	16
Sugar Pine	2	15	2	7	6	5
White Fir	39	121		5	5	5
Unit Totals	871	2,629	235	361	345	300

Unit : 30-1 1 Acres 0 Regen 1 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	106	318	5	14	14	13

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Sugar Pine	1	3				
Western Hemlock						
Ponderosa Pine	1	2	1			
Incense-cedar	9	14	1			
White Fir						
Unit Totals	117	337	7	14	14	13

Unit : 30-2 7 Acres 0 Regen 7 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	745	2,229	33	100	99	92
Incense-cedar	63	97	7	3	3	3
Ponderosa Pine	5	12	5	1	1	1
Sugar Pine	6	23	2	2	1	1
Western Hemlock	1	2	1			
White Fir	3	3				
Unit Totals	823	2,366	48	106	104	97

Unit : 32-1E 4 Acres 0 Regen 4 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	288	1,031	4	76	76	68
Incense-cedar	6	6				
White Fir	1	2				
Unit Totals	295	1,039	4	76	76	68

Unit : 32-1F 3 Acres 0 Regen 3 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	216	774	3	57	57	51
Incense-cedar	4	4				
White Fir		2				
Unit Totals	220	780	3	57	57	51

Unit : 32-1H 16 Acres 0 Regen 16 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,150	4,126	15	303	302	273
Incense-cedar	23	23		1	1	1
White Fir	2	8		1	1	1
Unit Totals	1,175	4,157	15	305	304	275

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Unit : 34-2B 64 Acres 0 Regen 64 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	6,816	20,375	304	911	908	841
Incense-cedar	574	891	64	32	30	28
Sugar Pine	51	209	21	16	13	12
Ponderosa Pine	42	107	49	11	9	8
Western Hemlock	6	17	6	3	3	2
White Fir	31	31		1	1	1
Unit Totals	7,520	21,630	444	974	964	892

Unit : 34-2D 7 Acres 0 Regen 7 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	250	952	156	90	84	80
Incense-cedar	14	25	3	1	1	1
Ponderosa Pine	2	4	2			
Unit Totals	266	981	161	91	85	81

Unit : 35-A 28 Acres 0 Regen 28 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	2,982	8,914	133	399	396	368
Incense-cedar	251	390	28	14	13	12
Sugar Pine	22	91	9	7	6	5
Ponderosa Pine	18	47	21	5	4	4
White Fir	14	14				
Western Hemlock	2	7	2	1		
Unit Totals	3,289	9,463	193	426	419	389

Unit : 35-B 7 Acres 0 Regen 7 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	503	1,805	7	133	132	120
Incense-cedar	10	10				
White Fir	1	4				
Unit Totals	514	1,819	7	133	132	120

Unit : 35-C1 12 Acres 0 Regen 12 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	863	3,094	11	228	227	205
White Fir	2	6		1	1	1

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Incense-cedar	17	17				
Unit Totals	882	3,117	11	229	228	206

Unit : 35-C2 17 Acres 0 Regen 17 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,222	4,384	16	322	321	290
Incense-cedar	25	25		1	1	1
White Fir	2	9		1	1	1
Unit Totals	1,249	4,418	16	324	323	292

Unit : 35-C3 7 Acres 0 Regen 7 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	503	1,805	7	133	132	120
Incense-cedar	10	10				
White Fir	1	4				
Unit Totals	514	1,819	7	133	132	120

Unit : 35-D 13 Acres 0 Regen 13 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	935	3,352	12	247	246	222
White Fir	2	7		1	1	1
Incense-cedar	19	19				
Unit Totals	956	3,378	12	248	247	223

Unit : 35-E 24 Acres 0 Regen 24 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,725	6,189	23	455	453	410
White Fir	3	13		1	1	1
Incense-cedar	35	35		1	1	1
Unit Totals	1,763	6,237	23	457	455	412

Unit : 7-2 16 Acres 0 Regen 16 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	979	2,859	14	131	129	119
Incense-cedar	38	51		1	1	1
Ponderosa Pine	24	24		1	1	
Unit Totals	1,041	2,934	14	133	131	120

**UNITED STATES
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Medford
Lower Grave
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Unit : 7-2C 19 Acres 0 Regen 19 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,163	3,395	16	156	153	141
Incense-cedar	45	61		1	1	1
Ponderosa Pine	29	29		1	1	1
Unit Totals	1,237	3,485	16	158	155	143

Unit : RW-1 1 Acres 0 Regen 0 Partial 1 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	40	108	13	9	8	8
Incense-cedar	9	16	3	3	2	2
Ponderosa Pine	1	2	1			
Unit Totals	50	126	17	12	10	10

Unit : RW-2 1 Acres 0 Regen 0 Partial 1 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	8	18	2	2	2	2
Incense-cedar	1	5	2	2	1	1
Unit Totals	9	23	4	4	3	3

**UNITED STATES
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Medford
Lower Grave
ORM07-TS-15-3

Stump to Truck Costs

Total (16' MBF)

Total Stump to Truck Costs	Net Volume	Cost / Net Volume
\$ 1,966,974.87	8,458	\$ 232.56

Detail

Yarding & Loading

Yarding System	Unit Of Measure	Units	Cost / Unit	Total Cost
Med Twr=40-70	GM MBF	6,147	\$ 196.62	\$ 1,208,623.14
Track Skidder	GM MBF	1,990	\$ 134.02	\$ 266,699.80
Helicopter	GM MBF	1,154	\$ 366.07	\$ 422,444.78
Subtotal				\$ 1,897,767.72

Other Costs

Explanation	Unit Of Measure	Units	Cost / Unit	Total Cost
Tractor Assist	Hour	50	\$ 75.00	\$ 3,750.00
Directional Falling	MBF	845	\$ 14.47	\$ 12,227.15
Deadman Anchors	3 Anchors	21	\$ 1,350.00	\$ 28,350.00
Subtotal				\$ 44,327.15

Additional Move-Ins

Equipment	# Move-In	Cost / Move In	Total Cost
Yarder / Loader	18	\$ 600.00	\$ 10,800.00
Dozer	21	\$ 440.00	\$ 9,240.00
Delimber	7	\$ 440.00	\$ 3,080.00
Harvester	4	\$ 440.00	\$ 1,760.00
Subtotal			\$ 24,880.00

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Medford
Lower Grave
ORM07-TS-15-3

Other Allowances Costs

Total (16' MBF)

Total Other Allowances Costs	Net Volume	Cost / Net Volume *	Total Buy Out Cost
\$183,624.00	8,458	\$21.71	\$0.00

Fuels Treatment

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Slashing - Level 1	\$ 7,440.00	\$ 0.88	N	\$ 0.00
Hand Pile, Cvr - Level 2	\$ 58,900.00	\$ 6.96	N	\$ 0.00
Hand Pile, Cvr - Level 3	\$ 12,240.00	\$ 1.45	N	\$ 0.00
Hand Pile Brn-Level 2	\$ 6,510.00	\$ 0.77	N	\$ 0.00
Hand Pile Brn-Level 3	\$ 1,272.00	\$ 0.15	N	\$ 0.00
Lop and Scatter-Lvl 1	\$ 13,314.00	\$ 1.57	N	\$ 0.00
Excavator	\$ 31,031.00	\$ 3.67	N	\$ 0.00
Hand Pile, Cvr - Level 6	\$ 1,400.00	\$ 0.17	N	\$ 0.00
Hand Pile Brn-Level 5	\$ 1,400.00	\$ 0.17	N	\$ 0.00
Subtotal	\$ 133,507.00	\$ 15.78		\$ 0.00

Misc

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Waterbar Corridors	\$ 640.00	\$ 0.08		\$ 0.00
Subtotal	\$ 640.00	\$ 0.08		\$ 0.00

Other Costs

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Ripping	\$ 8,300.00	\$ 0.98	N	\$ 0.00
Hand Seeding @ 17 lb seed per hour	\$ 4,400.00	\$ 0.52	N	\$ 0.00
Mulching (2 hours/5 bales)	\$ 12,000.00	\$ 1.42	N	\$ 0.00
Skid Location	\$ 640.00	\$ 0.08	N	\$ 0.00
Waterbar Skids	\$ 600.00	\$ 0.07	N	\$ 0.00
Stream and Culvert Cleaning	\$ 640.00	\$ 0.08	N	\$ 0.00
Barricades	\$ 1,875.00	\$ 0.22	N	\$ 0.00
Landing Clean up	\$ 7,425.00	\$ 0.88	N	\$ 0.00
Landing Construction	\$ 7,425.00	\$ 0.88	N	\$ 0.00
Temporary Spur Construction	\$ 2,700.00	\$ 0.32	N	\$ 0.00
Equipment Washing	\$ 3,472.00	\$ 0.41	N	\$ 0.00
Subtotal	\$ 49,477.00	\$ 5.85		\$ 0.00

* Cost / Net Volume has been rounded to the nearest \$0.01 Subtotals may not tie to Sale Total Cost / Net Volume.

**UNITED STATES
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Consolidated Comments**

Medford
Lower Grave
ORM07-TS-15-3

General

Lump sum sale.
July pricing.

Yarding & Loading

Lift Trees(275) and Intermediate Supports(42) cost included in stump to truck price for Medium Tower.
Helicopter equipment move in cost included in stump to truck price for Helicopter.

Road Costs

(see Engineering Appraisal for details).

Transportation

(see Transportation appendix for details).

Other Allowances

Excavator = Machine Pile, Cover, and Burn.
Hand Pile, Cvr-level 6 = Landing Decks Cover.
Hand Pile Brn-Level 5 = Burn Landing Decks.

Temp Spur Constuction for tractor swing route in unit 34-2B, and short purchaser spurs into units 1-2 and 15-3A. See engineering appraisal for all other temp routes.

Equipment Washing: 1 Yarder, 4 Loaders, 3 Tractors, 1 Delimber, 1 Harvester, 1 Processor.

Barricades: Block 36 skid trails and 14 purchaser spurs in unit 1-2 and 15-3A. See engineering appraisal for information on decomissioning other temp roads.

Waterbar Skids: 16 acres of skid trails need waterbars.

Waterbar Corridors: 120 waterbars needed at 20 minutes per waterbar.

Prospectus

UNITED STATES
DEPARTMENT OF THE INTERIOR
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Version: 5.2.0.9

Updated: 6/30/2014

Summary of All Roads and Projects

T.S. Contract Name: Lower Grave TS Tract No: 15-3 Sale Date: 8/27/2015

Prepared by: EFreeman Ph: 471-6601 Print Date: 7/20/2015 9:57:29 AM

Construction: 15.50 sta

Improve: 0.00 sta Renov: 2035.46 sta Decom: 0.00 sta Temp: 80.15 sta

200 Clearing and Grubbing: 5.9 acres	\$24,748.15
300 Excavation: 3,800 cy	\$11,239.18
Haul < 500 ft: 0 sta-yds	
Haul > 500 ft: 0 yd-mi	
400 Drainage:	\$9,682.56
Culvert: 142 lf	DownSpout: 0 lf
PolyPipe: 0 lf	
500 Renovation:	\$64,979.94
Blading 40.07 mi	
Slide Removal 47 cy	
700-1200 Surfacing:	\$24,300.00
Commercial Quarry Name: Approved Quarry 810 LCY	
1800 Soil Stabilization: 5.4 acres	\$6,997.07
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 34.64 Miles	\$27,272.00
2300 Engineering: 15.50 sta.	\$2,307.02
8000 Miscellaneous:	\$13,547.02
Mobilization: Const. \$7,916.70 Surf. \$0.00.....	\$7,916.70

Total: 8,458 mbf @ \$22.82/mbf = \$192,989.65

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 33-5-27.2(A-B2) Road Name: JoCo Forestry Spur

Road Renovation: 0.55 mi 14 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.3 acres	\$765.60
300 Excavation: 732 cy	\$2,294.51
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$467.61
Blading 0.55 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$1,144.42
Mobilization: Const. \$199.86 Surf. \$0.00.....	\$199.86

Total: \$4,872.00

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 33-5-27.2(A-B2) Road Name: JoCo Forestry Spur

Section 200 Clearing and Grubbing:

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

16-30% (Avg Side Slopes): Adjustment Factor (0.1)

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

Total Adjustment Factor: $1.67 + 0.1 + 0 + 0.25 = 2.02$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 2.02 x Total Acres: 0.3 = \$765.60

Subtotal: \$765.60

Section 300 Excavation:

Excavation - Common: $\$1.93/\text{cy} \times 732 \text{ cy} = \$1,412.76$

Embankment Placement & Compaction 306.f - Common: $\$0.26/\text{cy} \times 732 \text{ cy} = \190.32

Subgrade Compaction: 4 Sta/hr $\$33.62/\text{sta.} \times 11.0 \text{ sta} = \369.82

Slope Rounding: $\$0.29/\text{lf} \times 1,109 \text{ lf} = \321.61

Subtotal: \$2,294.51

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.55 \text{ mi} = \245.70

Compaction: $\$403.47/\text{mi} \times 0.55 \text{ mi} = \221.91

Subtotal: \$467.61

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Reconstruct Turnaround Area

Motor Grader 14M 1 hr x $\$147.33/\text{hr} = \147.33

Excavator -Small (1.5 CY) 1 hr x $\$97.09/\text{hr} = \97.09

Construct Water Dip

Construct Water Dip 2 EA x $\$200.00/\text{EA} = \400.00

Reconstruct Existing Water Dip

Reconstruct Ex. Water Dip 4 EA x $\$125.00/\text{EA} = \500.00

Subtotal: \$1,144.42

Mobilization:

Construction - 2.52% of total Costs = \$199.86

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$199.86

Total: \$4,872.00

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 33-5-31.1 Road Name: Miller Gulch Sth Spr

Road Renovation: 0.64 mi 14 ft Subgrade 3 ft ditch 6/30/2014

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:	\$933.21
Blading 0.64 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$512.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$61.82 Surf. \$0.00.....	\$61.82

Total: \$1,507.03

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 33-5-31.1 Road Name: Miller Gulch Sth Spr

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: $\$720.50/\text{mi} \times 0.64 \text{ mi} = \461.12

Compaction: $\$403.47/\text{mi} \times 0.64 \text{ mi} = \258.22

Clean Culverts: $\$334.17/\text{mi} \times 0.64 \text{ mi} = \213.87

Subtotal: \$933.21

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 0.64 Mile x \$800.00/Mile = \$512.00

Subtotal: \$512.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.78% of total Costs = \$61.82

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$61.82

Total: \$1,507.03

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 33-5-31.3(A) Road Name: Miller Benjamin Road

Road Renovation: 0.47 mi 14 ft Subgrade 3 ft ditch 6/30/2014

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:	\$685.33
Blading 0.47 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$20.50
2100 RoadSide Brushing: 0.0 acres	\$376.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$46.28 Surf. \$0.00.....	\$46.28

Total: \$1,128.10

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 33-5-31.3(A) Road Name: Miller Benjamin 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: $\$720.50/\text{mi} \times 0.47 \text{ mi} = \338.64

Compaction: $\$403.47/\text{mi} \times 0.47 \text{ mi} = \189.63

Clean Culverts: $\$334.17/\text{mi} \times 0.47 \text{ mi} = \157.06

Subtotal: \$685.33

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

BMP Installation (15mins/site)

General Laborer $0.25 \text{ hr} \times \$33.60/\text{hr} = \8.40

Crew Cab or 3/4 Ton Pickup $0.25 \text{ hr} \times \$48.38/\text{hr} = \12.10

Subtotal: \$20.50

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Roadside Brushing & Chipping $0.47 \text{ Mile} \times \$800.00/\text{Mile} = \$376.00$

Subtotal: \$376.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.58% of total Costs = \$46.28

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$46.28

Total: \$1,128.10

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 33-5-32.0(A) Road Name: Miller Gulch X Spur

Road Renovation: 0.63 mi 14 ft Subgrade 3 ft ditch 6/30/2014

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:	\$918.63
Blading 0.63 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$20.50
2100 RoadSide Brushing: 0.0 acres	\$504.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$61.73 Surf. \$0.00.....	\$61.73

Total: \$1,504.85

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 33-5-32.0(A) Road Name: Miller Gulch X 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: $\$720.50/\text{mi} \times 0.63 \text{ mi} = \453.92

Compaction: $\$403.47/\text{mi} \times 0.63 \text{ mi} = \254.19

Clean Culverts: $\$334.17/\text{mi} \times 0.63 \text{ mi} = \210.53

Subtotal: \$918.63

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

BMP Installation (15mins/site)

General Laborer 0.25 hr x $\$33.60/\text{hr} = \8.40

Crew Cab or 3/4 Ton Pickup 0.25 hr x $\$48.38/\text{hr} = \12.10

Subtotal: \$20.50

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Roadside Brushing & Chipping 0.63 Mile x $\$800.00/\text{Mile} = \504.00

Subtotal: \$504.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.78% of total Costs = \$61.73

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$61.73

Total: \$1,504.85

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 33-5-32.2(A) Road Name: Redboy Miller Spur

Road Renovation: 0.06 mi 14 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.1 acres	\$502.82
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$139.41
Blading 0.06 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$48.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$225.00
Mobilization: Const. \$39.15 Surf. \$0.00.....	\$39.15

Total: \$954.38

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 33-5-32.2(A) Road Name: Redboy Miller Spur

Section 200 Clearing and Grubbing:

Clearing - Heavy (Clearing): Adjustment Factor (2.54)

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

Pile and Burn (Slash): Adjustment Factor (1.19)

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

Total Adjustment Factor: $2.54 + 0 + 1.19 + 0.25 = 3.98$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 3.98 x Total Acres: 0.1 = \$502.82

Subtotal: \$502.82

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.06 \text{ mi} = \26.80

Compaction: $\$403.47/\text{mi} \times 0.06 \text{ mi} = \24.21

Heavy Blading

Motor Grader 14M (0.06miles @ 0.10mi/hr)

$0.6 \text{ hr} \times \$147.33/\text{hr} = \88.40

Subtotal: \$139.41

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Roadside Brushing & Chipping 0.06 Mile x \$800.00/Mile = \$48.00

Subtotal: \$48.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Remove Existing Barricade

Remove Existing Barricade 1 EA x \$150.00/EA = \$150.00

Install Log Barricade

Install Log Barricade 1 EA x \$75.00/EA = \$75.00

Subtotal: \$225.00

Mobilization:

Construction - 0.49% of total Costs = \$39.15

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$39.15

Total: \$954.38

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 33-5-34.1 Road Name: Upper Eastman

Road Construction: 0.29 mi 15 ft Subgrade 3 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.9 acres	\$2,126.25
300 Excavation: 1,067 cy	\$4,562.48
400 Drainage:	\$5,176.96
Culvert: 62 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
700-1200 Surfacing:	\$23,160.00
Quarry Name: Approved Quarry 772 LCY	
1800 Soil Stabilization: 0.5 acres	\$507.75
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 15.50 sta.	\$2,307.02
8000 Miscellaneous:	\$341.12
Mobilization: Const. \$1,633.26 Surf. \$0.00.....	\$1,633.26

Total: \$39,814.84

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 33-5-34.1 Road Name: Upper Eastman

Section 200 Clearing and Grubbing:

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

16-30% (Avg Side Slopes): Adjustment Factor (0.1)

20-40' (Avg Clearing Widths): Adjustment Factor (0.1)

Total Adjustment Factor: $1.67 + 0.1 + 0 + 0.1 = 1.87$

Base Cost/Acre: $\$1,263.37 \times \text{Adjustment Factor: } 1.87 \times \text{Total Acres: } 0.9 = \$2,126.25$

Subtotal: \$2,126.25

Section 300 Excavation:

Excavation - Common: $\$1.93/\text{cy} \times 377 \text{ cy} = \727.61

Excavation - Rippable: $\$3.90/\text{cy} \times 690 \text{ cy} = \$2,691.00$

Excavation - Solid: $\$6.60/\text{cy} \times 0 \text{ cy} = \0.00

Embankment Placement & Compaction 306.f - Common: $\$0.26/\text{cy} \times 377 \text{ cy} = \98.02

Embankment Placement & Compaction 306.f - Rock: $\$0.26/\text{cy} \times 690 \text{ cy} = \179.40

Subgrade Compaction: 5 Sta/hr $\$26.90/\text{sta.} \times 15.5 \text{ sta} = \416.95

Slope Rounding: $\$0.29/\text{lf} \times 1,550 \text{ lf} = \449.50

Embankment Placement & Compaction 306.a - Common: $\$0.90/\text{cy} \times 0 \text{ cy} = \0.00

Embankment Placement & Compaction 306.a - Rock: $\$0.85/\text{cy} \times 0 \text{ cy} = \0.00

End Hauling - 100 to 500 ft: $\$0.15/\text{sta-yd} \times 0 \text{ sta-yd} = \0.00

End Hauling > 500 ft and 10 mph: $\$2.69/\text{yd-mi} \times 0 \text{ yd-mi} = \0.00

End Hauling > 500 ft and 20 mph: $\$1.35/\text{yd-mi} \times 0 \text{ yd-mi} = \0.00

End Hauling > 500 ft and 45 mph: $\$0.60/\text{yd-mi} \times 0 \text{ yd-mi} = \0.00

End Hauling > 500 ft - Fixed Cost (CY): $\$2.97/\text{cy} \times 0 \text{ cy} = \0.00

Blading with ditch: $\$14.45/\text{station} \times 0.00 \text{ stations} = \0.00

Blading without ditch: $\$12.14/\text{station} \times 0.00 \text{ stations} = \0.00

Subtotal: \$4,562.48

Section 400 Drainage:

Aluminized STA 12+60 18 inch 16 ga 32 lf x $\$50.08/\text{lf} = \$1,602.56$

Aluminized STA 9+00 18 inch 16 ga 30 lf x $\$50.08/\text{lf} = \$1,502.40$

Install 12" CMP at STA 0+80

Aluminized 16ga CMP 74 LF x $\$28.00/\text{LF} = \$2,072.00$

Subtotal: \$5,176.96

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:

Commercial Quarry Name: Approved Quarry

Comment: Cost/CY included haul

<u>Length</u>	<u>TopW</u>	<u>BotW</u>	<u>Depth</u>	<u>CWid</u>	<u>#TOs</u>	<u>Width</u>	<u>F.W.L</u>	<u>Taper</u>	<u>Other</u>
									772 LCY

Rock Volume = 772 LCY

Purchase Price / Royalty: $\$30.00/\text{LCY} \times 772 \text{ LCY} = \$23,160.00$

Subtotal: \$23,160.00

Section 1800 Soil Stabilization:

Comment: Fill slope & cut bank areas

Dry Method with Mulch: $\$563.50/\text{acre} \times 0.50 \text{ acres} = \281.75

Includes Small Quantity Factor of 1.48

+ Seed Cost: $\$132.00/\text{acre} \times 0.50 \text{ acres} = \66.00

+ Mulch Cost: $\$320.00/\text{acre} \times 0.50 \text{ acres} = \160.00

Subtotal: \$507.75

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Road Number: 33-5-34.1 Upper Eastman Continued

Section 2300 Engineering:

Both Sides Normal: $\$148.84/\text{sta} \times 15.50 \text{ sta} = \$2,307.02$

Subtotal: \$2,307.02

Section 8000 Miscellaneous:

Construct Turnaround Area

Tractor: D5 with winch 1.5 hr x $\$96.83/\text{hr} = \145.25

Excavator -Small (1.5 CY) 0.5 hr x $\$97.09/\text{hr} = \48.55

Motor Grader 14M 1 hr x $\$147.33/\text{hr} = \147.33

Subtotal: \$341.12

Mobilization:

Construction - 20.63% of total Costs = $\$1,633.26$

Surfacing - 95.31% by rock volume = $\$0.00$

Subtotal: \$1,633.26

Total: \$39,814.84

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 33-5-35.0 Road Name: St Paul Mtn Road

Road Renovation: 0.11 mi 14 ft Subgrade 3 ft ditch 6/30/2014

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:	\$123.64
Blading 0.11 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$88.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$9.05 Surf. \$0.00.....	\$9.05

Total: \$220.69

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 33-5-35.0 Road Name: St Paul Mtn 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: $\$720.50/\text{mi} \times 0.11 \text{ mi} = \79.26

Compaction: $\$403.47/\text{mi} \times 0.11 \text{ mi} = \44.38

Subtotal: \$123.64

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 0.11 Miles x \$800.00/Mile = \$88.00

Subtotal: \$88.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.11% of total Costs = \$9.05

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$9.05

Total: \$220.69

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 33-5-35.1(A-B) Road Name: St Paul Mtn

Road Renovation: 1.07 mi 14 ft Subgrade 3 ft ditch 6/30/2014

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:	\$1,560.21
Blading 1.07 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$856.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$103.36 Surf. \$0.00.....	\$103.36

Total: \$2,519.57

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 33-5-35.1(A-B) Road Name: St Paul Mtn

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: $\$720.50/\text{mi} \times 1.07 \text{ mi} = \770.94

Compaction: $\$403.47/\text{mi} \times 1.07 \text{ mi} = \431.71

Clean Culverts: $\$334.17/\text{mi} \times 1.07 \text{ mi} = \357.56

Subtotal: \$1,560.21

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 1.07 Mile $\times \$800.00/\text{Mile} = \856.00

Subtotal: \$856.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 1.31% of total Costs = \$103.36

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$103.36

Total: \$2,519.57

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 33-5-35.2 Road Name: St Paul Mtn Spur

Road Renovation: 0.36 mi 14 ft Subgrade 3 ft ditch 6/30/2014

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:	\$524.93
Blading 0.36 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$288.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$34.77 Surf. \$0.00.....	\$34.77

Total: \$847.70

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 33-5-35.2 Road Name: St Paul Mtn 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: $\$720.50/\text{mi} \times 0.36 \text{ mi} = \259.38

Compaction: $\$403.47/\text{mi} \times 0.36 \text{ mi} = \145.25

Clean Culverts: $\$334.17/\text{mi} \times 0.36 \text{ mi} = \120.30

Subtotal: \$524.93

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 0.36 Mile x \$800.00/Mile = \$288.00

Subtotal: \$288.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.44% of total Costs = \$34.77

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$34.77

Total: \$847.70

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 33-5-35.5 Road Name: Bob's Boot

Road Renovation: 1.20 mi 16 ft Subgrade 0 ft ditch 6/30/2014

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:	\$1,053.66
Blading 1.20 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$960.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$86.14 Surf. \$0.00.....	\$86.14

Total: \$2,099.79

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 33-5-35.5 Road Name: Bob's Boot

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Comment: Only one culvert on this road

Blading w/o Ditches: \$446.73/mi x 1.20 mi = \$536.08

Compaction: \$403.47/mi x 1.20 mi = \$484.16

Clean Culverts: \$334.17/mi x 0.10 mi = \$33.42

Subtotal: \$1,053.66

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 1.20 Mile x \$800.00/Mile = \$960.00

Subtotal: \$960.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 1.09% of total Costs = \$86.14

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$86.14

Total: \$2,099.79

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 33-6-24.0(A-B2) Road Name: Miller Gulch Road

Road Renovation: 3.52 mi 16 ft Subgrade 3 ft ditch 6/30/2014

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:	\$5,132.65
Blading 3.52 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$61.49
2100 RoadSide Brushing: 0.0 acres	\$2,816.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$342.64 Surf. \$0.00.....	\$342.64

Total: \$8,352.78

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 33-6-24.0(A-B2) Road Name: Miller Gulch 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: $\$720.50/\text{mi} \times 3.52 \text{ mi} = \$2,536.16$

Compaction: $\$403.47/\text{mi} \times 3.52 \text{ mi} = \$1,420.21$

Clean Culverts: $\$334.17/\text{mi} \times 3.52 \text{ mi} = \$1,176.28$

Subtotal: \$5,132.65

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

BMP Installation (15min/site)

General Laborer 0.75 hr x $\$33.60/\text{hr} = \25.20

Crew Cab or 3/4 Ton Pickup 0.75 hr x $\$48.38/\text{hr} = \36.29

Subtotal: \$61.49

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 3.52 Mile x $\$800.00/\text{Mile} = \$2,816.00$

Subtotal: \$2,816.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 4.33% of total Costs = $\$342.64$

Surfacing - 0.00% by rock volume = $\$0.00$

Subtotal: \$342.64

Total: \$8,352.78

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-4-28.0(K-J) Road Name: Ditch Creek Road

Road Renovation: 1.76 mi 18 ft Subgrade 3 ft ditch 6/30/2014

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:	\$2,566.33
Blading 1.76 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$122.97
2100 RoadSide Brushing: 0.0 acres	\$1,408.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$175.27 Surf. \$0.00.....	\$175.27

Total: \$4,272.56

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-4-28.0(K-J) Road Name: Ditch 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: $\$720.50/\text{mi} \times 1.76 \text{ mi} = \$1,268.08$

Compaction: $\$403.47/\text{mi} \times 1.76 \text{ mi} = \710.11

Clean Culverts: $\$334.17/\text{mi} \times 1.76 \text{ mi} = \588.14

Subtotal: \$2,566.33

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

BMP Installation (15mins/site)

General Laborer 1.5 hr x $\$33.60/\text{hr} = \50.40

Crew Cab or 3/4 Ton Pickup 1.5 hr x $\$48.38/\text{hr} = \72.57

Subtotal: \$122.97

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 1.76 Mile x $\$800.00/\text{Mile} = \$1,408.00$

Subtotal: \$1,408.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 2.21% of total Costs = \$175.27

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$175.27

Total: \$4,272.56

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-4-7.0 Road Name: Daisy Mine Spur

Road Renovation: 0.30 mi 14 ft Subgrade 0 ft ditch 6/30/2014

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:	\$437.44
Blading 0.30 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$20.50
2100 RoadSide Brushing: 0.0 acres	\$240.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$244.42
Mobilization: Const. \$40.31 Surf. \$0.00.....	\$40.31

Total: \$982.67

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-4-7.0 Road Name: Daisy Mine 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: \$720.50/mi x 0.30 mi = \$216.15

Compaction: \$403.47/mi x 0.30 mi = \$121.04

Clean Culverts: \$334.17/mi x 0.30 mi = \$100.25

Subtotal: \$437.44

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

BMP Installation (15mins/site)

General Laborer 0.25 hr x \$33.60/hr = \$8.40

Crew Cab or 3/4 Ton Pickup 0.25 hr x \$48.38/hr = \$12.10

Subtotal: \$20.50

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 0.30 Mile x \$800.00/Mile = \$240.00

Subtotal: \$240.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Reconstruct Turnaround Area

Motor Grader 14M 1 hr x \$147.33/hr = \$147.33

Excavator -Small (1.5 CY) 1 hr x \$97.09/hr = \$97.09

Subtotal: \$244.42

Mobilization:

Construction - 0.51% of total Costs = \$40.31

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$40.31

Total: \$982.67

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-4-7.1 Road Name: Coffin Creek

Road Renovation: 0.16 mi 14 ft Subgrade 0 ft ditch 6/30/2014

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:	\$136.03
Blading 0.16 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$128.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$450.00
Mobilization: Const. \$30.54 Surf. \$0.00.....	\$30.54

Total: \$744.58

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-4-7.1 Road Name: Coffin Creek

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.16 \text{ mi} = \71.48

Compaction: $\$403.47/\text{mi} \times 0.16 \text{ mi} = \64.56

Subtotal: \$136.03

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 0.16 Mile x $\$800.00/\text{Mile} = \128.00

Subtotal: \$128.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Remove Ex. Earthen Barricade

Remove Existing Barricade 1 EA x $\$150.00/\text{EA} = \150.00

Reconstruct Ex. Water Bars

Construct Water Bar 3 EA x $\$50.00/\text{EA} = \150.00

Construct Earthen Barricade

Construct Earthen Barricade 1 EA x $\$150.00/\text{EA} = \150.00

Subtotal: \$450.00

Mobilization:

Construction - 0.39% of total Costs = \$30.54

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$30.54

Total: \$744.58

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-4-8.0(A-D) Road Name: Ditch Creek Summit

Road Renovation: 2.72 mi 14 ft Subgrade 3 ft ditch 6/30/2014

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:	\$3,722.49
Blading 2.72 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$2,176.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$252.31 Surf. \$0.00.....	\$252.31

Total: \$6,150.80

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-4-8.0(A-D) Road Name: Ditch Creek Summit

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: $\$720.50/\text{mi} \times 1.83 \text{ mi} = \$1,318.52$

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.89 \text{ mi} = \397.59

Compaction: $\$403.47/\text{mi} \times 2.72 \text{ mi} = \$1,097.44$

Clean Culverts: $\$334.17/\text{mi} \times 2.72 \text{ mi} = \908.94

Subtotal: \$3,722.49

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 2.72 Mile $\times \$800.00/\text{Mile} = \$2,176.00$

Subtotal: \$2,176.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 3.19% of total Costs = \$252.31

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$252.31

Total: \$6,150.80

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-5-1.0(A-B) Road Name: Clark Creek Road

Road Renovation: 1.99 mi 14 ft Subgrade 3 ft ditch 6/30/2014

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:	\$2,901.70
Blading 1.99 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$122.97
2100 RoadSide Brushing: 0.0 acres	\$1,592.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$197.48 Surf. \$0.00.....	\$197.48

Total: \$4,814.15

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-1.0(A-B) Road Name: Clark 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: $\$720.50/\text{mi} \times 1.99 \text{ mi} = \$1,433.80$

Compaction: $\$403.47/\text{mi} \times 1.99 \text{ mi} = \802.91

Clean Culverts: $\$334.17/\text{mi} \times 1.99 \text{ mi} = \665.00

Subtotal: \$2,901.70

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

BMP Installation (15min/site)

General Laborer 1.5 hr x $\$33.60/\text{hr} = \50.40

Crew Cab or 3/4 Ton Pickup 1.5 hr x $\$48.38/\text{hr} = \72.57

Subtotal: \$122.97

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 1.99 Mile x $\$800.00/\text{Mile} = \$1,592.00$

Subtotal: \$1,592.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 2.49% of total Costs = \$197.48

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$197.48

Total: \$4,814.15

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-5-1.3(A-E) Road Name: Hancock Ridgeline Rd

Road Renovation: 3.41 mi 14 ft Subgrade 3 ft ditch 6/30/2014

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:	\$4,972.26
Blading 3.41 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$122.97
2100 RoadSide Brushing: 0.0 acres	\$640.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$245.33 Surf. \$0.00.....	\$245.33

Total: \$5,980.56

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-1.3(A-E) Road Name: Hancock Ridgeline Rd

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: $\$720.50/\text{mi} \times 3.41 \text{ mi} = \$2,456.91$

Compaction: $\$403.47/\text{mi} \times 3.41 \text{ mi} = \$1,375.83$

Clean Culverts: $\$334.17/\text{mi} \times 3.41 \text{ mi} = \$1,139.52$

Subtotal: \$4,972.26

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

BMP Installation (15mins/site)

General Laborer 1.5 hr x $\$33.60/\text{hr} = \50.40

Crew Cab or 3/4 Ton Pickup 1.5 hr x $\$48.38/\text{hr} = \72.57

Subtotal: \$122.97

Section 2100 Roadside Brushing:

Comment: 2.61 miles of this road goes thru a clearcut on prvt

Roadside Brushing & Chipping

Brush Chipper 0.80 Mile x $\$800.00/\text{Mile} = \640.00

Subtotal: \$640.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 3.10% of total Costs = \$245.33

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$245.33

Total: \$5,980.56

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-5-10.2(A-C) Road Name: McCoy Creek Spur #1

Road Renovation: 1.47 mi 14 ft Subgrade 3 ft ditch 6/30/2014

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$2,534.40
Culvert: 45 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$2,626.52
Blading 1.47 mi	
Slide Removal 22 cy	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.2 acres	\$305.57
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$1,176.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$744.42
Mobilization: Const. \$315.98 Surf. \$0.00.....	\$315.98

Total: \$7,702.89

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-10.2(A-C) Road Name: McCoy Creek Spur #1

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Aluminized MP 0.16; Type 3 24 inch 16 ga 45 lf x \$56.32/lf = \$2,534.40

Subtotal: \$2,534.40

Section 500 Renovation:

Slide Removal 22 cy

Front End Loader \$107.45/hr x 2.00 hr = \$214.90

Dump Truck: \$93.87/hr x 2.00 hr = \$187.74

Blading: \$720.50/mi x 1.47 mi = \$1,059.14

Scarification: \$893.46/mi x 0.09 mi = \$80.41

Compaction: \$403.47/mi x 1.47 mi = \$593.10

Clean Culverts: \$334.17/mi x 1.47 mi = \$491.23

Subtotal: \$2,626.52

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Comment: Estimated 0.10 acres per slump site.

Dry Method with Mulch: \$563.50/acre x 0.20 acres = \$112.70

Includes Small Quantity Factor of 1.48

+ Seed Cost: \$132.00/acre x 0.20 acres = \$26.40

+ Mulch Cost: \$320.00/acre x 0.20 acres = \$64.00

BMP Installation (15mins/site)

General Laborer 1.25 hr x \$33.60/hr = \$42.00

Crew Cab or 3/4 Ton Pickup 1.25 hr x \$48.38/hr = \$60.48

Subtotal: \$305.57

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 1.47 Mile x \$800.00/Mile = \$1,176.00

Subtotal: \$1,176.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Reconstruct Turnaround Area

Excavator -Small (1.5 CY) 1 hr x \$97.09/hr = \$97.09

Motor Grader 14M 1 hr x \$147.33/hr = \$147.33

Reconstruct Ex. Water Dip

Reconstruct Ex. Water Dip 4 EA x \$125.00/EA = \$500.00

Subtotal: \$744.42

Mobilization:

Construction - 3.99% of total Costs = \$315.98

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$315.98

Total: \$7,702.89

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-5-12.1 Road Name: Murphy North Spur

Road Renovation: 0.19 mi 14 ft Subgrade 0 ft ditch 6/30/2014

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:	\$161.54
Blading 0.19 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$6.91 Surf. \$0.00.....	\$6.91

Total: \$168.45

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-12.1 Road Name: Murphy North 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 w/o Ditches: $\$446.73/\text{mi} \times 0.19 \text{ mi} = \84.88

Compaction: $\$403.47/\text{mi} \times 0.19 \text{ mi} = \76.66

Subtotal: \$161.54

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.09% of total Costs = \$6.91

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$6.91

Total: \$168.45

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-5-12.2 Road Name: Murphy Southeast Sp

Road Renovation: 0.20 mi 14 ft Subgrade 0 ft ditch 6/30/2014

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:	\$170.04
Blading 0.20 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$160.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$14.12 Surf. \$0.00.....	\$14.12

Total: \$344.16

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-12.2 Road Name: Murphy Southeast Sp

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.20 \text{ mi} = \89.35

Compaction: $\$403.47/\text{mi} \times 0.20 \text{ mi} = \80.69

Subtotal: \$170.04

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 0.20 Mile x \$800.00/Mile = \$160.00

Subtotal: \$160.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.18% of total Costs = \$14.12

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$14.12

Total: \$344.16

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-5-15.0 Road Name: McCoy Creek Spur

Road Renovation: 0.99 mi 14 ft Subgrade 3 ft ditch 6/30/2014

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:	\$1,443.56
Blading 0.99 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$40.99
2100 RoadSide Brushing: 0.0 acres	\$792.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$97.38 Surf. \$0.00.....	\$97.38

Total: \$2,373.93

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-15.0 Road Name: McCoy 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: $\$720.50/\text{mi} \times 0.99 \text{ mi} = \713.30

Compaction: $\$403.47/\text{mi} \times 0.99 \text{ mi} = \399.44

Clean Culverts: $\$334.17/\text{mi} \times 0.99 \text{ mi} = \330.83

Subtotal: \$1,443.56

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

BMP Installation (15min/site)

General Laborer 0.5 hr x $\$33.60/\text{hr} = \16.80

Crew Cab or 3/4 Ton Pickup 0.5 hr x $\$48.38/\text{hr} = \24.19

Subtotal: \$40.99

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 0.99 Mile x $\$800.00/\text{Mile} = \792.00

Subtotal: \$792.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 1.23% of total Costs = \$97.38

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$97.38

Total: \$2,373.93

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-5-15.1(A-B) Road Name: McCoy Creek Spur #2

Road Renovation: 0.83 mi 14 ft Subgrade 3 ft ditch 6/30/2014

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:	\$2,280.82
Blading 0.83 mi	
Slide Removal 10 cy	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.1 acres	\$108.84
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$664.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$244.42
Mobilization: Const. \$141.08 Surf. \$0.00.....	\$141.08

Total: \$3,439.17

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-15.1(A-B) Road Name: McCoy Creek Spur #2

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Slide Removal 10 cy

Front End Loader \$107.45/hr x 1.00 hr = \$107.45

Dump Truck: \$93.87/hr x 1.00 hr = \$93.87

Blading: \$720.50/mi x 0.83 mi = \$598.02

Compaction: \$403.47/mi x 0.83 mi = \$334.88

Clean Culverts: \$334.17/mi x 0.83 mi = \$277.36

Heavy Blading

Motor Grader 14M (0.59miles @ 0.10mi/hr)

5.9 hr x \$147.33/hr = \$869.25

Subtotal: \$2,280.82

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Comment: Estimated 0.10 acres per slump site.

Dry Method with Mulch: \$563.50/acre x 0.10 acres = \$56.35

Includes Small Quantity Factor of 1.48

+ Mulch Cost: \$320.00/acre x 0.10 acres = \$32.00

BMP Installation (15mins/site)

General Laborer 0.25 hr x \$33.60/hr = \$8.40

Crew Cab or 3/4 Ton Pickup 0.25 hr x \$48.38/hr = \$12.10

Subtotal: \$108.84

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 0.83 Mile x \$800.00/Mile = \$664.00

Subtotal: \$664.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Reconstruct Turnaround Area

Motor Grader 14M 1 hr x \$147.33/hr = \$147.33

Excavator -Small (1.5 CY) 1 hr x \$97.09/hr = \$97.09

Subtotal: \$244.42

Mobilization:

Construction - 1.78% of total Costs = \$141.08

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$141.08

Total: \$3,439.17

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-5-2.0(C-B) Road Name: Daisy Cutoff

Road Renovation: 3.19 mi 14 ft Subgrade 3 ft ditch 6/30/2014

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$1,971.20
Culvert: 35 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$5,078.72
Blading 3.19 mi	
700-1200 Surfacing:	\$540.00
Quarry Name: Approved Quarry 18 LCY	
1800 Soil Stabilization: 0.1 acres	\$245.01
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$1,664.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$125.00
Mobilization: Const. \$411.67 Surf. \$0.00.....	\$411.67

Total: \$10,035.61

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-2.0(C-B) Road Name: Daisy Cutoff

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Aluminized MP 2.25; Type 3 24 inch 16 ga 35 lf x \$56.32/lf = \$1,971.20

Subtotal: \$1,971.20

Section 500 Renovation:

Blading: \$720.50/mi x 3.19 mi = \$2,298.40

Compaction: \$403.47/mi x 3.19 mi = \$1,287.07

Clean Culverts: \$334.17/mi x 3.19 mi = \$1,066.00

Heavy Blading

Motor Grader 14M (0.29miles @ 0.10mi/hr)

2.9 hr x \$147.33/hr = \$427.26

Subtotal: \$5,078.72

Section 700-1200 Surfacing:

Commercial Quarry Name: Approved Quarry

Comment: costs include hauling within a 25-50 mile range

<u>Length</u>	<u>TopW</u>	<u>BotW</u>	<u>Depth</u>	<u>CWid</u>	<u>#TOs</u>	<u>Width</u>	<u>F.W.L</u>	<u>Taper</u>
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Other

18 LCY

Rock Volume = 18 LCY

Purchase Price / Royalty: \$30.00/LCY x 18 LCY = \$540.00

Subtotal: \$540.00

Section 1800 Soil Stabilization:

Comment: Estimated 0.10 acres for culvert replacement site

Dry Method with Mulch: \$563.50/acre x 0.10 acres = \$56.35

Includes Small Quantity Factor of 1.48

+ Seed Cost: \$132.00/acre x 0.10 acres = \$13.20

+ Mulch Cost: \$320.00/acre x 0.10 acres = \$32.00

BMP Installation (15mins/site)

General Laborer 1.75 hr x \$33.60/hr = \$58.80

Crew Cab or 3/4 Ton Pickup 1.75 hr x \$48.38/hr = \$84.67

Subtotal: \$245.01

Section 2100 Roadside Brushing:

Comment: 0.89 miles of this road is thru a clearcut on prvt

Roadside Brushing & Chipping

Brush Chipper 2.08 Mile x \$800.00/Mile = \$1,664.00

Subtotal: \$1,664.00

Section 8000 Miscellaneous:

Reconstruct Ex. Water Dip

Reconstruct Ex. Water Dip 1 EA x \$125.00/EA = \$125.00

Subtotal: \$125.00

Mobilization:

Construction - 5.20% of total Costs = \$411.67

Surfacing - 2.22% by rock volume = \$0.00

Subtotal: \$411.67

Total: \$10,035.61

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-5-2.1(A-B) Road Name: Eastman Gulch Road

Road Renovation: 3.72 mi 14 ft Subgrade 3 ft ditch 6/30/2014

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:	\$5,424.28
Blading 3.72 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$184.46
2100 RoadSide Brushing: 0.0 acres	\$2,976.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$367.22 Surf. \$0.00.....	\$367.22

Total: \$8,951.96

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-2.1(A-B) Road Name: Eastman Gulch 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: $\$720.50/\text{mi} \times 3.72 \text{ mi} = \$2,680.26$

Compaction: $\$403.47/\text{mi} \times 3.72 \text{ mi} = \$1,500.91$

Clean Culverts: $\$334.17/\text{mi} \times 3.72 \text{ mi} = \$1,243.11$

Subtotal: \$5,424.28

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

BMP Installation (15min/site)

General Laborer 2.25 hr x $\$33.60/\text{hr} = \75.60

Crew Cab or 3/4 Ton Pickup 2.25 hr x $\$48.38/\text{hr} = \108.86

Subtotal: \$184.46

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 3.72 Miles x $\$800.00/\text{Mile} = \$2,976.00$

Subtotal: \$2,976.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 4.64% of total Costs = $\$367.22$

Surfacing - 0.00% by rock volume = $\$0.00$

Subtotal: \$367.22

Total: \$8,951.96

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-5-20.0(F-E) Road Name: Daisy Mine Road

Road Renovation: 1.35 mi 14 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.1 acres	\$267.83
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$1,147.77
Blading 1.35 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$1,080.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$844.42
Mobilization: Const. \$142.87 Surf. \$0.00.....	\$142.87

Total: \$3,482.90

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-20.0(F-E) Road Name: Daisy Mine Road

Section 200 Clearing and Grubbing:

Clearing - Light (Clearing): Adjustment Factor (0.93)

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

Pile and Burn (Slash): Adjustment Factor (1.19)

greater than 40' (Avg Clearing Widths): Adjustment Factor (0)

Total Adjustment Factor: $0.93 + 0 + 1.19 + 0 = 2.12$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 2.12 x Total Acres: 0.1 = \$267.83

Subtotal: \$267.83

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 1.35 \text{ mi} = \603.09

Compaction: $\$403.47/\text{mi} \times 1.35 \text{ mi} = \544.68

Subtotal: \$1,147.77

Section 700-1200 Surfacing:
Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 1.35 Mile x \$800.00/Mile = \$1,080.00

Subtotal: \$1,080.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Construct Turnaround Area

Motor Grader 14M 1 hr x \$147.33/hr = \$147.33

Excavator -Small (1.5 CY) 1 hr x \$97.09/hr = \$97.09

Construct Water Dip w/ Leadout

Construct Water Dip 3 EA x \$200.00/EA = \$600.00

Subtotal: \$844.42

Mobilization:

Construction - 1.80% of total Costs = \$142.87

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$142.87

Total: \$3,482.90

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-5-3.2 Road Name: Wide Open

Road Renovation: 0.13 mi 14 ft Subgrade 3 ft ditch 6/30/2014

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:	\$189.56
Blading 0.13 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$104.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$12.56 Surf. \$0.00.....	\$12.56

Total: \$306.12

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-3.2 Road Name: Wide Open

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: $\$720.50/\text{mi} \times 0.13 \text{ mi} = \93.67

Compaction: $\$403.47/\text{mi} \times 0.13 \text{ mi} = \52.45

Clean Culverts: $\$334.17/\text{mi} \times 0.13 \text{ mi} = \43.44

Subtotal: \$189.56

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 0.13 Mile x \$800.00/Mile = \$104.00

Subtotal: \$104.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.16% of total Costs = \$12.56

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$12.56

Total: \$306.12

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-5-9.0(A) Road Name: McCoy Creek Road

Road Renovation: 3.60 mi 16 ft Subgrade 3 ft ditch 6/30/2014

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:	\$5,302.91
Blading 3.60 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$368.91
2100 RoadSide Brushing: 0.0 acres	\$2,880.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$365.81 Surf. \$0.00.....	\$365.81

Total: \$8,917.64

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-9.0(A) Road Name: McCoy 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: \$720.50/mi x 3.60 mi = \$2,593.80

Scarification: \$893.46/mi x 0.06 mi = \$53.61

Compaction: \$403.47/mi x 3.60 mi = \$1,452.49

Clean Culverts: \$334.17/mi x 3.60 mi = \$1,203.01

Subtotal: \$5,302.91

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

BMP Installation (15mins/site)

General Laborer 4.5 hr x \$33.60/hr = \$151.20

Crew Cab or 3/4 Ton Pickup 4.5 hr x \$48.38/hr = \$217.71

Subtotal: \$368.91

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 3.60 Mile x \$800.00/Mile = \$2,880.00

Subtotal: \$2,880.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 4.62% of total Costs = \$365.81

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$365.81

Total: \$8,917.64

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-6-1.0 Road Name: Salmon Creek Spur

Road Renovation: 0.45 mi 16 ft Subgrade 0 ft ditch 6/30/2014

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:	\$382.59
Blading 0.45 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$360.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$619.42
Mobilization: Const. \$58.26 Surf. \$0.00.....	\$58.26

Total: \$1,420.27

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-6-1.0 Road Name: Salmon 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 w/o Ditches: \$446.73/mi x 0.45 mi = \$201.03

Compaction: \$403.47/mi x 0.45 mi = \$181.56

Subtotal: \$382.59

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 0.45 Mile x \$800.00/Mile = \$360.00

Subtotal: \$360.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Reconstruct Turnaround Area

Excavator -Small (1.5 CY) 1 hr x \$97.09/hr = \$97.09

Motor Grader 14M 1 hr x \$147.33/hr = \$147.33

Reconstruct Ex. Water Dip

Reconstruct Ex. Water Dip 3 EA x \$125.00/EA = \$375.00

Subtotal: \$619.42

Mobilization:

Construction - 0.74% of total Costs = \$58.26

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$58.26

Total: \$1,420.27

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-6-1.1 Road Name: Aiko Aiko Road

Road Renovation: 1.47 mi 16 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.1 acres	\$373.96
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$2,635.27
Blading 1.47 mi	
Slide Removal 7 cy	
700-1200 Surfacing:	\$600.00
Quarry Name: Approved Quarry 20 LCY	
1800 Soil Stabilization: 0.1 acres	\$122.04
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$1,176.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$585.54
Mobilization: Const. \$234.96 Surf. \$0.00.....	\$234.96

Total: \$5,727.77

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-6-1.1 Road Name: Aiko Aiko Road

Section 200 Clearing and Grubbing:

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

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

Pile and Burn (Slash): Adjustment Factor (1.19)

20-40' (Avg Clearing Widths): Adjustment Factor (0.1)

Total Adjustment Factor: $1.67 + 0 + 1.19 + 0.1 = 2.96$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 2.96 x Total Acres: 0.1 = \$373.96

Subtotal: \$373.96

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Slide Removal 7 cy

Front End Loader \$107.45/hr x 1.00 hr = \$107.45

Dump Truck: \$93.87/hr x 1.00 hr = \$93.87

Scarification: \$893.46/mi x 0.05 mi = \$44.67

Blading w/o Ditches: \$446.73/mi x 1.47 mi = \$656.69

Compaction: \$403.47/mi x 1.47 mi = \$593.10

Clean Culverts: \$334.17/mi x 1.47 mi = \$491.23

Heavy Blading

Motor Grader 14M 0.44miles @ 0.10mi/hr

4.4 hr x \$147.33/hr = \$648.25

Subtotal: \$2,635.27

Section 700-1200 Surfacing:

Commercial Quarry Name: Approved Quarry

Comment: costs include hauling within a 25-50 mile range

<u>Length</u>	<u>TopW</u>	<u>BotW</u>	<u>Depth</u>	<u>CWid</u>	<u>#TOs</u>	<u>Width</u>	<u>F.W.L</u>	<u>Taper</u>	<u>Other</u>
									20 LCY

Rock Volume = 20 LCY

Purchase Price / Royalty: \$30.00/LCY x 20 LCY = \$600.00

Subtotal: \$600.00

Section 1800 Soil Stabilization:

Comment: Estimated 0.10 acres per slump site

Dry Method with Mulch: \$563.50/acre x 0.10 acres = \$56.35

Includes Small Quantity Factor of 1.48

+ Seed Cost: \$132.00/acre x 0.10 acres = \$13.20

+ Mulch Cost: \$320.00/acre x 0.10 acres = \$32.00

BMP installation (15mins/site)

General Laborer 0.25 hr x \$33.60/hr = \$8.40

Crew Cab or 3/4 Ton Pickup 0.25 hr x \$48.38/hr = \$12.10

Subtotal: \$122.04

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Roadside Brushing & Chipping 1.47 Mile x \$800.00/Mile = \$1,176.00

Subtotal: \$1,176.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Reconstruct Turnaround Area

Excavator -Small (1.5 CY) 1 hr x \$97.09/hr = \$97.09

Motor Grader 14M 1 hr x \$147.33/hr = \$147.33

Construct Large Turnout Area

Excavator -Small (1.5 CY) 0.5 hr x \$97.09/hr = \$48.55

Tractor: D5 with winch 1.5 hr x \$96.83/hr = \$145.25

Motor Grader 14M 1 hr x \$147.33/hr = \$147.33

Subtotal: \$585.54

Mobilization:

Construction - 2.97% of total Costs = \$234.96

Surfacing - 2.47% by rock volume = \$0.00

Subtotal: \$234.96

Total: \$5,727.77

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-6-1.2 Road Name: Salmon School Road

Road Renovation: 0.05 mi 14 ft Subgrade 0 ft ditch 6/30/2014

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:	\$42.51
Blading 0.05 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$40.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$3.53 Surf. \$0.00.....	\$3.53

Total: \$86.04

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-6-1.2 Road Name: Salmon School 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 w/o Ditches: $\$446.73/\text{mi} \times 0.05 \text{ mi} = \22.34

Compaction: $\$403.47/\text{mi} \times 0.05 \text{ mi} = \20.17

Subtotal: \$42.51

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Roadside Brushing & Chipping

Brush Chipper 0.05 Mile x \$800.00/Mile = \$40.00

Subtotal: \$40.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.04% of total Costs = \$3.53

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$3.53

Total: \$86.04

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: 34-6-2.0(A-D) Road Name: Salmon Creek Road

Road Renovation: 1.96 mi 16 ft Subgrade 3 ft ditch 6/30/2014

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:	\$4,018.14
Blading 1.96 mi	
Slide Removal 8 cy	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.2 acres	\$326.07
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$1,568.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$252.90 Surf. \$0.00.....	\$252.90

Total: \$6,165.11

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-6-2.0(A-D) Road Name: Salmon 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:

Slide Removal 8 cy

Front End Loader \$107.45/hr x 2.00 hr = \$214.90

Dump Truck: \$93.87/hr x 2.00 hr = \$187.74

Blading: \$720.50/mi x 1.96 mi = \$1,412.18

Scarification: \$893.46/mi x 0.65 mi = \$580.75

Compaction: \$403.47/mi x 1.96 mi = \$790.80

Clean Culverts: \$334.17/mi x 1.96 mi = \$654.97

Heavy Blading

Motor Grader 14M (0.12miles @ 0.10mi/hr)

1.2 hr x \$147.33/hr = \$176.80

Subtotal: \$4,018.14

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Comment: Estimated 0.10 acres per slump site

Dry Method with Mulch: \$563.50/acre x 0.20 acres = \$112.70

Includes Small Quantity Factor of 1.48

+ Seed Cost: \$132.00/acre x 0.20 acres = \$26.40

+ Mulch Cost: \$320.00/acre x 0.20 acres = \$64.00

BMP Installation (15min/site)

General Laborer 1.5 hr x \$33.60/hr = \$50.40

Crew Cab or 3/4 Ton Pickup 1.5 hr x \$48.38/hr = \$72.57

Subtotal: \$326.07

Section 2100 Roadside Brushing:

Roadside Brushing and Chipping

Brush Chipper 1.96 Mile x \$800.00/Mile = \$1,568.00

Subtotal: \$1,568.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 3.19% of total Costs = \$252.90

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$252.90

Total: \$6,165.11

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: TR 01-A Road Name: Temp Route

Temporary Road: 0.11 mi 12 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.3 acres	\$1,394.76
300 Excavation: 188 cy	\$411.72
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$636.82
Blading 0.11 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.3 acres	\$324.96
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$577.06
Mobilization: Const. \$143.10 Surf. \$0.00.....	\$143.10

Total: \$3,488.42

Notes:

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

Road Construction Worksheet

Road Number: TR 01-A Road Name: Temp Route

Section 200 Clearing and Grubbing:

Clearing - Heavy (Clearing): Adjustment Factor (2.54)

16-30% (Avg Side Slopes): Adjustment Factor (0.1)

Scatter (Slash): Adjustment Factor (0.94)

20-40' (Avg Clearing Widths): Adjustment Factor (0.1)

Total Adjustment Factor: $2.54 + 0.1 + 0.94 + 0.1 = 3.68$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 3.68 x Total Acres: 0.3 = \$1,394.76

Subtotal: \$1,394.76

Section 300 Excavation:

Excavation - Common: $\$1.93/\text{cy} \times 188 \text{ cy} = \362.84

Embankment Placement & Compaction 306.f - Common: $\$0.26/\text{cy} \times 188 \text{ cy} = \48.88

Subtotal: \$411.72

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.11 \text{ mi} = \49.14

Heavy Blading

Tractor: D7 with rippers (0.05mi/hr) 2 hr x \$163.53/hr = \$327.06

Construct Turnaround Area

Tractor: D7 with rippers 1 hr x \$163.53/hr = \$163.53

Excavator -Small (1.5 CY) 1 hr x \$97.09/hr = \$97.09

Subtotal: \$636.82

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Comment: Upon Completion of Decommissioning

Dry Method with Mulch: $\$563.50/\text{acre} \times 0.32 \text{ acres} = \180.32

Includes Small Quantity Factor of 1.48

+ Seed Cost: $\$132.00/\text{acre} \times 0.32 \text{ acres} = \42.24

+ Mulch Cost: $\$320.00/\text{acre} \times 0.32 \text{ acres} = \102.40

Subtotal: \$324.96

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Ripping Subgrade

Tractor: D7 with rippers (0.05mi/hr) 2 hr x \$163.53/hr = \$327.06

Construct Water Bar

Construct Water Bar 2 EA x \$50.00/EA = \$100.00

Construct Earthen Barricade

Construct Earthen Barricade 1 EA x \$150.00/EA = \$150.00

Subtotal: \$577.06

Mobilization:

Construction - 1.81% of total Costs = \$143.10

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$143.10

Total: \$3,488.42

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: TR 01-A2 Road Name: Temp Route

Temporary Road: 0.18 mi 12 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.7 acres	\$3,254.44
300 Excavation: 440 cy	\$963.60
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$995.15
Blading 0.18 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.7 acres	\$680.38
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$463.53
Mobilization: Const. \$271.93 Surf. \$0.00.....	\$271.93

Total: \$6,629.04

Notes:

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

Road Construction Worksheet

Road Number: TR 01-A2 Road Name: Temp Route

Section 200 Clearing and Grubbing:

Clearing - Heavy (Clearing): Adjustment Factor (2.54)

16-30% (Avg Side Slopes): Adjustment Factor (0.1)

Scatter (Slash): Adjustment Factor (0.94)

20-40' (Avg Clearing Widths): Adjustment Factor (0.1)

Total Adjustment Factor: $2.54 + 0.1 + 0.94 + 0.1 = 3.68$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 3.68 x Total Acres: 0.7 = \$3,254.44
Subtotal: \$3,254.44

Section 300 Excavation:

Excavation - Common: $\$1.93/\text{cy} \times 440 \text{ cy} = \849.20

Embankment Placement & Compaction 306.f - Common: $\$0.26/\text{cy} \times 440 \text{ cy} = \114.40
Subtotal: \$963.60

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.18 \text{ mi} = \80.41

Heavy Blading

Tractor: D7 with rippers (0.05mi/hr) 4 hr x \$163.53/hr = \$654.12

Construct Turnaround Area

Tractor: D7 with rippers 1 hr x \$163.53/hr = \$163.53

Excavator -Small (1.5 CY) 1 hr x \$97.09/hr = \$97.09

Subtotal: \$995.15

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Comment: Upon Completion of Decommissioning

Dry Method with Mulch: $\$563.50/\text{acre} \times 0.67 \text{ acres} = \377.54

Includes Small Quantity Factor of 1.48

+ Seed Cost: $\$132.00/\text{acre} \times 0.67 \text{ acres} = \88.44

+ Mulch Cost: $\$320.00/\text{acre} \times 0.67 \text{ acres} = \214.40

Subtotal: \$680.38

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Ripping Subgrade (BLM land)

Tractor: D7 with rippers (0.05mi/hr) 1 hr x \$163.53/hr = \$163.53

Construct Water Bar

Construct Water Bar 3 EA x \$50.00/EA = \$150.00

Construct Earthen Barricade

Construct Earthen Barricade 1 EA x \$150.00/EA = \$150.00

Subtotal: \$463.53

Mobilization:

Construction - 3.43% of total Costs = \$271.93

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$271.93

Total: \$6,629.04

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: TR 01-C3 Road Name: Temp Route

Temporary Road: 0.18 mi 12 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.4 acres	\$1,884.95
300 Excavation: 94 cy	\$205.86
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$930.00
Blading 0.18 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.4 acres	\$436.66
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$954.12
Mobilization: Const. \$188.71 Surf. \$0.00.....	\$188.71

Total: \$4,600.30

Notes:

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

Road Construction Worksheet

Road Number: TR 01-C3 Road Name: Temp Route

Section 200 Clearing and Grubbing:

Clearing - Heavy (Clearing): Adjustment Factor (2.54)

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

Scatter (Slash): Adjustment Factor (0.94)

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

Total Adjustment Factor: $2.54 + 0 + 0.94 + 0.25 = 3.73$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 3.73 x Total Acres: 0.4 = \$1,884.95

Subtotal: \$1,884.95

Section 300 Excavation:

Excavation - Common: $\$1.93/\text{cy} \times 94 \text{ cy} = \181.42

Embankment Placement & Compaction 306.f - Common: $\$0.26/\text{cy} \times 94 \text{ cy} = \24.44

Subtotal: \$205.86

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.18 \text{ mi} = \80.41

Heavy Blading

Tractor: D7 with rippers (0.05mi/hr) 4 hr x \$163.53/hr = \$654.12

Reconstruct Turnaround Area

Tractor: D7 with rippers 0.75 hr x \$163.53/hr = \$122.65

Excavator -Small (1.5 CY) 0.75 hr x \$97.09/hr = \$72.82

Subtotal: \$930.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Comment: Upon completion of decommissioning

Dry Method without Mulch: $\$372.49/\text{acre} \times 0.00 \text{ acres} = \0.00

Dry Method with Mulch: $\$563.50/\text{acre} \times 0.43 \text{ acres} = \242.30

Includes Small Quantity Factor of 1.48

+ Seed Cost: $\$132.00/\text{acre} \times 0.43 \text{ acres} = \56.76

+ Mulch Cost: $\$320.00/\text{acre} \times 0.43 \text{ acres} = \137.60

Subtotal: \$436.66

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Construct Water Bar

Construct Water Bar 3 EA x \$50.00/EA = \$150.00

Construct Earthen Barricade

Construct Earthen Barricade 1 EA x \$150.00/EA = \$150.00

Ripping Subgrade

Tractor: D7 with rippers (0.05mi/hr) 4 hr x \$163.53/hr = \$654.12

Subtotal: \$954.12

Mobilization:

Construction - 2.38% of total Costs = \$188.71

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$188.71

Total: \$4,600.30

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: TR 01-C5 Road Name: Temp Route

Temporary Road: 0.19 mi 12 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.5 acres	\$2,356.19
300 Excavation: 196 cy	\$429.24
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$934.46
Blading 0.19 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.5 acres	\$456.97
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$1,004.12
Mobilization: Const. \$221.62 Surf. \$0.00.....	\$221.62

Total: \$5,402.60

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: TR 01-C5 Road Name: Temp Route

Section 200 Clearing and Grubbing:

Clearing - Heavy (Clearing): Adjustment Factor (2.54)

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

Scatter (Slash): Adjustment Factor (0.94)

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

Total Adjustment Factor: $2.54 + 0 + 0.94 + 0.25 = 3.73$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 3.73 x Total Acres: 0.5 = \$2,356.19

Subtotal: \$2,356.19

Section 300 Excavation:

Excavation - Common: $\$1.93/\text{cy} \times 196 \text{ cy} = \378.28

Embankment Placement & Compaction 306.f - Common: $\$0.26/\text{cy} \times 196 \text{ cy} = \50.96

Subtotal: \$429.24

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.19 \text{ mi} = \84.88

Reconstruct Turnaround Area

Tractor: D7 with rippers 0.75 hr x \$163.53/hr = \$122.65

Excavator -Small (1.5 CY) 0.75 hr x \$97.09/hr = \$72.82

Heavy Blading

Tractor: D7 with rippers (0.05mi/hr)

4 hr x \$163.53/hr = \$654.12

Subtotal: \$934.46

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Comment: Upon Completion of Decommissioning

Dry Method with Mulch: $\$563.50/\text{acre} \times 0.45 \text{ acres} = \253.57

Includes Small Quantity Factor of 1.48

+ Seed Cost: $\$132.00/\text{acre} \times 0.45 \text{ acres} = \59.40

+ Mulch Cost: $\$320.00/\text{acre} \times 0.45 \text{ acres} = \144.00

Subtotal: \$456.97

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Construct Water Bar

Construct Water Bar 4 EA x \$50.00/EA = \$200.00

Ripping Subgrade

Tractor: D7 with rippers (0.05mi/hr)

4 hr x \$163.53/hr = \$654.12

Construct Earthen Barricade

Construct Earthen Barricade 1 EA x \$150.00/EA = \$150.00

Subtotal: \$1,004.12

Mobilization:

Construction - 2.80% of total Costs = \$221.62

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$221.62

Total: \$5,402.60

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: TR 07-2 Road Name: Temp Route

Temporary Road: 0.05 mi 12 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.1 acres	\$361.32
300 Excavation: 34 cy	\$74.46
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$442.02
Blading 0.04 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.1 acres	\$111.70
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$363.53
Mobilization: Const. \$57.88 Surf. \$0.00.....	\$57.88

Total: \$1,410.92

Notes:

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

Road Construction Worksheet

Road Number: TR 07-2 Road Name: Temp Route

Section 200 Clearing and Grubbing:

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

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

Scatter (Slash): Adjustment Factor (0.94)

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

Total Adjustment Factor: $1.67 + 0 + 0.94 + 0.25 = 2.86$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 2.86 x Total Acres: 0.1 = \$361.32

Subtotal: \$361.32

Section 300 Excavation:

Excavation - Common: $\$1.93/\text{cy} \times 34 \text{ cy} = \65.62

Embankment Placement & Compaction 306.f - Common: $\$0.26/\text{cy} \times 34 \text{ cy} = \8.84

Subgrade Compaction: 4 Sta/hr $\$33.62/\text{sta.} \times 0.0 \text{ sta} = \0.00

Subtotal: \$74.46

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.04 \text{ mi} = \17.87

Heavy Blading

Tractor: D7 with rippers (0.05mi/hr)

1 hr x \$163.53/hr = \$163.53

Construct Turnaround Area

Tractor: D7 with rippers 1 hr x \$163.53/hr = \$163.53

Excavator -Small (1.5 CY) 1 hr x \$97.09/hr = \$97.09

Subtotal: \$442.02

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Comment: Upon completion of decommissioning

Dry Method with Mulch: $\$563.50/\text{acre} \times 0.11 \text{ acres} = \61.98

Includes Small Quantity Factor of 1.48

+ Seed Cost: $\$132.00/\text{acre} \times 0.11 \text{ acres} = \14.52

+ Mulch Cost: $\$320.00/\text{acre} \times 0.11 \text{ acres} = \35.20

Subtotal: \$111.70

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Construct Water Bar

Construct Water Bar 1 EA x \$50.00/EA = \$50.00

Ripping Subgrade

Tractor: D7 with rippers (0.05mi/hr)

1 hr x \$163.53/hr = \$163.53

Construct Earthen Barricade

Construct Earthen Barricade 1 EA x \$150.00/EA = \$150.00

Subtotal: \$363.53

Mobilization:

Construction - 0.73% of total Costs = \$57.88

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$57.88

Total: \$1,410.92

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: TR 07-2c Road Name: Temp Route

Temporary Road: 0.05 mi 12 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.2 acres	\$929.84
300 Excavation: 96 cy	\$210.24
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$446.49
Blading 0.05 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.2 acres	\$162.48
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$363.53
Mobilization: Const. \$90.37 Surf. \$0.00.....	\$90.37

Total: \$2,202.94

Notes:

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

Road Construction Worksheet

Road Number: TR 07-2c Road Name: Temp Route

Section 200 Clearing and Grubbing:

Clearing - Heavy (Clearing): Adjustment Factor (2.54)

16-30% (Avg Side Slopes): Adjustment Factor (0.1)

Scatter (Slash): Adjustment Factor (0.94)

20-40' (Avg Clearing Widths): Adjustment Factor (0.1)

Total Adjustment Factor: $2.54 + 0.1 + 0.94 + 0.1 = 3.68$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 3.68 x Total Acres: 0.2 = \$929.84

Subtotal: \$929.84

Section 300 Excavation:

Excavation - Common: $\$1.93/\text{cy} \times 96 \text{ cy} = \185.28

Embankment Placement & Compaction 306.f - Common: $\$0.26/\text{cy} \times 96 \text{ cy} = \24.96

Subtotal: \$210.24

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.05 \text{ mi} = \22.34

Heavy Blading

Tractor: D7 with rippers (0.05mi/hr)

1 hr x \$163.53/hr = \$163.53

Construct Turnaround Area

Tractor: D7 with rippers 1 hr x \$163.53/hr = \$163.53

Excavator -Small (1.5 CY) 1 hr x \$97.09/hr = \$97.09

Subtotal: \$446.49

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Comment: Upon Completion of Decommissioning

Dry Method with Mulch: $\$563.50/\text{acre} \times 0.16 \text{ acres} = \90.16

Includes Small Quantity Factor of 1.48

+ Seed Cost: $\$132.00/\text{acre} \times 0.16 \text{ acres} = \21.12

+ Mulch Cost: $\$320.00/\text{acre} \times 0.16 \text{ acres} = \51.20

Subtotal: \$162.48

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Construct Water Bar

Construct Water Bar 1 EA x \$50.00/EA = \$50.00

Ripping Subgrade

Tractor: D7 with rippers (0.05mi/hr)

1 hr x \$163.53/hr = \$163.53

Construct Earthen Barricade

Construct Earthen Barricade 1 EA x \$150.00/EA = \$150.00

Subtotal: \$363.53

Mobilization:

Construction - 1.14% of total Costs = \$90.37

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$90.37

Total: \$2,202.94

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: TR 32-1H-1 Road Name: Temp Route

Temporary Road: 0.07 mi 12 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.2 acres	\$942.47
300 Excavation: 71 cy	\$155.49
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$455.42
Blading 0.07 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.2 acres	\$172.63
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$513.53
Mobilization: Const. \$95.80 Surf. \$0.00.....	\$95.80

Total: \$2,335.35

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: TR 32-1H-1 Road Name: Temp Route

Section 200 Clearing and Grubbing:

Clearing - Heavy (Clearing): Adjustment Factor (2.54)

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

Scatter (Slash): Adjustment Factor (0.94)

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

Total Adjustment Factor: $2.54 + 0 + 0.94 + 0.25 = 3.73$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 3.73 x Total Acres: 0.2 = \$942.47

Subtotal: \$942.47

Section 300 Excavation:

Excavation - Common: $\$1.93/\text{cy} \times 71 \text{ cy} = \137.03

Embankment Placement & Compaction 306.f - Common: $\$0.26/\text{cy} \times 71 \text{ cy} = \18.46

Subtotal: \$155.49

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.07 \text{ mi} = \31.27

Heavy Blading

Tractor: D7 with rippers (0.05mi/hr) 1 hr x \$163.53/hr = \$163.53

Construct Turnaround Area

Tractor: D7 with rippers 1 hr x \$163.53/hr = \$163.53

Excavator -Small (1.5 CY) 1 hr x \$97.09/hr = \$97.09

Subtotal: \$455.42

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Comment: Upon Completion of Decommissioning

Dry Method with Mulch: $\$563.50/\text{acre} \times 0.17 \text{ acres} = \95.79

Includes Small Quantity Factor of 1.48

+ Seed Cost: $\$132.00/\text{acre} \times 0.17 \text{ acres} = \22.44

+ Mulch Cost: $\$320.00/\text{acre} \times 0.17 \text{ acres} = \54.40

Subtotal: \$172.63

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Construct Water Bar

Construct Water Bar 1 EA x \$50.00/EA = \$50.00

Construct Earthen Barricade

Construct Earthen Barricade 1 EA x \$150.00/EA = \$150.00

Remove Existing Barricade

Remove Existing Barricade 1 EA x \$150.00/EA = \$150.00

Ripping Subgrade

Tractor: D7 with rippers (0.05mi/hr) 1 hr x \$163.53/hr = \$163.53

Subtotal: \$513.53

Mobilization:

Construction - 1.21% of total Costs = \$95.80

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$95.80

Total: \$2,335.35

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: TR 32-1H-2 Road Name: Temp Route

Temporary Road: 0.06 mi 12 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.2 acres	\$942.47
300 Excavation: 62 cy	\$135.78
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$190.33
Blading 0.06 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.2 acres	\$152.32
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$363.53
Mobilization: Const. \$76.33 Surf. \$0.00.....	\$76.33

Total: \$1,860.77

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: TR 32-1H-2 Road Name: Temp Route

Section 200 Clearing and Grubbing:

Clearing - Heavy (Clearing): Adjustment Factor (2.54)

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

Scatter (Slash): Adjustment Factor (0.94)

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

Total Adjustment Factor: $2.54 + 0 + 0.94 + 0.25 = 3.73$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 3.73 x Total Acres: 0.2 = \$942.47

Subtotal: \$942.47

Section 300 Excavation:

Excavation - Common: $\$1.93/\text{cy} \times 62 \text{ cy} = \119.66

Embankment Placement & Compaction 306.f - Common: $\$0.26/\text{cy} \times 62 \text{ cy} = \16.12

Subtotal: \$135.78

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.06 \text{ mi} = \26.80

Heavy Blading

Tractor: D7 with rippers (0.05mi/hr) 1 hr x \$163.53/hr = \$163.53

Subtotal: \$190.33

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Comment: Upon Completion of Decommissioning

Dry Method with Mulch: $\$563.50/\text{acre} \times 0.15 \text{ acres} = \84.52

Includes Small Quantity Factor of 1.48

+ Seed Cost: $\$132.00/\text{acre} \times 0.15 \text{ acres} = \19.80

+ Mulch Cost: $\$320.00/\text{acre} \times 0.15 \text{ acres} = \48.00

Subtotal: \$152.32

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Construct Earthen Barricade

Construct Earthen Barricade 1 EA x \$150.00/EA = \$150.00

Construct Water Bar

Construct Water Bar 1 EA x \$50.00/EA = \$50.00

Ripping Subgrade

Tractor: D7 with rippers (0.05mi/hr) 1 hr x \$163.53/hr = \$163.53

Subtotal: \$363.53

Mobilization:

Construction - 0.96% of total Costs = \$76.33

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$76.33

Total: \$1,860.77

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: TR 34-2B Road Name: Temp Route

Temporary Road: 0.39 mi 12 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 1.2 acres	\$5,806.45
300 Excavation: 505 cy	\$1,105.95
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$1,743.08
Blading 0.39 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 1.2 acres	\$1,198.28
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$2,058.24
Mobilization: Const. \$509.55 Surf. \$0.00.....	\$509.55

Total: \$12,421.56

Notes:

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

Road Construction Worksheet

Road Number: TR 34-2B Road Name: Temp Route

Section 200 Clearing and Grubbing:

Clearing - Heavy (Clearing): Adjustment Factor (2.54)

16-30% (Avg Side Slopes): Adjustment Factor (0.1)

Scatter (Slash): Adjustment Factor (0.94)

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

Total Adjustment Factor: $2.54 + 0.1 + 0.94 + 0.25 = 3.83$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 3.83 x Total Acres: 1.2 = \$5,806.45

Subtotal: \$5,806.45

Section 300 Excavation:

Excavation - Common: $\$1.93/\text{cy} \times 505 \text{ cy} = \974.65

Embankment Placement & Compaction 306.f - Common: $\$0.26/\text{cy} \times 505 \text{ cy} = \131.30

Subtotal: \$1,105.95

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.39 \text{ mi} = \174.22

Construct Turnaround Area

Tractor: D7 with rippers 1 hr x \$163.53/hr = \$163.53

Excavator -Small (1.5 CY) 1 hr x \$97.09/hr = \$97.09

Heavy Blading

Tractor: D7 with rippers (0.05mi/hr) 8 hr x \$163.53/hr = \$1,308.24

Subtotal: \$1,743.08

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Comment: Upon Completion of Decommissioning

Dry Method with Mulch: $\$563.50/\text{acre} \times 1.18 \text{ acres} = \664.92

Includes Small Quantity Factor of 1.48

+ Seed Cost: $\$132.00/\text{acre} \times 1.18 \text{ acres} = \155.76

+ Mulch Cost: $\$320.00/\text{acre} \times 1.18 \text{ acres} = \377.60

Subtotal: \$1,198.28

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Construct Water Dip

Construct Water Dip 1 EA x \$200.00/EA = \$200.00

Construct Water Bar

Construct Water Bar 8 EA x \$50.00/EA = \$400.00

Ripping Subgrade

Tractor: D7 with rippers (0.05mi/hr) 8 hr x \$163.53/hr = \$1,308.24

Construct Earthen Barricade

Construct Earthen Barricade 1 EA x \$150.00/EA = \$150.00

Subtotal: \$2,058.24

Mobilization:

Construction - 6.44% of total Costs = \$509.55

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$509.55

Total: \$12,421.56

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: TR 35-A Road Name: Temp Route

Temporary Road: 0.07 mi 12 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.2 acres	\$942.47
300 Excavation: 85 cy	\$186.15
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$194.80
Blading 0.07 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.2 acres	\$162.48
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$363.53
Mobilization: Const. \$79.11 Surf. \$0.00.....	\$79.11

Total: \$1,928.55

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: TR 35-A Road Name: Temp Route

Section 200 Clearing and Grubbing:

Clearing - Heavy (Clearing): Adjustment Factor (2.54)

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

Scatter (Slash): Adjustment Factor (0.94)

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

Total Adjustment Factor: $2.54 + 0 + 0.94 + 0.25 = 3.73$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 3.73 x Total Acres: 0.2 = \$942.47

Subtotal: \$942.47

Section 300 Excavation:

Excavation - Common: $\$1.93/\text{cy} \times 85 \text{ cy} = \164.05

Embankment Placement & Compaction 306.f - Common: $\$0.26/\text{cy} \times 85 \text{ cy} = \22.10

Subtotal: \$186.15

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.07 \text{ mi} = \31.27

Heavy Blading

Tractor: D7 with rippers (0.05mi/hr) 1 hr x \$163.53/hr = \$163.53

Subtotal: \$194.80

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Comment: Upon Completion of Decommissioning

Dry Method with Mulch: $\$563.50/\text{acre} \times 0.16 \text{ acres} = \90.16

Includes Small Quantity Factor of 1.48

+ Seed Cost: $\$132.00/\text{acre} \times 0.16 \text{ acres} = \21.12

+ Mulch Cost: $\$320.00/\text{acre} \times 0.16 \text{ acres} = \51.20

Subtotal: \$162.48

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Ripping Subgrade

Tractor: D7 with rippers (0.05mi/hr) 1 hr x \$163.53/hr = \$163.53

Construct Water Bar

Construct Water Bar 1 EA x \$50.00/EA = \$50.00

Construct Earthen Barricade

Construct Earthen Barricade 1 EA x \$150.00/EA = \$150.00

Subtotal: \$363.53

Mobilization:

Construction - 1.00% of total Costs = \$79.11

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$79.11

Total: \$1,928.55

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number: TR 35-E Road Name: Temp Route

Temporary Road: 0.18 mi 12 ft Subgrade 0 ft ditch 6/30/2014

200 Clearing and Grubbing: 0.4 acres	\$1,445.30
300 Excavation: 230 cy	\$503.70
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$831.62
Blading 0.18 mi	
700-1200 Surfacing:	\$0.00
1800 Soil Stabilization: 0.4 acres	\$436.66
Includes Small Quantity Factor of 1.48	
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
8000 Miscellaneous:	\$954.12
Mobilization: Const. \$178.44 Surf. \$0.00.....	\$178.44

Total: \$4,349.84

Notes:

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

Road Construction Worksheet

Road Number: TR 35-E Road Name: Temp Route

Section 200 Clearing and Grubbing:

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

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

Scatter (Slash): Adjustment Factor (0.94)

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

Total Adjustment Factor: $1.67 + 0 + 0.94 + 0.25 = 2.86$

Base Cost/Acre: \$1,263.37 x Adjustment Factor: 2.86 x Total Acres: 0.4 = \$1,445.30

Subtotal: \$1,445.30

Section 300 Excavation:

Excavation - Common: $\$1.93/\text{cy} \times 230 \text{ cy} = \443.90

Embankment Placement & Compaction 306.f - Common: $\$0.26/\text{cy} \times 230 \text{ cy} = \59.80

Subtotal: \$503.70

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$446.73/\text{mi} \times 0.18 \text{ mi} = \80.41

Heavy Blading

Tractor: D7 with rippers (0.05mi/hr) 3 hr x \$163.53/hr = \$490.59

Construct Turnaround Area

Tractor: D7 with rippers 1 hr x \$163.53/hr = \$163.53

Excavator -Small (1.5 CY) 1 hr x \$97.09/hr = \$97.09

Subtotal: \$831.62

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Comment: Upon Completion of Decommissioning

Dry Method with Mulch: $\$563.50/\text{acre} \times 0.43 \text{ acres} = \242.30

Includes Small Quantity Factor of 1.48

+ Seed Cost: $\$132.00/\text{acre} \times 0.43 \text{ acres} = \56.76

+ Mulch Cost: $\$320.00/\text{acre} \times 0.43 \text{ acres} = \137.60

Subtotal: \$436.66

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Ripping Subgrade

Tractor: D7 with rippers (0.05mi/hr) 4 hr x \$163.53/hr = \$654.12

Construct Water Bar

Construct Water Bar 3 EA x \$50.00/EA = \$150.00

Construct Earthen Barricade

Construct Earthen Barricade 1 EA x \$150.00/EA = \$150.00

Subtotal: \$954.12

Mobilization:

Construction - 2.25% of total Costs = \$178.44

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$178.44

Total: \$4,349.84

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Mobilization Costs - Construction and Surfacing

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Average Mobilization distance = 35 miles Factor = 0.75

Mobilization: Construction

Comment: Wash equipment for weed control

Graders-all: 1 ea x (0.75 x \$483.00/ea + 35 mi x \$14.73/mi)= \$877.80

Brush Cutter: 1 ea x (0.75 x \$483.00/ea) = \$362.25

Loaders < 3cy: 1 ea x (0.75 x \$483.00/ea + 35 mi x \$9.21/mi)= \$684.60

Rollers & Comp: 1 ea x (0.75 x \$483.00/ea + 35 mi x \$26.90/mi)= \$1,303.75

Tractors <= D7: 1 ea x (0.75 x \$672.00/ea + 35 mi x \$32.67/mi)= \$1,647.45

Dump Truck<=15cy: 1 ea x (0.75 x \$113.00/ea + 35 mi x \$4.69/mi)= \$248.90

Excavators(Small): 1 ea x (0.75 x \$483.00/ea + 35 mi x \$19.42/mi)= \$1,041.95

Equipment Washing: 7 ea x (\$250.00) /ea = \$1,750.00

Subtotal: \$7,916.70

Mobilization: Surfacing

Comment: **Surfacing Costs are included in the cost per CY.**

Subtotal: \$0.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Summary of Construction Quantities

T.S. Contract Name: Lower Grave TS Sale Date: 8/27/2015

Road Number	Const	Improv	Renov	Decomm	Temp
33-5-27.2(A-B2)			29.04		
33-5-31.1			33.79		
33-5-31.3(A)			24.82		
33-5-32.0(A)			33.26		
33-5-32.2(A)			3.17		
33-5-34.1	15.50				
33-5-35.0			5.81		
33-5-35.1(A-B)			56.50		
33-5-35.2			19.01		
33-5-35.5			63.36		
33-6-24.0(A-B2)			185.86		
34-4-28.0(K-J)			92.93		
34-4-7.0			15.84		
34-4-7.1			8.45		
34-4-8.0(A-D)			143.62		
34-5-1.0(A-B)			105.07		
34-5-1.3(A-E)			180.05		
34-5-10.2(A-C)			77.62		
34-5-12.1			10.03		
34-5-12.2			10.56		
34-5-15.0			52.27		
34-5-15.1(A-B)			43.82		
34-5-2.0(C-B)			168.43		
34-5-2.1(A-B)			196.42		
34-5-20.0(F-E)			71.28		
34-5-3.2			6.86		
34-5-9.0(A)			190.08		
34-6-1.0			23.76		
34-6-1.1			77.62		
34-6-1.2			2.64		
34-6-2.0(A-D)			103.49		
TR 01-A					5.60
TR 01-A2					9.70
TR 01-C3					9.35
TR 01-C5					9.90
TR 07-2					2.45
TR 07-2c					2.85
TR 32-1H-1					3.65
TR 32-1H-2					3.20
TR 34-2B					20.60
TR 35-A					3.45
TR 35-E					9.40

Total Sta:	15.50		2,035.46		80.15
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200 Clearing and Grubbing

Clearing
acres

33-5-27.2(A-B2)	0.3
33-5-31.1	0.0
33-5-31.3(A)	0.0
33-5-32.0(A)	0.0
33-5-32.2(A)	0.1
33-5-34.1	0.9
33-5-35.0	0.0

Continuation of Construction Quantities

200 Clearing and Grubbing	Clearing acres
33-5-35.1(A-B)	0.0
33-5-35.2	0.0
33-5-35.5	0.0
33-6-24.0(A-B2)	0.0
34-4-28.0(K-J)	0.0
34-4-7.0	0.0
34-4-7.1	0.0
34-4-8.0(A-D)	0.0
34-5-1.0(A-B)	0.0
34-5-1.3(A-E)	0.0
34-5-10.2(A-C)	0.0
34-5-12.1	0.0
34-5-12.2	0.0
34-5-15.0	0.0
34-5-15.1(A-B)	0.0
34-5-2.0(C-B)	0.0
34-5-2.1(A-B)	0.0
34-5-20.0(F-E)	0.1
34-5-3.2	0.0
34-5-9.0(A)	0.0
34-6-1.0	0.0
34-6-1.1	0.1
34-6-1.2	0.0
34-6-2.0(A-D)	0.0
TR 01-A	0.3
TR 01-A2	0.7
TR 01-C3	0.4
TR 01-C5	0.5
TR 07-2	0.1
TR 07-2c	0.2
TR 32-1H-1	0.2
TR 32-1H-2	0.2
TR 34-2B	1.2
TR 35-A	0.2
TR 35-E	0.4
Totals:	5.9

300 Excavation	Excav LCY.s	Haul sta-yds	Haul yd-mi
33-5-27.2(A-B2)	732	0	0
33-5-34.1	1,067	0	0
TR 01-A	188	0	0
TR 01-A2	440	0	0
TR 01-C3	94	0	0
TR 01-C5	196	0	0
TR 07-2	34	0	0
TR 07-2c	96	0	0
TR 32-1H-1	71	0	0
TR 32-1H-2	62	0	0
TR 34-2B	505	0	0
TR 35-A	85	0	0
TR 35-E	230	0	0
Totals:	3,800	0	0

400 Drainage

Road Number	Culvert	Polypipe	Downspout
33-5-34.1	62 lf	0 lf	0 lf
34-5-10.2(A-C)	45 lf	0 lf	0 lf
34-5-2.0(C-B)	35 lf	0 lf	0 lf

Subtotal Drainage:	142 lf		
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Install 12" CMP at STA 0+80 33-5-34.1
 Aluminized 16ga CMP 74 LF

Total Drainage:	216 lf
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500 Renovation

	Blade Miles	Slide cy
33-5-27.2(A-B2)	0.55	0
33-5-31.1	0.64	0
33-5-31.3(A)	0.47	0
33-5-32.0(A)	0.63	0
33-5-32.2(A)	0.06	0
33-5-35.0	0.11	0
33-5-35.1(A-B)	1.07	0
33-5-35.2	0.36	0
33-5-35.5	1.20	0
33-6-24.0(A-B2)	3.52	0
34-4-28.0(K-J)	1.76	0
34-4-7.0	0.30	0
34-4-7.1	0.16	0
34-4-8.0(A-D)	2.72	0
34-5-1.0(A-B)	1.99	0
34-5-1.3(A-E)	3.41	0
34-5-10.2(A-C)	1.47	22
34-5-12.1	0.19	0
34-5-12.2	0.20	0
34-5-15.0	0.99	0
34-5-15.1(A-B)	0.83	10
34-5-2.0(C-B)	3.19	0
34-5-2.1(A-B)	3.72	0
34-5-20.0(F-E)	1.35	0
34-5-3.2	0.13	0
34-5-9.0(A)	3.60	0
34-6-1.0	0.45	0
34-6-1.1	1.47	7
34-6-1.2	0.05	0
34-6-2.0(A-D)	1.96	8
TR 01-A	0.11	0
TR 01-A2	0.18	0
TR 01-C3	0.18	0
TR 01-C5	0.19	0
TR 07-2	0.04	0
TR 07-2c	0.05	0
TR 32-1H-1	0.07	0
TR 32-1H-2	0.06	0
TR 34-2B	0.39	0
TR 35-A	0.07	0
TR 35-E	0.18	0

Totals:	40.07	47
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Continuation of Construction Quantities

Construct Turnaround Area	TR 34-2B	
Tractor: D7 with rippers		1 hr
Excavator -Small (1.5 CY)		1 hr
Construct Turnaround Area	TR 32-1H-1	
Tractor: D7 with rippers		1 hr
Excavator -Small (1.5 CY)		1 hr
Construct Turnaround Area	TR 35-E	
Tractor: D7 with rippers		1 hr
Excavator -Small (1.5 CY)		1 hr
Construct Turnaround Area	TR 01-A	
Tractor: D7 with rippers		1 hr
Excavator -Small (1.5 CY)		1 hr
Construct Turnaround Area	TR 01-A2	
Tractor: D7 with rippers		1 hr
Excavator -Small (1.5 CY)		1 hr
Construct Turnaround Area	TR 07-2	
Tractor: D7 with rippers		1 hr
Excavator -Small (1.5 CY)		1 hr
Construct Turnaround Area	TR 07-2c	
Tractor: D7 with rippers		1 hr
Excavator -Small (1.5 CY)		1 hr
Heavy Blading	TR 01-A2	
Tractor: D7 with rippers (0.05mi/hr)		4 hr
Heavy Blading	34-6-1.1	
Motor Grader 14M 0.44miles @ 0.10mi/hr		4.4 hr
Heavy Blading	34-5-15.1(A-B)	
Motor Grader 14M (0.59miles @ 0.10mi/hr)		5.9 hr
Heavy Blading	34-5-2.0(C-B)	
Motor Grader 14M (0.29miles @ 0.10mi/hr)		2.9 hr
Heavy Blading	33-5-32.2(A)	
Motor Grader 14M (0.06miles @ 0.10mi/hr)		0.6 hr
Heavy Blading	TR 07-2	
Tractor: D7 with rippers (0.05mi/hr)		1 hr
Heavy Blading	TR 07-2c	
Tractor: D7 with rippers (0.05mi/hr)		1 hr
Heavy Blading	TR 01-C5	
Tractor: D7 with rippers (0.05mi/hr)		4 hr
Heavy Blading	34-6-2.0(A-D)	
Motor Grader 14M (0.12miles @ 0.10mi/hr)		1.2 hr
Heavy Blading	TR 01-C3	
Tractor: D7 with rippers (0.05mi/hr)		4 hr
Heavy Blading	TR 34-2B	
Tractor: D7 with rippers (0.05mi/hr)		8 hr
Heavy Blading	TR 01-A	
Tractor: D7 with rippers (0.05mi/hr)		2 hr
Heavy Blading	TR 35-A	
Tractor: D7 with rippers (0.05mi/hr)		1 hr
Heavy Blading	TR 35-E	
Tractor: D7 with rippers (0.05mi/hr)		3 hr
Heavy Blading	TR 32-1H-1	
Tractor: D7 with rippers (0.05mi/hr)		1 hr
Heavy Blading	TR 32-1H-2	
Tractor: D7 with rippers (0.05mi/hr)		1 hr
Reconstruct Turnaround Area	TR 01-C5	
Tractor: D7 with rippers		0.75 hr
Excavator -Small (1.5 CY)		0.75 hr
Reconstruct Turnaround Area	TR 01-C3	
Tractor: D7 with rippers		0.75 hr
Excavator -Small (1.5 CY)		0.75 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.

Quarry Name: Approved Quarry

Commercial	Roadway	Turnouts	Other	
34-6-1.1	0	0	20	20
34-5-2.0(C-B)	0	0	18	18
33-5-34.1	0	0	772	772
Totals:	0	0	810	810

1800 Soil stabilization - acres	Dry W/O Mulch	Dry/with Mulch	Hydro Mulch
33-5-34.1	0.0	0.5	
34-5-10.2(A-C)	0.0	0.2	
34-5-15.1(A-B)	0.0	0.1	
34-5-2.0(C-B)	0.0	0.1	
34-6-1.1	0.0	0.1	
34-6-2.0(A-D)	0.0	0.2	
TR 01-A	0.0	0.3	
TR 01-A2	0.0	0.7	
TR 01-C3	0.0	0.4	
TR 01-C5	0.0	0.5	
TR 07-2	0.0	0.1	
TR 07-2c	0.0	0.2	
TR 32-1H-1	0.0	0.2	
TR 32-1H-2	0.0	0.2	
TR 34-2B	0.0	1.2	
TR 35-A	0.0	0.2	
TR 35-E	0.0	0.4	
Totals:	0.0	5.4	0.0

Small Quantity Factor of 1.48 used

BMP Installation (15min/site)	33-6-24.0(A-B2)	
General Laborer		0.75 hr
Crew Cab or 3/4 Ton Pickup		0.75 hr
BMP Installation (15min/site)	34-5-2.1(A-B)	
General Laborer		2.25 hr
Crew Cab or 3/4 Ton Pickup		2.25 hr
BMP Installation (15min/site)	34-5-1.0(A-B)	
General Laborer		1.5 hr
Crew Cab or 3/4 Ton Pickup		1.5 hr
BMP Installation (15min/site)	34-5-15.0	
General Laborer		0.5 hr
Crew Cab or 3/4 Ton Pickup		0.5 hr
BMP Installation (15min/site)	34-6-2.0(A-D)	
General Laborer		1.5 hr
Crew Cab or 3/4 Ton Pickup		1.5 hr
BMP Installation (15mins/site)	33-5-32.0(A)	
General Laborer		0.25 hr
Crew Cab or 3/4 Ton Pickup		0.25 hr
BMP Installation (15mins/site)	33-5-31.3(A)	
General Laborer		0.25 hr
Crew Cab or 3/4 Ton Pickup		0.25 hr
BMP Installation (15mins/site)	34-5-1.3(A-E)	
General Laborer		1.5 hr
Crew Cab or 3/4 Ton Pickup		1.5 hr
BMP Installation (15mins/site)	34-4-7.0	
General Laborer		0.25 hr
Crew Cab or 3/4 Ton Pickup		0.25 hr

Continuation of Construction Quantities

BMP Installation (15mins/site)	34-5-2.0(C-B)	
General Laborer		1.75 hr
Crew Cab or 3/4 Ton Pickup		1.75 hr
BMP Installation (15mins/site)	34-4-28.0(K-J)	
General Laborer		1.5 hr
Crew Cab or 3/4 Ton Pickup		1.5 hr
BMP Installation (15mins/site)	34-5-10.2(A-C)	
General Laborer		1.25 hr
Crew Cab or 3/4 Ton Pickup		1.25 hr
BMP Installation (15mins/site)	34-5-15.1(A-B)	
General Laborer		0.25 hr
Crew Cab or 3/4 Ton Pickup		0.25 hr
BMP Installation (15mins/site)	34-5-9.0(A)	
General Laborer		4.5 hr
Crew Cab or 3/4 Ton Pickup		4.5 hr
BMP installation (15mins/site)	34-6-1.1	
General Laborer		0.25 hr
Crew Cab or 3/4 Ton Pickup		0.25 hr

2100 RoadSide Brushing

Miles

	Totals:	34.64	
Roadside Brushing & Chipping	34-5-1.3(A-E)		
Brush Chipper		0.80	Mile
Roadside Brushing & Chipping	34-6-1.0		
Brush Chipper		0.45	Mile
Roadside Brushing & Chipping	34-6-1.2		
Brush Chipper		0.05	Mile
Roadside Brushing & Chipping	34-5-9.0(A)		
Brush Chipper		3.60	Mile
Roadside Brushing & Chipping	34-5-15.0		
Brush Chipper		0.99	Mile
Roadside Brushing & Chipping	34-5-20.0(F-E)		
Brush Chipper		1.35	Mile
Roadside Brushing & Chipping	34-5-15.1(A-B)		
Brush Chipper		0.83	Mile
Roadside Brushing & Chipping	34-5-10.2(A-C)		
Brush Chipper		1.47	Mile
Roadside Brushing & Chipping	34-4-28.0(K-J)		
Brush Chipper		1.76	Mile
Roadside Brushing & Chipping	34-4-8.0(A-D)		
Brush Chipper		2.72	Mile
Roadside Brushing & Chipping	34-5-2.0(C-B)		
Brush Chipper		2.08	Mile
Roadside Brushing & Chipping	34-5-12.2		
Brush Chipper		0.20	Mile
Roadside Brushing & Chipping	34-4-7.0		
Brush Chipper		0.30	Mile
Roadside Brushing & Chipping	34-6-1.1		
Roadside Brushing & Chipping		1.47	Mile
Roadside Brushing & Chipping	34-5-1.0(A-B)		
Brush Chipper		1.99	Mile
Roadside Brushing & Chipping	33-5-35.1(A-B)		
Brush Chipper		1.07	Mile
Roadside Brushing & Chipping	33-5-35.2		
Brush Chipper		0.36	Mile
Roadside Brushing & Chipping	33-5-35.5		
Brush Chipper		1.20	Mile
Roadside Brushing & Chipping	33-5-35.0		
Brush Chipper		0.11	Mile

Continuation of Construction Quantities

Roadside Brushing & Chipping	34-5-2.1(A-B)	
Brush Chipper		3.72 Mile
Roadside Brushing & Chipping	34-5-3.2	
Brush Chipper		0.13 Mile
Roadside Brushing & Chipping	33-6-24.0(A-B2)	
Brush Chipper		3.52 Mile
Roadside Brushing & Chipping	33-5-31.1	
Brush Chipper		0.64 Mile
Roadside Brushing & Chipping	33-5-32.2(A)	
Roadside Brushing & Chipping		0.06 Mile
Roadside Brushing & Chipping	33-5-31.3(A)	
Roadside Brushing & Chipping		0.47 Mile
Roadside Brushing & Chipping	33-5-32.0(A)	
Roadside Brushing & Chipping		0.63 Mile
Roadside Brushing & Chipping	34-4-7.1	
Brush Chipper		0.16 Mile
Roadside Brushing and Chipping	34-6-2.0(A-D)	
Brush Chipper		1.96 Mile

2300 Engineering	stations
33-5-34.1	15.50
Totals:	<u>15.50</u>

8000 Miscellaneous

Construct Earthen Barricade	TR 07-2c	
Construct Earthen Barricade		1 EA
Construct Earthen Barricade	TR 01-A	
Construct Earthen Barricade		1 EA
Construct Earthen Barricade	TR 01-C3	
Construct Earthen Barricade		1 EA
Construct Earthen Barricade	TR 35-A	
Construct Earthen Barricade		1 EA
Construct Earthen Barricade	TR 35-E	
Construct Earthen Barricade		1 EA
Construct Earthen Barricade	TR 01-A2	
Construct Earthen Barricade		1 EA
Construct Earthen Barricade	TR 32-1H-1	
Construct Earthen Barricade		1 EA
Construct Earthen Barricade	TR 01-C5	
Construct Earthen Barricade		1 EA
Construct Earthen Barricade	TR 32-1H-2	
Construct Earthen Barricade		1 EA
Construct Earthen Barricade	TR 07-2	
Construct Earthen Barricade		1 EA
Construct Earthen Barricade	34-4-7.1	
Construct Earthen Barricade		1 EA
Construct Earthen Barricade	TR 34-2B	
Construct Earthen Barricade		1 EA
Construct Large Turnout Area	34-6-1.1	
Excavator -Small (1.5 CY)		0.5 hr
Tractor: D5 with winch		1.5 hr
Motor Grader 14M		1 hr
Construct Turnaround Area	33-5-34.1	
Tractor: D5 with winch		1.5 hr
Excavator -Small (1.5 CY)		0.5 hr
Motor Grader 14M		1 hr
Construct Turnaround Area	34-5-20.0(F-E)	
Motor Grader 14M		1 hr
Excavator -Small (1.5 CY)		1 hr

Continuation of Construction Quantities

Construct Water Bar	TR 07-2c		
Construct Water Bar		1	EA
Construct Water Bar	TR 07-2		
Construct Water Bar		1	EA
Construct Water Bar	TR 01-C3		
Construct Water Bar		3	EA
Construct Water Bar	TR 01-A2		
Construct Water Bar		3	EA
Construct Water Bar	TR 01-C5		
Construct Water Bar		4	EA
Construct Water Bar	TR 01-A		
Construct Water Bar		2	EA
Construct Water Bar	TR 34-2B		
Construct Water Bar		8	EA
Construct Water Bar	TR 35-A		
Construct Water Bar		1	EA
Construct Water Bar	TR 35-E		
Construct Water Bar		3	EA
Construct Water Bar	TR 32-1H-2		
Construct Water Bar		1	EA
Construct Water Bar	TR 32-1H-1		
Construct Water Bar		1	EA
Construct Water Dip	TR 34-2B		
Construct Water Dip		1	EA
Construct Water Dip	33-5-27.2(A-B2)		
Construct Water Dip		2	EA
Construct Water Dip w/ Leadout	34-5-20.0(F-E)		
Construct Water Dip		3	EA
Install Log Barricade	33-5-32.2(A)		
Install Log Barricade		1	EA
Reconstruct Ex. Water Bars	34-4-7.1		
Construct Water Bar		3	EA
Reconstruct Ex. Water Dip	34-6-1.0		
Reconstruct Ex. Water Dip		3	EA
Reconstruct Ex. Water Dip	34-5-10.2(A-C)		
Reconstruct Ex. Water Dip		4	EA
Reconstruct Ex. Water Dip	34-5-2.0(C-B)		
Reconstruct Ex. Water Dip		1	EA
Reconstruct Existing Water Dip	33-5-27.2(A-B2)		
Reconstruct Ex. Water Dip		4	EA
Reconstruct Turnaround Area	34-6-1.0		
Excavator -Small (1.5 CY)		1	hr
Motor Grader 14M		1	hr
Reconstruct Turnaround Area	34-5-15.1(A-B)		
Motor Grader 14M		1	hr
Excavator -Small (1.5 CY)		1	hr
Reconstruct Turnaround Area	34-5-10.2(A-C)		
Excavator -Small (1.5 CY)		1	hr
Motor Grader 14M		1	hr
Reconstruct Turnaround Area	34-6-1.1		
Excavator -Small (1.5 CY)		1	hr
Motor Grader 14M		1	hr
Reconstruct Turnaround Area	34-4-7.0		
Motor Grader 14M		1	hr
Excavator -Small (1.5 CY)		1	hr
Reconstruct Turnaround Area	33-5-27.2(A-B2)		
Motor Grader 14M		1	hr
Excavator -Small (1.5 CY)		1	hr
Remove Ex. Earthen Barricade	34-4-7.1		
Remove Existing Barricade		1	EA

Continuation of Construction Quantities

Remove Existing Barricade	TR 32-1H-1	
Remove Existing Barricade		1 EA
Remove Existing Barricade	33-5-32.2(A)	
Remove Existing Barricade		1 EA
Ripping Subgrade	TR 34-2B	
Tractor: D7 with rippers (0.05mi/hr)		8 hr
Ripping Subgrade	TR 35-A	
Tractor: D7 with rippers (0.05mi/hr)		1 hr
Ripping Subgrade	TR 07-2c	
Tractor: D7 with rippers (0.05mi/hr)		1 hr
Ripping Subgrade	TR 07-2	
Tractor: D7 with rippers (0.05mi/hr)		1 hr
Ripping Subgrade	TR 32-1H-1	
Tractor: D7 with rippers (0.05mi/hr)		1 hr
Ripping Subgrade	TR 01-C3	
Tractor: D7 with rippers (0.05mi/hr)		4 hr
Ripping Subgrade	TR 01-C5	
Tractor: D7 with rippers (0.05mi/hr)		4 hr
Ripping Subgrade	TR 35-E	
Tractor: D7 with rippers (0.05mi/hr)		4 hr
Ripping Subgrade	TR 01-A	
Tractor: D7 with rippers (0.05mi/hr)		2 hr
Ripping Subgrade	TR 32-1H-2	
Tractor: D7 with rippers (0.05mi/hr)		1 hr
Ripping Subgrade (BLM land)	TR 01-A2	
Tractor: D7 with rippers (0.05mi/hr)		1 hr

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sale: Lower Grave TS
Sale Date: 8/27/2015
Prep. By : EFreeman
Tract No: 15-3

ROAD MAINTENANCE AND ROAD USE APPRAISAL WORK SHEET

Summary of Costs

1) Road Use - Amortization: (1) $\$6,574.16/8458 \text{ MBF} = \$0.78/\text{MBF}$ ^{1/}
(R-3b) (Tot Sale Vol)

2) Road Maintenance Obligation:

$\frac{\$38,219.97}{(2.1)} + \frac{\$11,620.04}{(2.2)} + \frac{\$0.00}{(3.1)} + \frac{\$832.31}{(3.2)} + \frac{\$1,179.81}{(5.1)} = \frac{\$51,852.13}{(R-2)}$

3) Other Maintenance Payments:

$\frac{\$0.00}{(4.1)}$

4) Purchaser Maintenance Allowances:

(5.2A) Move In	\$7253.22
(5.2B) Culverts, Catch Basins, Downspouts	\$4895.59
(5.2C) Grading, Ditching	\$5259.65
(5.2D) Slide Removal and Slump Repair	\$0.00
(5.2E) Dust Palliative (Water)	\$15047.76
(5.2F) Surface Repair (Aggregate)	\$0.00
(5.2G) Other	\$0.00

Total (5.2) = $\frac{\$32456.22}{(\text{Ex. D})}$

2)+3)+4) Total = $\$84,308.35/8458 \text{ MBF} = \$9.97/\text{MBF}$ ^{1/}
(Total Sale Vol)

Costs are estimates only and do not include Profit and Risk.

1) Road Use Fees - Amortization

R/W Number	Road Number	Rd Use Fee x	Vol MBF	Road Use = Obligation
M-660	34-5-12.1	2.00	222	\$444.00
M-660	34-5-12.2	2.00	143	\$286.00
M-1182	34-5-10.2(B)	2.12	68	\$144.16
M-660K	34-5-1.3(B)	2.00	570	\$1140.00
M-660K	34-5-1.3(C)	2.00	570	\$1140.00
M-660K	34-5-1.3(D1)	2.00	570	\$1140.00
M-660J	34-5-1.3(D3)	2.00	570	\$1140.00
M-660J	34-5-1.3(E)	2.00	570	\$1140.00

(1.1) Subtotal \$6574.16

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
34-6-2.0(A)	A PRR	0.10	0.76	805		\$61.18	0.49 805	\$39.45
34-6-2.0(B)	A PRR	0.07	0.76	805		\$42.83	0.49 805	\$27.61
34-6-2.0(C)	A PRR	0.64	0.76	805		\$391.55	0.49 805	\$252.45
34-6-2.0(D)	A PRR	0.64	0.76	805		\$391.55	0.49 805	\$252.45
34-6-2.0(D)	A PRR	0.23	0.76	583		\$101.91	0.49 583	\$65.70
34-6-2.0(D)	A PRR	0.28	0.76	350		\$74.48	0.49 350	\$48.02
34-6-1.0	A PRR	0.45	0.76	233		\$79.69	0.49 233	\$51.38
34-6-1.1	A PRR	1.47	0.76	350		\$391.02	0.49 350	\$252.11
34-5-9.0(A)	A PRR	1.19	0.76	710		\$642.12	0.49 710	\$414.00
34-5-9.0(A)	A PRR	2.41	0.76	642		\$1175.89	0.49 642	\$758.14
34-5-15.0	A ASC	0.33	0.76	642		\$161.01	0.49 642	\$103.81
34-5-15.0	A ASC	0.66	0.76	367		\$184.09	0.49 367	\$118.69
34-4-28.0(K)	A ASC	0.61	0.76	1419		\$657.85	0.49 1419	\$424.14
34-4-28.0(J)	A ASC	1.15	0.76	1419		\$1240.21	0.49 1419	\$799.61
34-4-8.0(A)	A ASC	0.49	0.76	1419		\$528.44	0.49 1419	\$340.70
34-4-8.0(B)	A ASC	0.40	0.76	1419		\$431.38	0.49 1419	\$278.12
34-4-8.0(C)	A ASC	0.60	0.76	1299		\$592.34	0.49 1299	\$381.91
34-4-8.0(C)	A ASC	0.34	0.76	1254		\$324.03	0.49 1254	\$208.92
34-4-8.0(D)	A NAT	0.15	0.76	1254		\$142.96	0.00 1254	\$0.00
34-4-8.0(D)	A NAT	0.74	0.76	1156		\$650.13	0.00 1156	\$0.00
34-5-2.0(C)	A ASC	0.60	0.76	1156		\$527.14	0.49 1156	\$339.86
34-5-2.0(C)	A ASC	0.51	0.76	934		\$362.02	0.49 934	\$233.41
34-5-2.0(B)	A ASC	0.11	0.76	934		\$78.08	0.49 934	\$50.34
34-5-2.0(B)	A ASC	0.57	0.76	336		\$145.56	0.49 336	\$93.84
34-5-2.0(B)	A ASC	1.40	0.76	141		\$150.02	0.49 141	\$96.73
34-5-1.0(A)	A ASC	1.30	0.76	2057		\$2032.32	0.49 2057	\$1310.31
34-5-1.0(B)	A ASC	0.69	0.76	1979		\$1037.79	0.49 1979	\$669.10
33-5-35.0	A ASC	0.11	0.76	78		\$6.52	0.49 78	\$4.20
33-5-35.1(A)	A PRR	0.27	0.76	1979		\$406.09	0.49 1979	\$261.82
33-5-35.1(A)	A PRR	0.40	0.76	618		\$187.87	0.49 618	\$121.13
33-5-35.1(B)	A PRR	0.40	0.76	292		\$88.77	0.49 292	\$57.23
33-5-35.2	A PRR	0.36	0.76	292		\$79.89	0.49 292	\$51.51
34-5-2.1(A)	A ASC	0.63	0.76	2213		\$1059.58	0.49 2213	\$683.15
34-5-2.1(B)	A PRR	2.25	0.76	2213		\$3784.23	0.49 2213	\$2439.83
34-5-2.1(B)	A PRR	0.84	0.76	902		\$575.84	0.49 902	\$371.26
34-5-3.2	A PRR	0.13	0.76	300		\$29.64	0.49 300	\$19.11
34-5-10.0(A1)	A BST	3.06	0.71	6439		\$13989.37	0.00 6439	\$0.00
34-5-10.0(A2)	A BST	0.31	0.71	4226		\$930.14	0.00 4226	\$0.00
34-5-10.0(A3)	A BST	0.62	0.71	4426		\$1948.33	0.00 4426	\$0.00
34-5-10.0(A4)	A BST	0.43	0.71	2169		\$662.20	0.00 2169	\$0.00
34-5-10.0(A4)	A BST	0.49	0.71	1419		\$493.67	0.00 1419	\$0.00
34-5-10.0(A5)	A BST	0.34	0.71	1419		\$342.55	0.00 1419	\$0.00
34-5-10.0(A6)	A BST	1.03	0.71	1419		\$1037.71	0.00 1419	\$0.00

(2.1) Subtotal \$38219.97

(2.2) Subtotal \$11620.04

3) Third Party Maintenance and Rockwear

		MAINTENANCE (3.1)			ROCKWEAR (3.2)		
Agrmnt	Road						
Number	Number	Mi	x	Fee x MBF =	Maint	Fee x MBF =	Rkwear
M-660J	34-5-1.3(D3-E)	0.75				0.49 570	\$209.48
M-660K	34-5-1.3(B-D1)	2.23				0.49 570	\$622.84
(3.1) Subtotal		\$0.00			(3.2) Subtotal \$832.31		

4) Other Maintenance Payments - USFS or Others Perform Maintenance

Agency	Road Number	Fee		Fee	Vol	Maint
		MBF/Mi	x Mi =	/MBF x	Hauled =	Cost
(4.1) Subtotal		\$0.00				

5) Purchaser Maintenance - Rock Wear

		TIMBER HAUL (5.1) ^{1/2}				
Road No	1/	A		RkWear	Vol	Total
and Segment		N	Mi	x Fee x	MBF =	RkWear
34-5-20.0(F)		A	0.43	0.49	367	\$77.33
34-5-20.0(E)		A	0.92	0.00	224	\$0.00
34-5-15.1(A)		A	0.24	0.49	275	\$32.34
34-5-15.1(B)		A	0.59	0.00	275	\$0.00
34-5-10.2(A-C)		A	1.47	0.00	68	\$0.00
34-4-7.1		A	0.16	0.00	45	\$0.00
34-4-7.0		A	0.30	0.00	60	\$0.00
33-5-27.2(A-B2)		A	0.55	0.00	292	\$0.00
33-6-24.0(A)		A	0.98	0.49	504	\$242.02
33-6-24.0(B1)		A	0.60	0.49	504	\$148.18
33-6-24.0(B1)		A	0.42	0.49	491	\$101.05
33-6-24.0(B1)		A	1.18	0.49	394	\$227.81
33-6-24.0(B2)		A	0.34	0.49	394	\$65.64
33-5-31.1		A	0.47	0.49	275	\$63.33
33-5-31.1		A	0.17	0.49	85	\$7.08
33-5-32.2(A)		A	0.06	0.00	110	\$0.00
33-5-31.3(A)		A	0.47	0.49	119	\$27.41
33-5-32.0(A)		A	0.38	0.49	119	\$22.16
33-5-32.0(A)		A	0.25	0.49	68	\$8.33
34-5-12.2		N	0.20	0.00	98	\$0.00
34-5-12.1		N	0.19	0.00	222	\$0.00
34-5-1.3(A)		A	0.42	0.49	750	\$154.35
34-5-1.3(D2)		A	0.01	0.49	570	\$2.79

(5.1) Subtotal \$1179.81

- 1/ All surfaced roads have a rockwear fee which includes an allowance for rock haul
 2/ Include lump sum logging damage repair

Purchaser Operational Maintenance

Cost allowances must be limited to work required under timber sale Exhibit D.
 If purchaser maint. such as dust control/damage repair is performed on BLM maint. roads,
 add appropriate mandatory Ex. D provisions. Note in prospectus.

Move In

Equipment 1/	No Units	Move x in x	Cost/ 50 Mi	Dist x Factor	Sub- = total
Motor Grader:	1	7	\$483.00	0.78	\$2637.18
Back Hoe:	1	7	\$483.00	0.78	\$2637.18
Loader:	1	3	\$483.00	0.78	\$1130.22
Water Truck:	1	7	\$107.00	0.78	\$584.22
Dump Truck:	1	3	\$113.00	0.78	\$264.42

(5.2A) Total \$7253.22

1/ Equipment limited to that allowed in Exhibit D.

Culvert Maintenance - Including Catch basins and Downpipes ^{1/}

Miles	x	Cost/Mi	=	Subtotal
14.65		334.17		\$4895.59

(5.2B) Total \$4895.59

1/ Does not include purchase or installation of culvert pipe.

Grading (Includes Ditches and Shoulders) ^{1/}

	Miles	x	Cost/Mi	x	Freq	=	Subtotal
Blade w/ Ditch:	7.30		720.50		1		\$5259.65
Blade w/o Ditch:	0.00		446.73		0		\$0.00

(5.2C) Total \$5259.65

1/ Watch for double allowance on roadway preparation for dust palliative application.

Slide and Slough removal, Slump Repair (15 sta-yds. ea.) ^{1/}

Type Equipment	No Slides /Slumps	Hours x Each	Equip x Cost	=	Subtotal
Grader:	0	0	147.33		\$0.00
Loader:	0	0	107.45		\$0.00
Backhoe:	0	0	76.21		\$0.00

(5.2D) Total \$0.00

1/ Maximum haul is 15 sta. yds. Use grader or front end loader only.

Dust Palliative (Water) ^{1/}

Spreading Hours

Miles	/	MPH	=	Hours	x	No Days	x	Freq /Day	=	Truck Hours
2.00		5		0.4		120		1		48
Load & Haul =				1.0		120		1		120
										Total Hours = 168

Truck Cost: \$89.57/Hr. x 168.0 Hours = \$15047.76

(5.2E) Total \$15047.76

1/ Allow water for all BLM maintained non-oiled roads.

Surface Repair (Aggregate)

Production Cost:	0.0 CY x \$0.00/CY	=	\$0.00
Haul to Stockpile:	0.0 CY x ((\$2.21/CY x 0.00 Mi) + \$0.74)	=	\$0.00
Stockpile:	0.0 CY x \$1.01/CY	=	\$0.00
Load from Stockpile:	0.0 CY x \$1.11/CY	=	\$0.00
Haul from Stockpile:	0.0 CY x ((\$2.21/CY x 0.00 Mi) + \$0.74)	=	\$0.00
Process with Grader:	0.0 CY x \$0.90/CY	=	\$0.00
Compaction:	0.0 CY x \$1.34/CY	=	\$0.00

(5.2F) Total \$0.00

Other

Fallen Timber Cutting: ^{1/}	0.0 Hours x \$0.00/Hour =	\$0.00
Brush Cutting/Tree Trimming: ^{2/}	0.0 Hours x \$0.00/Hour =	\$0.00
Oil/Asphalt Materials: ^{3/}	Lump Sum =	\$0.00
Signing for Dust Palliatives: ^{4/}	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

- 1/ Exhibit D Subsection 3104.
- 2/ Exhibit D Subsection 3107.
- 3/ Exhibit D Subsection 3401.
- 4/ Exhibit D Subsection 3405b.

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-15-03
Sale Name Lower Grave
Sale Notice (dated) 7/30/2015
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 \$ **75,400.00** 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	7,992	X	=	X	=
Incense-Cedar	MBF	217	X	=	X	=
Ponderosa pine	MBF	140	X	=	X	=
Sugar Pine	MBF	75	X	=	X	=
White Fir	MBF	31	X	=	X	=
Western Hemlock	MBF	3	X	=	X	=
Total		8,458	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.