

P R O S P E C T U S

S C A L E S A L E

GRANTS PASS RESOURCE AREA
JOSEPHINE MASTER UNIT

Medford Sale # ORM07-TS-19-24
September 26, 2019 (SQF)

#2. Oh Windy Timber Sale, Douglas County, O&C, P.D. **BID DEPOSIT REQUIRED: \$72,200.00**

All timber designated for cutting in: SW¼SW¼ Sec. 17, NE¼NE¼, S½NE¼, E½SE¼ Sec. 18, Unnumbered Lot in NW¼NW¼ Sec. 19, T. 32 S., R. 5 W., Lot 1, Lot 2, Lot 3, Lot 4, S½NE¼, S½NW¼, SW¼, SE¼ Sec. 1, SW¼NE¼, SE¼NW¼, NW¼SE¼ Sec. 3, NE¼, NW¼, N½SW¼, SE¼SW¼, SE¼ Sec. 11, NW¼ Sec. 13, SE¼SW¼ Sec. 14, N½NW¼, SE¼SW¼, SW¼SE¼ Sec. 23, NE¼NE¼, SE¼SW¼ Sec. 24, N½NW¼ Sec. 25, SE¼NE¼, SE¼ Sec. 27, Lot 1, Lot 2, NW¼NE¼ Sec. 34, T. 32 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 |
|-----------------------------|-------------------------|-----------------|-------------------------|----------------------|-----------------------------------|
| 54,831 | 10,369 | Douglas fir | 12,635 | \$52.50 | \$663,337.50 |
| 4,997 | 487 | Incense-cedar | 628 | \$68.10 | \$42,766.80 |
| 1,171 | 213 | White Fir | 260 | \$42.50+ | \$11,050.00 |
| 460 | 41 | Ponderosa Pine | 50 | \$37.70+ | \$1,885.00 |
| 210 | 34 | Western Hemlock | 48 | \$36.80+ | \$1,766.40 |
| 71 | 17 | Sugar Pine | 23 | \$34.00+ | \$782.00 |
| 61,740 | 11,161 | Totals | 13,644 | | \$721,587.70 |

*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.

*Minimum Stumpage values were used to compute the Appraised Price/MBF (10% of Pond Value) Reduced Douglas fir stumpage by \$1.60/mbf or \$20,216. Reduced Incense cedar stumpage by \$19.00/mbf or \$11,932. Total stumpage deduction \$32,148 to pay for deficit species White fir, Western Hemlock, and Pines.

TIMBER AUCTION LOCATION – The timber auction will be held at the Grants Pass Inter-agency Office, located at 2164 NE Spalding, Oregon, at 9 a.m. on Thursday, September 26, 2019.

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 Oh Windy timber sale units were cruised using the PCMTRE method. The strata was based on land use allocation and silvicultural prescription. Strata 1 primarily Late Successional Reserve (LSR) land use allocation contained 330 acres in which 331 plots were cruised using a 40 BAF and a 1 in 5 sampling frequency. Strata 2 primarily Harvest Land Base (HLB) land use allocation contained 441 acres in which 416 plots were cruised using a 40 BAF and a 1 in 5 sampling frequency. Strata 3 primarily Harvest Land Base (HLB) land use

allocation/gap prescription contained 106 acres in which 99 plots were cruised using a 40 BAF and a 1 in 10 sampling frequency. Units 18-1 and 18-2 (originally Blown Fortune units) contained 47 acres in which 56 plots were cruised using a 40 BAF and a 1 in 5 sampling frequency. The walk through method was used on all edge plots. Road right of way units were cruised using 3P for Douglas fir and BLM100% for all other species.

Approximately 0 trees which are considered to be non-merchantable are designated for cutting. Approximately 0% of the 13,644 mbf sale volume is salvage material. With respect to merchantable trees of all conifer species: the average tree is 15.5 inches DBHOB; the average gross merchantable log contains 64bd. ft.; the total gross volume is approximately 15,244 M bd. ft; and 89% recovery is expected. (Average DF is 15.4 inches DBHOB; average gross merchantable log DF contains 65 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 – Twenty (20) units containing eight hundred eighteen (818) acres must be partial cut and seven (7) units containing one hundred six (106) acres must be group selection harvested. This includes twelve (12) right-of-ways that must be clear-cut. One (1) unit containing two (2) acres must be clear-cut for a road right-of-way.

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, existing BLM roads, and:

- (B)(7) Right-of-Way and Road Use Agreement M-2000 with Juniper Properties, LLC.
Among other conditions, this agreement requires, but is not limited to:
- (1) completion of an agreement between the Purchaser and Permittee.
 - (2) road maintenance to be completed by the Purchaser.
 - (3) arbitration of conditions of road use. The Permittee has indicated they require a rockwear obligation of \$1,197.47, based upon the cruised estimated volume listed in the license agreement. The final rockwear obligation will be based on a \$0.60 per thousand board feet log scale per mile for the use of said rocked roads.
 - (4) prior to cutting or removing any timber from the road right-of-way between Stations 0+00 and 2+50 on Temp Route 11-02, the Purchaser shall pay the total value of that timber as agreed upon.
- (B)(8) Right-of-Way and Road Use Agreement 1960 Memorandum Of Understanding with Oregon Department of Forestry.
Among other conditions, this agreement requires, but is not limited to:
- (1) completion of an agreement between the Purchaser and Permittee.
 - (2) road maintenance to be completed by the Purchaser.
 - (3) arbitration of conditions of road use. The Permittee has indicated they require a road maintenance obligation of \$3,650.15 and a rockwear obligation of

\$8,605.41, based upon the cruised estimated volume listed in the license agreement. The final road maintenance obligation will be based on a \$0.75 per thousand board feet log scale per mile for the use of said roads. The final rockwear obligation will be based on a \$0.60 per thousand board feet log scale per mile for the use of said rocked roads.

- (4) prior to cutting or removing any timber from the road right-of-way between Stations 0+00 and 7+50 on Temp Route 01-05, Stations 0+00 and 2+01 on Temp Route 13-01, Stations 07+56 and 10+15 on Temp Route 13-03, and Stations 0+00 and 2+59 and Stations 119+63 and 161+61.5 on Road No. 32-5-18.1, the Purchaser shall pay the total value of that timber as agreed upon.

(B)(9) Right-of-Way and Road Use Agreement M-824 with Silver Butte Timber Company.

Among other conditions, this agreement requires, but is not limited to:

- (1) completion of an agreement between the Purchaser and Permittee.
- (2) road maintenance to be completed by the Purchaser.
- (3) prior to cutting or removing any timber from the road right-of-way between Stations 102+17.7 and 119+63 on Road No. 32-5-18.1, the Purchaser shall pay the total value of that timber as agreed upon.

(B)(10) Right-of-Way and Road Use Agreement M-2000, M-605, and M-887 with Weyerhaeuser Company.

Among other conditions, this agreement requires, but is not limited to:

- (1) completion of an agreement between the Purchaser and Permittee.
- (2) road maintenance to be completed by the Purchaser.
- (3) arbitration of conditions of road use. The Permittee has indicated they require a rockwear obligation of \$2,659.52, based upon the cruised estimated volume listed in the license agreement. The final rockwear obligation will be based on a \$0.60 per thousand board feet log scale per mile for the use of said rocked roads.
- (4) prior to cutting or removing any timber from the road right-of-way between Stations 29+40.6 and 64+04.4 and Stations 74+29.7 and 102+17.7 and Stations 161+61.6 and 167+30.9 on Road No. 32-5-18.1 and Stations 0+00 and 4+54 on Temp Route 23-04C, the Purchaser shall pay the total value of that timber as agreed upon.

ROAD MAINTENANCE - The Purchaser will be required to maintain all of the roads which he constructs plus 30.16 miles of existing BLM and Third Party (Industry) roads. The BLM will maintain 0.64 miles of an existing BLM bituminous surfaced road. The Purchaser will be required to pay a rockwear fee of \$0.60 per thousand board feet log scale per mile for the use of these rocked roads and a maintenance fee of \$0.92 per thousand board feet log scale per mile for the use of the bituminous surfaced road listed in the contract.

ROAD CONSTRUCTION - The contract will require the Purchaser to construct 202.75 stations, renovate 1389.67 stations, and construct/decommission 118.60 stations of temporary routes. Additional information is available in the timber sale prospectus.

SOIL DAMAGE PREVENTION - Pursuant to Section 26 of Form 5450-004, Timber Sale Contract, mechanical ground based harvesting, ground based yarding, skid trail and landing rehabilitation, machine piling, temporary route construction, temporary route reconstruction, or temporary route decommissioning shall be restricted to periods of low moisture (dry conditions). Low soil moisture varies by texture and is based on site-specific considerations. Generally, low soil moisture is 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. Low soil moisture limits will be determined by the Authorized Officer.

Pursuant to Section 26 of Form 5450-004, Timber Sale Contract, log haul shall not be conducted on all natural surface roads and rocked rocks with insufficient rock depth (specifically, but not limited to, road numbers 32-5-8.0, 32-5-8.1, 32-6-1.0, 32-6-3.0, 32-6-3.1, 32-6-3.2, and 32-6-9.0), that receive one-half (½) inch or more precipitation within a twenty four (24) hour period. Haul shall not resume for a minimum of forty eight (48) hours following any storm event, or until road surface is sufficiently dry, as approved by the Authorized Officer. The Purchaser may elect, at their own expense, to apply rock surfacing to these roads to bring them up to wet weather haul standards, as approved by the Authorized Officer.

Pursuant to Section 26 of Form 5450-004, Timber Sale Contract, log haul shall not be conducted on hydrologically connect natural surface or rocked roads during conditions that would result in any of the following: surface displacement such as rutting or ribbons, continuous mud splash or tire slides, fines being pumped through road surfacing from the subgrade resulting in a layer of surface sludge, as directed by the Authorized Officer.

Pursuant to Section 26 of Form 5450-004, Timber Sale Contract, the Purchaser shall, prior to October 15 of the same operating season, winterize and rehabilitate temporary routes, landings, hydrologically connected corridors and 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 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.

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, perform all non-emergency road maintenance as directed by the Authorized Officer.

EQUIPMENT REQUIREMENTS - A yarding tractor equipped with an integral arch capable of one-end log suspension and a winch for lining logs seventy-five (75) feet. A skyline yarder with a large (50-70 foot) tower; capable of one-end log suspension with a minimum lateral yarding capability of seventy-five (75) feet while maintaining a fixed position during inhaul; capable of multi-span; and capable of an external yarding distance of one thousand six hundred (1,600) feet slope distance. A helicopter equipped with a dropline with a minimum length of two hundred (200) feet. A piece of equipment capable of sub-soiling to a depth of twelve (12) inches will be required for fully decommissioning temporary route 23-4A, the by-pass road associated with the bridge, and any landings or skid roads within ground based units as necessary to achieve no more than twenty (20) percent detrimental soil compaction within the unit. A fire engine of three hundred (300) gallons or more capacity with five hundred (500) feet of 1½ inch hose (must be adequate length to reach two hundred (200) feet beyond active work sites), six (6) 1½ inch wyes, six (6) 1½ inch to 1 inch reducers, three (3) 1½ inch nozzels and three (3) 1 inch nozzles will be required for fire prevention and control. Each fire engine shall be equipped with a pump capable of delivering a minimum of forty (40) gallons per minute (gpm) water flow at one hundred fifty (150) pounds per square inch (psi) engine pressure through fifty (50) feet of 1½ inch fire hose. The pump may be either power take off driven or truck-mounted auxiliary engine driven, or portable.

SLASH DISPOSAL - Slash disposal will consist of a combination of lop and scatter, machine pile, cover, and burn machine piles, selective slashing, hand pile, cover, and burn hand piles, pile, cover, and burn landing decks, and underburn as described in SD-1, SD-2, and SD-4 of the Special Provisions. A post logging assessment shall be conducted to determine treatment needs in all units. The initial slash disposal appraisal described in SD-5 prescribed one hundred forty (140) acres of lop and scatter, five hundred seventy four (574) acres of selective slashing, hand pile, cover, and burn hand piles, two hundred twelve (212) acres of machine pile, cover, and burn machine piles, and sixty three (63) acres of cover and burn landing decks.

Additionally, there is an option to provide payment in lieu of constructing forty six thousand six hundred twenty five (46,625) feet of fireline and perform underburning on five hundred twenty six

(526) acres.

OPTIONAL CONTRIBUTION - The purchaser will have the option of performing fireline construction and underburning slash disposal requirements or contributing one hundred fifty five thousand, six hundred fifty and no/100 dollars (\$155,650.00) in lieu thereof. The option must be declared upon execution of the contract. The optional contribution must be paid in installments payable in the same manner as and together with payments required in Section 3 of the contract.

CONTRACT TERMINATION - A Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and/or to modify or terminate the contract when necessary to comply with the Endangered Species Act, or comply with a court order, or protect occupied marbled murrelet sites in accordance with the Standards and Guidelines of the Medford District Record of Decision (ROD) and Resource Management Plan (RMP). This contract provision limits the liability of the Government to the actual costs incurred by the Purchaser which have not been amortized by timber removed from the contract area.

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. A revised Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and/or to modify or terminate the contract when necessary to: (1) Comply with the Endangered Species Act or to prevent incidental take of northern spotted owls in accordance with management direction in the Record of Decision (ROD) and Resource Management Plan (RMP), or; (2) Comply with a stay or remedy issued by the Interior Board of Land Appeals or a court order, or; (3) Protect species which were identified for protection in accordance with management direction established in the ROD and RMP.
3. No work in the stream channel shall be conducted between September 15 of one calendar year and July 1 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.
4. No non-emergency road maintenance shall be conducted from October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.
5. No helicopter shall operate within one-quarter (¼) mile of the northern spotted owl site near unit 11-2G as shown on Exhibit A between March 1 and June 30 of the same calendar year, both days inclusive. This restriction will not apply if it can be shown from northern spotted owl protocol surveys conducted in accordance with accepted standards, as approved by the Contracting Officer, that northern spotted owl nesting and/or fledging activities are not occurring during the year and/or time of harvest. This restriction may be extended until September 30 during the year of harvest if the harvesting would cause a nesting northern spotted owl to flush.
6. 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 portion of harvest units. Mechanized equipment as stated above with self-leveling cabs may be used on slopes up to 50%, as approved by the Authorized Officer.

7. In the ground-based portion of unit 1-9, the Purchaser may need to walk a harvester across ODF land in T32S-R6W-12 from the existing road into the unit, as shown on Exhibit A, as approved by the Authorized Officer. This would allow the logs in this portion of the unit to be harvested and bunched into areas that could be reached with cable corridors to then yard the logs up to the landing. Permission to cross ODF land would need to be obtained by the Purchaser.
8. Contingency dozer lines from the MP 97 fire were constructed and rehabilitated in Units 1-5 and 1-8.
9. In the Riparian Reserve and Late-Successional Reserve portion of units 1-5, 1-6, 1-8, 1-9, 11-1, 11-2, 11-8, 13-1, 13-2, 13-3, 14-1, 18-1, 18-2, 23-4, 25-1A, and 27-3 as shown on Exhibit E, the Purchaser shall create a total of four hundred seventy eight (478) snags via girdling. See Special Provision L-32 and Exhibit E for more details.
10. Temporary route TR 11-2 crosses private land owned by Juniper Properties, LLC. The felling of trees and construction of TR 11-2 shall adhere to the terms and conditions of the crossing plat with Juniper Properties, LLC.
11. In unit 1-8, a landing and anchors may be needed on private land owned by Silver Butte Co. The use will adhere to the terms and conditions of the crossing plat with Silver Butte Co.
12. Construction of Road 32-5-18.1 and temporary routes TR 13-1-A, TR 13-3, and the temporary bypass road to ford Windy Creek cross over Oregon Department of Forestry land. Additionally, landings, artificial guylines anchors, and cable corridors will be needed on Oregon Department of Forestry land to access units 13-3 and 23-1G. The use of landings, felling, yarding and purchasing of trees, and construction of Road 32-5-18.1, TR 13-1-A, TR 13-3, and the bypass road shall adhere to the terms and conditions of the MOU with Oregon Department of Forestry.
13. Construction of Road 32-5-18.1 and temporary route TR 23-4-B will require tree removal and construction across lands owned by Weyerhaeuser Company. Additionally, landings artificial guylines anchors, and cable corridors will be needed on Weyerhaeuser Company land to access unit 25-1G. The use of landings, felling, yarding and purchasing of trees, and construction of Road 32-5-18.1 and TR 23-4-B shall adhere to the terms and conditions of the crossing plat with Weyerhaeuser Company.
14. Artificial guylines anchors (equipment or deadmen) may be needed for units 1-5, 1-8, 11-8, 13-3, 14-1, 23-1G, 24-4, and 25-1G.
15. In units 11-1, 11-1G, 11-2, 14-1, 23-1G, 27-1, and 27-1G it is acceptable to have yarding corridors outside of unit boundaries, as approved by the Authorized Officer.
16. In the portion of unit 1-5 that is TPCC Fragile for Soil Moisture Restricted, as shown on Exhibit A, logs shall be yarded with one-end suspension during dry conditions or yarded with full suspension during wet conditions.
17. In a portion of unit 11-2G there is historic railroad grade, as shown on Exhibit A. Directionally fall trees away from the railroad grade. Do not pile slash within thirty (30) feet of the railroad grade.
18. In portions of units 1-5, 1-6, 1-8, 11-8, 14-1, and 27-3, a cable-tractor swing yarding system may need to be utilized in order to access all of the unit.

19. Helicopter landings shall be approved by the Authorized Officer prior to construction and use.
20. The large portion of unit 25-1A was appraised as helicopter yard due to the high number of double intermediate supports that may be needed to cable yard the unit. The Purchaser may choose to cable yard the unit if one-end suspension can be achieved.

NARRATIVE DESCRIPTION OF HOW TO GET TO THE TIMBER SALE AREA - - From I-5 North take Exit 80 to Glendale. At the four-way stop proceed straight (Junction Road) for .7 miles. Turn left onto Azalea-Glen Road, travel 2.4 miles. Turn Right onto Windy Creek Rd. Proceed for approximately 5 miles and take a left onto the 32-5-18 / Slate Creek Road. All units can be accessed from Windy Creek Rd.

ENVIRONMENTAL ASSESSMENT - An environmental assessment (DOI-BLM-ORWA-M070-2018-0010-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.

OH WINDY TIMBER SALE

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) IR-1 Approximately twelve thousand thirty one (12,031) Douglas-fir, twenty nine (29) ponderosa pine, one hundred twenty eight (128) sugar pine, one thousand five hundred ninety one (1,591) incense-cedar, one hundred eighty (180) White fir, fifty four (54) oak, and nine hundred twenty five (925) hardwood trees marked with orange paint above and below stump height in units 1-5, 1-6, 11-1G, 11-1, 11-2G, 11-8, 13-1, 13-2, 13-3, and 18-1 as on Exhibit A.
- (C) IR-1 Approximately eleven thousand three hundred ninety four (11,394) Douglas-fir, five hundred seventy six (576) ponderosa pine, thirty two (32) sugar pine, five hundred twenty (520) incense-cedar, two hundred nine (209) White fir, two hundred eighteen (218) oak, and four hundred ninety one (491) hardwood trees marked with pink paint above and below stump height in units 1-8, 1-9, 3-4, 11-2, 14-1, 18-2, 23-1G, 23-4, 24-4, 25-1G, 25-1A, 27-1, 27-1G, 27-2G, 27-3, and 27-4 as on Exhibit A.
- (D) IR-6 All Pacific yew trees in the Contract Area shown on Exhibit A.
- (E) IR-13 All trees greater than thirty six (36) inches D.B.H.O.B and were established prior to 1850 in the contract as shown on Exhibit A that are cut for safety or operational purposes shall be retained on site as directed by the Authorized Officer.
- (F) IR-13 All existing snags and coarse woody debris in all units shown on Exhibit A which do not present a safety hazard as determined by the Authorized Officer. All snags that are felled for safety reasons, and do not present a safety hazard on the ground, shall be retained on site.

OH WINDY TIMBER SALE

SPECIAL PROVISIONS

Section 42

(A) LOGGING

- (1) L-1 Before beginning operations on the contract area for the first time or after a shutdown of seven (7) or more days, the Purchaser shall notify the Authorized Officer in writing of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if he intends to cease operations for any period of seven (7) or more days.
- (2) L-2 Prior to the commencement of operations the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract, which shall include measures needed to ensure protection of the environment and watershed. A pre-work conference between the Purchaser's authorized representative and the Authorized Officer must be held at a location designated by the Authorized Officer before the logging plan will be approved. All logging shall be done in accordance with the plan.
- (3) L-4 All trees designated for cutting shall be cut so that the resulting stumps shall not be higher than twelve (12) inches measured from the ground on the uphill side of the trees unless otherwise approved by the Authorized Officer.
- (4) L-5 All conifer trees eight (8) inches or larger D.B.H.O.B., which are not reserved shall be felled in all units shown on Exhibit A.
- (5) L-8 In all units except helicopter yard units as shown on Exhibit A, all trees designated for cutting shall be felled and whole tree yarded or yarded with tops attached except when excessive stand damage occurs as determined by the Authorized Officer. If excessive stand damage occurs, all trees shall be bucked into log lengths not to exceed forty one (41) feet prior to being yarded.
- (6) L-10 In the portion of Unit 11-2G with the historic railroad grade as shown on Exhibit A, all trees designated for cutting which are within one (1) tree length of the railroad grade shall be directionally felled away from the grade. Trees shall not be pulled across the railroad grade during yarding. No hand piles shall be created within thirty (30) feet of the railroad grade.

OH WINDY TIMBER SALE

SPECIAL PROVISIONS

- (7) L-11 No trees may be felled into the stream, or other resource buffers designated on Exhibit A.
- (8) L-12 In the Units shown on Exhibit A, yarding/felling shall be done in accordance with the requirements for the designated area listed below.

| Designated Area | Yarding Requirements or Limitations |
|--|---|
| <p style="text-align: center;"><u>Ground Based Harvest & Ground Based (Tractor) Yard Units</u></p> <p>1-5, 1-6, 1-8, 1-9, 3-4, 11-2, 11-8, 13-1, 13-3, 14-1, 18-2, 23-1G, 23-4, 24-4, 27-3</p> | <p>Mechanized harvesting operations are optional. All ground-based harvest units may be manually felled.</p> <p>The harvester, feller-processor, or feller-buncher shall be approved by the Authorized Officer prior to the start of mechanized felling operations. Only purpose built carriers with boom-mounted felling heads may be approved. The boom must have a lateral reach of twenty (20) feet or more, and the machine’s lateral reach must be utilized as much as possible. The purpose-built carrier may be of the articulated, rubber-tired design, or the zero-clearance tail swing leveling track-mounted design.</p> <p>Directional falling to lead and away from streams, unit boundaries, and resource buffers shown on Exhibit A will be required.</p> <p>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.</p> <p>Non-specialized ground-based equipment (without a self-leveling cab) shall be limited to slopes of thirty five (35) percent or less. Specialized ground-based equipment (with a self-leveling cab) shall be limited to slopes fifty (50) percent or less. This equipment can operate on steeper ground if it is operating on previously constructed skid trails or accessing isolated ground-based harvest areas requiring short distances over steeper pitches.</p> |

OH WINDY TIMBER SALE

SPECIAL PROVISIONS

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| <p><u>Ground Based Harvest & Ground Based (Tractor) Yard Units Continued</u></p> <p>1-5, 1-6, 1-8, 1-9, 3-4, 11-2, 11-8, 13-1, 13-3, 14-1, 18-2, 23-1G, 23-4, 24-4, 27-3</p> | <p>Mechanized ground-based felling and yarding operations are subject to dry condition operating restrictions as described in Section 42(C)(1)(E-1) of this contract.</p> <p>Yarding tractor shall be equipped with an integral arch and yard with one-end log suspension.</p> <p>Existing skid roads shall be used when possible. Skid roads shall not exceed a width of twelve (12) feet on average per unit and new skid roads shall be placed at least one hundred fifty (150) feet apart where topography will allow, unless the Purchaser proposes an alternate logging plan that limits soil compaction from skids trails to less than fifteen (15) percent over the harvest unit and is approved by the Authorized Officer.</p> <p>Designate skid trails in locations that do not channel water into waterbodies, floodplains, and wetlands, or unstable areas.</p> <p>Rehabilitate utilized skid roads, landings, cable-tractor swing routes, and/or temporary routes as necessary to achieve no more than twenty (20) percent detrimental soil conditions in the ground-based harvest unit, as specified in Sec. 42(C)(12)(E-1).</p> <p>Block skid trails following use.</p> <p>Landing size shall not exceed one-quarter (1/4) acre, shall be located along existing roads, temporary routes, and/or cable-tractor swing routes within unit boundaries, 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>Minimize disturbance to existing coarse woody debris. Where skid trails encounter large coarse woody debris,</p> |
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OH WINDY TIMBER SALE

SPECIAL PROVISIONS

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| <p><u>Ground Based Harvest & Ground Based (Tractor) Yard Units Continued</u></p> <p>1-5, 1-6, 1-8, 1-9, 3-4, 11-2, 11-8, 13-1, 13-3, 14-1, 18-2, 23-1G, 23-4, 24-4, 27-3</p> | <p>the Purchaser shall buck out a portion for equipment access.</p> <p>The use of blades while tractor yarding will be limited, equipment shall walk over as much ground litter as possible.</p> <p>In the ground-based portion of unit 1-9, the Purchaser may need to walk a harvester across ODF land in T32S-R6W-12 from the existing road into the unit, as shown on Exhibit A, as approved by the Authorized Officer. This would allow the logs in this portion of the unit to be harvested and bunched into areas that could be reached with cable corridors to then yard the logs up to the landing. Permission to cross ODF land would need to be obtained by the Purchaser.</p> |
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| Designated Area | Yarding Requirements or Limitations |
|--|--|
| <p><u>Cable Yard Units</u></p> <p>1-5, 1-6, 1-8, 1-9, 3-4, 11-1, 11-1G, 11-2, 11-8, 13-2, 13-3, 14-1, 18-1, 23-1G, 23-4, 24-4, 25-1G, 25-1A, 27-1, 27-1G, 27-3, 27-4</p> | <p>Yarding will be done with a cable yarding system which will suspend one end of the log clear of the ground during inhaul on the yarding corridor. The cable yarding system shall be capable of yarding one thousand six hundred (1,600) feet slope distance.</p> <p>Skyline equipment shall be capable of yarding in a multispan configuration.</p> <p>In the portion of unit 1-5 that is TPCC Fragile for Soil Moisture Restricted, as shown on Exhibit A, logs shall be yarded with one-end suspension during dry conditions or yarded with full suspension during wet conditions.</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.</p> |

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| <p><u>Cable Yard Units</u> <u>Continued</u></p> <p>1-5, 1-6, 1-8, 1-9, 3-4, 11-1, 11-1G, 11-2, 11-8, 13-2, 13-3, 14-1, 18-1, 23-1G, 23-4, 24-4, 25-1G, 25-1A, 27-1, 27-1G, 27-3, 27-4</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 (¼) 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 11-1, 11-1G, 11-2, 13-3, 14-1, 23-1G, 25-1A, 25-1G, 27-1, and 27-1G. These landings and corridors shall not be located in any of the buffers shown on Exhibit A and shall be approved by the Authorized Officer prior to use.</p> <p>In unit 11-1, try to avoid yarding over the young plantation area excluded from the unit boundary, if operationally feasible.</p> <p>Yarding over streams shall be avoided unless it is the only viable option. If yarding is needed over streams shown on Exhibit A, it shall be done with full suspension within fifty (50) feet of and over streams and shall be approved by the Authorized Officer. Any trees cut for the yarding corridor outside of unit boundaries within one hundred ninety five (195) feet of streams shown on Exhibit A shall be retained on site as coarse woody debris.</p> |
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| <p><u>Cable Yard Units</u> <u>Continued</u></p> <p>1-5, 1-6, 1-8, 1-9, 3-4, 11-1, 11-1G, 11-2, 11-8, 13-2, 13-3, 14-1, 18-1, 23-1G, 23-4, 24-4, 25-1G, 25-1A, 27-1, 27-1G, 27-3, 27-4</p> | <p>Directional falling to the lead and away from streams, and unit boundaries shown on Exhibit A will be required.</p> <p>Cable corridors that are hydrologically connected to streams shown on Exhibit A shall be water-barred and shall have slash placed over them prior to winter rain events to protect water quality.</p> <p>In units 1-5, 1-6, 1-8, 1-9, 11-8, 14-1, and 27-3 the Purchaser shall be allowed to walk a yarder into the unit utilizing a tractor-swing system as approved by the Authorized Officer.</p> |
|---|--|

| Designated Area | Yarding Requirements or Limitations |
|---|---|
| <p><u>Helicopter Yard Units</u></p> <p>11-2G, 23-4, 23-4G, 25-1A, 27-2G</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. Potential landing locations are shown on Exhibit A.</p> <p>Service pads and helispots can be constructed with prior approval of the Authorized Officer and shall not be larger than necessary.</p> <p>A dropline with a minimum length of two hundred (200) 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 forest stand as determined by the Authorized Officer.</p> |

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| <u>Helicopter Yard Units Continued</u> | See Special Provision Sec. 42(A)(12)(L-20) for the Seasonal Restriction in part of unit 11-2G, and as shown on Exhibit A. |
|--|---|

- (9) L-14 No falling, yarding or loading is permitted in or through the stream buffers as shown on Exhibit A.
- (10) L-17 Helicopter landings shall be placed at the approximate locations as shown on Exhibit A. Any alternate landing sites must be approved by the Contracting Officer in the written operations and logging plan.
- (11) L-19 No work in the stream channel shall be conducted between September 15 of one calendar year and July 1 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.
- (12) L-19 No non-emergency road maintenance shall be conducted from October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.
- (13) L-20 No helicopter shall operate within one-quarter ($\frac{1}{4}$) mile of the northern spotted owl site near unit 11-2G as shown on Exhibit A between March 1 and June 30 of the same calendar year, both days inclusive. This restriction will not apply if it can be shown from northern spotted owl protocol surveys conducted in accordance with accepted standards, as approved by the Contracting Officer that northern spotted owl nesting and/or fledging activities are not occurring during the year and/or time of harvest. This restriction may be extended until September 30 during the year of harvest if the harvesting would cause a nesting northern spotted owl to flush.
- (14) L-22 During logging operations, the Purchaser shall keep the 32-5-18.0 Road, 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.
- (15) L-24 Before cutting and removing any trees necessary to facilitate logging in the harvest units shown on Exhibit A, the Purchaser shall identify the location of the skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the Logging Plan. Said Purchaser identification of trees to be cut and removed does not constitute authority

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to proceed with cutting and removal. In addition, before proceeding with cutting the following conditions must be met:

- (a) All skid roads and/or cable yarding roads upon which timber is identified by the Purchaser to be cut and removed in accordance with this special provision must be necessary for the safe and expeditious removal of timber sold under this contract and shall be limited to the minimum width necessary for yarding of logs with a minimum of damage to reserve trees, however, unless otherwise approved in writing by the Contracting Officer, the width of each skid road, and/or cable yarding road shall be limited to twelve (12) feet.
- (b) The Purchaser may immediately cut and remove additional timber to clear skid roads and cable yarding roads; and provide tailhold, tieback, guyline, lift and intermediate support trees; and clear danger trees when the trees have been marked with paint (color to be determined at pre-work) above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Section 3.(b) of the contract or sufficient bonding has been provided in accordance with Section 3.(d) of the contract.
- (c) The Purchaser agrees that sale of this additional timber shall be accomplished by a unilateral modification of the contract executed by the Contracting Officer and that such timber shall be sold at the unit prices shown in Exhibit B of this contract unless: the value of the timber must be reappraised subject to the terms for contract extension set forth in Section. 9 of the contract; or, the Authorized Officer determines that the species of trees are not listed in Exhibit B of this contract shall be appraised and sold by bilateral modification of the contract at current fair market value in accordance with Section 8 of the contract.
- (d) This authorization for the Purchaser to cut and remove additional timber prior to the execution of a modification may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser has cut and removed any tree not previously marked and approved for cutting by the Authorized Officer, which under Section 10 of the contract

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constitutes a violation of the contract and under Section 13 of the contract may constitute a trespass rendering the Purchaser liable for damages under applicable law.

- (e) If authorization is withdrawn, the Contracting Officer shall issue a written notice to the Purchaser that the sale of additional timber under this special provision is no longer approved. In this case, the Purchaser shall inform the Authorized Officer at least one (1) working day prior to the need for cutting and removing any additional timber, and execute a bilateral modification prior to cutting for such additional approved timber at the unit prices shown in Exhibit B of the contract or in accordance with Section 8 or Section 9 of the contract as determined by the Authorized Officer in accordance with this provision. The Contracting Officer may issue a written order to the Purchaser to suspend, delay, or interrupt any or all contract work for the period of time deemed necessary and appropriate for the Government to safely measure and mark additional timber.
 - (f) The Government may reserve trees previously designated for cutting and removal by blacking out blue paint, and/or applying orange or pink 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. This may include the replacement of trees damaged by storm events, or insects or disease. The volume of this timber to be reserved will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and the value shall be based on the unit prices shown in Exhibit B of the contract. The Purchaser agrees that the Total Purchase Price shall be reduced accordingly through a unilateral modification to the contract executed by the Contracting Officer.
- (16) L-32 In harvest units 1-6, 1-8, 1-9, 11-1, 11-8, 13-1, 13-2, 13-3, 14-1, 18-1, 18-2, 23-4, 25-1A, and 27-3 the Purchaser shall create snags via girdling, or other method as approved by the Authorized Officer, within one hundred ninety five (195) feet of streams (the Riparian Reserve land use allocation) as shown on Exhibit E. The total number of snags to create in the Riparian Reserve per unit is as follows: 1-6 (12 snags), 1-8 (14 snags), 1-9 (30 snags), 11-1 (18 snags), 11-8 (12 snags), 13-1 (2 snags), 13-2 (2 snags), 13-3 (12 snags), 14-1 (2 snags), 18-1 (2 snags), 18-2 (2 snags), 23-4 (6 snags), 25-1A (12 snags), 27-3 (8 snags). A total of total of one hundred thirty four (134) snags shall be created in the Riparian

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Reserve land use allocation portion of units. Of this total, one-half (½) of the snags required in each unit shall be greater than ten (10) inches diameter at breast height outside bark and one-half (½) of the snags required in each unit shall be greater than twenty (20) inches diameter at breast height outside bark. All snags created shall come from reserve marked trees as described in Section 41(B)(IR-1) or Section 41(C)(IR-1) and shall be distributed in a variety of spatial patterns including aggregated groups and individual trees. No adjustments of volume or value shall be made to meet these requirements. The Purchaser shall tally all girdled trees by diameter class and species per unit. At the end of girdling operations a completed tree tally shall be submitted to the Authorized Officer. Any species of tree available could be used to meet this requirement. The Purchaser shall not create snags in locations that may be hazardous to roads or powerlines.

- (17) L-32 In harvest units 1-5, 1-6, 1-8, 1-9, 11-2, 13-1, 13-2, 18-2, and 25-1A the Purchaser shall create snags via girdling, or other method as approved by the Authorized Officer, within the Late-Successional Reserve (LSR) land use allocation as shown on Exhibit E. The total number of snags to create in the LSR per unit is as follows: 1-5 (2 snags), 1-6 (160 snags), 1-8 (52 snags), 1-9 (62 snags), 11-2 (2 snags), 13-1 (2 snags), 13-2 (16 snags), 18-2 (2 snags), 25-1A (46 snags). A total of total of three hundred forty four (344) snags shall be created in the LSR portion of units. Of this total, one-half (½) of the snags required in each unit shall be greater than ten (10) inches diameter at breast height outside bark and one-half (½) of the snags required in each unit shall be greater than twenty (20) inches diameter at breast height outside bark. All snags created shall come from reserve marked trees as described in Section 41(B)(IR-1) or Section 41(C)(IR-1) and shall be distributed in a variety of spatial patterns including aggregated groups and individual trees. No adjustments of volume or value shall be made to meet these requirements. The Purchaser shall tally all girdled trees by diameter class and species per unit. At the end of girdling operations a completed tree tally shall be submitted to the Authorized Officer. Any species of tree available could be used to meet this requirement. The Purchaser shall not create snags in locations that may be hazardous to roads or powerlines.
- (18) L-33 Purchaser's operations shall facilitate BLM's safe and practical inspection of Purchaser's operations and BLM's conduct of other official duties on Contract Area. Purchaser has all responsibility for compliance with safety requirements for Purchaser's employees, contractors and subcontractors.

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In the event that the Authorized Officer identifies a conflict between the requirements of this contract or agreed upon methods of proceeding hereunder and State or Federal safety requirements, the contract may be modified. If the cost of such contract modification is of a substantial nature (\$2,000.00 or more), the Purchaser may request, in writing, an adjustment in the Actual Purchase Price specified in Section 2 of the timber sale contract, as amended, to compensate for the changed conditions.

Unless otherwise specified in writing, when operations are in progress adjacent to or on roads and/or trails in the harvest unit area, Purchaser shall furnish, install, and maintain all temporary traffic controls that provide the road or trail user with adequate warning of and protection from hazardous or potentially hazardous conditions associated with its operations. Purchaser shall prepare a Traffic Control Plan, which the Purchaser has determined is compliant with state and local OSHA and Transportation standards no later than the pre-work meeting and prior to commencing operations. Traffic control devices shall be appropriate to current operating and/or weather conditions and shall be covered or removed when not needed., Flagmen and devices shall be as specified in state OSHA and Transportation standards for logging roads or the “Manual on Uniform Traffic Control Devices for Streets and Highways” (MUTCD) published by the U.S. Department of Transportation - Federal Highway Administration. Included in the Traffic Control Plan, Purchaser shall note traffic control device locations on a Purchaser produced copy of the contract Exhibit “A” Map.

(B) ROAD CONSTRUCTION, MAINTENANCE, AND USE

- (1) R-1: The Purchaser shall construct, improve, renovate, and/or decommission all roads, structures, and temporary routes listed for use under this contract in accordance with the plans and specifications shown on Exhibits C and D, which is attached hereto and made a part hereof.
 - (a) R-1a: Any required renovation of roads and structures shall be completed and accepted, in accordance with Section 18, prior to the removal of any timber, except right-of-way timber, over that road.
 - (b) R-1b: The Purchaser shall construct, reconstruct, use, and decommission temporary routes by October 15th of the same respective operating season.
 - (c) R-1c: The Purchaser shall not commence work on road renovation, construction, and reconstruction until receipt of written notice to do so from

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the Authorized Officer. Work shall commence no later than 5 days after such notice, and shall be completed within 1 year after such notice.

- (d) R-1d: Prior to completion and approval of sub-grade construction from all proposed road construction and reconstruction, as well as all temporary route construction and reconstruction, as shown on Exhibit C, all logs shall be removed from the designated right-of-way.

- (2) R-2: The Purchaser is authorized to use the roads listed below and shown on Exhibits C and D for the removal of Government timber sold under the terms of this contract, provided that the Purchaser pay the required maintenance and rockwear obligations described in Section 42(B)(4), Section 42(B)(7), Section 42(B)(8), Section 42(B)(9), and Section 42(B)(10). Any road listed on Exhibit C and D and requiring construction, improvement, or renovation in Exhibit C of this contract, shall be maintained by the Purchaser until receiving written acceptance of the construction, improvement, or renovation from the Contracting Officer. The Purchaser shall pay current Bureau of Land Management maintenance and rockwear fees for the sale of additional timber under modification to the contract.

| Road No. and Segment | Length in Miles | Road Control | Surface Type | Maintenance Responsibility |
|-----------------------------|------------------------|---------------------|---------------------|-----------------------------------|
| 32-6-22.0(A1) | 1.11 | Juniper | AGG | Purchaser |
| 32-6-22.0(A2) | 0.62 | WeyCo | AGG | Purchaser |
| 32-6-22.0(B) | 0.58 | WeyCo | AGG | Purchaser |
| 32-6-9.0(A-B) | 2.58 | WeyCo | AGG | Purchaser |
| 32-6-3.1(A1-A2) | 0.30 | WeyCo | AGG | Purchaser |
| 32-6-3.1(B) | 0.13 | BLM | AGG | Purchaser |
| 32-6-3.2(A1) | 0.32 | WeyCo | AGG | Purchaser |
| 32-6-3.2(A2-A3) | 0.18 | BLM | AGG | Purchaser |
| 32-6-3.6 | 0.14 | BLM | NAT | Purchaser |
| 32-6-3.0(A1) | 0.60 | WeyCo | AGG | Purchaser |
| 32-6-3.0(A2) | 0.78 | WeyCo | NAT | Purchaser |
| 32-6-3.0(B1-B2) | 1.49 | Juniper | NAT | Purchaser |
| 32-6-3.0(C) | 0.74 | ODF | NAT | Purchaser |
| 32-6-3.0(D) | 0.28 | BLM | NAT | Purchaser |

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| Road No. and Segment | Length in Miles | Road Control | Surface Type | Maintenance Responsibility |
|-----------------------------|------------------------|---------------------|---------------------|-----------------------------------|
| 32-6-1.0(A) | 0.46 | BLM | NAT | Purchaser |
| 32-6-1.0(B) | 0.07 | Silver Butte | NAT | Purchaser |
| 32-6-15.0 | 0.99 | BLM | AGG | Purchaser |
| 32-6-15.1 | 0.42 | BLM | AGG | Purchaser |
| 32-6-23.0 | 0.43 | BLM | AGG | Purchaser |
| 32-6-23.1 | 0.24 | BLM | NAT | Purchaser |
| Windy Creek Rd | 0.63 | ODF | AGG | ODF |
| 32-5-18.0(A1) | 1.27 | ODF | AGG | Purchaser |
| 32-5-18.0(A2-A3) | 1.71 | ODF | NAT | Purchaser |
| 32-5-18.0(B-G) | 3.22 | BLM | NAT | Purchaser |
| 32-6-14.0 | 0.43 | ODF | NAT | Purchaser |
| 32-6-13.0 | 1.99 | ODF | NAT | Purchaser |
| 32-5-18.1(A1-A3) | 0.66 | BLM | NAT | Purchaser |
| 32-5-18.1(B) | 0.29 | WeyCo | NAT | Purchaser |
| 32-5-18.1(C) | 0.60 | BLM | NAT | Purchaser |
| 32-5-18.1(D) | 0.41 | WeyCo | NAT | Purchaser |
| 32-5-18.1(E) | 0.32 | Silver Butte | NAT | Purchaser |
| 32-5-18.1(F) | 0.58 | ODF | NAT | Purchaser |
| 32-5-18.1(G) | 1.00 | BLM | NAT | Purchaser |
| 32-5-20.0(A) | 0.64 | BLM | BST | BLM |
| 32-5-20.0(B) | 2.00 | BLM | AGG | Purchaser |
| 32-5-8.0 | 2.09 | BLM | AGG | Purchaser |
| 32-5-8.1 | 0.90 | BLM | AGG | Purchaser |
| | | | | |
| Total | 30.16 | | | |

- (3) R-2a: With the prior written approval of the Authorized Officer, the Purchaser may arrange for cooperative maintenance with other users of road(s) included in Section 42(B)(2) of this contract; provided, that such cooperative arrangement shall not

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relieve the Purchaser of his liability for the maintenance and repair of such roads resulting from wear or damage, in accordance with this contract. The Purchaser shall furnish the Authorized Officer a copy of any cooperative maintenance agreements entered into with other users on these roads.

- (4) R-2d: The Purchaser shall pay a road maintenance fee of **\$0.92** per thousand board feet log scale per mile for the use of said BLM road: 32-5-20.0(A) and the Purchaser shall pay a rockwear fee of **\$0.60** per thousand board feet log scale per mile for the use of all remaining BLM rocked roads listed for use under this contract. The total maintenance fee due shall be based upon volumes determined pursuant to Exhibit B of this contract and mileage of roads used as determined by the Authorized Officer. Prior to the use of such roads, the Purchaser shall give written notice to the Authorized Officer of the roads intended for use in the removal of timber purchased under this contract, together with an estimate of the volume to be hauled over such roads. The Authorized Officer shall establish an installment schedule of payment of the maintenance obligation. If it is determined by the Authorized Officer, after all merchantable timber has been cut and scaled, that the total maintenance payments made under this contract exceed the total maintenance and rockwear payment due, such excess shall be returned to the Purchaser after such determination is made.
- (5) R-2e: The Contracting Officer may at any time, by written notice, terminate the Purchaser's operator road maintenance obligations and require instead payment of current Bureau of Land Management road maintenance and rockwear fees for the particular surface type of the roads involved. These fees will be applied to the remaining contract volume on the sale area, as determined by the Authorized Officer, to be transported over the roads listed in Section 42(B)(2). If the total road maintenance and rockwear fee does not exceed five hundred and no/100 dollars (\$500.00), the Purchaser shall pay such amount in full prior to use of such roads. If the total road maintenance and rockwear fee exceeds five hundred and no/100 dollars (\$500.00), the Authorized Officer shall establish an installment schedule of payments of the maintenance and rockwear obligations.
- (6) R-2f: The Purchaser shall perform any required road repair and maintenance work on roads used by them, under the terms of Exhibit D, Road Maintenance Specifications, of this contract, which is attached hereto and made a part hereof.
- (7) R-3: In the use of Roads 32-6-3.0(B1-B2) and 32-6-22.0(A1), the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-2000, between the United States of America and **Juniper Properties, LLC**. This

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document is available for inspection at the Medford District Office.

These conditions include:

- (a) Payment of a road rockwear obligation of **one thousand one hundred ninety seven and 47/100 dollars (\$1,197.47)**, based upon the cruised estimated volume, to Juniper Properties, LLC, payable at the time indicated in the License Agreement.
- (b) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.
- (c) Prior to cutting or removing any timber from the road right-of-way between Stations 0+00 and 2+50 on Temp Route 11-02, the Purchaser shall pay to Juniper Properties, LLC, the owner of the right-of-way timber, the total value of that timber as agreed upon.

| Species | Estimated Volume MBF | Price Per MBF | Estimated Volume times Unit Price |
|-------------|----------------------|---------------|-----------------------------------|
| Douglas-fir | 1.8 | * | * |
| White fir | 0.2 | * | * |

*These figures will not be available until after the timber sale.

- (d) Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.
- (8) R-3: In the use of Roads 32-6-3.0(C), Windy Creek Road, 32-5-18.0(A1-A3), 32-6-14.0, 32-6-13.0, and 32-5-18.1(F), the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M.O.U. dated 01/06/1960, between the United States of America and **Oregon Department of Forestry**. This document is available for inspection at the Medford District Office.

These conditions include:

- (a) Payment of a road maintenance obligation of **three thousand six hundred fifty and 15/100 dollars (\$3,650.15)** and a road rockwear obligation of

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eight thousand six hundred five and 41/100 dollars (\$8,605.41), based upon the cruised estimated volume, to Oregon Department of Forestry, payable at the time indicated in the License Agreement.

- (b) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.
- (c) Prior to cutting or removing any timber from the road right-of-way between Stations 0+00 and 7+50 on Temp Route 01-05, Stations 0+00 and 2+01 on Temp Route 13-01, Stations 07+56 and 10+15 on Temp Route 13-03, and Stations 0+00 and 2+59 and Stations 119+63 and 161+61.5 on Road No. 32-5-18.1 the Purchaser shall pay to Oregon Department of Forestry, the owner of the right-of-way timber, the total value of that timber as agreed upon.

| Species | Estimated Volume MBF | Price Per MBF | Estimated Volume times Unit Price |
|----------------|----------------------|---------------|-----------------------------------|
| Douglas-fir | 73 | * | * |
| Ponderosa Pine | 0.3 | * | * |
| Incense-cedar | 1 | * | * |

*These figures will not be available until after the timber sale.

- (d) Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.
- (9) **R-3:** In the use of Roads 32-6-1.0(B) and 32-5-18.1(E), the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-824, between the United States of America and **Silver Butte Timber Co.** This document is available for inspection at the Medford District Office.

These conditions include:

- (a) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.
- (b) Prior to cutting or removing any timber from the road right-of-way between

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Stations 102+17.7 and 119+63 on Road No. 32-5-18.1 the Purchaser shall pay to Silver Butte Timber Co., the owner of the right-of-way timber, the total value of that timber as agreed upon.

| Species | Estimated Volume MBF | Price Per MBF | Estimated Volume times Unit Price |
|-------------|----------------------|---------------|-----------------------------------|
| Douglas-fir | 1.8 | * | * |

*These figures will not be available until after the timber sale.

- (c) Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.
- (10) R-3: In the use of Roads 32-5-18.1(B & D), 32-6-22.0(A2-B), 32-6-3.0(A), 32-6-3.1(A1-A2), 32-6-3.2(A1), and 32-6-9.0(A-B), the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement Nos. M-2000, M-605, M-887, between the United States of America and **Weyerhaeuser Company**. This document is available for inspection at the Medford District Office.

These conditions include:

- (a) Payment of a road rockwear obligation of **two thousand six hundred fifty nine and 52/100 dollars (\$2,659.52)**, based upon the cruised estimated volume, to Weyerhaeuser Company, payable at the time indicated in the License Agreement.
- (b) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.
- (c) Prior to cutting or removing any timber from the road right-of-way between Stations 29+40.6 and 64+04.4 and Stations 74+29.7 and 102+17.7 and Stations 161+61.6 and 167+30.9 on Road No. 32-5-18.1 and Stations 0+00 and 4+54 on Temp Route 23-04C the Purchaser shall pay to Weyerhaeuser Company, the owner of the right-of-way timber, the total value of that timber as agreed upon.

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| Species | Estimated Volume MBF | Price Per MBF | Estimated Volume times Unit Price |
|----------------|----------------------|---------------|-----------------------------------|
| Douglas-fir | 8.5 | * | * |
| Ponderosa Pine | 1.5 | * | * |
| Incense-cedar | 1.2 | * | * |

*These figures will not be available until after the timber sale.

- (d) 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.

- (11) R-3c: The Purchaser agrees that if they elect to use any other private roads, 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.

- (12) R-3e: The Purchaser shall pay a road maintenance fee of **zero and 75/100 dollars (\$0.75)** per thousand board feet log scale per mile and a road rockwear fee of **zero and 60/100 dollars (\$0.60)** per thousand board feet log scale per mile for the use of said third party roads listed. The totals fees due shall be based on the volumes specified in Exhibit B of this contract, and mileage of roads used, as determined by the Authorized Officer. Prior to the use of such roads, the Purchaser shall give written notice to the Contracting Officer of the roads intended for use in the removal of timber purchased under this contract, together with an estimate of the volume to be hauled over such roads. The Contracting Officer shall establish an installment schedule of payment of the rockwear obligation.

- (13) R-4: The Purchaser shall be required to secure written approval to use vehicles or haul forest products and equipment over Government owned or controlled roads when such vehicles or equipment exceeds the maximum allowable weights or dimensions established by the State for vehicles operating without a permit or if vehicles meet allowable non-permitted State vehicle weights, but the haul route crosses a structure or segment of road that is posted for reduced weights. The Purchaser agrees to abide by any special requirements included in said written approval.

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

Details shall include:

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

The Purchaser shall be responsible for repair of any damage to roads or structures caused by the use of overweight or over-dimension vehicles or equipment: (1) without written approval; (2) in violation of the conditions of a written approval; or, (3) in a negligent manner.

The amount of actual damage shall be determined by the Authorized Officer following a technical inspection and evaluation.

- (14) **R-5: Tracked type equipment shall not be allowed to cross over concrete bridge decks, other concrete surfaced structures, or asphalt surfaced roads without the proper protection of that surface.** Prior approval shall be obtained from the Authorized Officer when crossing with protective devices.

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

(C) ENVIRONMENTAL PROTECTION

- (1) **E-1** In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall restrict non-road, in unit, ground-based equipment used for harvesting, yarding, machine piling, and rehabilitation operations (including temporary routes,

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tractor swing routes, and landings) to periods of low soil moisture (dry conditions). Low soil moisture varies by texture and is based on site-specific considerations. Generally, low soil moisture is determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks. Low soil moisture limits will be determined by the Authorized Officer. Ground-based equipment shall be allowed to operate when the ground is frozen or adequate snow exists to prevent soil compaction and displacement, as determined by the Authorized Officer.

- (2) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall not haul on hydrologically connected natural surface or rocked roads during conditions that would result in any of the following: surface displacement such as rutting or ribbons, continuous mud splash or tire slide, fines being pumped through road surfacing from the subgrade resulting in a layer of surface sludge, as directed by the Authorized Officer.
- (3) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall not haul on all natural surface roads and rocked roads with insufficient rock depth (specifically, but not limited to, road numbers 32-5-8.0, 32-5-8.1, 32-6-1.0, 32-6-3.0, 32-6-3.1, 32-6-3.2, and 32-6-9.0), that receive one-half ($\frac{1}{2}$) inch or more precipitation within a twenty four (24) hour period. Haul shall not resume for a minimum of forty eight (48) hours following any storm event, or until road surface is sufficiently dry, as approved by the Authorized Officer. The Purchaser may elect, at their own expense, to apply rock surfacing to these roads to bring them up to wet weather haul standards, as approved by the Authorized Officer.
- (4) 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.

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

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

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

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

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

Grass seed 20 to 25 lbs/acre (cumulative, all species)

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

The Purchaser shall apply seed and straw mulch between September 1 of one calendar year and March 31 of the following year. Deviations from that timing must be approved by the Authorized Officer. The Purchaser shall notify the Authorized Officer at least 5 days in advance of the date that he/she intends to commence revegetation and soil stabilization work.

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

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

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

- (6) 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 (SPCC) for all hazardous substances to be used in the contract area, as directed by the Authorized Officer. Such plan shall include identification of Purchaser's representatives responsible for supervising initial containment action for releases and subsequent

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cleanup. Such plans must comply with the State of Oregon DEQ OAR 340-142, Oil and Hazardous Materials Emergency Response Requirements. All operators shall have a Spill Containment Kit (SCK) as described in the SPCC plan on-site during any operation with potential for run-off to adjacent waterbodies. The SCK shall be appropriate in size and type for the oil or hazardous material carried by the Purchaser.

- (7) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not store any fuel or other petroleum products or refuel heavy mechanized equipment within one hundred fifty (150) feet of all riparian management or wet areas. The Purchaser shall not refuel or maintain handheld equipment such as drip torches and chainsaw within one hundred (100) feet of waterbodies. Portable pumps may be refueled onsite within a spill containment system. 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.
- (8) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall prevent the delivery of chemical retardant foam or additives to waterbodies, and wetlands. Ignition devices/materials shall be stored and disposed of at least one hundred fifty (150) feet away from streams and wetlands.
- (9) 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.
- (10) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall ensure that silt fencing or other sediment control measures are properly placed and maintained during use and periods of non-use when utilizing landings, skid trails, temp routes, or haul routes that have the potential to release eroded fines into a stream or wet area, directly or via draws or ditchlines. Any project-related activity would be suspended if conditions develop that cause a potential for sediment laden runoff to enter a wetland, floodplain or waters of the state. Operations can resume when sediment control devices are in place and conditions allow turbidity standards to be met.

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- (11) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall, prior to October 15 of the same operating season, winterize and rehabilitate temporary routes, landings, hydrologically connected corridors and skidtrails and other areas of exposed soils by properly installing and/or using water bars, berms, sediment basins, gravel pads, hay bales, small dense woody debris, seeding and/or mulching, to reduce sediment runoff and divert runoff water away from stream channels, headwalls, slide areas, high landslide hazard locations or steep erodible fill slopes as directed by the Authorized Officer.
- (12) E-1 In addition to the requirement set forth in Section 26 of this contract, the Purchaser shall fully decommission temporary route 23-4A and the by-pass road associated with the bridge replacement, and rehabilitate ground based skid trails, temporary routes, cable-tractor swing routes, and landings outside of the road prism, within ground-based yarding areas **as needed to achieve no more than twenty (20) percent detrimental soil compaction within the unit**, as directed by the Authorized Officer, by one of the following methods:
- (a) If the Authorized Officer deems subsoiling will not cause unacceptable damage to the root systems of residual trees the Purchaser shall discontinuously subsoil, simultaneously water bar, seed, mulch, and barricade. Subsoil to a depth of twelve (12) inches, and no further than thirty six (36) inches apart. If the Authorized Officer deems subsoiling to this depth will cause an unacceptable amount of damage to the root system of residual trees, the Purchaser shall scarify to a depth of up to six (6) inches and simultaneously water bar, seed, mulch, and barricade.
 - (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.
 - (c) All rehabilitation shall occur within eighteen (18) months of harvest, during dry conditions, and after pile burning is complete.
- (13) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall place material removed during excavation in locations where it cannot enter streams or other water bodies.

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- (14) E-2 The water bars to be constructed as required by Sec. 26(c) shall be constructed in accordance with the spacing described in the table below and to the specifications shown on Exhibit C-11-1 which is attached hereto and made a part hereof.

| Gradient (Percent) | Water Bar Spacing By Erosion Class | |
|-----------------------|--|--|
| | High Units 1-5, 1-6, 1-8, 11-2, 11-8, 14-1, 18-2, 23-4, | Moderate Units 1-9, 3-4, 13-1, 13-3, 23-1G, 24-4, 25-1G |
| 2-5% | 200 feet | 300 feet |
| 6-10% | 150 feet | 200 feet |
| 11-15% | 100 feet | 150 feet |
| 16-20% | 75 feet | 100 feet |
| 21-35% | 50 feet | 75 feet |
| 36+% | 50 feet | 50 feet |

- (15) E-3 The Purchaser shall immediately discontinue specified construction or timber harvesting operations upon written notice from the Contracting Officer that:
- (a) threatened or endangered plants or animals protected under the Endangered Species Act of 1973, as amended, may be affected by the operation, and a determination is made that consultation or reinitiation of consultation is required concerning the species prior to continuing operation, or;
 - (b) when, in order to comply with the Endangered Species Act, or to prevent incidental take of northern spotted owls in accordance with management direction in the Record of Decision (ROD) and Resource Management Plan (RMP), the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
 - (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) 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;

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- (e) when, in order to comply with a court order, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
- (f) when, in order to comply with a stay or other remedy issued by the Interior Board of Land Appeals (IBLA) the Contracting Officer determines it may be necessary to modify or terminate the contract, or;+
- (g) species have been discovered which were identified for protection in accordance with management direction established in the ROD and RMP, and the Contracting Officer determines that continued operations would affect the species or its habitat, or;
- (h) when, in order to protect species which were identified for protection in accordance with management direction established in the ROD and RMP, the Contracting Officer determines it may be necessary to modify or terminate the contract.

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

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

In the event of a suspension period or a combination of suspension periods that exceed a total of 30 days, the First Installment held on deposit may be temporarily reduced upon the written request of the Purchaser. For the period of suspension extending beyond 30 days, the First Installment on deposit may be reduced to five (5) percent of the First Installment amount listed in Section 3.a. of the contract. Any First Installment amount temporarily reduced may be refunded or transferred to another BLM contract at the request of the Purchaser. However, if the Purchaser has outstanding debt owing the United States, the Contracting Officer must first apply the amount of First Installment that could be refunded to the debt

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owed in accordance with the Debt Collection Improvement Act, as amended (31 USC 3710, et seq.). Upon Purchaser's receipt of a bill for collection and written notice from the Contracting Officer lifting the suspension, the Purchaser shall restore the First Installment to the full amount shown in Section 3.a. of the contract within 15 days after the bill for collection is issued, subject to Section 3.i. of the contract. The Purchaser shall not resume contract operations until the First Installment amount is fully restored.

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

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

The Contracting Officer may determine that it is necessary to modify the contract or terminate the cutting and removal rights under the contract in order to comply with the Endangered Species Act, prevent incidental take of northern spotted owls in accordance with the ROD and RMP, protect species that have been discovered which were identified for protection in accordance with management direction established in the ROD and RMP, or comply with a court order or an IBLA issued stay or remedy. Following the issuance of a written notice that cutting and removal rights will be terminated, the Purchaser will be permitted to remove timber cut under the contract, if allowed by the Endangered Species Act, if able to proceed

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without causing incidental take of northern spotted owls in accordance with the ROD and RMP, if consistent with species protection in accordance with management direction established in the ROD and RMP, or if consistent with a court order or an IBLA issued stay or remedy.

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

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

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

Upon receipt of a notice that the Purchaser expects to perform such operations during this time period, the Government will conduct surveys to determine whether owls are nesting within 0.25 miles of the harvest units. If it is determined owls are not nesting or that no young have been produced, the Authorized Officer may lift

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the seasonal restriction on such operations in writing. Without this approval, such operations are prohibited from March 1 through July 15 of each year.

(D) FIRE PREVENTION

- (1) F-1 Fire Prevention and Control. Primarily for purposes of fire prevention and control, the Purchaser shall, prior to the operation of power driven equipment in construction or logging operations under this contract during the closed fire season or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the of the Authorized Officer.
- (2) F-1a Fire Prevention and Control. Primarily for purposes of fire prevention and control, the Purchaser shall comply with the following provisions:
 - (a) At least three (3) days prior to the operation of power-driven equipment during any operations under this contract during the closed fire season or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the Authorized Officer, the State of Oregon Department of Forestry, and the State of Oregon Douglas Forest Protection Agency.
 - (b) Provide and maintain on the contract area in good working order, and immediately available, the following equipment for use during closed fire season or periods of fire danger:
 1. F-2a Fire fighting tools shall be kept at each landing or at such other place as the Authorized Officer shall designate whenever employees are working on the contract area. All fire fighting tools shall be kept in a sturdily constructed box which shall be painted red and lettered on the front or top in large letters, "For Fire Only." The box shall have a hinged lid and a hasp by which the lid can be sealed. One box may serve two landings not over six hundred (600) feet apart. When filled, the box shall not weigh over two hundred (200) pounds. The fire tools shall be in good condition, be tight on strong handles, and have sharp cutting edges. There shall be not less than four (4) tools in each box nor less than one (1) tool for each employee working on the contract area. Three-fourths (3/4) of all fire tools shall be shovels, hazel hoes, or other scraping tools. The fire tools shall be used only for fighting fire.

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

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independent use of the hands. At least one extra set of batteries shall be provided for each such headlight.

6. F-2f Two (2) back-pack pumps at each landing and one (1) at each tail block, all to be kept full of water and in good operating condition.

7. F-2g A chemical fire extinguisher of at least eight (8) ounces minimum capacity of a type approved by the Authorized Officer and a size 0 or larger shovel shall be carried during the closed fire season or periods of fire danger by each falling crew and each buckner using a power saw on the contract area. Such fire extinguisher shall be filled and in effective operating condition and shall at all times be immediately available to the operator when the saw is being fueled or the motor of the saw is running. Any fueling of a power saw shall be done in an area which has first been cleared of all flammable material. Power saws shall be moved at least twenty (20) feet from the place of fueling before the engine is started. Each power saw shall be equipped with an exhaust system and a spark arresting device which are of types approved by the Authorized Officer.

(c) F-5 Where blocks and cables are used on the contract area during periods of fire danger, the Purchaser shall remove all flammable material at least ten (10) feet from the place where the tail or any other block will hang when the cable is tight. Such clearings shall be inspected periodically by the Purchaser and shall be kept free of flammable material.

(3) F-9 During Oregon Department of Forestry regulated use closure, no smoking shall be permitted outside of closed vehicles.

(E) SLASH DISPOSAL

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

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- (a) SD-1a Lop and scatter all slash in units 13-2 and 27-2G and lop and scatter all slash outside of the machine pile and burn and/or handpile and burn portions of units 1-5, 1-6, 11-2, and 25-1A as shown on Exhibit S. All top and side branches must be free of the central stem so that such stem is reduced to the extent that it is within eighteen (18) inches of the ground at all points. Slash includes all woody material (brush, limbs, tops, unmerchantable stems, or chunks) severed, uprooted, or broken from live plants as a result of Purchaser's operations under the terms of this contract. Lop and scatter shall be completed in accordance with Exhibit S as directed by the Authorized Officer.
1. All slash shall be arranged in a discontinuous pattern across the forest floor.
 2. All slash shall be loped to no more than eight (8) feet in length.
- (b) SD-1b Machine pile, cover, and burn all slash in the ground based portion of units 1-5, 1-8, 1-9, 3-4, 11-2, 11-8, 13-1, 13-3, 14-1, 18-2, 23-1G, 23-4, 24-4, and 32-5-18 ROW, and within the clearing limits of all temporary routes as shown on Exhibit S. Slash shall be piled by machine. Piling shall be completed in accordance with Exhibit S as directed by the Authorized Officer. Finished piles shall be tight and free of earth.
1. The BLM will prepare a fire burn plan. Smoke clearance shall be obtained by the BLM the day prior to planned ignition for all burn units.
 2. Slash includes all woody material (brush, limbs, tops, unmerchantable stems, or chunks) severed, uprooted, or broken from live plants as a result of Purchaser's operations under the terms of this contract. Do not pile pieces of slash with a diameter greater than twelve (12) inches.
 3. All equipment shall be approved by the Authorized Officer. Piling shall be accomplished using a track mounted hydraulic excavator or equivalent with at least a five (5) tooth brush rake. The excavator shall have a minimum reach of twenty (20) feet. The excavator shall be equipped with a hydraulic thumb or rotating controllable grapple head. Finished piles shall be tight and free of dirt and other non-woody debris.

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4. Piles shall be less than sixteen (16) feet in height and width.
 5. Machine piling operations are limited to slopes less than thirty five (35) percent slope when using non-specialized equipment (without a self-leveling cab) or to slopes less than fifty (50) percent slope when using specialized equipment (with a self-leveling cab); and to dry conditions as described in Sec. 42(C)(1)(E-1). All areas that are identified in Exhibit A as ground based yarding that cannot be machine piled would be hand piled.
 6. Machine piles shall be constructed as compactly as possible. There should be an adequate supply of fine fuels located within and under the covered area of the pile to ensure ignition of the larger fuels. Completed piles shall be free of projecting limbs or slash which would interfere with adequate covering of the piles.
 7. Machine piles shall be adequately covered with a cap of ten (10) feet by ten (10) feet of four (4) millimeter black polyethylene plastic. The plastic shall be held in place with woody debris or tied with rope or twine to ensure coverage. Coverage shall be completed when piles are constructed, or as directed by the Authorized Officer.
 8. Machine piles shall not be placed within fifteen (15) feet of snags, stumps, reserve trees or large woody debris.
 9. In the portion of unit 11-2G with the historic railroad grade, as shown on Exhibit A, no hand piles shall be placed within thirty (30) feet of the railroad grade.
 10. Machine piles will be burned in the fall to spring season after one (1) or more inches of precipitation have occurred.
 11. The Purchaser is required to furnish the fuel and equipment for machine pile burning.
- (c) SD-1c Hand pile, cover, and burn all slash situated in units 11-1, 11-1G, 11-2G, 18-1, 23-4G, 25-1G, 27-1, 27-1G, 27-3, 27-4 and hand pile, cover, and burn slash in portions of units 1-5, 1-6, 1-8, 1-9, 3-4, 11-8, 13-3, 14-1, 23-

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1G, 23-4, 24-4, 25-1A, as shown on Exhibit S. Slash shall be piled by hand. Finished piles shall be tight and free of earth.

1. The BLM will prepare a fire burn plan. Smoke clearance shall be obtained by the BLM the day prior to planned ignition for all burn units.
 2. Slash includes woody material (brush, limbs, tops, unmerchantable stems, or chunks severed, uprooted, or broken from live plants as a result of Purchaser's operations under the terms of this contract.
 3. Hand pile all slash which is between one (1) and six (6) inches in diameter on the large end and exceeds two (2) feet in length, or as directed by the Authorized Officer.
 4. Hand piles shall be covered with a large enough piece of four (4) millimeter thick black plastic to ensure a dry ignition spot, generally five (5) feet by five (5) feet or large enough to cover eighty (80) percent of the pile.
 5. Hand piles shall not be placed adjacent to or within ten (10) feet of leave trees or large woody debris.
 6. Hand piles shall not be located on roadways, turnouts, shoulders, or cut banks, unless authorized by the Authorized Officer.
 7. Burning of hand piles would occur after a sufficient period of curing (generally over a year) and adequate seasonal moisture.
- (d) SD-1f Within twenty (20) feet of the edge of each landing pile, all tops, broken pieces, limbs and debris more than one (1) inch in diameter at the large end and longer than two (2) feet in length shall be piled within fourteen (14) days of completion of hauling logs from that landing. Landing piles shall be kept free of dirt and located off of the driving surface of roads and at least fifteen feet (15) from any Reserve Tree and/or as directed by the Authorized Officer.

Upon completion of landing piling, the Purchaser shall prepare the landing piles for burning by constructing a fireline by hand or machine approximately eighteen (18) inches wide and down to mineral soil around

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each pile to prevent escaped fire. Landing piles shall be less than sixteen (16) feet in height and width. Cover piles with large enough piece of four (4) millimeter thick black plastic to ensure a dry ignition spot, generally ten (10) foot by ten (10) foot. The Purchaser is required to furnish the covering materials. The timing of this covering work shall be in accordance with instructions from the Authorized Officer. If the structure of the landing piles will not permit adequate consumption of piled debris by burning, the Purchaser shall re-pile them at the direction of the Authorized Officer.

1. The BLM will prepare a fire burn plan. Smoke clearance shall be obtained by the BLM the day prior to planned ignition for all burn units.
 2. Landing piles will be burned in the fall to spring season after one (1) or more inches of precipitation have occurred.
 3. Landing piles will be burned within twenty four (24) months of harvest completion.
 4. If purchaser elects to set aside pole/firewood decks and not put the material in landing piles, the purchaser will be required to remove decks before the expiration of cutting rights. Material will be hauled off site for processing. The Authorized Officer will determine location of pole/hardwood decks.
- (2) SD-2 Notwithstanding the provisions of Sec. 15 of this contract, the Government shall assume all obligations for disposal or reduction of fire hazards created by Purchaser's operations on Government lands, except for burning and mop up assistance as required herein, and measures required in Sections 42(E)(1)(SD-1) and 42(E)(3)(SD-4). In accordance with written instruction to be issued by the Authorized Officer at least ten (10) days in advance of earliest date of required performance, the Purchaser shall, under supervision of the Authorized Officer or his designated representative, assist in preparing units for burning, mop-up, and patrol by furnishing, at his own expense, the services of personnel and equipment on each unit as shown below.

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.

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- (a) For igniting and burning machine piles in units 1-5, 1-8, 1-9, 3-4, 11-2, 11-8, 13-1, 13-3, 14-1, 18-2, 23-1G, 23-4, 24-4, and 32-5-18 ROW, and within the clearing limits of all temporary routes as shown on Exhibit S:
1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
 2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
 3. One (1) Wildland Fire Engine Boss.
 4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.
 5. Six (6) drip torches.
 6. Hand ignition with drip torches is required in machine pile units.
 7. All ignition personnel will be directly supervised by a BLM representative.
- (b) For mop-up of machine piles in units 1-5, 1-8, 1-9, 3-4, 11-2, 11-8, 13-1, 13-3, 14-1, 18-2, 23-1G, 23-4, 24-4, and 32-5-18 ROW, and within the clearing limits of all temporary routes as shown on Exhibit S:
1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.

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2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) Wildland Fire Engine Boss.
4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.

(c) For igniting and burning hand piles in units 1-5, 1-6, 1-8, 1-9, 3-4, 11-1, 11-1G, 11-2G, 11-8, 13-3, 14-1, 18-1, 23-1G, 23-4, 23-4G, 24-4, 25-1A, 25-1G, 27-1, 27-1G, 27-3, 27-4:

1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
2. One (1) crew with ten (10) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) Wildland Fire Engine Boss.
4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzles acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump

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conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.

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

(d) For mop up of hand piles in units 1-5, 1-6, 1-8, 1-9, 3-4, 11-1, 11-1G, 11-2G, 11-8, 13-3, 14-1, 18-1, 23-1G, 23-4, 23-4G, 24-4, 25-1A, 25-1G, 27-1, 27-1G, 27-3, 27-4:

1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) Wildland Fire Engine Boss.
4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.

(e) For igniting and burning landing piles:

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1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) Wildland Fire Engine Boss.
4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzles acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.

(f) For mop-up landing piles:

1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) Wildland Fire Engine Boss.
4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610

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as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.

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

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

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

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

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

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

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

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

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

- (3) SD-4 Logging Residue Reduction. In addition to the requirements of Secs. 15 and 25 of this contract, and notwithstanding the Purchaser's satisfactory compliance with State laws and regulations regarding offsetting or abating the additional fire hazard created by this operation and the State's willingness to release Purchaser from liability for such hazard, the Purchaser shall remain responsible to the Government for performance of the following logging residue reduction and site preparation measures required by this contract:

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- (a) 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 11-1, 11-1G, 11-2G, 18-1, 23-4G, 25-1G, 27-1, and 27-3 and portions of units 1-5, 1-6, 1-8, 1-9, 3-4, 11-8, 13-3, 14-1, 23-1G, 23-4, 24-4, and 25-1A as shown on Exhibit S. Space live conifers twelve (12) feet by twelve (12) feet, and space hardwoods and shrubs forty (40) feet by forty (40) feet.

Acceptable leave trees shall:

1. Demonstrate good form and vigor.
2. Have a minimum four (4) inch terminal leader with thirty (30) percent live crown ratio.
3. Be non-chlorotic; be light or dark green with very little or no yellowish tint.
4. Have an un-damaged top.
5. Be free of visible disease, cankers, fire damage, or blister rust.
6. Not have multiple tops.

In absence of trees that meet the above definition for an acceptable leave tree, include any live conifer seedling, natural or planted that has a two (2) inch terminal leader with a twenty five (25) percent crown ratio.

- (b) Perform fireline construction for underburning in units 1-8, 1-9, 3-4, 11-1, 11-8, 13-3, 14-1, 18-1, 24-4, and 27-4 as shown on Exhibit S:

Notwithstanding the provisions of Sec. 15 of this contract, the Government shall assume all obligations for disposal or reduction of fire hazards created by Purchaser's operations on Government lands, except for burning and mop up assistance as required herein, and measures required in Sections 42(E)(1)(SD-1) and 42(E)(3)(SD-4). In accordance with written instruction to be issued by the Authorized Officer at least ten (10) days in advance of earliest date of required performance, the Purchaser shall, under supervision of the Authorized Officer or his designated representative, assist in preparing units for burning, mop-up, and patrol by furnishing, at his own expense, the services of personnel and equipment on each unit as shown below.

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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.

1. Underburn units shall follow the Resource, Prescribed Fire Objectives and Constraints (Element 5 Objectives) for each underburn unit as outlined in Prescribed Fire Burn Plan and as directed by the Authorized Officer or BLM representative.
2. The BLM will prepare a fire burn plan. Smoke clearance shall be obtained the day prior to planned ignition for all burn units by the BLM.
3. Prescribed burning shall be conducted in a manner that will minimize damage to reserve trees, duff, soil, and to avoid loss of large/coarse woody debris and will be consistent with ecosystem management objectives outlined in the burn plan.
4. Firelines will be constructed by hand to mineral soil to a minimum of eighteen (18) inches wide and a maximum of three (3) feet wide.
5. Create a minimum fuel break of ten (10) feet on the underburn side of the fire line and six (6) feet on the unburned side of the fire line by removing logging slash or live vegetation under eight (8) inches diameter at the large end or at eight (8) inch diameter at breast height.
6. Slash shall be dispersed in a discontinuous pattern a minimum of fifteen (15) feet away from the fire line within or outside the unit boundary as directed by the Authorized Officer or BLM representative.
7. Limit fire lines inside Riparian Reserves (areas within one hundred ninety five (195) feet of streams shown on Exhibit S). On very steep ground where runoff could enter waterways incorporate water bars as directed by the Authorized Officer. Locate fire lines so that open meadows associated with streams do not burn, unless prescribed for restoration.

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8. Fire lines shall be constructed within thirty (30) days of notification by the Authorized Officer. Water bars shall be constructed and maintained on the fire lines to the satisfaction of the Authorized Officer.
- (c) For igniting and holding underburning in units 1-8, 1-9, 3-4, 11-1, 11-8, 13-3, 14-1, 18-1, 24-4, and 27-4 as shown on Exhibit S:
1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
 2. Two (2) crews with ten (10) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
 3. One (1) tractor/dozer operator.
 4. Three (3) Wildland Fire Engine Bosses.
 5. One (1) tractor (Caterpillar D6 or equivalent) equipped with straight solid blade.
 6. Three (3) Wildland Fire Engines. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzles acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.
 7. Sixteen (16) drip torches.
 8. Hand ignition with drip torches is required in underburn units. Ignition shall occur at least twenty five (25) feet from intermittent

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streams and at least sixty (60) feet from perennial streams shown on Exhibit S.

9. All ignition personnel will be directly supervised by a BLM representative.
10. The Purchaser is required to furnish the fuel and equipment for underburning.

(d) For mop-up of underburning in units 1-8, 1-9, 3-4, 11-1, 11-8, 13-3, 14-1, 18-1, 24-4, and 27-4 as shown on Exhibit S:

1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) Wildland Fire Engine Boss.
4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.

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

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

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

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

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

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

In situations where an escaped fire is controlled and contained by an adequate fire break (e.g., trail, road, stream, rock formation), the Government may permit the Purchaser to remove personnel for that day; provided that, all mop up work on the

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escaped fire area is included with mop up work on the prescribed fire area. In such an event, the Purchaser must sign a statement of agreement to complete mop up work on all escaped fire areas concurrently with mop up work on the prescribed fire area.

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

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

- (4) SD-5 The Purchaser shall perform logging residue reduction and site preparation work on approximately nine hundred eighty nine (989) acres of harvest area located in all units 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.

| Treatment | Treatment Description | Cost/Acre |
|------------------------------|-----------------------|-----------|
| Lop and Scatter | 0-12 tons/acre | \$42.00 |
| Selective Slashing | ≤ 60% cover (cut) | \$300.00 |
| Hand Pile and Cover | 0-25 piles/acre | \$325.00 |
| Hand Pile Burn and Mop-up | 0-25 piles/acre | \$42.00 |
| Machine Pile and Cover | Cost per acre | \$375.00 |
| Machine Pile Burn and Mop-up | 0-20 piles/acre | \$28.00 |

OH WINDY TIMBER SALE

SPECIAL PROVISIONS

| | | |
|------------------------------|---------------|---------|
| Cover and Burn Landing Decks | Cost per acre | \$56.00 |
|------------------------------|---------------|---------|

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

| Appraised Treatment | Acres | Cost/Acre | Total Cost Per Treatment |
|------------------------------|------------|-----------|--------------------------|
| Lop and Scatter | 140 | \$42.00 | \$5,880.00 |
| Selective Slashing | 574 | \$300.00 | \$172,200.00 |
| Hand Pile and Cover | 574 | \$325.00 | \$186,550.00 |
| Hand Pile Burn and Mop-up | 574 | \$42.00 | \$24,108.00 |
| Fireline Construction* | 46,625 | \$0.80 | \$37,300.00 |
| Underburning | 526 | \$225.00 | \$118,350.00 |
| Machine Pile and Cover | 212 | \$375.00 | \$79,500.00 |
| Machine Pile Burn and Mop-up | 212 | \$28.00 | \$5,936.00 |
| Cover and Burn Landing Decks | 63 | \$56.00 | \$3,528.00 |
| Total Appraised Cost | 989 | | \$633,352.00 |

*Linear Foot

- (c) The Total Purchase Price set forth in Section 2 shall be adjusted in a unilateral modification executed by the Contracting Officer by the amount that the total cost of the site preparation treatments designated pursuant to Section 42(E)(4)(SD-5)(a) differs from six hundred thirty three thousand, three hundred fifty two and no/100 dollars (\$633,352.00), as calculated by using the estimated acres determined by the Authorized Officer and the per acre costs listed in Section 42(E)(4)(SD-5)(a).
- (d) Lop and scatter shall be done in accordance with Section 42(E)(1)(SD-1)(a)(SD-1a); Selective slashing shall be done in accordance with Section 42(E)(3)(SD-4)(a)(L-4); Hand piling and burning shall be done in accordance with Section 42(E)(1)(SD-1)(c)(SD-1c) and Section 42(E)(2)(SD-2)(c&d); Machine piling and burning shall be done in accordance with Section 42(E)(1)(SD-1)(b)(SD-1b) and Section 42(E)(2)(SD-2)(a&b); Pile and burn landing decks shall be done in

OH WINDY TIMBER SALE

SPECIAL PROVISIONS

accordance with Section 42(E)(1)(SD-1)(d)(SD-1f) and Section 42(E)(2)(SD-2)(e&f).

(F) CONTRIBUTIONS

- (1) C-1 The Purchaser shall perform fireline construction in accordance with Section 42(E)(3)(SD-4)(b) and perform underburning in accordance with Section 42(E)(3)(SD-4)(c&d). The Purchaser shall have the option of completing this work, or in lieu thereof, may make a contribution to the Bureau of Land Management in the amount of one hundred fifty five thousand, six hundred fifty and no/100 dollars (\$155,650.00), and upon making such contribution, the Purchaser shall be relieved of the obligations set out in this subsection. The Purchaser shall notify the Authorized Officer of their intention to make this contribution prior to the date of execution of this contract. If the total contribution does not exceed five hundred and no/100 dollars (\$500.00), the Purchaser shall pay such amount in full prior to the commencement of operations. If the total contribution exceeds five hundred and no/100 dollars (\$500.00), the Authorized Officer shall establish an installment schedule of payments.

(G) 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).

OH WINDY TIMBER SALE

SPECIAL PROVISIONS

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 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

OH WINDY TIMBER SALE

SPECIAL PROVISIONS

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.

Oh Windy Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-19-24

| |
|--|
| Unrestricted Period |
| Operations Restricted To Dry Condition |
| Operations Restricted |
| Spotted Owl Restriction may be extended if activities would cause nesting spotted owl to flush |

* Operations will be suspended if unacceptable damage to residual trees occur.

** In-stream work periods for culvert cleaning are July 1st - September 15th.

*** **All road maintenance and improvements must be completed before wet season haul can occur on that road. Haul will be suspended if the road begins to show damage or conditions develop that could cause damage to the road as described in Sec. 42(C)(2&3)(E-1).**

Blasting- If blasting for Road Construction is deemed necessary, a seasonal restriction from March 1st through Sept 30th could apply depending on proximity to owls and amount of blasting needed.

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 is between 15-25% depending on soil type.

| Sale Area | Activity | Jan | | Feb | | Mar | | Apr | | May | | Jun | | Jul | | Aug | | Sep | | Oct | | Nov | | Dec | |
|---|--|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|
| | | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 |
| <u>Ground Based Yard Unit with Dry Condition Haul: 18-2</u> | Manual Felling and Bucking* | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mechanical Ground Based Harvesting & Yarding, Landing Construction, and Rehabilitation Activities Involving Heavy Equipment | | | | | | | | | | | | | | | | | | | | | | | | |
| | Road Maintenance** | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Ground Based Yard Units with Road and/or Temp. Route Construction: 13-1, 32-5-18.1 ROW</u> | Loading, Hauling*** | | | | | | | | | | | | | | | | | | | | | | | | |
| | Manual Felling and Bucking* | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mechanical Ground Based Harvesting & Yarding, Road & Temp. Route & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment | | | | | | | | | | | | | | | | | | | | | | | | |
| | Road Maintenance** | | | | | | | | | | | | | | | | | | | | | | | | |
| | Loading, Hauling*** | | | | | | | | | | | | | | | | | | | | | | | | |

Oh Windy Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-19-24

| Sale Area | Activity | Jan | | Feb | | Mar | | Apr | | May | | Jun | | Jul | | Aug | | Sep | | Oct | | Nov | | Dec | |
|--|---|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|
| | | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 |
| Cable Yard Unit: 11-1 | Manual Falling and Bucking* | | | | | | | | | | | | | | | | | | | | | | | | |
| | Cable Yarding* | | | | | | | | | | | | | | | | | | | | | | | | |
| | Landing Construction & Rehab. Activities Involving Heavy Equipment | | | | | | | | | | | | | | | | | | | | | | | | |
| | Road Maintenance** | | | | | | | | | | | | | | | | | | | | | | | | |
| | Loading, Hauling*** | | | | | | | | | | | | | | | | | | | | | | | | |
| Cable Yard Unit with Dry Condition Haul: 18-1 | Manual Falling and Bucking* | | | | | | | | | | | | | | | | | | | | | | | | |
| | Cable Yarding* | | | | | | | | | | | | | | | | | | | | | | | | |
| | Landing Construction & Rehab. Activities Involving Heavy Equipment | | | | | | | | | | | | | | | | | | | | | | | | |
| | Road Maintenance** | | | | | | | | | | | | | | | | | | | | | | | | |
| | Loading, Hauling*** | | | | | | | | | | | | | | | | | | | | | | | | |
| Cable Yard Units with Road and/or Temp Route Construction and/or Reconstruction: 11-1G, 13-2, 25-1G, 27-1, 27-1G, 27-3, 27-4 | Manual Falling and Bucking* | | | | | | | | | | | | | | | | | | | | | | | | |
| | Cable Yarding* | | | | | | | | | | | | | | | | | | | | | | | | |
| | Road, Temp. Route & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment | | | | | | | | | | | | | | | | | | | | | | | | |
| | Road Maintenance** | | | | | | | | | | | | | | | | | | | | | | | | |
| | Loading, Hauling*** | | | | | | | | | | | | | | | | | | | | | | | | |
| Cable & Ground Based Yard Units: 1-6, 1-9, 14-1, 23-1G | Manual Falling and Bucking* | | | | | | | | | | | | | | | | | | | | | | | | |
| | Cable Yarding* | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mechanical Ground Based Harvesting & Yarding, Landing Construction and Rehabilitation Activities Involving Heavy Equipment | | | | | | | | | | | | | | | | | | | | | | | | |
| | Road Maintenance** | | | | | | | | | | | | | | | | | | | | | | | | |
| | Loading, Hauling*** | | | | | | | | | | | | | | | | | | | | | | | | |

Oh Windy Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-19-24

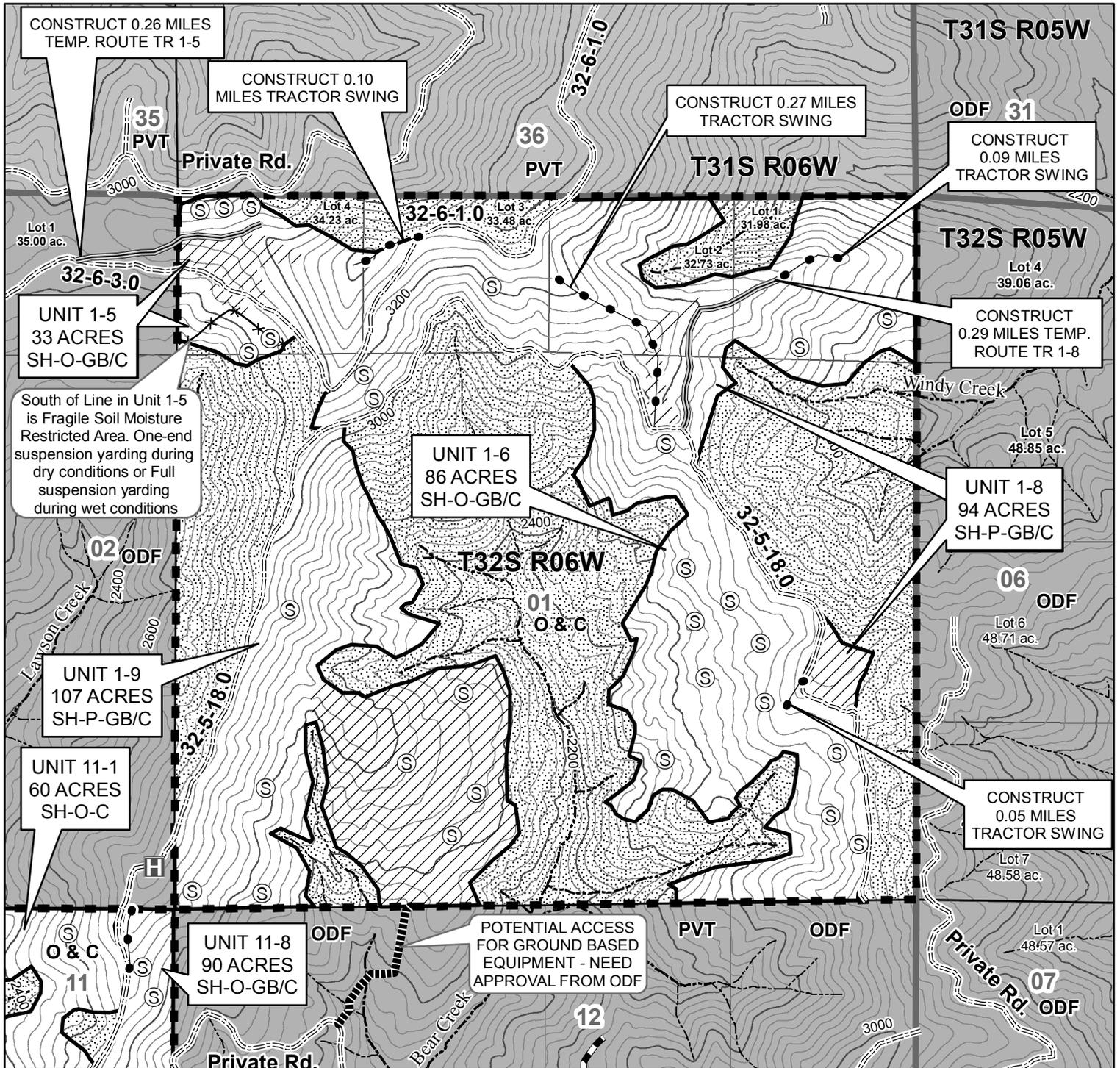
| Sale Area | Activity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | | 1 15 |
| <u>Cable & Ground Based Yard Units with Road and/or Temp Route Construction and/or Reconstruction:</u> 1-8, 11-2, 11-8, 13-3, 24-4, 27-3 | Manual Felling and Bucking* | | | | | | | | | | | | |
| | Cable Yarding* | | | | | | | | | | | | |
| | Mechanical Ground Based Harvesting & Yarding, Road & Temp. Route & Landing Construction, and Rehab Activities Involving Heavy Equipment | | | | | | | | | | | | |
| | Road Maintenance** Loading, Hauling*** | | | | | | | | | | | | |
| <u>Cable & Ground Based Yard Unit with Temp Route Construction and Partial Dry Condition Haul: 1-8</u> | Manual Felling and Bucking* | | | | | | | | | | | | |
| | Cable Yarding* | | | | | | | | | | | | |
| | Mechanical Ground Based Harvesting & Yarding, Road & Temp. Route & Landing Construction, and Rehab Activities Involving Heavy Equipment | | | | | | | | | | | | |
| | Road Maintenance** Loading, Hauling*** on 32-5-18.0 Road | | | | | | | | | | | | |
| <u>Cable & Ground Based Yard Unit Temp. Route Construction & Dry Condition Haul:</u> 3-4 | Loading, Hauling*** on 32-6-1.0 & 32-6-3.0 Roads | | | | | | | | | | | | |
| | Manual Felling and Bucking* | | | | | | | | | | | | |
| | Cable Yarding* | | | | | | | | | | | | |
| | Mechanical Ground Based Harvesting & Yarding, Road & Temp. Route & Landing Construction, and Rehab Activities Involving Heavy Equipment | | | | | | | | | | | | |

Oh Windy Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-19-24

| Sale Area | Activity | Jan | | Feb | | Mar | | Apr | | May | | Jun | | Jul | | Aug | | Sep | | Oct | | Nov | | Dec | | | | | |
|---|---|-----------------------------|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|--|--|--|--|
| | | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | | | | |
| <u>Cable & Ground Based Yard Unit with Temp. Route Construction, TPCC-soil Restriction & Dry Condition Haul:</u> 1-5 | Manual Falling and Bucking* Cable Yarding outside of the TPCC-Fragile for Soil Moisture Restricted portion of unit* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Cable Yarding with full suspension within the TPCC-Fragile for Soil Moisture Restricted portion of unit* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Cable Yarding with one-end suspension within the TPCC-Fragile for Soil Moisture Restricted portion of unit* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mechanical Ground Based Harvesting & Yarding, Temp. Route & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Road Maintenance** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Loading, Hauling*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Manual Falling and Bucking* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Helicopter Yarding | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Landing Construction & Rehabilitation Activities Involving Heavy Equipment | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Road Maintenance** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Helicopter Yard Units:</u> 23-4G, 27-2G | Loading, Hauling*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Manual Falling and Bucking* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Cable Yarding* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Helicopter yarding | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Road & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Road Maintenance** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Loading, Hauling*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <u>Helicopter & Cable Yard Unit with Road Construction: 25-1A</u> | Manual Falling and Bucking* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Cable Yarding* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Helicopter yarding | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Road & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Road Maintenance** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Loading, Hauling*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Oh Windy Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-19-24

| Sale Area | Activity | Jan | | Feb | | Mar | | Apr | | May | | Jun | | Jul | | Aug | | Sep | | Oct | | Nov | | Dec | | | | |
|---|--|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|--|--|--|
| | | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | 1 | 15 | | | |
| <u>Helicopter Yard Unit with Spotted Owl Restrictions:</u> 11-2G | Manual Falling and Bucking* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Helicopter Yarding Farther than ¼ mile of Spotted Owl Site as shown on Exhibit A | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Helicopter Yarding Within ¼ mile of Spotted Owl Site as shown on Exhibit A | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Landing Construction & Rehabilitation Activities Involving Heavy Equipment | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Road Maintenance** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Loading, Hauling*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Helicopter, Cable & Ground Based Yard Unit with Temp. Route Construction and Reconstruction:</u> 23-4 | Manual Falling and Bucking* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Helicopter yarding | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mechanical Ground Based Harvesting & Yarding, Road & Temp. Route & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Road Maintenance** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Loading, Hauling*** | | | | | | | | | | | | | | | | | | | | | | | | | | | |



1 inch = 1,000 feet

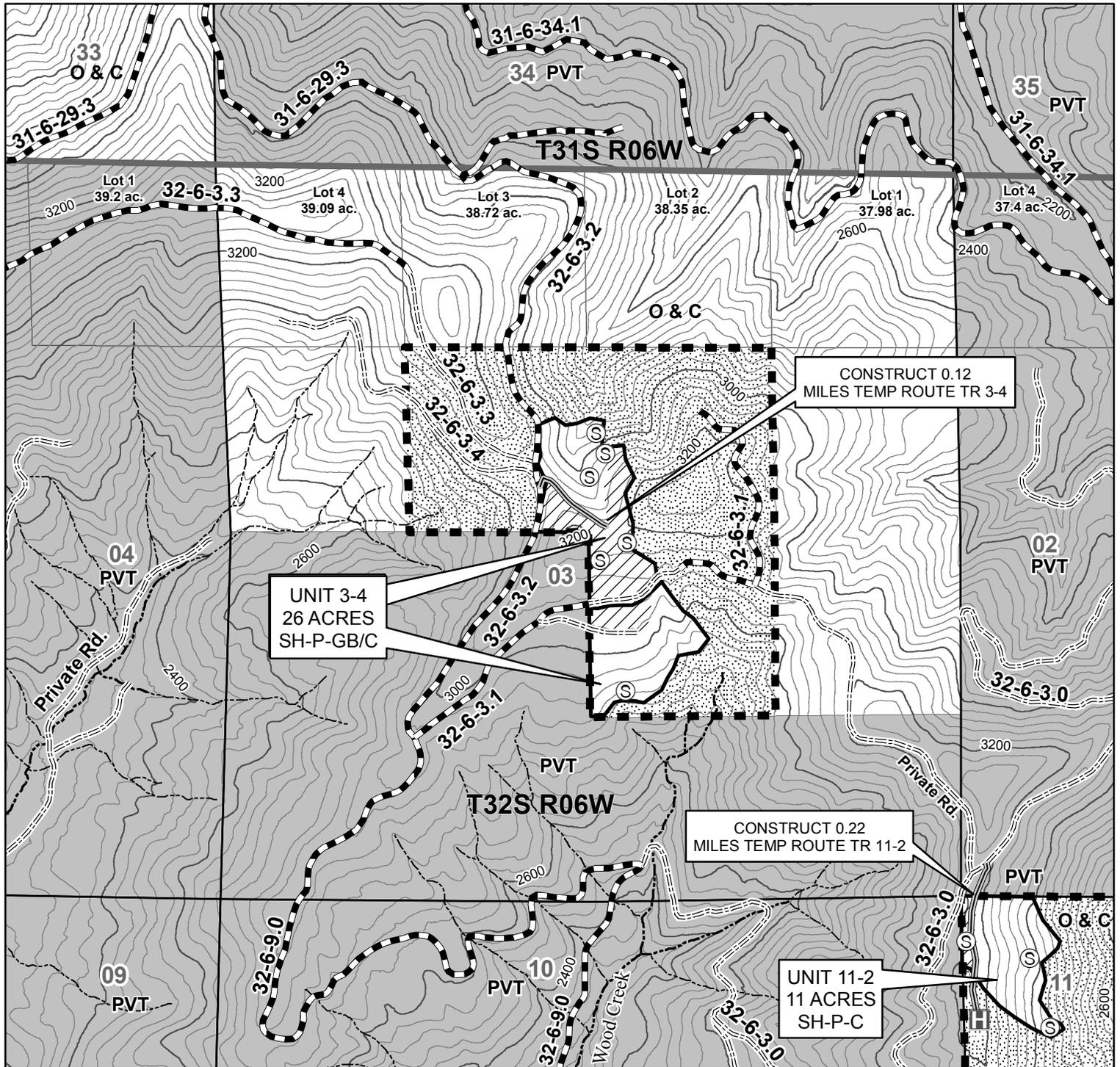
40 FOOT CONTOUR INTERVAL

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

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

Map created by SDT
 6/13/2019





1 inch = 1,000 feet

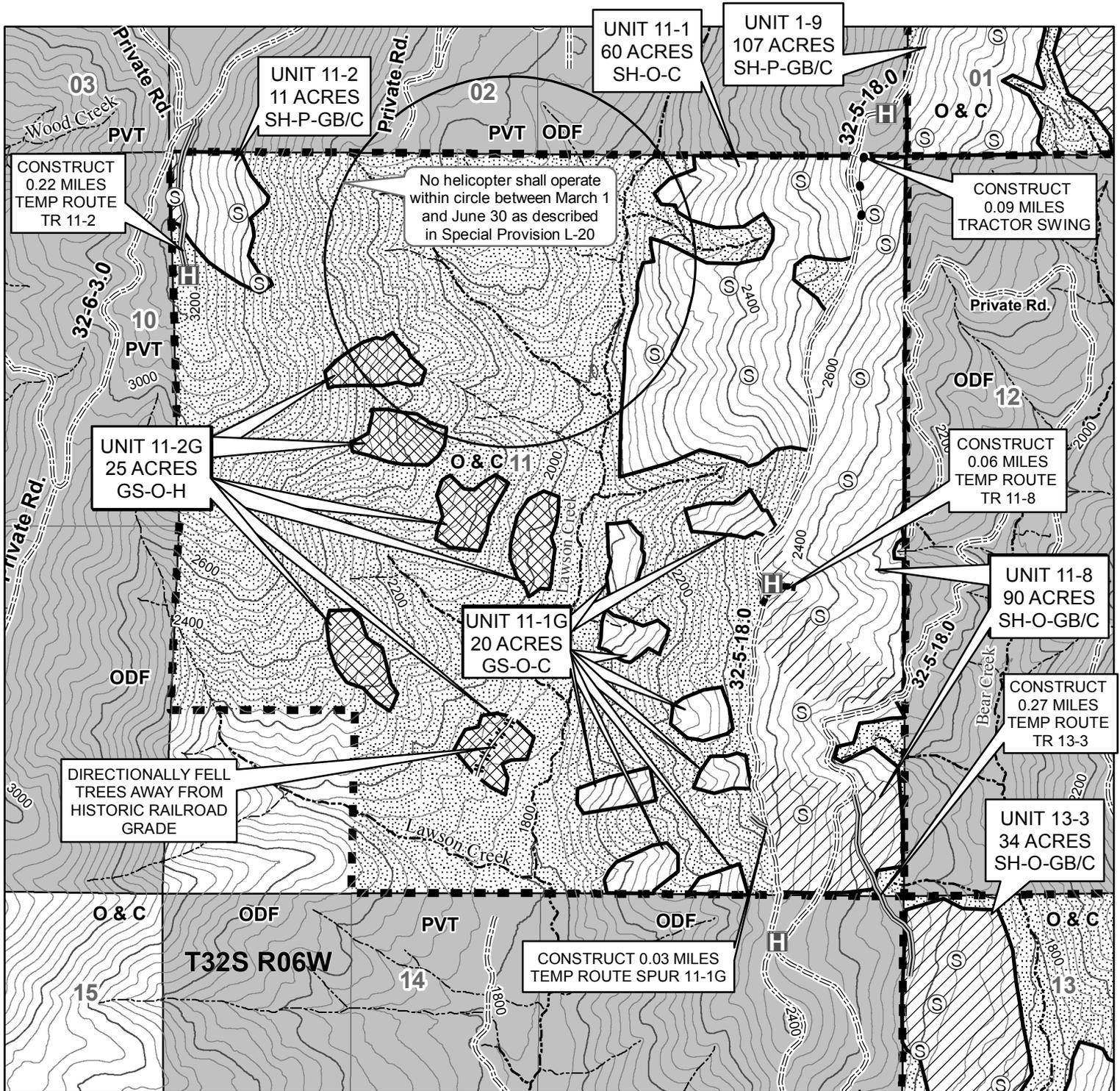
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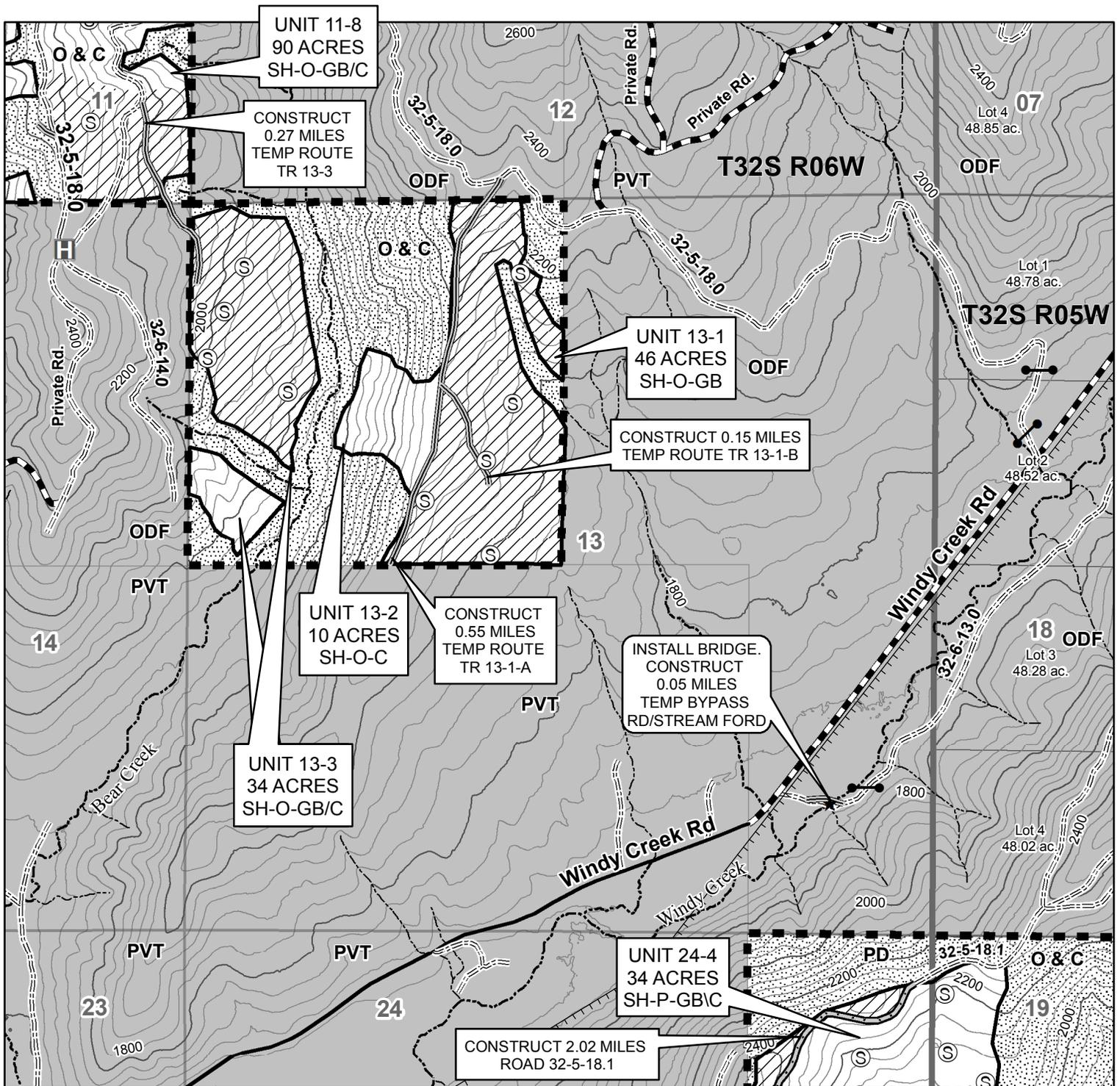
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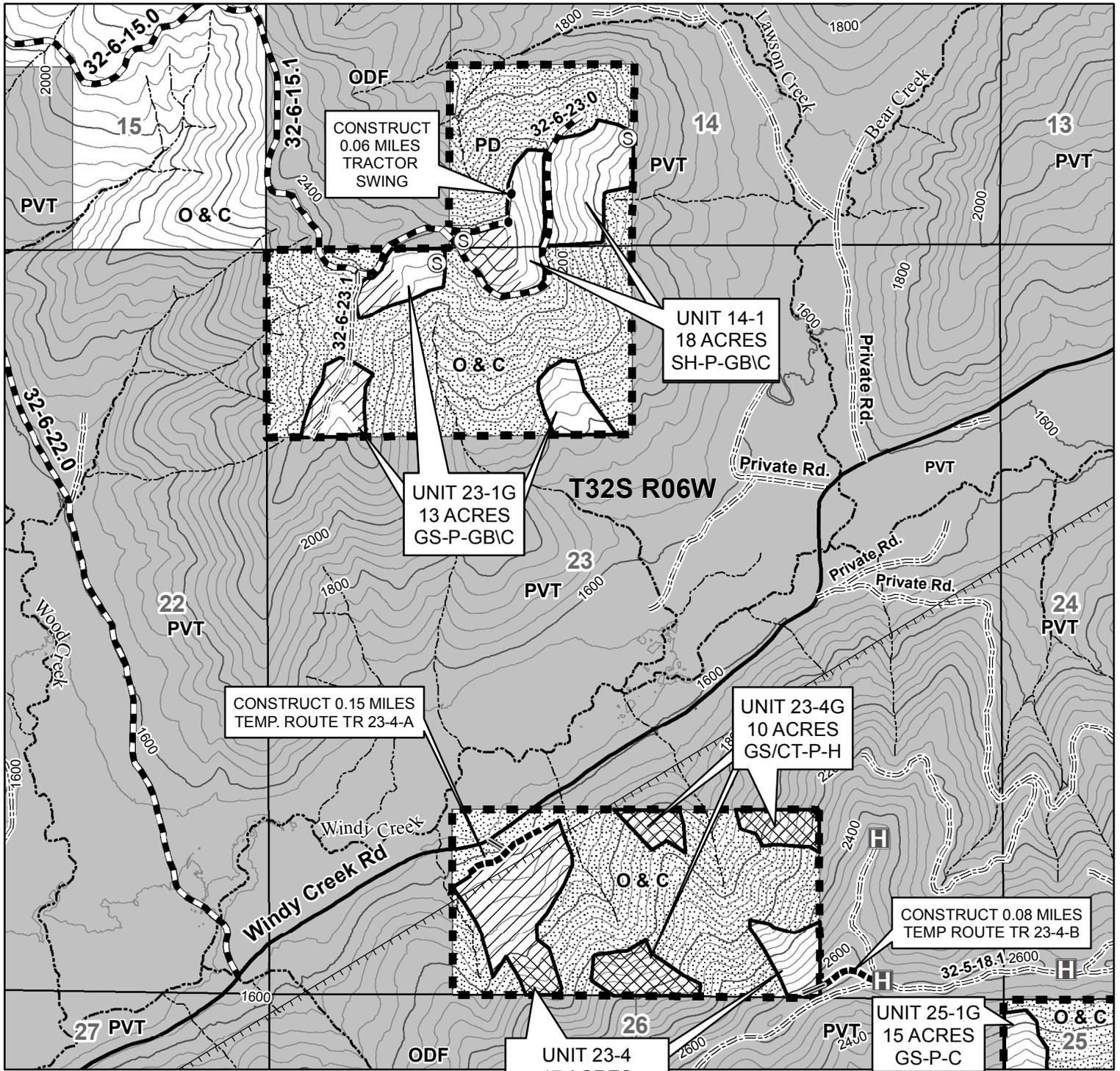
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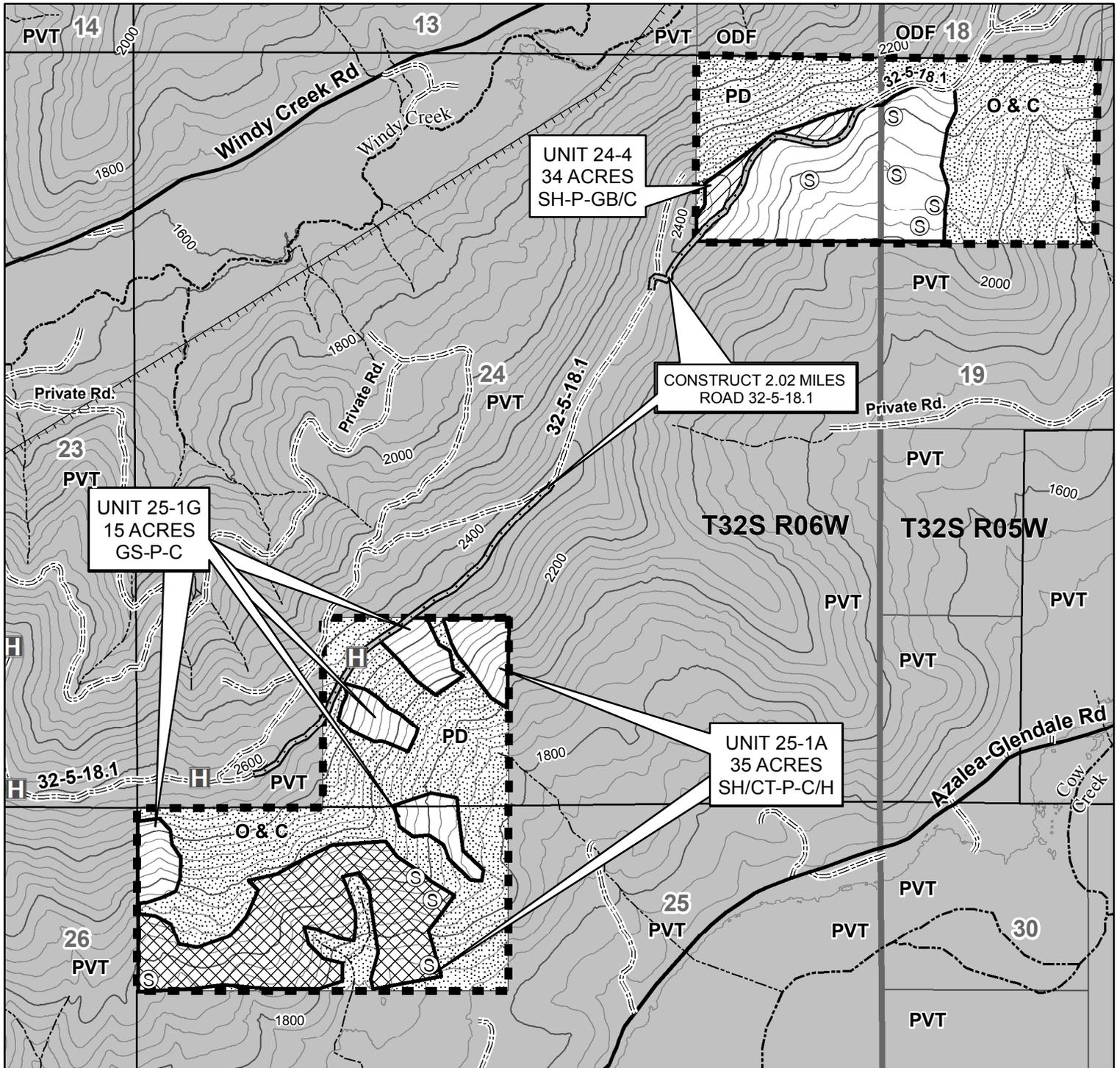
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1 inch = 1,000 feet

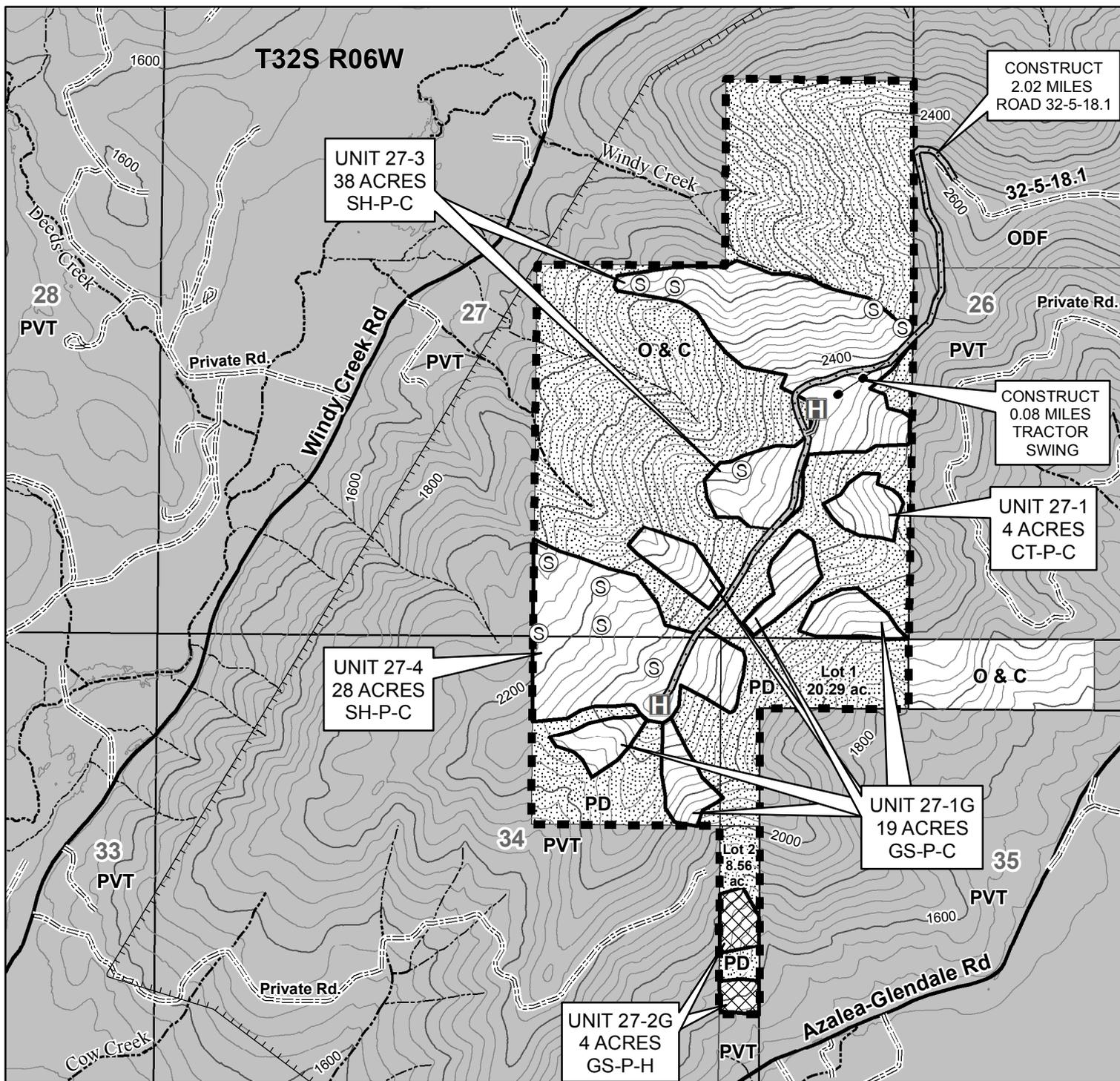
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 6/13/2019





1 inch = 1,000 feet

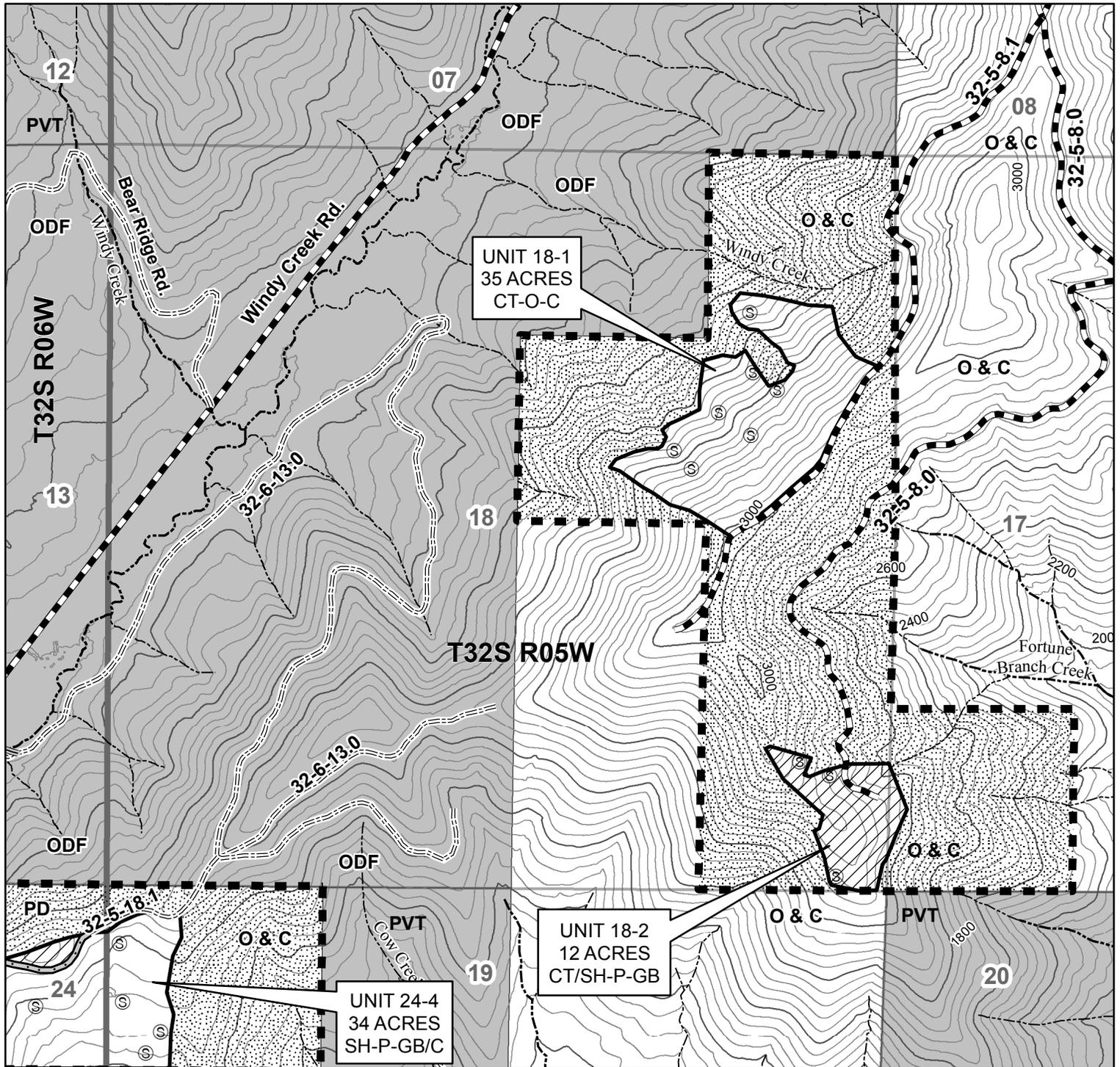
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 6/13/2019





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 7/20/2019



LEGEND

| UNIT | UNIT ACRES | PRESCRIPTION-PAINT COLOR-LOGGING SYSTEM |
|---------------|------------|---|
| 1-5 | 33 | SH-O-GB/C |
| 1-6 | 86 | SH-O-GB/C |
| 1-8 | 94 | SH-P-GB/C |
| 1-9 | 107 | SH-P-GB/C |
| 3-4 | 26 | SH-P-GB/C |
| 11-1 | 60 | SH-O-C |
| 11-1G | 20 | GS-O-C |
| 11-2 | 11 | SH-P-GB/C |
| 11-2G | 25 | GS-O-H |
| 11-8 | 90 | SH-O-GB/C |
| 13-1 | 46 | SH-O-GB |
| 13-2 | 10 | SH-O-C |
| 13-3 | 34 | SH-O-GB/C |
| 14-1 | 18 | SH-P-GB/C |
| 18-1 | 35 | CT-O-C |
| 18-2 | 12 | CT/SH-P-GB |
| 23-1G | 13 | GS-P-GB/C |
| 23-4 | 17 | GS/CT-P-GB/C/H |
| 23-4G | 10 | GS/CT-P-H |
| 24-4 | 34 | SH-P-GB/C |
| 25-1G | 15 | GS-P-C |
| 25-1A | 35 | SH/CT-P-C/H |
| 27-1 | 4 | CT-P-C |
| 27-1G | 19 | GS-P-C |
| 27-2G | 4 | GS-P-H |
| 27-3 | 38 | SH-P-C |
| 27-4 | 28 | SH-P-C |
| 32-5-18.1 ROW | 2 | CC-O-GB |
| TOTAL | 926 | |

* BOUNDARIES OF HARVEST UNITS ARE POSTED AND PAINTED IN ORANGE

SH = SELECTION HARVEST
 CT = COMMERCIAL THIN
 GS = GROUP SELECTION HARVEST
 CC = CLEAR CUT ROAD RIGHT-OF-WAY
 GB = GROUND BASE YARD
 C = CABLE YARD
 H = HELICOPTER YARD
 P = PINK MARK LEAVE TREE
 O = ORANGE MARK LEAVE TREE



1 inch = 1,000 feet

40 FOOT CONTOUR INTERVAL

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

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

Map created by SDT
 6/13/2019



Legend

- ▲ Mountain Peaks
- Gate
- Powerline
- Pipeline
- Potential Ground-based Equipment Route into Unit 1-9
- Historic Railroad Grade in Unit 11-2G
- Area of TPCC Soil Moisture Restricted in Unit 1-5
- ★ Bridge Installation Location
- ⊙ Skips
- ⊠ Potential Helicopter Landing
- Intermittent Stream
- Perennial Stream
- Intermediate 40-ft contour
- Index 200-ft contour
- Roads**
- Surface Type**
- Natural
- Paved Road
- Rocked Road
- Road Construction**
- Construction Type**
- Road Construction
- Temp Route Construction
- Temp Route Reconstruction
- Tractor Swing
- Oh Windy Timber Sale Unit**
- Logging System**
- Ground Based Harvest & Yard
- Cable Yard
- Helicopter Yard
- Contract Area Boundary
- Reserve Area
- O & C Bureau of Land Management O & C Lands
- PD Bureau of Land Management Public Domain Lands
- PVT Private
- ODF State
- Township and Range
- Section
- Lots

SUMMARY

| | | |
|----------------|---|---------------|
| CT-P-C | COMMERCIAL THIN - PINK MARK LEAVE TREE - CABLE YARD (UNIT 27-1) | 4 ACRES |
| CT-O-C | COMMERCIAL THIN - ORANGE MARK LEAVE TREE - CABLE YARD (UNITS 18-1) | 35 ACRES |
| CT/SH-P-GB | COMMERCIAL THIN & SELECTION HARVEST - PINK MARK LEAVE TREE - GROUND BASE YARD (UNIT 18-2) | 12 ACRES |
| SH-O-GB/C | SELECTION HARVEST - ORANGE MARK LEAVE TREE - GROUND BASE AND CABLE YARD (UNITS 1-5, 1-6, 11-8, 13-1) | 255 ACRES |
| SH-O-C | SELECTION HARVEST - ORANGE MARK LEAVE TREE - CABLE YARD (UNITS 11-1, 13-2, 13-3) | 104 ACRES |
| SH-P-GB/C | SELECTION HARVEST - PINK MARK LEAVE TREE - GROUND BASE AND CABLE YARD (UNITS 1-8, 1-9, 3-4, 14-1, 24-4) | 279 ACRES |
| SH-P-C | SELECTION HARVEST - PINK MARK LEAVE TREE - CABLE YARD (UNITS 11-2, 27-3, 27-4) | 77 ACRES |
| SH/CT-P-C/H | SELECTION HARVEST & COMMERCIAL THIN - PINK MARK LEAVE TREE - CABLE & HELICOPTER YARD (UNIT 25-1A) | 35 ACRES |
| GS-O-C | GROUP SELECTION HARVEST - ORANGE MARK LEAVE TREE - CABLE YARD (UNIT 11-1G) | 20 ACRES |
| GS-O-H | GROUP SELECTION HARVEST - ORANGE MARK LEAVE TREE - HELICOPTER YARD (UNIT 11-2G) | 25 ACRES |
| GS-P-GB/C | GROUP SELECTION HARVEST - PINK MARK LEAVE TREE - GROUND BASE & CABLE YARD (UNIT 23-1G) | 13 ACRES |
| GS-P-C | GROUP SELECTION HARVEST - PINK MARK LEAVE TREE - CABLE YARD (UNITS 25-1G, 27-1G) | 34 ACRES |
| GS-P-H | GROUP SELECTION HARVEST - PINK MARK LEAVE TREE - HELICOPTER YARD (UNIT 27-2G) | 4 ACRES |
| GS/CT-P-GB/C/H | GROUP SELECTION HARVEST & COMMERCIAL THIN - PINK MARK LEAVE TREE - GROUND BASE, CABLE & HELICOPTER YARD (UNIT 23-4) | 17 ACRES |
| GS/CT-P-H | GROUP SELECTION HARVEST & COMMERCIAL THIN - PINK MARK LEAVE TREE - HELICOPTER YARD (UNIT 23-4G) | 10 ACRES |
| CC-O-GB | CLEAR CUT ROAD RIGHT OF WAY - ORANGE MARK LEAVE TREE - GROUND BASE YARD (UNIT 32-5-18.1 ROW) | 2 ACRES |
| | TOTAL TIMBER SALE UNIT AREA | 926 ACRES |
| | RESERVE AREA | 1475.27 ACRES |
| | TOTAL CONTRACT AREA | 2401.27 ACRES |

0 750 1,500 3,000 Feet

1 inch = 1,000 feet

40 FOOT CONTOUR INTERVAL

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Map created by SDT
 6/13/2019





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

Timber Appraisal

| | |
|---------------------------------------|--|
| Sale Name: Oh Windy | Sale Date: Thursday, September 26, 2019 |
| BLM District: Medford DO | Unit of Measure: 16' MBF |
| Contract #: ORM07-TS-2019.0024 | Contract Term: 36 months |
| Sale Type: Advertised | Contract Mechanism: 5450-4 Sale of Timber - Scale Sale |

Content

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

Prepared By: Caulfield, David J - 9/5/2019

Approved By: Caulfield, David J - 9/5/2019

Legal Description of Contract Area

| Land Status | County | Township | Range | Section | Subdivision | Meridian |
|-------------|---------|----------|-------|---------|--|------------|
| O&C | Douglas | 32S | 5W | 19 | Unnumbered lot in NW1/4NW1/4 | Willamette |
| O&C | Douglas | 32S | 6W | 1 | Lots 1,2,3,4, S1/2NE1/4, S1/2NW1/4, SW1/4, SE1/4 | Willamette |
| O&C | Douglas | 32S | 6W | 3 | SW1/4NE1/4, SE1/4NW1/4, NW1/4SE1/4 | Willamette |
| O&C | Douglas | 32S | 6W | 11 | NE1/4, NW1/4, N1/2SW1/4, SE1/4SW1/4, SE1/4 | Willamette |
| O&C | Douglas | 32S | 6W | 13 | NW1/4 | Willamette |
| PD | Douglas | 32S | 6W | 14 | SE1/4SW1/4 | Willamette |
| O&C | Douglas | 32S | 6W | 23 | N1/2NW1/4, SE1/4SW1/4, SW1/4SE1/4 | Willamette |
| PD | Douglas | 32S | 6W | 24 | NE1/4NE1/4, SE1/4SW1/4 | Willamette |
| O&C | Douglas | 32S | 6W | 25 | N1/2NW1/4 | Willamette |
| O&C | Douglas | 32S | 6W | 27 | SE1/4NE1/4, SE1/4 | Willamette |
| PD | Douglas | 32S | 6W | 34 | Lots 1,2, NW1/4NE1/4 | Willamette |
| O&C | Douglas | 32S | 5W | 17 | SW1/4SW1/4 | Willamette |
| O&C | Douglas | 32S | 5W | 18 | NE1/4NE1/4, S1/2NE1/4, E1/2SE1/4 | Willamette |

Species Totals

| Species | Net | Gross Merch | Gross | # of Merch Logs | # of Cull Logs | # of Trees |
|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|---------------|
| Douglas Fir | 12,635.0 | 13,842.0 | 14,076.0 | 208,147 | 3,550 | 54,831 |
| Incense-cedar | 628.0 | 724.0 | 727.0 | 14,962 | 165 | 4,997 |
| White Fir | 260.0 | 276.0 | 298.0 | 4,760 | 576 | 1,171 |
| Ponderosa Pine | 50.0 | 54.0 | 54.0 | 1,015 | 0 | 460 |
| Western Hemlock | 48.0 | 51.0 | 51.0 | 898 | 0 | 210 |
| Sugar Pine | 23.0 | 26.0 | 38.0 | 239 | 25 | 71 |
| Totals | 13,644.0 | 14,973.0 | 15,244.0 | 230,021 | 4,316 | 61,740 |

Cutting Area Acres

| Regeneration Harvest Acres | Partial Cut Acres | Right of Way Acres | Total Acres | Net Volume per Acre |
|----------------------------|-------------------|--------------------|-------------|---------------------|
| 106.0 | 818.0 | 2.0 | 926.0 | 14.7 |

Comments:

New RMP sale. Scale sale. Timber cut on milepost 97 fire contingency dozer lines in units 1-6 and 1-8 may be removed before sale.

Logging Costs

| | |
|------------------------------------|-----------------------|
| Stump to Truck | \$3,021,068.20 |
| Transportation | \$462,515.97 |
| Road Construction | \$1,237,693.03 |
| Maintenance/Rockwear | \$42,530.47 |
| Road Use | \$0.00 |
| Other Allowances | \$678,146.34 |
| Total: | \$5,441,954.01 |
| Total Logging Cost per MBF: | \$398.85 |

Utilization Centers

| <u>Location</u> | <u>Distance</u> | <u>% of Net Volume</u> |
|-----------------|-----------------|------------------------|
| Glendale | 7.7 miles | 100 % |

Profit & Risk

| | |
|--------------------------------|-------------|
| Profit | 9 % |
| Risk | 3 % |
| Total Profit & Risk | 12 % |

Tract Features

| | |
|------------------------------------|--------------|
| Quadratic Mean DBH | 15.5 in |
| Average GM Log | 64 bf |
| Average Volume per Acre | 14.7 mbf |
| Recovery | 89 % |
| <u>Net MBF volume:</u> | |
| Green | 13,644.0 mbf |
| Salvage | 0 mbf |
| Export | 0 mbf |
| <u>Ground Base Logging:</u> | |
| Percent of Sale Volume | 21 % |
| Average Yarding Slope | 0 % |
| Average Yarding Distance | 0 ft |
| <u>Cable Logging:</u> | |
| Percent of Sale Volume | 68 % |
| Average Yarding Slope | 0 % |
| Average Yarding Distance | 0 ft |
| <u>Aerial Logging:</u> | |
| Percent of Sale Volume | 11 % |
| Average Yarding Slope | 0 % |
| Average Yarding Distance | 0 ft |

Cruise

| | |
|-------------------------|-------------------|
| Cruise Completed | July 2019 |
| Cruised By | Caulfield, Cannon |
| Cruise Method | |

Oh Windy timber sale units were cruised using the PCMTRE method. The strata was based on land use allocation and silvicultural prescription. Strata 1 primarily Late Successional Reserve (LSR) land use allocation contained 330 acres in which 331 plots were cruised using a 40 BAF and a 1 in 5 sampling frequency. Strata 2 primarily Harvest Land Base (HLB) land use allocation contained 441 acres in which 416 plots were cruised using a 40 BAF and a 1 in 5 sampling frequency. Strata 3 primarily Harvest Land Base (HLB) land use allocation/gap prescription contained 106 acres in which 99 plots were cruised using a 40 BAF and a 1 in 10 sampling frequency. Units 18-1 and 18-2 (originally Blown Fortune units) contained 47 acres in which 56 plots were cruised using a 40 BAF and a 1 in 5 sampling frequency. The walk through method was used on all edge plots. Road right of way units were cruised using 3P for Douglas fir and BLM100% for all other species.

Stumpage Computation

| Species | # of Trees | Net Volume | Pond Value | (-) Profit & Risk | (-) Logging Costs | (+) Marginal Log Value | Appraised Price/MBF | Appraised Value |
|-----------------|---------------|-----------------|------------|-------------------|-------------------|------------------------|---------------------|---------------------|
| Douglas Fir | 54,831 | 12,635.0 | \$512.88 | \$61.55 | \$398.85 | \$0.00 | \$52.50 | \$663,337.50 |
| Incense-cedar | 4,997 | 628.0 | \$530.60 | \$63.67 | \$398.85 | \$0.00 | \$68.10 | \$42,766.80 |
| White Fir | 1,171 | 260.0 | \$424.76 | \$50.97 | \$398.85 | \$0.00 | \$42.50 * | \$11,050.00 |
| Ponderosa Pine | 460 | 50.0 | \$376.38 | \$45.17 | \$398.85 | \$0.00 | \$37.70 * | \$1,885.00 |
| Western Hemlock | 210 | 48.0 | \$367.86 | \$44.14 | \$398.85 | \$0.00 | \$36.80 * | \$1,766.40 |
| Sugar Pine | 71 | 23.0 | \$339.25 | \$40.71 | \$398.85 | \$0.00 | \$34.00 * | \$782.00 |
| Totals | 61,740 | 13,644.0 | | | | | | \$721,587.70 |

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

Percent of Volume By Log Grade

| Species | No. 1 & 2 Peeler | No. 3 Peeler | Special Mill | No. 2 Sawmill | No. 3 Sawmill | No. 4 Sawmill | Camp Run |
|-------------|------------------|--------------|--------------|---------------|---------------|---------------|----------|
| Douglas Fir | | | 1.0 % | 55.0 % | 40.0 % | 4.0 % | |

Comments: Reduce Douglas fir stumpage by \$1.60/mbf or \$20216.

Reduce Incense cedar stumpage by \$19.00/mbf or \$11,932.

Total stumpage deduction \$32,148 to pay for deficit species White fir, Western Hemlock, and Pines

| Species | No. 1 Sawmill | No. 2 Sawmill | No. 3 Sawmill | No. 4 Sawmill | No. 5 Sawmill | No. 6 Sawmill | Camp Run |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------|
| Incense-cedar | | | | 36.0 % | 56.0 % | 8.0 % | |

| Species | Peeler | No. 1 Sawmill | Special Mill | No. 2 Sawmill | No. 3 Sawmill | No. 4 Sawmill | Camp Run |
|-----------|--------|---------------|--------------|---------------|---------------|---------------|----------|
| White Fir | | | | 46.0 % | 51.0 % | 3.0 % | |

| Species | No. 1 Sawmill | No. 2 Sawmill | No. 3 Sawmill | No. 4 Sawmill | No. 5 Sawmill | No. 6 Sawmill | Camp Run |
|----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------|
| Ponderosa Pine | | | | 47.0 % | 35.0 % | 18.0 % | |

| Species | Peeler | No. 1 Sawmill | Special Mill | No. 2 Sawmill | No. 3 Sawmill | No. 4 Sawmill | Camp Run |
|-----------------|--------|---------------|--------------|---------------|---------------|---------------|----------|
| Western Hemlock | | | | 52.0 % | 45.0 % | 3.0 % | |

| Species | No. 1 Sawmill | No. 2 Sawmill | No. 3 Sawmill | No. 4 Sawmill | No. 5 Sawmill | No. 6 Sawmill | Camp Run |
|------------|---------------|---------------|---------------|---------------|---------------|---------------|----------|
| Sugar Pine | | | | 81.0 % | 19.0 % | | |

Oh Windy**Unit Summary****ORM07-TS-2019.0024****Unit: 1-5**

| Species | Net | Gross Merch | Gross | # of Trees |
|-----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 349.0 | 384.0 | 388.0 | 1,828 |
| White Fir | 12.0 | 12.0 | 13.0 | 65 |
| Incense-cedar | 12.0 | 14.0 | 14.0 | 168 |
| Western Hemlock | 5.0 | 5.0 | 5.0 | 21 |
| Totals: | 378.0 | 415.0 | 420.0 | 2,082 |

Net Volume/Acre: 11.5 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 33.0 |
| Right of Way | 0.0 |
| Total Acres: | 33.0 |

Unit: 1-6

| Species | Net | Gross Merch | Gross | # of Trees |
|-----------------|--------------|----------------|----------------|--------------|
| Douglas Fir | 910.0 | 1,001.0 | 1,011.0 | 4,765 |
| Incense-cedar | 33.0 | 37.0 | 37.0 | 437 |
| White Fir | 30.0 | 32.0 | 34.0 | 169 |
| Western Hemlock | 13.0 | 13.0 | 13.0 | 55 |
| Sugar Pine | 1.0 | 1.0 | 2.0 | 2 |
| Totals: | 987.0 | 1,084.0 | 1,097.0 | 5,428 |

Net Volume/Acre: 11.5 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 86.0 |
| Right of Way | 0.0 |
| Total Acres: | 86.0 |

Unit: 1-8

| Species | Net | Gross Merch | Gross | # of Trees |
|-----------------|----------------|----------------|----------------|--------------|
| Douglas Fir | 994.0 | 1,094.0 | 1,105.0 | 5,208 |
| Incense-cedar | 36.0 | 40.0 | 40.0 | 478 |
| White Fir | 33.0 | 35.0 | 37.0 | 185 |
| Western Hemlock | 14.0 | 14.0 | 14.0 | 60 |
| Sugar Pine | 1.0 | 1.0 | 2.0 | 2 |
| Totals: | 1,078.0 | 1,184.0 | 1,198.0 | 5,933 |

Net Volume/Acre: 11.5 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 94.0 |
| Right of Way | 0.0 |
| Total Acres: | 94.0 |

Unit: 1-9

| Species | Net | Gross Merch | Gross | # of Trees |
|-----------------|----------------|----------------|----------------|--------------|
| Douglas Fir | 1,132.0 | 1,245.0 | 1,261.0 | 5,929 |
| Incense-cedar | 40.0 | 46.0 | 47.0 | 543 |
| White Fir | 37.0 | 39.0 | 43.0 | 210 |
| Western Hemlock | 15.0 | 17.0 | 17.0 | 68 |
| Sugar Pine | 2.0 | 2.0 | 4.0 | 3 |
| Totals: | 1,226.0 | 1,349.0 | 1,372.0 | 6,753 |

Net Volume/Acre: 11.5 MBF

| | |
|----------------------|--------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 107.0 |
| Right of Way | 0.0 |
| Total Acres: | 107.0 |

Unit: 3-4

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 315.0 | 346.0 | 353.0 | 1,549 |
| Incense-cedar | 24.0 | 28.0 | 28.0 | 174 |
| White Fir | 7.0 | 7.0 | 8.0 | 27 |
| Ponderosa Pine | 3.0 | 3.0 | 3.0 | 27 |
| Totals: | 349.0 | 384.0 | 392.0 | 1,777 |

Net Volume/Acre: 13.4 MBF

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

Unit: 11-1

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 728.0 | 799.0 | 815.0 | 3,573 |
| Incense-cedar | 56.0 | 64.0 | 64.0 | 401 |
| White Fir | 15.0 | 16.0 | 18.0 | 62 |
| Ponderosa Pine | 8.0 | 9.0 | 9.0 | 68 |
| Totals: | 807.0 | 888.0 | 906.0 | 4,104 |

Net Volume/Acre: 13.5 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 60.0 |
| Right of Way | 0.0 |
| Total Acres: | 60.0 |

Unit: 11-1G

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 541.0 | 589.0 | 600.0 | 1,427 |
| Incense-cedar | 17.0 | 21.0 | 21.0 | 70 |
| White Fir | 6.0 | 6.0 | 6.0 | 13 |
| Sugar Pine | 4.0 | 4.0 | 6.0 | 12 |
| Totals: | 568.0 | 620.0 | 633.0 | 1,522 |

Net Volume/Acre: 28.4 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 20.0 |
| Partial Cut | 0.0 |
| Right of Way | 0.0 |
| Total Acres: | 20.0 |

Unit: 11-2

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|------------|
| Douglas Fir | 133.0 | 146.0 | 149.0 | 655 |
| Incense-cedar | 10.0 | 12.0 | 12.0 | 73 |
| White Fir | 3.0 | 3.0 | 3.0 | 11 |
| Ponderosa Pine | 1.0 | 1.0 | 1.0 | 11 |
| Totals: | 147.0 | 162.0 | 165.0 | 750 |

Net Volume/Acre: 13.4 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 11.0 |
| Right of Way | 0.0 |
| Total Acres: | 11.0 |

Unit: 11-2G

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 677.0 | 736.0 | 750.0 | 1,784 |
| Incense-cedar | 21.0 | 26.0 | 26.0 | 87 |
| White Fir | 7.0 | 8.0 | 8.0 | 16 |
| Sugar Pine | 4.0 | 5.0 | 7.0 | 15 |
| Totals: | 709.0 | 775.0 | 791.0 | 1,902 |

Net Volume/Acre: 28.4 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 25.0 |
| Partial Cut | 0.0 |
| Right of Way | 0.0 |
| Total Acres: | 25.0 |

Unit: 11-8

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|----------------|----------------|----------------|--------------|
| Douglas Fir | 1,091.0 | 1,198.0 | 1,223.0 | 5,360 |
| Incense-cedar | 85.0 | 96.0 | 97.0 | 601 |
| White Fir | 23.0 | 25.0 | 28.0 | 93 |
| Ponderosa Pine | 10.0 | 11.0 | 11.0 | 94 |
| Totals: | 1,209.0 | 1,330.0 | 1,359.0 | 6,148 |

Net Volume/Acre: 13.4 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 90.0 |
| Right of Way | 0.0 |
| Total Acres: | 90.0 |

Unit: 13-1

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 558.0 | 612.0 | 625.0 | 2,740 |
| Incense-cedar | 43.0 | 49.0 | 49.0 | 307 |
| White Fir | 12.0 | 13.0 | 14.0 | 47 |
| Ponderosa Pine | 5.0 | 6.0 | 6.0 | 48 |
| Totals: | 618.0 | 680.0 | 694.0 | 3,142 |

Net Volume/Acre: 13.4 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 46.0 |
| Right of Way | 0.0 |
| Total Acres: | 46.0 |

Unit: 13-2

| Species | Net | Gross Merch | Gross | # of Trees |
|-----------------|--------------|--------------|--------------|------------|
| Douglas Fir | 106.0 | 116.0 | 118.0 | 554 |
| White Fir | 4.0 | 4.0 | 4.0 | 20 |
| Incense-cedar | 4.0 | 4.0 | 4.0 | 51 |
| Western Hemlock | 1.0 | 2.0 | 2.0 | 6 |
| Totals: | 115.0 | 126.0 | 128.0 | 631 |

Net Volume/Acre: 11.5 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 10.0 |
| Right of Way | 0.0 |
| Total Acres: | 10.0 |

Unit: 13-3

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 412.0 | 453.0 | 462.0 | 2,025 |
| Incense-cedar | 32.0 | 36.0 | 36.0 | 227 |
| White Fir | 9.0 | 9.0 | 10.0 | 35 |
| Ponderosa Pine | 4.0 | 4.0 | 4.0 | 35 |
| Totals: | 457.0 | 502.0 | 512.0 | 2,322 |

Net Volume/Acre: 13.4 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 34.0 |
| Right of Way | 0.0 |
| Total Acres: | 34.0 |

Unit: 14-1

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 218.0 | 240.0 | 245.0 | 1,072 |
| Incense-cedar | 17.0 | 19.0 | 19.0 | 120 |
| White Fir | 5.0 | 5.0 | 5.0 | 19 |
| Ponderosa Pine | 2.0 | 2.0 | 2.0 | 19 |
| Totals: | 242.0 | 266.0 | 271.0 | 1,230 |

Net Volume/Acre: 13.4 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 18.0 |
| Right of Way | 0.0 |
| Total Acres: | 18.0 |

Unit: 18-1

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 667.0 | 726.0 | 734.0 | 1,939 |
| Totals: | 667.0 | 726.0 | 734.0 | 1,939 |

Net Volume/Acre: 19.1 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 35.0 |
| Right of Way | 0.0 |
| Total Acres: | 35.0 |

Unit: 18-2

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|------------|
| Douglas Fir | 229.0 | 249.0 | 251.0 | 665 |
| Totals: | 229.0 | 249.0 | 251.0 | 665 |

Net Volume/Acre: 19.1 MBF

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

Unit: 23-1G

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|------------|
| Douglas Fir | 352.0 | 383.0 | 390.0 | 928 |
| Incense-cedar | 11.0 | 14.0 | 14.0 | 45 |
| White Fir | 4.0 | 4.0 | 4.0 | 8 |
| Sugar Pine | 2.0 | 3.0 | 4.0 | 8 |
| Totals: | 369.0 | 404.0 | 412.0 | 989 |

Net Volume/Acre: 28.4 MBF

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

Unit: 23-4

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 206.0 | 226.0 | 231.0 | 1,012 |
| Incense-cedar | 16.0 | 18.0 | 18.0 | 114 |
| White Fir | 4.0 | 5.0 | 5.0 | 18 |
| Ponderosa Pine | 2.0 | 2.0 | 2.0 | 18 |
| Totals: | 228.0 | 251.0 | 256.0 | 1,162 |

Net Volume/Acre: 13.4 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 17.0 |
| Right of Way | 0.0 |
| Total Acres: | 17.0 |

Unit: 23-4G

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|------------|
| Douglas Fir | 271.0 | 294.0 | 300.0 | 714 |
| Incense-cedar | 8.0 | 11.0 | 11.0 | 35 |
| White Fir | 3.0 | 3.0 | 3.0 | 6 |
| Sugar Pine | 2.0 | 2.0 | 3.0 | 6 |
| Totals: | 284.0 | 310.0 | 317.0 | 761 |

Net Volume/Acre: 28.4 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 10.0 |
| Partial Cut | 0.0 |
| Right of Way | 0.0 |
| Total Acres: | 10.0 |

Unit: 24-4

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 412.0 | 453.0 | 462.0 | 2,025 |
| Incense-cedar | 32.0 | 36.0 | 36.0 | 227 |
| White Fir | 9.0 | 9.0 | 10.0 | 35 |
| Ponderosa Pine | 4.0 | 4.0 | 4.0 | 35 |
| Totals: | 457.0 | 502.0 | 512.0 | 2,322 |

Net Volume/Acre: 13.4 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 34.0 |
| Right of Way | 0.0 |
| Total Acres: | 34.0 |

Unit: 25-1A

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 424.0 | 466.0 | 476.0 | 2,085 |
| Incense-cedar | 33.0 | 37.0 | 38.0 | 234 |
| White Fir | 9.0 | 10.0 | 11.0 | 36 |
| Ponderosa Pine | 4.0 | 4.0 | 4.0 | 36 |
| Totals: | 470.0 | 517.0 | 529.0 | 2,391 |

Net Volume/Acre: 13.4 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 35.0 |
| Right of Way | 0.0 |
| Total Acres: | 35.0 |

Unit: 25-1G

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 406.0 | 441.0 | 450.0 | 1,070 |
| Incense-cedar | 12.0 | 16.0 | 16.0 | 52 |
| White Fir | 4.0 | 5.0 | 5.0 | 9 |
| Sugar Pine | 3.0 | 3.0 | 4.0 | 9 |
| Totals: | 425.0 | 465.0 | 475.0 | 1,140 |

Net Volume/Acre: 28.3 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 15.0 |
| Partial Cut | 0.0 |
| Right of Way | 0.0 |
| Total Acres: | 15.0 |

Unit: 27-1

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|-------------|-------------|-------------|------------|
| Douglas Fir | 49.0 | 53.0 | 54.0 | 238 |
| Incense-cedar | 4.0 | 4.0 | 4.0 | 27 |
| White Fir | 1.0 | 1.0 | 1.0 | 4 |
| Totals: | 54.0 | 58.0 | 59.0 | 269 |

Net Volume/Acre: 13.5 MBF

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

Unit: 27-1G

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 514.0 | 559.0 | 570.0 | 1,356 |
| Incense-cedar | 16.0 | 20.0 | 20.0 | 66 |
| White Fir | 5.0 | 6.0 | 6.0 | 12 |
| Sugar Pine | 3.0 | 4.0 | 5.0 | 12 |
| Totals: | 538.0 | 589.0 | 601.0 | 1,446 |

Net Volume/Acre: 28.3 MBF

| | |
|----------------------|-------------|
| Regeneration Harvest | 19.0 |
| Partial Cut | 0.0 |
| Right of Way | 0.0 |
| Total Acres: | 19.0 |

Unit: 27-2G

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|------------|
| Douglas Fir | 108.0 | 118.0 | 120.0 | 285 |
| Incense-cedar | 3.0 | 4.0 | 4.0 | 14 |
| White Fir | 1.0 | 1.0 | 1.0 | 3 |
| Sugar Pine | 1.0 | 1.0 | 1.0 | 2 |
| Totals: | 113.0 | 124.0 | 126.0 | 304 |

Net Volume/Acre: 28.3 MBF

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

Unit: 27-3

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 461.0 | 506.0 | 516.0 | 2,263 |
| Incense-cedar | 36.0 | 41.0 | 41.0 | 254 |
| White Fir | 10.0 | 10.0 | 12.0 | 39 |
| Ponderosa Pine | 4.0 | 5.0 | 5.0 | 40 |
| Totals: | 511.0 | 562.0 | 574.0 | 2,596 |

Net Volume/Acre: 13.4 MBF

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

Unit: 27-4

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|--------------|--------------|--------------|--------------|
| Douglas Fir | 340.0 | 373.0 | 381.0 | 1,668 |
| Incense-cedar | 26.0 | 30.0 | 30.0 | 187 |
| White Fir | 7.0 | 8.0 | 9.0 | 29 |
| Ponderosa Pine | 3.0 | 3.0 | 3.0 | 29 |
| Totals: | 376.0 | 414.0 | 423.0 | 1,913 |

Net Volume/Acre: 13.4 MBF

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

Unit: 32-5-18.1RW

| Species | Net | Gross Merch | Gross | # of Trees |
|----------------|-------------|-------------|-------------|------------|
| Douglas Fir | 32.0 | 36.0 | 36.0 | 114 |
| Incense-cedar | 1.0 | 1.0 | 1.0 | 5 |
| Totals: | 33.0 | 37.0 | 37.0 | 119 |

Net Volume/Acre: 16.5 MBF

| | |
|----------------------|------------|
| Regeneration Harvest | 0.0 |
| Partial Cut | 0.0 |
| Right of Way | 2.0 |
| Total Acres: | 2.0 |

Comments:

Added small fortune units 18-1, 18-2.

| Total Stump To Truck | Net Volume | \$/MBF |
|----------------------|------------|----------|
| \$3,021,068.20 | 13,644.0 | \$221.42 |

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

| Yarding System | Unit of Measure | # of Units of Measure | \$/Unit of Measure | Total Cost | Remarks |
|----------------------|-----------------|-----------------------|--------------------|-----------------------|--|
| Helicopter | GM MBF | 1,697.0 | \$392.53 | \$666,123.41 | |
| Cable Swing | GM MBF | 567.0 | \$225.24 | \$127,711.08 | Part of unit 1-9 |
| Tractor Swing | GM MBF | 557.0 | \$188.22 | \$104,838.54 | Portions of units 1-5, 1-8, 11-8, 14-1, 27-3 |
| Cable: Medium Yarder | GM MBF | 9,556.0 | \$162.91 | \$1,556,767.96 | |
| Track Skidder | GM MBF | 2,596.0 | \$144.88 | \$376,108.48 | |
| Subtotal | | | | \$2,831,549.47 | |

Additional Costs

| Item | Unit of Measure | # of Units of Measure | \$/Unit of Measure | Total Cost | Remarks |
|---------------------|-----------------|-----------------------|--------------------|---------------------|--|
| Deadman Anchor | Each | 69.0 | \$450.00 | \$31,050.00 | |
| Yum Yarding | MBF | 633.0 | \$177.49 | \$112,351.17 | Yum Yard Hardwoods in units 11-1G, 23-1G, 25-1G, and 27-1G |
| Lift Tree | Tree | 31.0 | \$150.00 | \$4,650.00 | Lift trees 30' and higher |
| Directional Falling | MBF | 1,524.0 | \$10.69 | \$16,291.56 | 10% of Gross Volume |
| Subtotal | | | | \$164,342.73 | |

Additional Moves

| Equipment | Unit of Measure | # of Units of Measure | \$/Unit of Measure | Total Cost | Remarks |
|------------------------------|------------------------|------------------------------|---------------------------|--------------------|--|
| Tractor Side | Total | 1.0 | \$14,064.00 | \$14,064.00 | 6 Moves - Yarder, Loader, 2 Tractor, Harvester |
| Cable Side | Total | 1.0 | \$9,504.00 | \$9,504.00 | 6 Moves - Yarder, Loader, Tractor, Delimber |
| Helicopter landing equipment | Total | 1.0 | \$1,608.00 | \$1,608.00 | 1 Move - 2 Loaders, processor |
| Subtotal | | | | \$25,176.00 | |

Comments:

Helicopter moves included in helicopter appraisal (FS logCost program)

| Total | Net Volume | \$/MBF |
|--------------|------------|---------|
| \$462,515.97 | 13,644.0 | \$33.90 |

| Utilization Center | One Way Mileage | Description | Unit of Measure | # of Units | \$/Unit of Measure | Total Cost | % of Sale Volume |
|--------------------|-----------------|-------------|-----------------|------------|--------------------|--------------|------------------|
| Glendale | 7.7 | All Species | GM MBF | 14,973.0 | \$30.89 | \$462,515.97 | 100 % |

Engineering Allowances

| Total | Net Volume | \$/MBF |
|----------------|------------|---------|
| \$1,280,223.50 | 13,644.0 | \$93.83 |

| Cost Item | Total Cost |
|----------------------------|----------------|
| Road Construction: | \$1,237,693.03 |
| Road Maintenance/Rockwear: | \$42,530.47 |
| Road Use Fees: | \$0.00 |

| Total | Net Volume | \$/MBF |
|--------------|------------|---------|
| \$678,146.34 | 13,644.0 | \$49.70 |

Environmental Protection

| Cost item | Total Cost |
|-------------------|--------------------|
| Equipment Washing | \$1,101.20 |
| Snag Creation | \$13,274.06 |
| Barricades | \$600.00 |
| Waterbar Skids | \$2,400.00 |
| Landing Clean Up | \$11,000.00 |
| Seed and Mulch | \$760.00 |
| Ripping | \$3,368.00 |
| Subtotal | \$32,503.26 |

Logging

| Cost item | Total Cost |
|----------------------|--------------------|
| Skid Location | \$550.60 |
| Landing Construction | \$11,000.00 |
| Subtotal | \$11,550.60 |

Miscellaneous

| Cost item | Total Cost |
|--------------------------------|-----------------|
| Temporary Spur Construction | \$150.00 |
| Temporary Spur Decommissioning | \$150.00 |
| Subtotal | \$300.00 |

Road Construction, Maintenance, Use, & Decommissioning

| Cost item | Total Cost |
|-----------------------------|-----------------|
| Stream and Culvert Cleaning | \$440.48 |
| Subtotal | \$440.48 |

Slash Disposal & Site Prep

| Cost item | Total Cost |
|------------------------------|---------------------|
| Fire Line Constuction | \$37,300.00 |
| Machine Pile Burn and Mop-up | \$5,936.00 |
| Handpile Burn and Mop-up | \$24,108.00 |
| Lop and Scatter | \$5,880.00 |
| Cover and Burn Landing Decks | \$3,528.00 |
| Underburning | \$118,350.00 |
| Selective Slashing | \$172,200.00 |
| Handpile and Burn | \$186,550.00 |
| Machine Pile and Cover | \$79,500.00 |
| Subtotal | \$633,352.00 |

Comments:

Snag creation equals girdling trees.

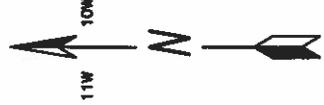
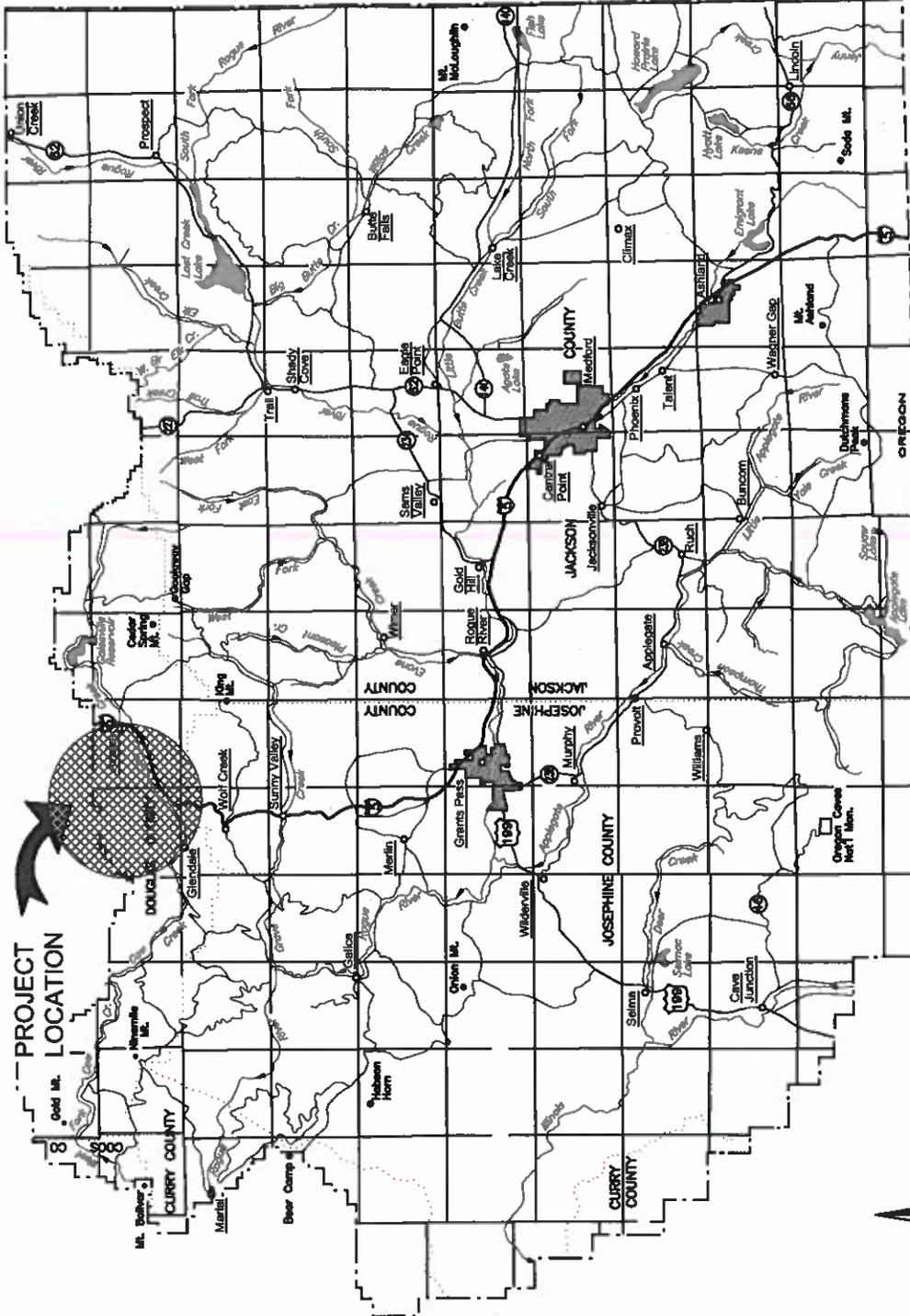
14 Barricades.

Temp spur construction unit 11-1G all other spurs in engineering package.

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

EXHIBIT C1

OH WINDY TIMBER SALE
 TRACT NO. ORM07-TS-19-24



ALWAYS
THINK
 SAFETY

| EXHIBIT NO. | DESCRIPTION |
|-------------|---|
| C1 | TITLE SHEET |
| C2 | ROAD RENOVATION MAPS |
| C3 | ESTIMATE OF QUANTITIES - CONSTRUCTION |
| C4 | SPECIFICATION SHEETS |
| C5 | ROAD RENOVATION WORKLIST |
| C6 | TYPICAL ROAD RENOVATION DETAILS |
| C7 | ROADSIDE BRUSHING DETAILS |
| C8 | CULVERT LIST |
| C9 | CULVERT INSTALLATION DETAILS |
| C10 | CULVERT BAND DETAIL |
| C11 | DRAINAGE & EROSION CONTROL INSTALLATION |
| C12 | PLAN AND PROFILE SHEETS |
| C13 | MEGA GATE DETAILS & INSTALLATION |
| C14 | SPECIAL PROVISIONS |
| C15 | ROAD SPECIFICATIONS |
| D1 | ROAD MAINTENANCE SPECIFICATIONS |
| D2 | ROAD MAINTENANCE MAPS |
| D3 | DECOMMISSIONING MAPS |
| D4 | DECOMMISSIONING WORK LIST |
| D5 | ESTIMATE OF QUANTITIES - MAINTENANCE |
| D6 | DECOMPACTION & CULVERT REMOVAL DETAILS |
| D7 | BARRIAGE & WATER BAR DETAILS |
| D8 | ROAD CAMOUFLAGE DETAIL |
| REV NO. | DESCRIPTION |
| | DATE |
| | APPROV. |

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

OH WINDY
 TIMBER SALE
 TITLE SHEET

DESIGNED: *[Signature]*
 REVIEWED: *[Signature]*
 APPROVED: *[Signature]*

DRAFTED BY: BLM
 DATE: AUG 2019
 SCALE: 1" = 12 MI
 SHEET: 1 OF 1
 DRAWING NO.: OR-11-9113.4-1

EXHIBIT C2-1

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Renovation Responsibility - Haul Roads

-  Purchaser Renovation
-  BLM Maintenance
-  Third Party Maintenance

Road Construction

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

Road Closures

-  Gate
-  Barricade (trees/dirt)

| Rev No. | Description | Date | Approval |
|---|-------------|----------------|----------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE ROAD RENOVATION MAP OVERALL SALE AREA | | | |
| DRAFTED BY: ELF | | SHEET: 1 OF 17 | |
| DATE: AUG 2019 | | | |

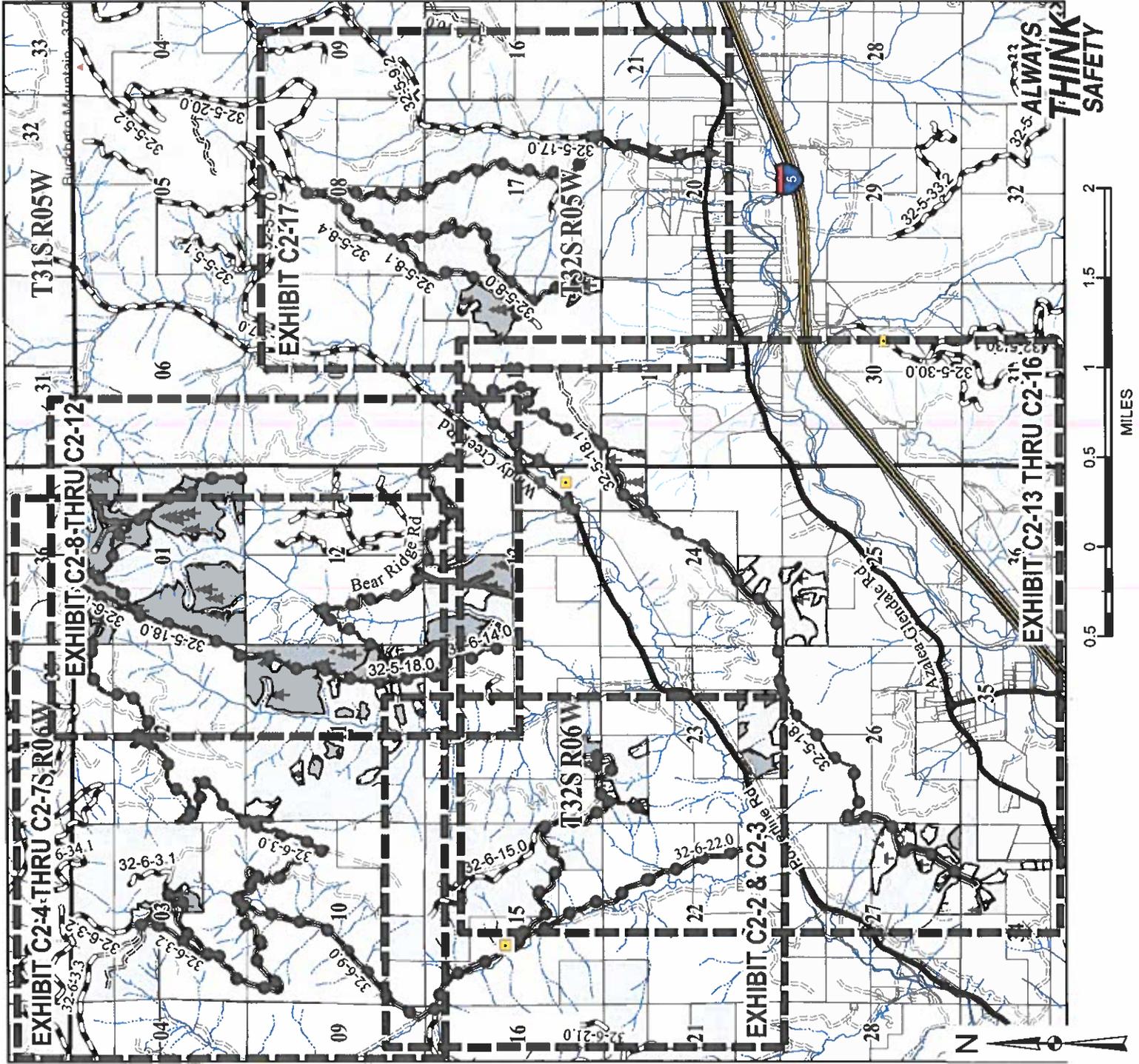


EXHIBIT C2-2

LEGEND

- Land Ownership**
- BLM
 - Non-BLM
 - Timber Units
- Roads - Surface Type**
- Bituminous
 - Aggregate
 - Natural
 - Unknown

Renovation Responsibility - Haul Roads

- Purchaser Renovation
- BLM Maintenance
- Third Party Maintenance

Road Construction

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

Road Closures

- Gate
- Barricade (trees/dirt)

| Rev No. | Description | Date | Approval |
|---------|-------------|------|----------|
| | | | |
| | | | |

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

OH WINDY TIMBER SALE

ROAD RENOVATION MAP

WOOD CREEK AREA

| | |
|-----------------|----------------|
| DRAFTED BY: ELF | SHEET: 2 OF 17 |
|-----------------|----------------|

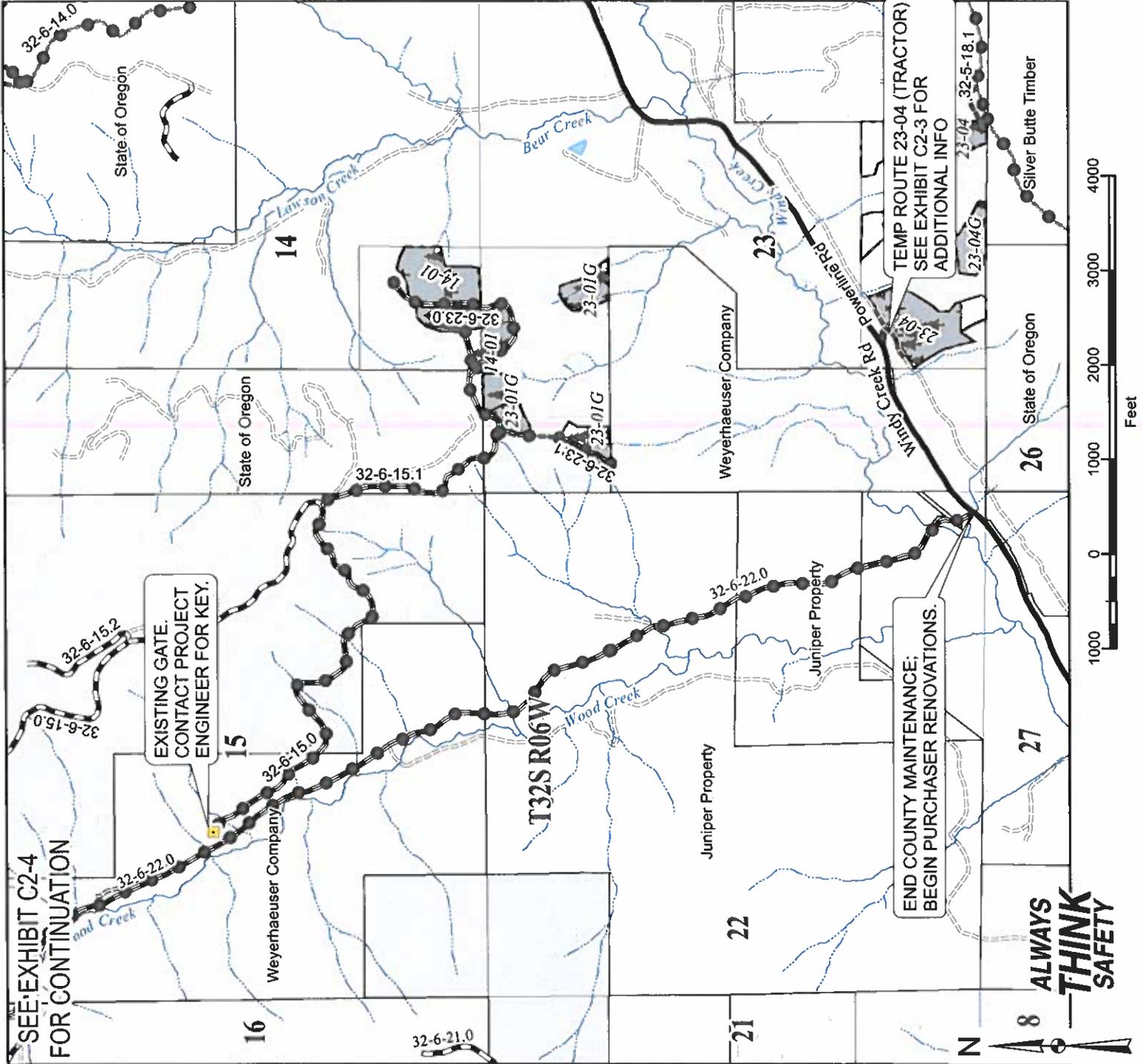


EXHIBIT C2-3

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Renovation Responsibility - Haul Roads

-  Purchaser Renovation
-  BLM Maintenance
-  Third Party Maintenance

Road Construction

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

Road Closures

-  Gate
-  Barricade (trees/dirt)

| Rev No. | Description | Date | Approval |
|---|-------------|------|----------------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE | | | |
| ROAD RENOVATION MAP | | | |
| WOOD CREEK AREA | | | |
| DRAFTED BY: ELF | | | SHEET: 3 OF 17 |
| DATE: AUG 2019 | | | |

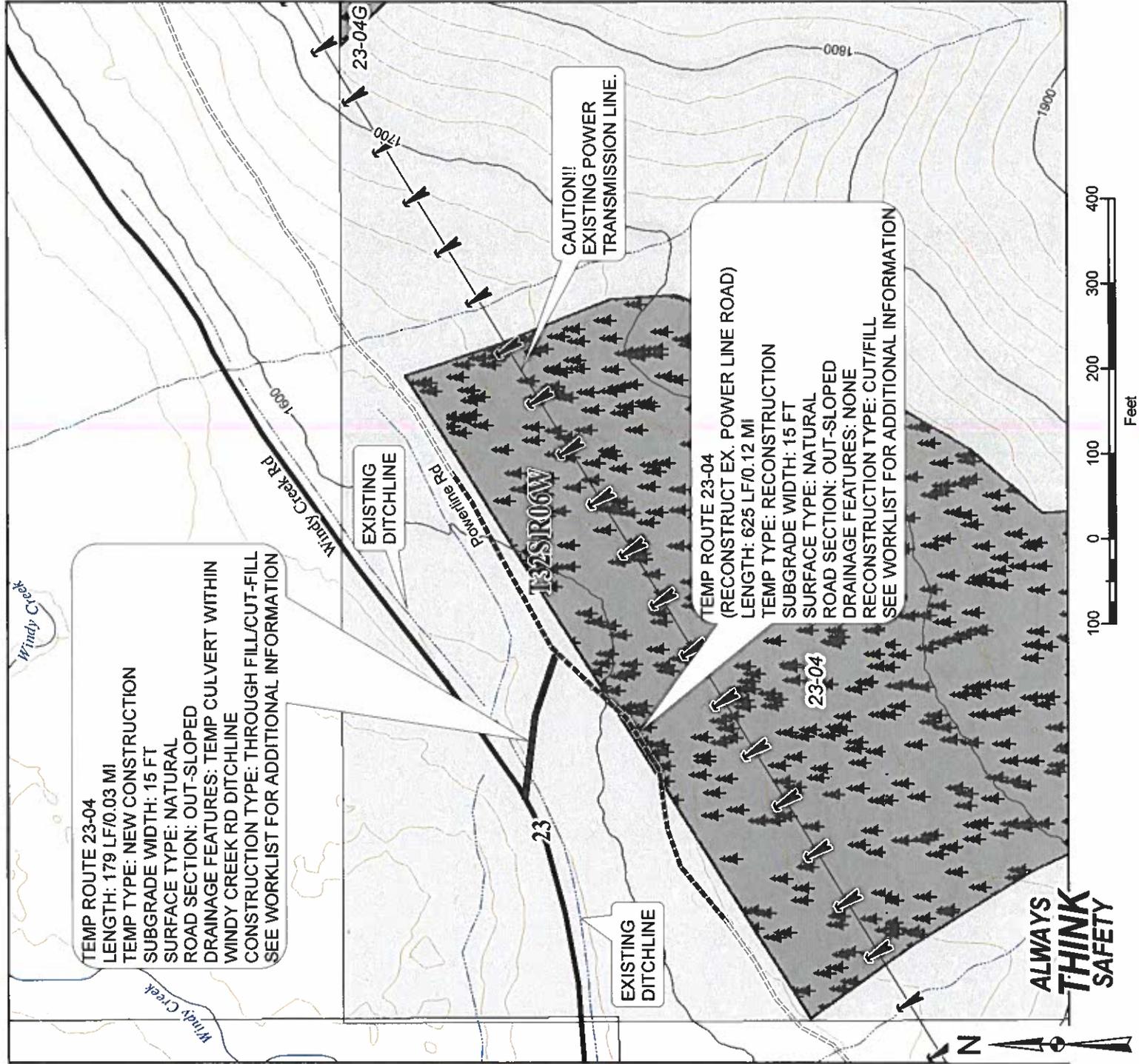


EXHIBIT C2-4

LEGEND

Land Ownership

- BLM
- Non-BLM
- Timber Units

Roads - Surface Type

- Bituminous
- Aggregate
- Natural
- Unknown

Renovation Responsibility - Haul Roads

- Purchaser Renovation
- BLM Maintenance
- Third Party Maintenance

Road Construction

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

- Heli Landing

Road Closures

- Gate

| Rev No. | Description | Date | Approval |
|---------|-------------|------|----------|
| | | | |
| | | | |

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

OH WINDY TIMBER SALE
ROAD RENOVATION MAP
WOOD CREEK AREA

DRAFTED BY: ELF
DATE: AUG 2019
SHEET: 4 OF 17

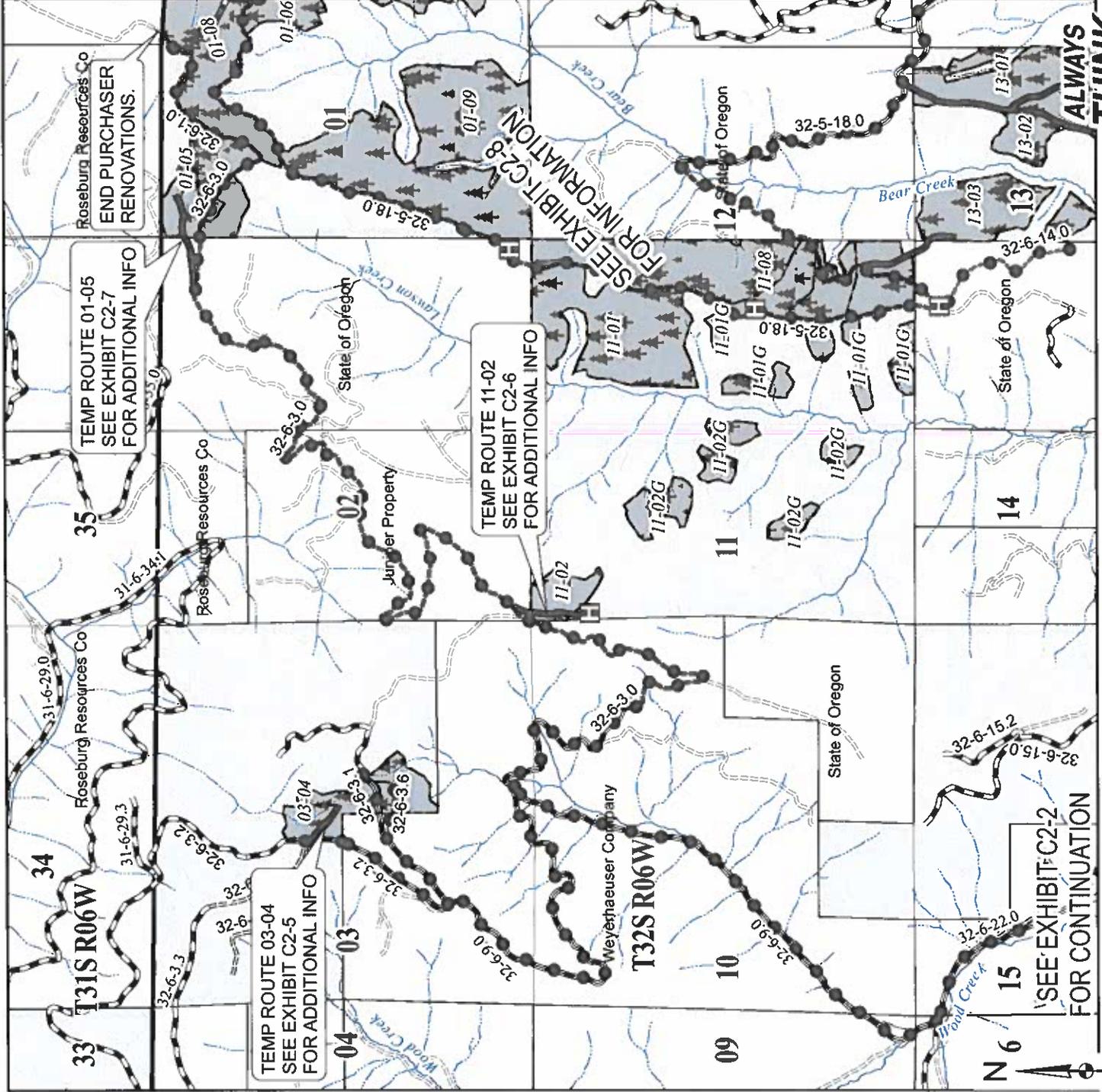


EXHIBIT C2-5

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Renovation Responsibility - Haul Roads

-  Purchaser Renovation
-  Third Party Maintenance

Road Construction

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

Road Closures

-  Gate
-  Barricade (trees/dirt)

| Rev No. | Description | Date | Approval |
|--|-------------|----------------|----------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR | | | |
| BUREAU OF LAND MANAGEMENT | | | |
| MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE | | | |
| ROAD RENOVATION MAP | | | |
| WOOD CREEK AREA | | | |
| DRAFTED BY: ELF | | | |
| DATE: AUG 2019 | | SHEET: 5 OF 17 | |

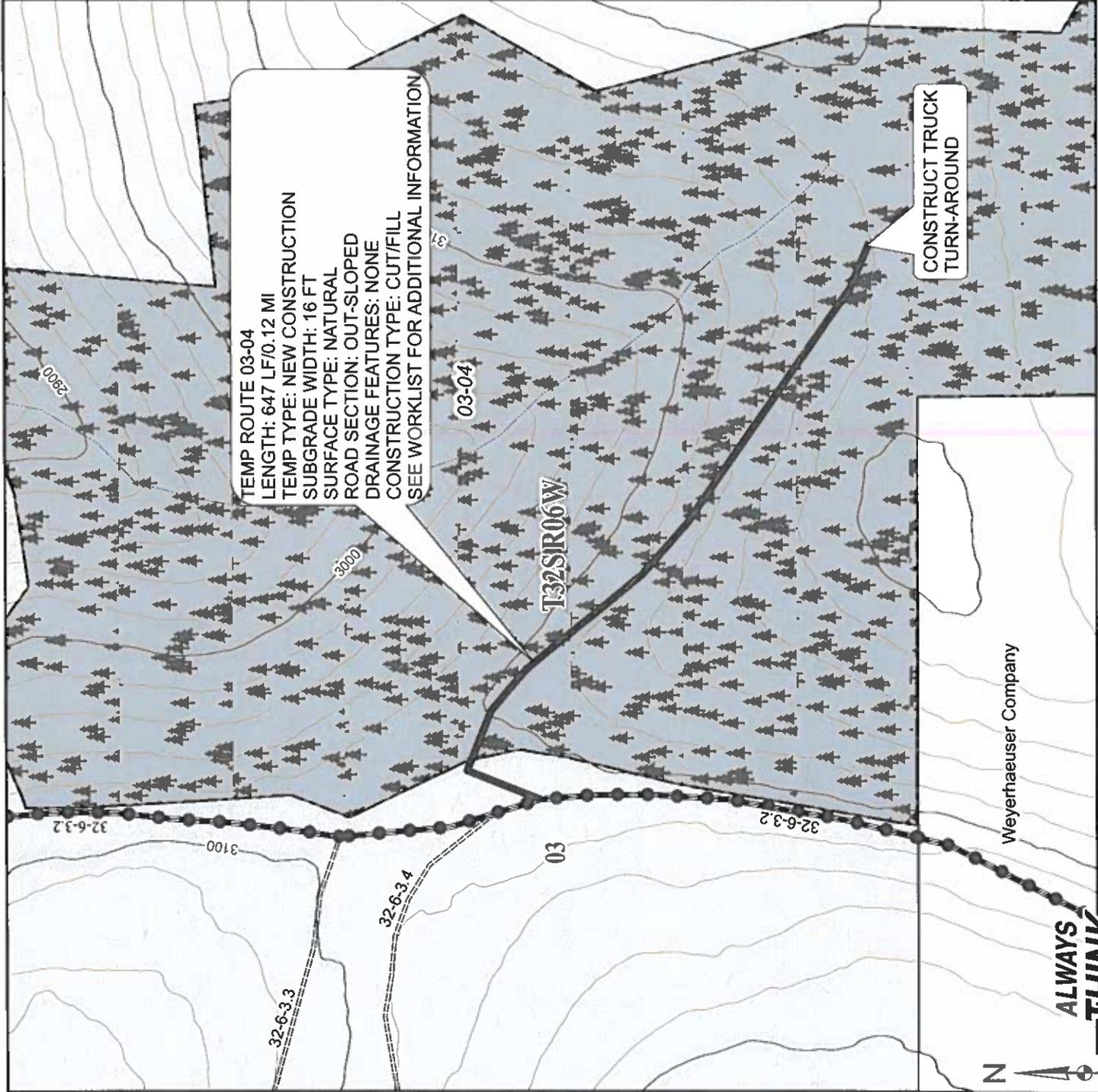


EXHIBIT C2-6

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Renovation Responsibility - Haul Roads

-  Purchaser Renovation
-  Third Party Maintenance

Road Construction

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

-  Heli Landing

Road Closures

-  Gate
-  Barricade (trees/dirt)

| Rev No. | Description | Date | Approval |
|---|-------------|----------------|----------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE ROAD RENOVATION MAP WOOD CREEK AREA | | | |
| DRAFTED BY: ELF | | DATE: AUG 2019 | |
| | | SHEET: 6 OF 17 | |

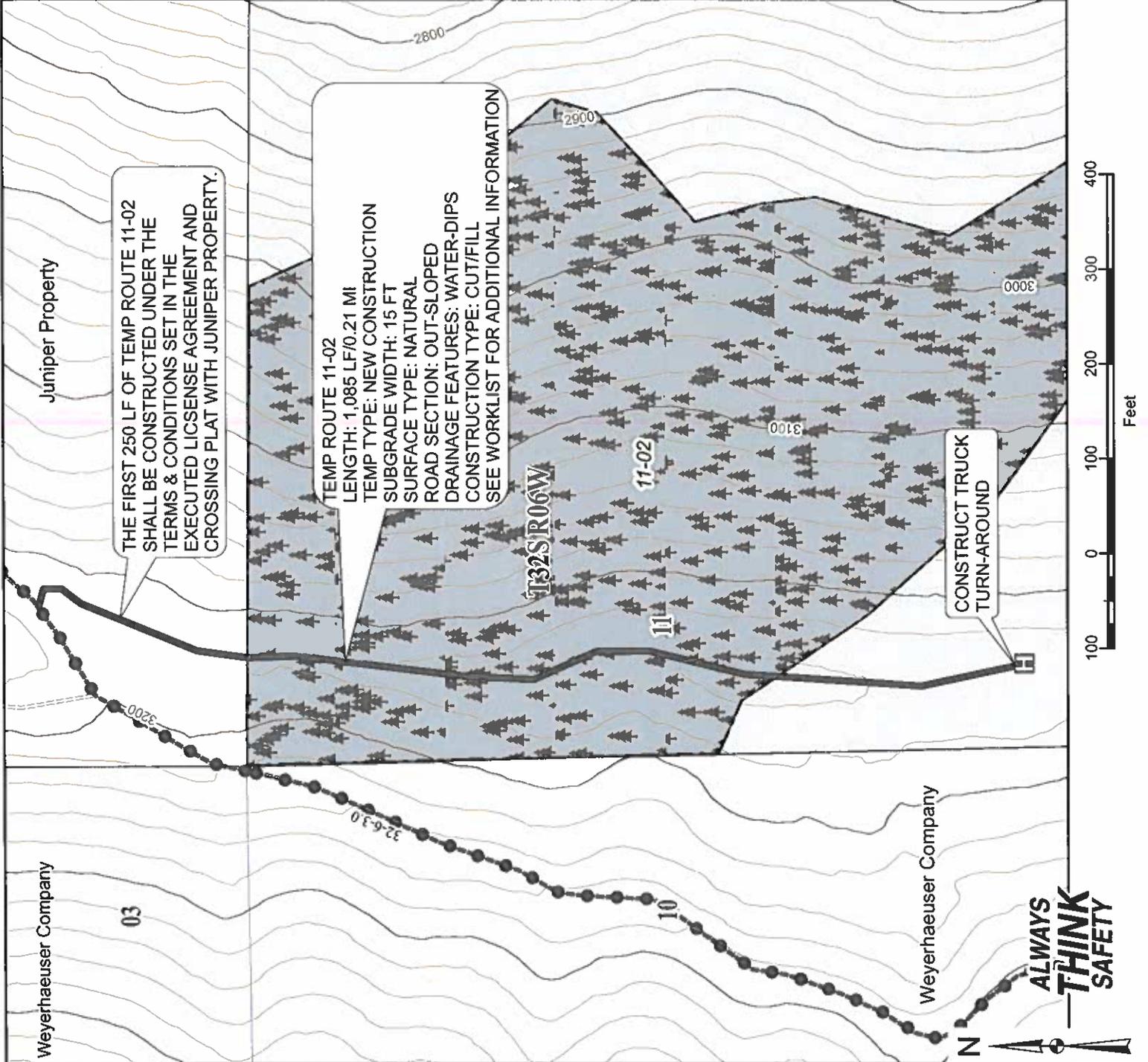


EXHIBIT C2-7

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Renovation Responsibility - Haul Roads

-  Purchaser Renovation
-  Third Party Maintenance

Road Construction

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

Road Closures

-  Gate
-  Barricade (trees/dirt)

| Rev No. | Description | Date | Approval |
|---|-------------|----------------|----------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE ROAD RENOVATION MAP WOOD CREEK AREA | | | |
| DRAFTED BY: ELF | | SHEET: 7 OF 17 | |
| DATE: AUG 2019 | | | |

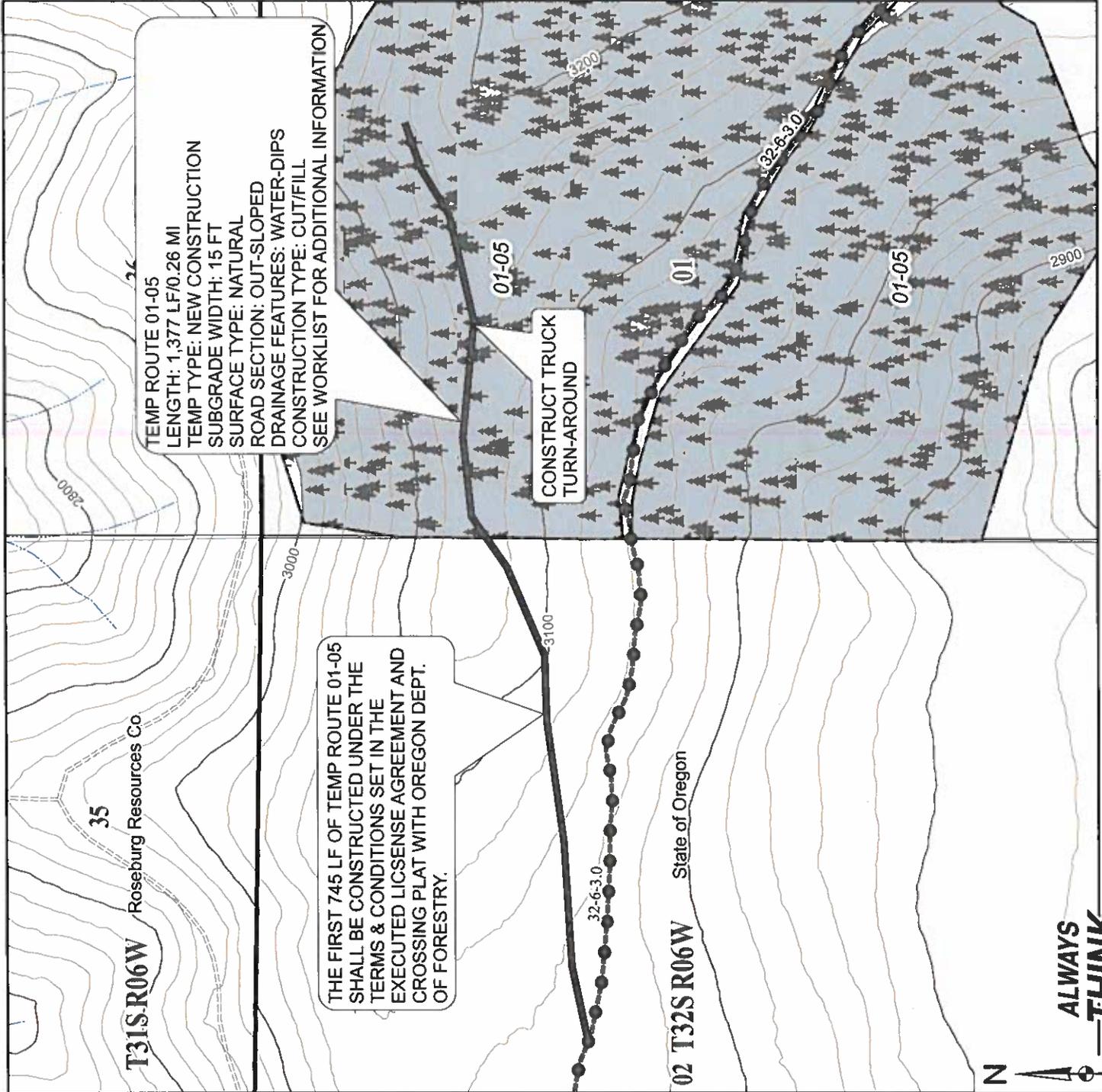


EXHIBIT C2-8

LEGEND

Land Ownership

- BLM
- Non-BLM
- Timber Units

Roads - Surface Type

- Bituminous
- Aggregate
- Natural
- Unknown

Renovation Responsibility - Haul Roads

- Purchaser Renovation
- BLM Maintenance
- Third Party Maintenance

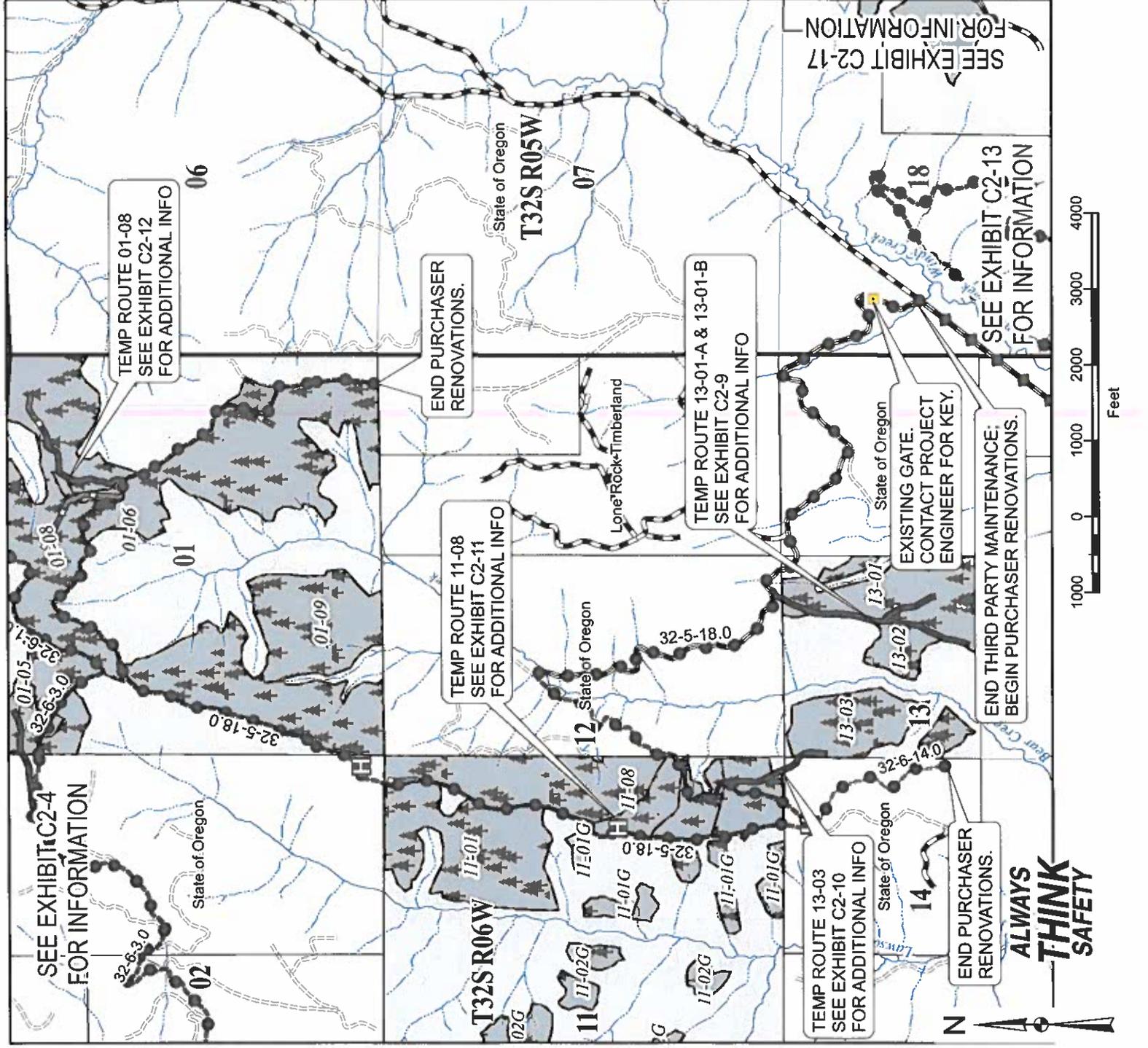
Road Construction

- Road Construction
- Temp Route Construction
- Temp Route Reconstruction
- Tractor Swing
- Heli Landing

Road Closures

- Gate

| Rev No. | Description | Date | Approval |
|---|-------------|----------------|----------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE ROAD RENOVATION MAP BEAR CREEK AREA | | | |
| DRAFTED BY: ELF | | SHEET: 8 OF 17 | |
| DATE: AUG 2019 | | | |



TEMP ROUTE 01-08
SEE EXHIBIT C2-12
FOR ADDITIONAL INFO

END PURCHASER
RENOVATIONS.

TEMP ROUTE 11-08
SEE EXHIBIT C2-11
FOR ADDITIONAL INFO

TEMP ROUTE 13-01-A & 13-01-B
SEE EXHIBIT C2-9
FOR ADDITIONAL INFO

EXISTING GATE.
CONTACT PROJECT
ENGINEER FOR KEY.

SEE EXHIBIT C2-13
FOR INFORMATION

END THIRD PARTY MAINTENANCE;
BEGIN PURCHASER RENOVATIONS.

SEE EXHIBIT C2-4
FOR INFORMATION

TEMP ROUTE 13-03
SEE EXHIBIT C2-10
FOR ADDITIONAL INFO

END PURCHASER
RENOVATIONS.

**ALWAYS
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EXHIBIT C2-9

LEGEND

Land Ownership

- BLM
- Non-BLM
- Timber Units

Roads - Surface Type

- Bituminous
- Aggregate
- Natural
- Unknown

Renovation Responsibility - Haul Roads

- Purchaser Renovation
- Third Party Maintenance

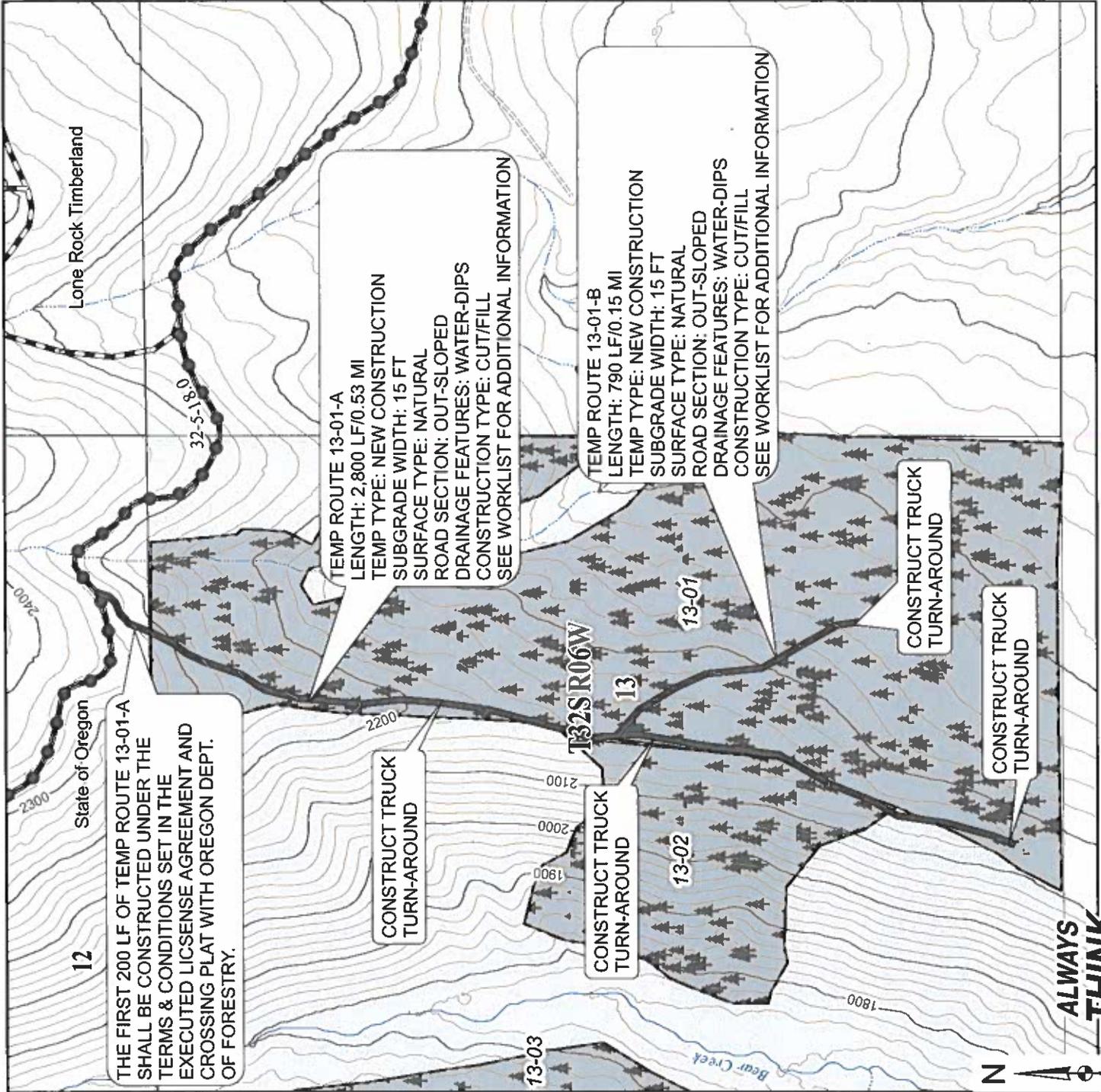
Road Construction

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

Road Closures

- Gate
- Barricade (trees/dirt)

| Rev No. | Description | Date | Approval |
|---|-------------|----------------|----------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE | | | |
| ROAD RENOVATION MAP | | | |
| BEAR CREEK AREA | | | |
| DRAFTED BY: ELF | | SHEET: 9 OF 17 | |
| DATE: AUG 2019 | | | |



**ALWAYS
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SAFETY**

EXHIBIT C2-10

LEGEND

Land Ownership

- BLM
- Non-BLM
- Timber Units

Roads - Surface Type

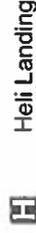
- Bituminous
- Aggregate
- Natural
- Unknown

Renovation Responsibility - Haul Roads

- Purchaser Renovation
- Third Party Maintenance

Road Construction

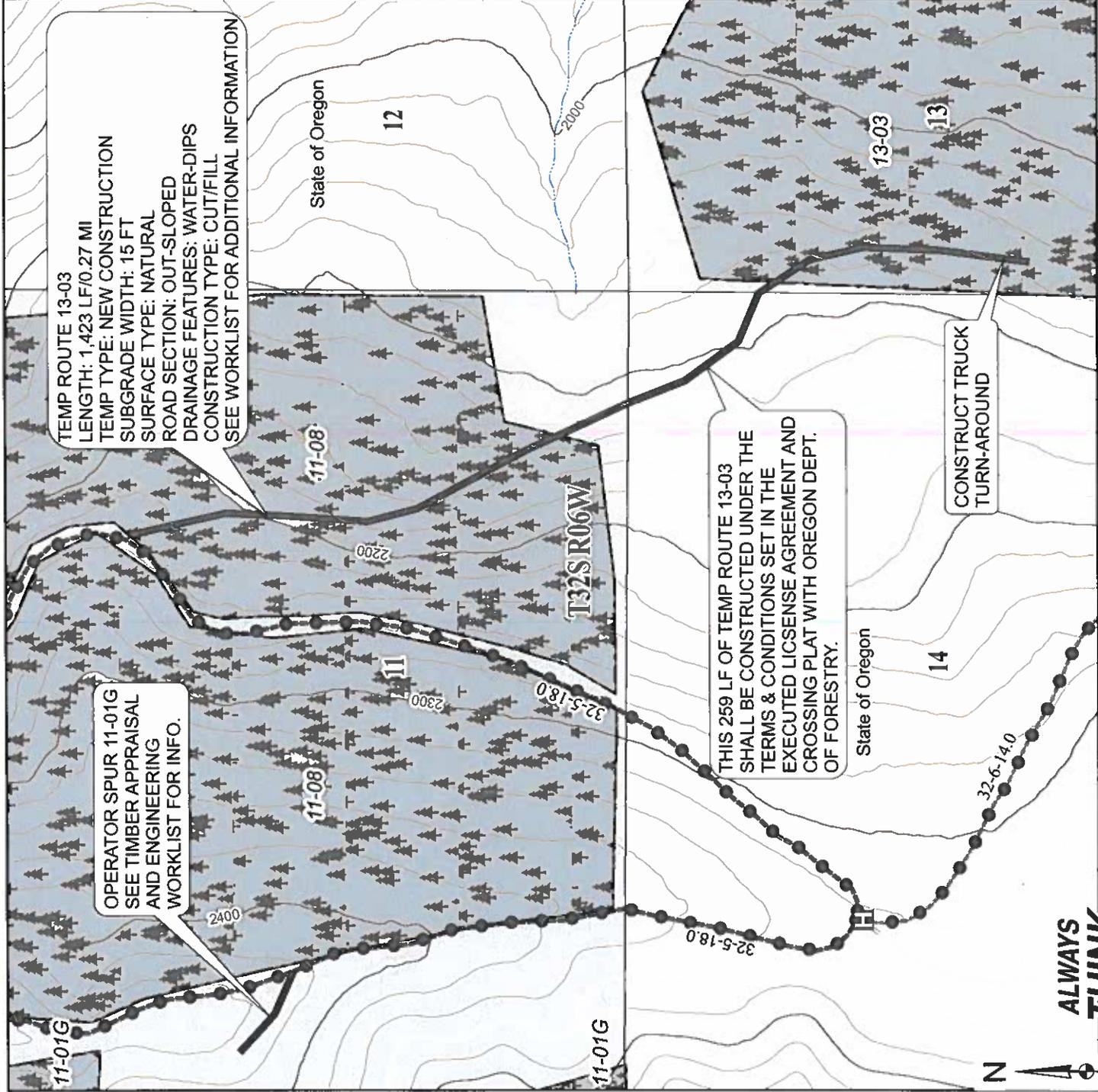
- Road Construction
- Temp Route New Construction
- Temp Route Reconstruction
- Tractor Swing



Road Closures

- Gate
- Barricade (trees/dirt)

| Rev No. | Description | Date | Approval |
|---|-------------|-----------------|----------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE | | | |
| ROAD RENOVATION MAP | | | |
| BEAR CREEK AREA | | | |
| DRAFTED BY: ELF | | SHEET: 10 OF 17 | |
| DATE: AUG 2019 | | | |



**ALWAYS
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EXHIBIT C2-11

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Renovation Responsibility - Haul Roads

-  Purchaser Renovation
-  Third Party Maintenance

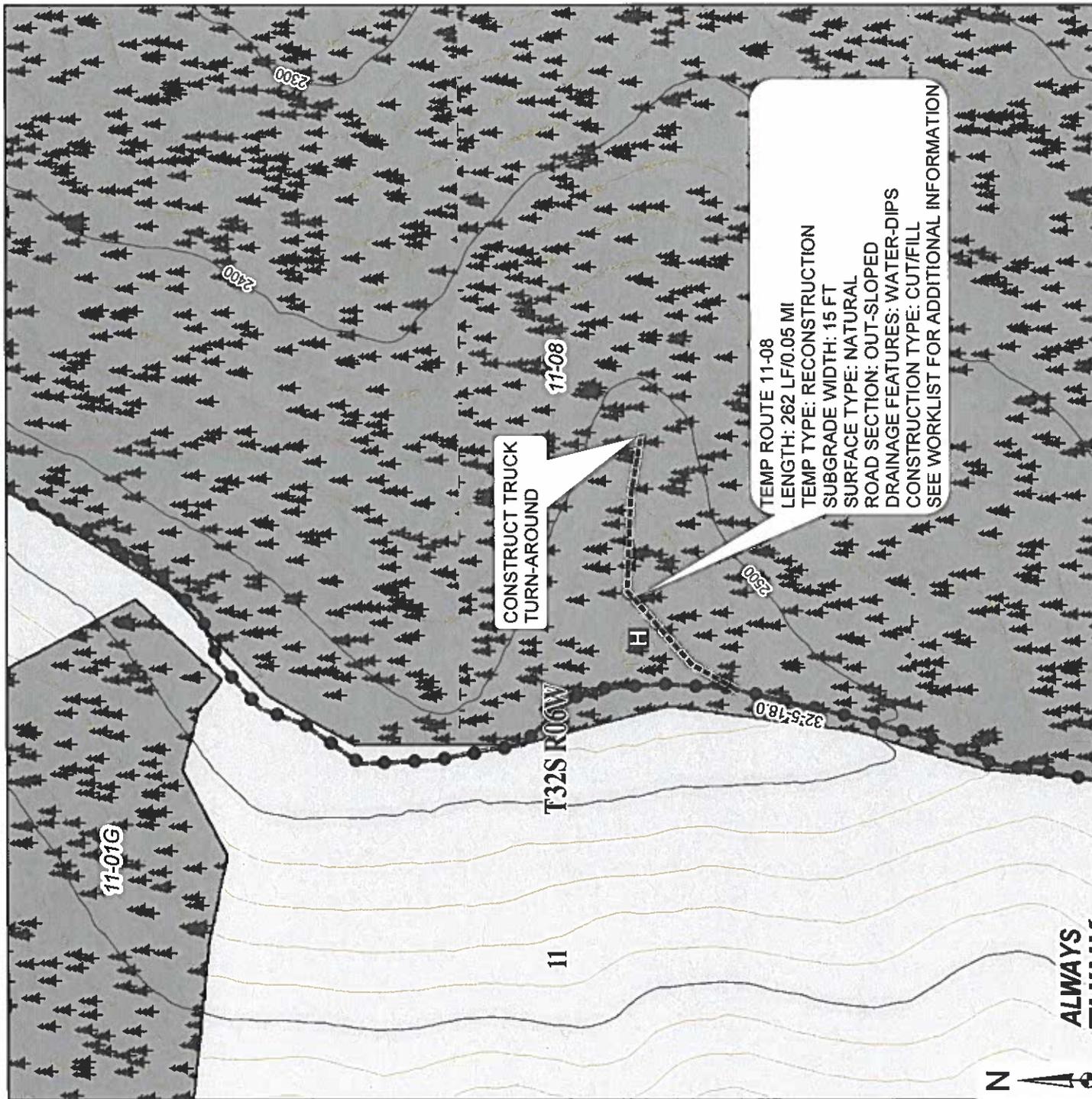
Road Construction

-  Road Construction
-  Temp Route New Construction
-  Temp Route Reconstruction
-  Tractor Swing
-  Helicopter Landing

Road Closures

-  Gate
-  Barricade (trees/dirt)

| Rev No. | Description | Date | Approval |
|--|-------------|------|-----------------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR | | | |
| BUREAU OF LAND MANAGEMENT | | | |
| MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE | | | |
| ROAD RENOVATION MAP | | | |
| BEAR CREEK AREA | | | |
| DRAFTED BY: ELF | | | SHEET: 11 OF 17 |
| DATE: AUG 2019 | | | |



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EXHIBIT C2-12

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Renovation Responsibility - Haut Roads

-  Purchaser Renovation
-  Third Party Maintenance

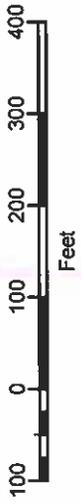
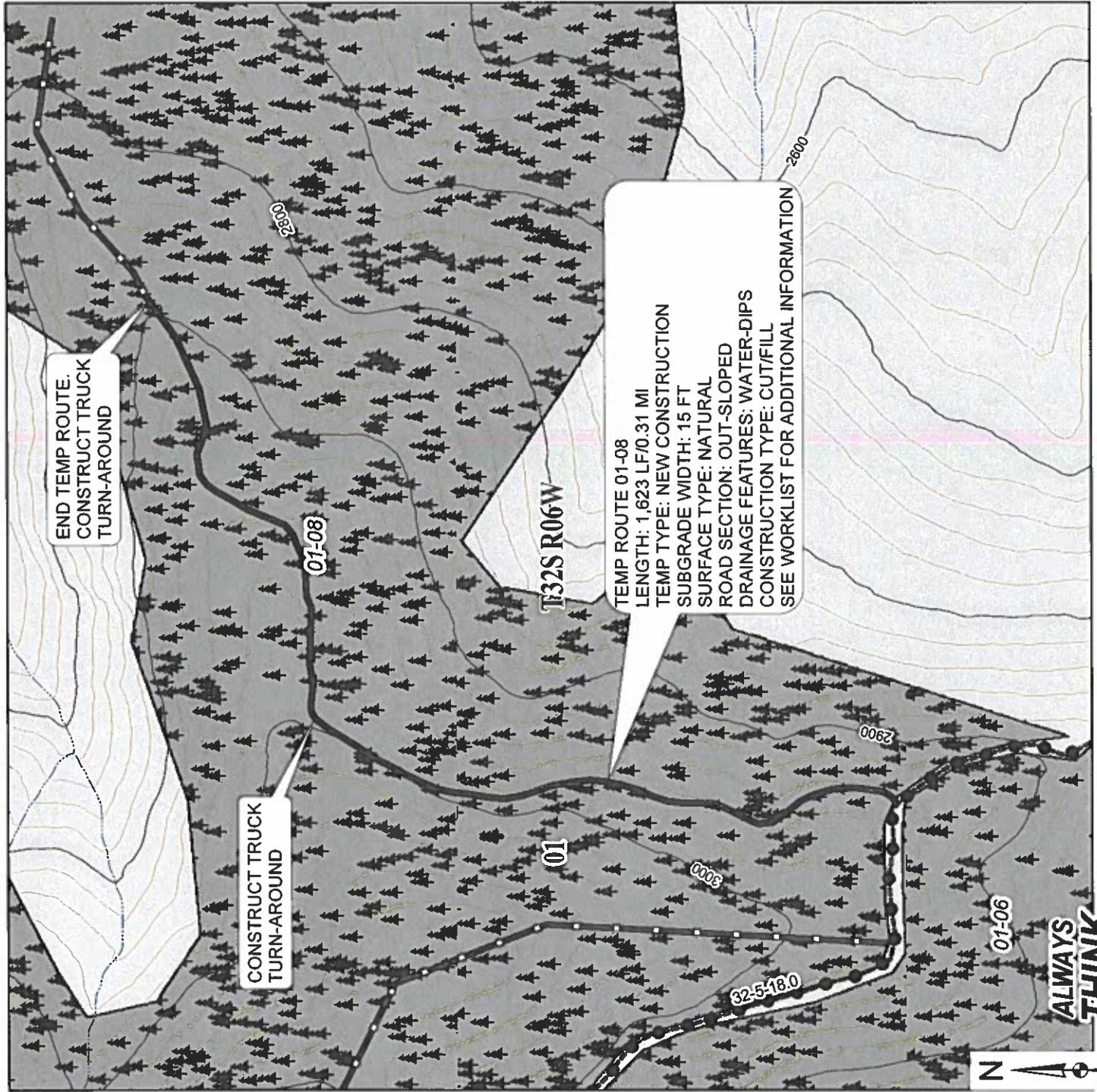
Road Construction

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

Road Closures

-  Gate
-  Barricade (trees/dirt)

| Rev No. | Description | Date | Approval |
|---|-------------|------|-----------------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE ROAD RENOVATION MAP BEAR CREEK AREA | | | |
| DRAFTED BY: ELF | | | SHEET: 12 OF 17 |
| DATE: AUG 2019 | | | |



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EXHIBIT C2-13

LEGEND

Land Ownership

- BLM
- Non-BLM
- Timber Units

Roads - Surface Type

- Bituminous
- Aggregate
- Natural
- Unknown

Renovation Responsibility - Haul Roads

- Purchaser Renovation
- BLM Maintenance
- Third Party Maintenance

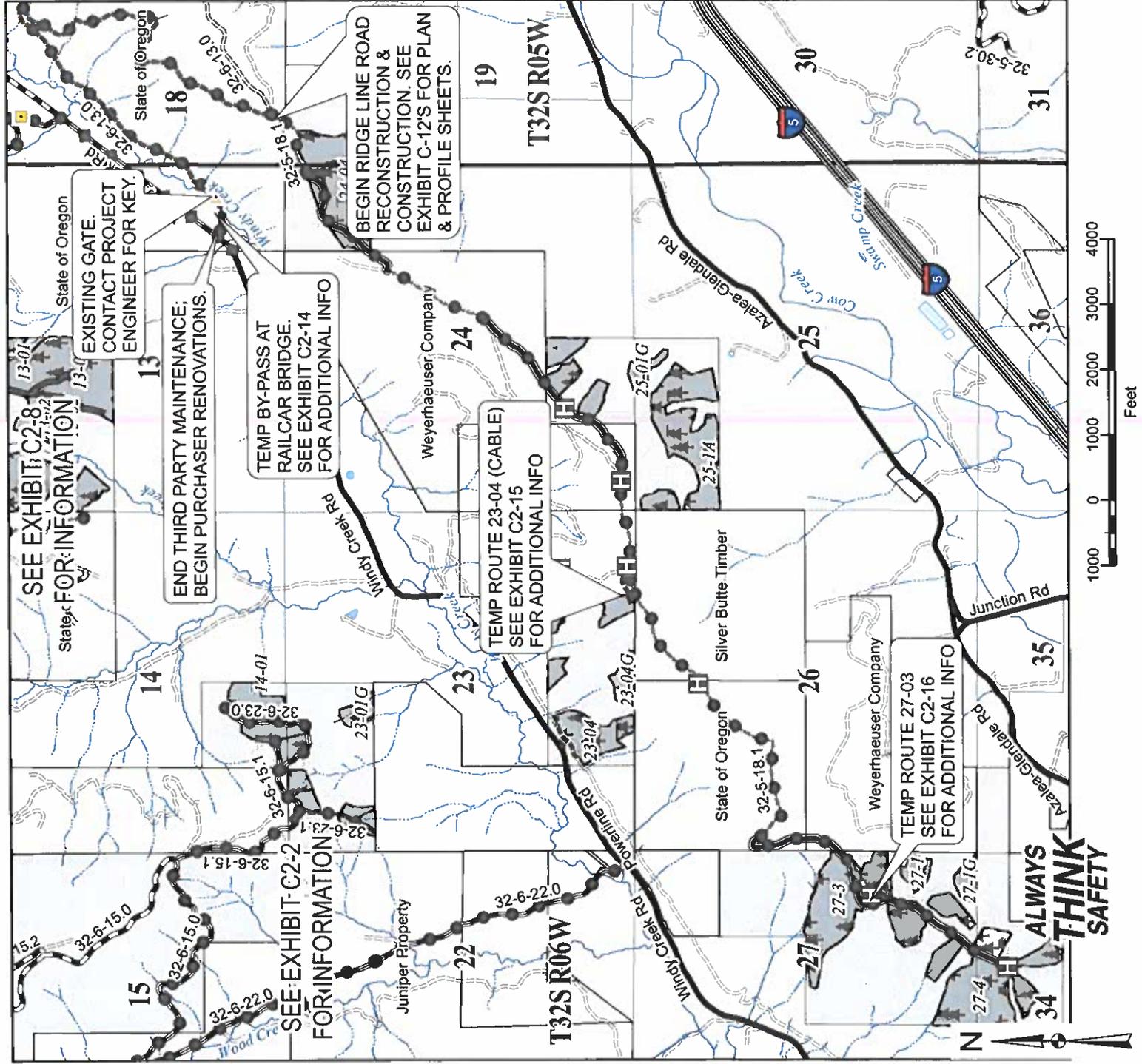
Road Construction

- Road Construction
- Temp Route Construction
- Temp Route Reconstruction
- Tractor Swing
- Heli-Landing

Road Closures

- Gate

| Rev No. | Description | Date | Approval |
|---|-------------|------|-----------------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE | | | |
| ROAD RENOVATION MAP | | | |
| WINDY CREEK AREA | | | |
| DRAFTED BY: ELF | | | SHEET: 13 OF 17 |
| DATE: AUG 2019 | | | |



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EXHIBIT C2-14

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

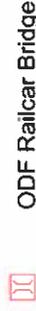
-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Renovation Responsibility - Haul Roads

-  Purchaser Renovation
-  Third Party Maintenance

Road Construction

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



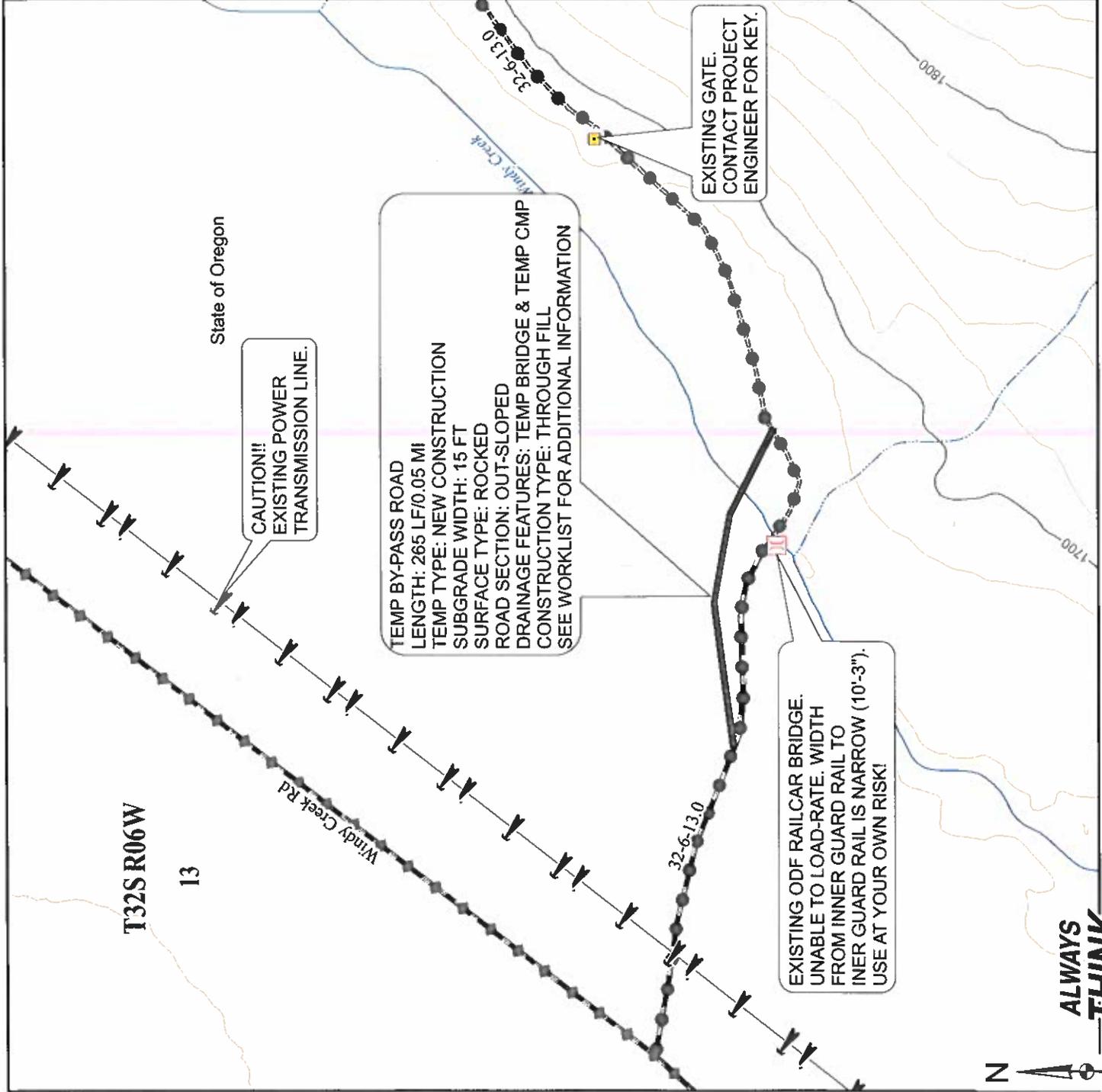
Road Closures

-  Gate
-  Barricade (trees/dirt)

| Rev No. | Description | Date | Approval |
|---------|-------------|------|----------|
| | | | |
| | | | |

| |
|--|
| UNITED STATES DEPARTMENT OF THE INTERIOR |
| BUREAU OF LAND MANAGEMENT |
| MEDFORD DISTRICT - MEDFORD, OREGON |
| OH WINDY TIMBER SALE |
| ROAD RENOVATION MAP |
| WINDY CREEK AREA |

| | |
|-----------------|-----------------|
| DRAFTED BY: ELF | SHEET: 14 OF 17 |
| DATE: AUG 2019 | |



CAUTION!!
EXISTING POWER
TRANSMISSION LINE.

TEMP BY-PASS ROAD
LENGTH: 265 LF/0.05 MI
TEMP TYPE: NEW CONSTRUCTION
SUBGRADE WIDTH: 15 FT
SURFACE TYPE: ROCKED
ROAD SECTION: OUT-SLOPED
DRAINAGE FEATURES: TEMP BRIDGE & TEMP CMP
CONSTRUCTION TYPE: THROUGH FILL
SEE WORKLIST FOR ADDITIONAL INFORMATION

EXISTING GATE.
CONTACT PROJECT
ENGINEER FOR KEY.

EXISTING ODF RAILCAR BRIDGE.
UNABLE TO LOAD-RATE. WIDTH
FROM INNER GUARD RAIL TO
INNER GUARD RAIL IS NARROW (10'-3").
USE AT YOUR OWN RISK!

T32S R06W
13

Windy Creek Rd

32-6-13.0



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EXHIBIT C2-15

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Renovation Responsibility - Haul Roads

-  Purchaser Renovation
-  Third Party Maintenance

Road Construction

-  Road Construction
-  Temp Route New Construction
-  Temp Route Reconstruction
-  Tractor Swing
-  Hell Landing

Road Closures

-  Gate
-  Barricade (trees/dirt)

| Rev No. | Description | Date | Approval |
|---|-------------|------|-----------------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE | | | |
| ROAD RENOVATION MAP | | | |
| WINDY CREEK AREA | | | |
| DRAFTED BY: ELF | | | SHEET: 15 OF 17 |
| DATE: AUG 2019 | | | |

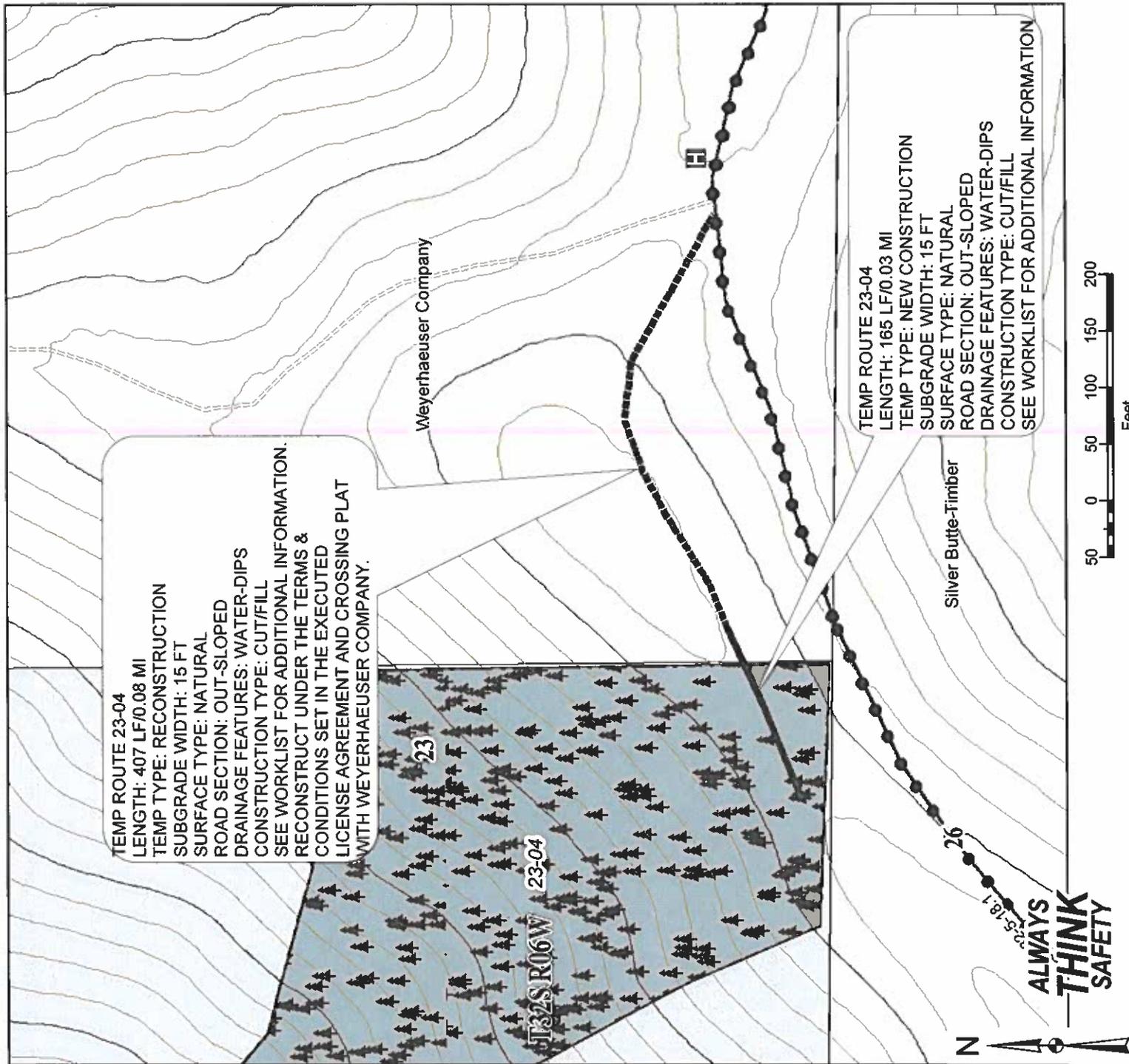


EXHIBIT C2-16

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Renovation Responsibility - Haul Roads

-  Purchaser Renovation
-  Third Party Maintenance

Road Construction

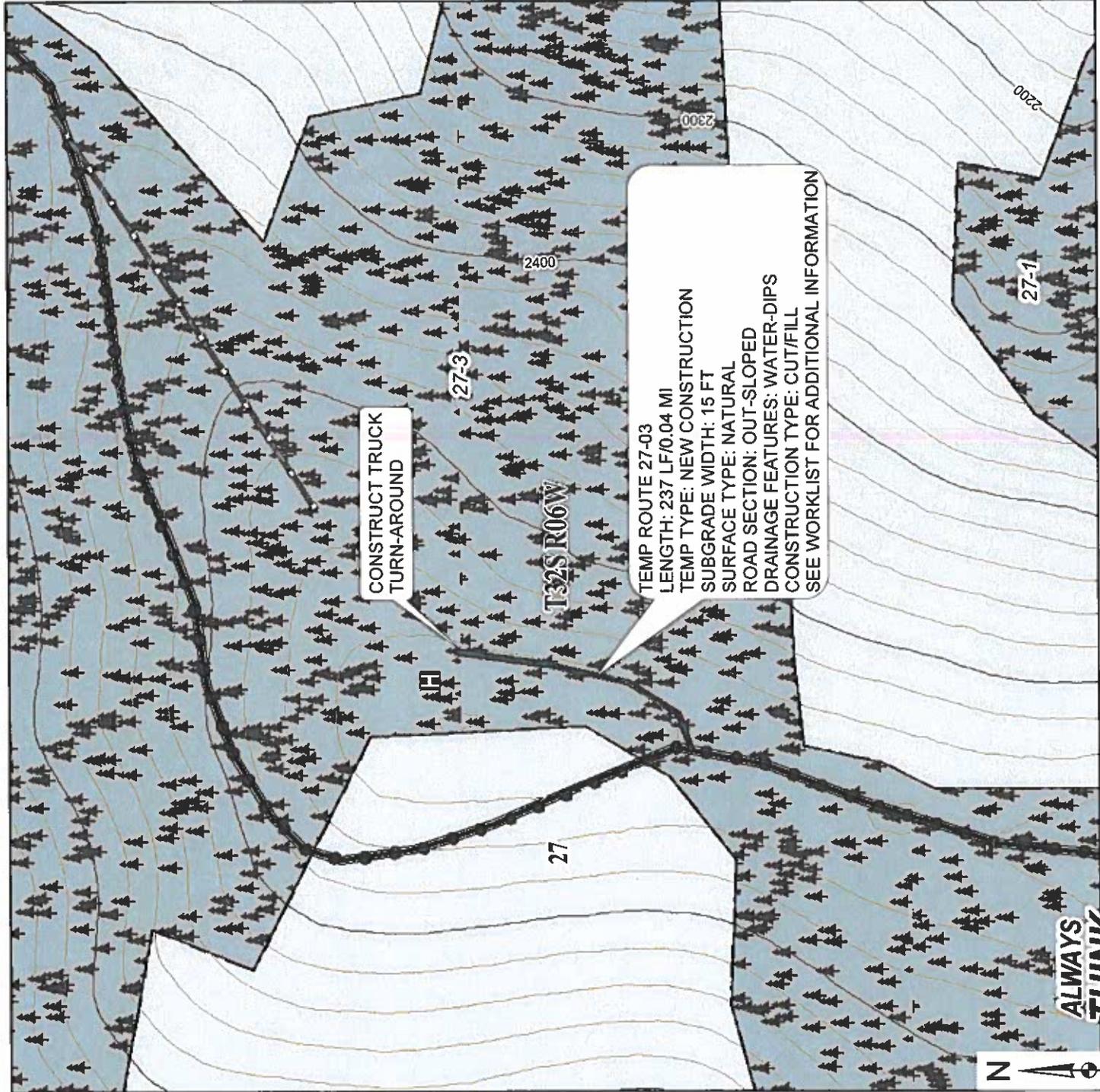
-  Road Construction
-  Temp Route New Construction
-  Temp Route Reconstruction
-  Tractor Swing

 Heli Landing

Road Closures

-  Gate
-  Barricade (trees/dirt)

| Rev No. | Description | Date | Approval |
|---|-------------|------|-----------------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE ROAD RENOVATION MAP WINDY CREEK AREA | | | |
| DRAFTED BY: ELF | | | SHEET: 16 OF 17 |
| DATE: AUG 2019 | | | |



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EXHIBIT C2-17

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Renovation Responsibility - Haul Roads

-  Purchaser Renovation
-  BLM Maintenance
-  Third Party Maintenance

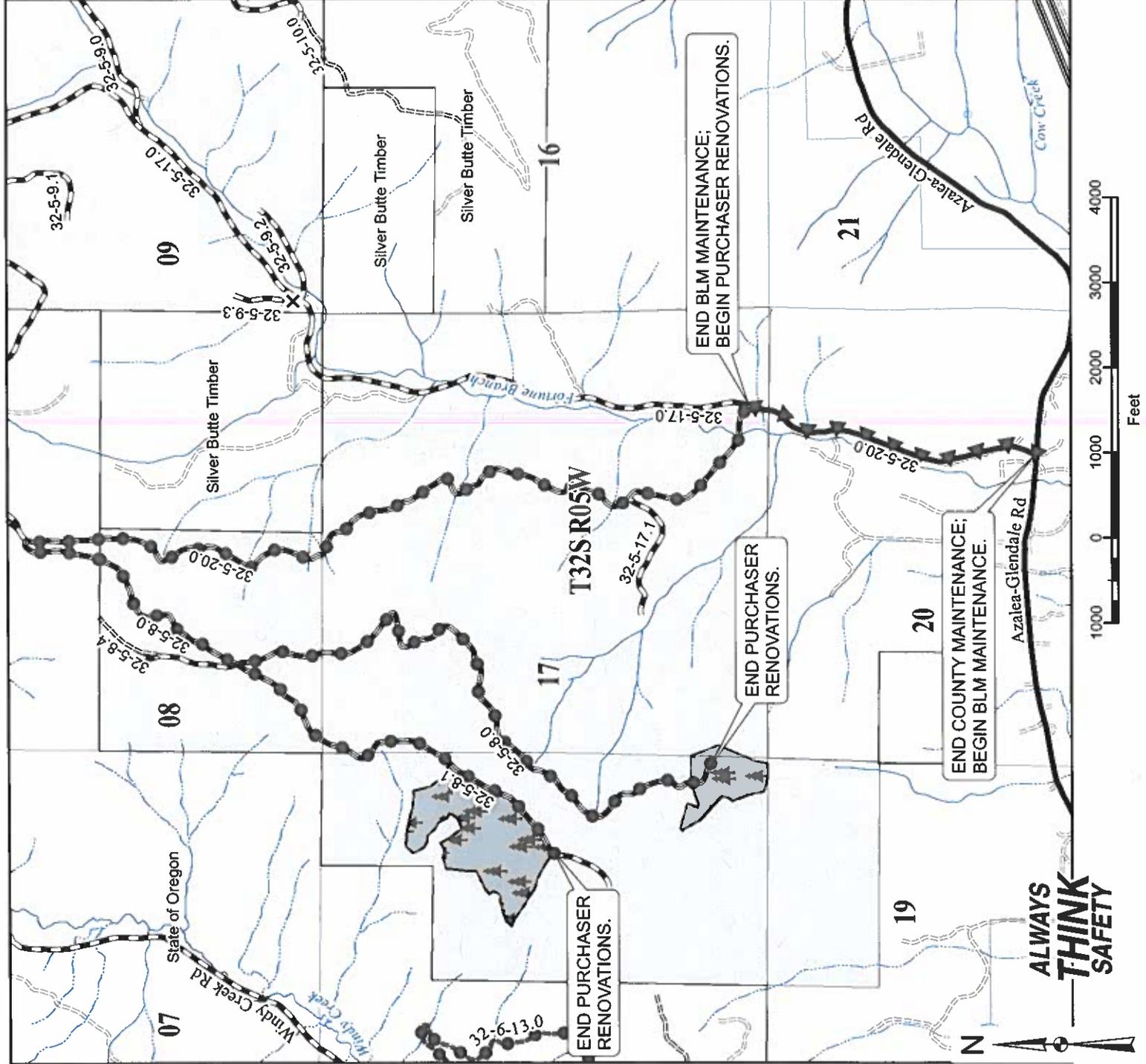
Road Construction

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

Road Closures

-  Gate
-  Barricade (trees/dirt)

| Rev No. | Description | Date | Approval |
|---|-------------|-----------------|----------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE ROAD RENOVATION MAP FORTUNE BRANCH AREA | | | |
| DRAFTED BY: ELF | | SHEET: 17 OF 17 | |
| DATE: AUG 2019 | | | |



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EXHIBIT C3-1

| ROAD NUMBER | SPECIFICATION NO. | FROM | TO | LENGTH | CLEARING AND GRUBBING | EXCAVATION | | DRAINAGE | | | | | | RENOVATION | | | | AGGREGATE | | | | ROADSIDE BRUSHING AND CHIPPING | MISCELLANEOUS | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-------------------|------|------|--------|-----------------------|------------|------|----------|-----|-----|-----|-----|-----|------------------------------|-------------------------------|------------------------------------|---------------|--------------------------------------|--|------------------|--------------------|--------------------------------|--|----------------------|------------------------|----------------------|------------------------|----------------------|--------------------|--------------------------|------------------------|-------------------|----|----|----|----|----|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | COMMON | ROCK | 18" | 24" | 30" | 36" | 48" | 60" | BLADING, WATERING, & ROLLING | DITCH AND/OR CULVERT CLEANING | SCARIFICATION AND/OR HEAVY BLADING | SLIDE REMOVAL | BASE COURSE SCREENED ROCK (4"-minus) | SURF. COURSE CRUSHED ROCK (1-1/2"-minus) | SLOPE PROTECTION | SOIL STABILIZATION | | INSTALL BMPs @ HYDRO POINTS OF CONCERN | CONSTRUCT WATER DIPS | RECONSTRUCT WATER DIPS | CONSTRUCT WATER DIPS | RECONSTRUCT TURNAROUND | CONSTRUCT TURNAROUND | REMOVE EXIST. BERM | REMOVE EXIST. TURNAROUND | RECONSTRUCT TURNAROUND | INSTALL MEGA GATE | | | | | | | | | | | | | | | | |
| UNITS | MP | MP | MP | MILE | ACRE | CY | CY | LF | LF | LF | LF | LF | LF | MILE | MILE | MILE | MILE | CY | CY | CY | ACRE | MILE | EA | EA | EA | EA | EA | EA | EA | EA | EA | EA | EA | EA | EA | EA | EA | | | | | | | | | | | |
| WOOD CREEK ROAD SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32-6-22.0 | 0.00 | 2.32 | 2.32 | 2.32 | | | | | | | | | | 2.17 | 2.32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32-6-9.0 | 0.00 | 2.58 | 2.58 | 2.58 | | | | | | | | | | 2.58 | 2.58 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32-6-3.1 | 0.00 | 0.43 | 0.43 | 0.43 | | | | | | | | | | 0.43 | 0.43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32-6-3.2 | 0.00 | 0.50 | 0.50 | 0.50 | | | | | | | | | | 0.50 | 0.50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32-6-3.6 | 0.00 | 0.14 | 0.14 | 0.14 | | | | | | | | | | 0.14 | 0.14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32-6-3.0(A1) | 0.00 | 0.60 | 0.60 | 0.60 | | | | | | | | | | 0.60 | 0.60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32-6-3.0(A2-D) | 0.60 | 3.89 | 3.29 | 3.29 | | | | | | | | | | 3.29 | 0.10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32-6-1.0 | 0.00 | 0.53 | 0.53 | 0.53 | | | | | | | | | | 0.53 | 0.99 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32-6-15.0 | 0.00 | 0.99 | 0.99 | 0.99 | | | | | | | | | | 0.99 | 0.99 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32-6-15.1 | 0.00 | 0.66 | 0.66 | 0.66 | | | | | | | | | | 0.66 | 0.66 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32-6-23.0 | 0.00 | 0.43 | 0.43 | 0.43 | | | | | | | | | | 0.43 | 0.43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32-6-23.1 | 0.00 | 0.24 | 0.24 | 0.24 | | | | | | | | | | 0.24 | 0.24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SEE PAGE 2 FOR ROAD TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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 | SIZE | SIZE |
| 4 inch | 3 inch | 1 1/2 inch |
| 3 inch | 2 inch | 1 inch |
| 2 inch | | 3/4 inch |
| 1 1/2 inch | | |
| GRADATION | GRADATION | GRADATION |
| A | A,C,F | C,C-1 |
| B | B,D,G,H | D,D-1 |
| C | | E,E-1 |
| D | | |

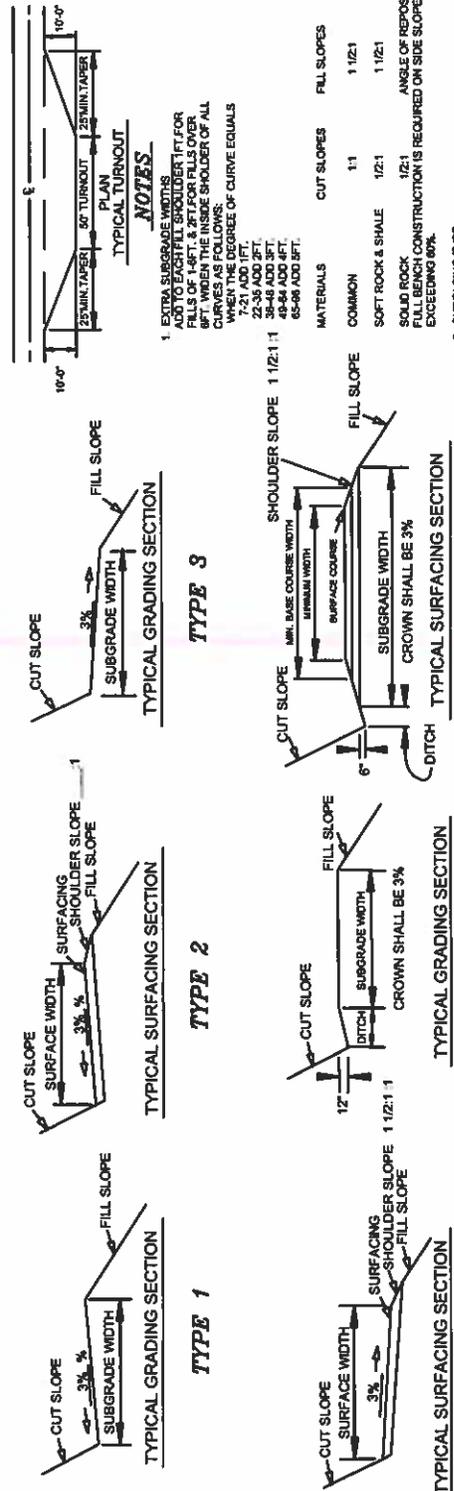
ALWAYS
THINK
SAFETY

| REV. NO. | DESCRIPTION | DATE | APPROVAL |
|---|-------------|---------------|----------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE ESTIMATE OF QUANTITIES* | | | |
| DRAFTED BY: BLM | | SCALE: NONE | |
| DATE: JULY 2019 | | SHEET: 1 OF 3 | |
| DRAWING NO.: OR-11-9113-4-1 | | | |

EXHIBIT C4-1

| ROAD NUMBER | STATION OR MILE POST | TO STATION OR MILE POST | LENGTH MILE OR STATION | TYPICAL SECTION TYPE | ALIGNMENT | | ROAD WIDTH (1-3) | | GRADIENT | | CLEARING WIDTH | | | SURFACING (4) | | | REMARKS | |
|-------------------|----------------------|-------------------------|------------------------|----------------------|-------------------------|----------|------------------|---------------------------|----------------|----------|----------------|---|---------------|---------------|----------------|-------------|---|------------------|
| | | | | | MAXIMUM DEGREE OF CURVE | SUBGRADE | DITCH | MAXIMUM FAVORABLE ADVERSE | BEYOND TOP CUT | TOE FILL | L | R | BASE COURSE | | SURFACE COURSE | | | |
| | | | | | | | | | | | | | MINIMUM WIDTH | COMP. DEPTH | MINIMUM WIDTH | COMP. DEPTH | | TYPE (2) |
| 32-6-13.0 | 0.00 | 0.06 | 0.06 | 6 | 15 | 3 | | 6 | 6 | 6 | 6 | 6 | 14 | 0'-8" | D | 1-1/2" | Use commercial rock | |
| 32-6-13.0 | 0.06 | 1.99 | 1.93 | 6 | 15 | 3 | | 6 | 6 | 6 | 6 | 6 | 14 | 0'-8" | C | 1-1/2" | Use commercial rock | |
| 32-6-18.0 | 0.00 | 2.03 | 2.03 | 6 | 15 | 3 | | 6 | 6 | 6 | 6 | 6 | 14 | 0'-8" | C | 1-1/2" | Use commercial rock | |
| 32-6-18.0 | 2.03 | 2.98 | 0.95 | 6 | 15 | 3 | | 6 | 6 | 6 | 6 | 6 | 14 | 0'-8" | C | 1-1/2" | Use commercial rock | |
| 32-6-18.0 | 2.98 | 6.20 | 3.22 | 4 | 15 | | | 6 | 6 | 6 | 6 | 6 | 14 | 0'-8" | C | 1-1/2" | Use commercial rock | |
| Temp Roads | | | | | | | | | | | | | | | | | | |
| TR 23-04 | 0+00 | 1+79 | 0.03 | 3 | 15 | | | 3 | 0 | | | | | | | | Temporary Road to be constructed. Fully Decommission upon Completion Log Haul | As Per Exhibit D |
| POWERLINE ROAD | -2+45 | 3+80 | 0.12 | 3 | 15 | | | 3 | 0 | | | | | | | | Temporary Road to be constructed. Partial Decommission upon Completion Log Haul | As Per Exhibit D |
| TR 03-04 | 0+00 | 6+47 | 0.12 | 3 | 15 | | | 3 | 0 | | | | | | | | Temporary Road to be constructed. Decommission upon Completion Log Haul | As Per Exhibit D |
| TR 11-02 | 0+00 | 10+85 | 0.21 | 3 | 15 | | | 3 | 0 | | | | | | | | Temporary Road to be constructed. Decommission upon Completion Log Haul | As Per Exhibit D |
| TR 01-05 | 0+00 | 13+77 | 0.26 | 3 | 15 | | | 3 | 0 | | | | | | | | Temporary Road to be constructed. Decommission upon Completion Log Haul | As Per Exhibit D |
| TR 13-01A | 0+00 | 28+00 | 0.53 | 3 | 15 | | | 3 | 0 | | | | | | | | Temporary Road to be constructed. Decommission upon Completion Log Haul | As Per Exhibit D |
| TR 13-01B | 0+00 | 7+90 | 0.15 | 3 | 15 | | | 3 | 0 | | | | | | | | Temporary Road to be constructed. Decommission upon Completion Log Haul | As Per Exhibit D |
| TR 13-03 | 0+00 | 14+23 | 0.27 | 3 | 15 | | | 3 | 0 | | | | | | | | Temporary Road to be constructed. Decommission upon Completion Log Haul | As Per Exhibit D |
| TR 11-01G | 0+00 | 1+40 | 0.23 | 3 | 15 | | | 3 | 0 | | | | | | | | Temporary Road to be constructed. Decommission upon Completion Log Haul | As Per Exhibit D |
| TR 11-08 | 0+00 | 2+62 | 0.05 | 3 | 15 | | | 3 | 0 | | | | | | | | Temporary Road to be constructed. Decommission upon Completion Log Haul | As Per Exhibit D |
| TR 01-08 | 0+00 | 16+23 | 0.31 | 3 | 15 | | | 3 | 0 | | | | | | | | Temporary Road to be constructed. Decommission upon Completion Log Haul | As Per Exhibit D |
| TEMP BYPASS | 0+00 | 2+30 | 0.04 | 3 | 15 | | | 3 | 0 | | | | | | | | Temporary Road to be constructed. Fully Decommission upon Completion Log Haul | As Per Exhibit D |
| TR 23-04 | 0+00 | 5+72 | 0.11 | 3 | 15 | | | 3 | 0 | | | | | | | | Temporary Road to be constructed. Decommission upon Completion Log Haul | As Per Exhibit D |
| TR 27-3 | 0+00 | 2+37 | 0.04 | 3 | 15 | | | 3 | 0 | | | | | | | | Temporary Road to be constructed. Decommission upon Completion Log Haul | As Per Exhibit D |

Temp Roads



- TURNOUTS
A. WIDTH TO BE IN ADDITION TO SUBGRADE WIDTH OR AS SHOWN ON THE PLANS.
B. SHOWN AS SHOWN ON THE ROAD PLANS.
C. INTERMISSIBLE AND NOT MORE THAN 10 FT. APART.
- TURNOUTS
A. WIDTH TO BE IN ADDITION TO SUBGRADE WIDTH OR AS SHOWN ON THE PLANS.
B. SHOWN AS SHOWN ON THE ROAD PLANS.
C. INTERMISSIBLE AND NOT MORE THAN 10 FT. APART.
- TURNOUTS
A. WIDTH TO BE IN ADDITION TO SUBGRADE WIDTH OR AS SHOWN ON THE PLANS.
B. SHOWN AS SHOWN ON THE ROAD PLANS.
C. INTERMISSIBLE AND NOT MORE THAN 10 FT. APART.
- SUBGRADE CURVE WIDENING AND ROAD APPROACH APPROX SHALL BE SURFACED.
- CLEARING WIDTH
SEE SUBSECTION 270

ALWAYS THINK SAFETY

| REV. NO. | DESCRIPTION | DATE | APPROV. |
|----------|-------------|------|---------|
| | | | |

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT

SPECIFICATION SHEET

DRAWN: Josh Roberson
DATE: July 2019
DRAWING NO. ORM07-TS18-25-C4

Temp Roads

Exhibit C5

Sale Name: Oh Windy

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Roads Work List

Definitions:

AGG = Aggregate Rock Surface

BST = Bituminous

CL = Center Line

CMP = Corrugated Metal Pipe

CY = Cubic Yard

HDPE = High Density Polyethylene

Jct = Junction/Intersection

MP = Mile Post

NAT = Natural or Native Surface

Pvt = Private (Industry or Citizen)

Seg = Segment

WDS = Waste Disposal Site

Road Renovation/Construction

The road renovation/construction work list consists of road work to be performed by the Purchaser's Representative and/or Contractor **prior** to timber hauling per Section 42(B)(2) of the contract Special Provisions. This work includes, but not limited to, clearing and grubbing; excavation for road construction; compacting, watering, blading and/or rolling the road surface; clearing and reshaping ditch lines; cleaning or enlarging catch basins and outlets; cleaning the entire barrel of all culverts; furnishing and replacing corrugated metal pipes (culverts); maintaining and/or constructing water dips; surfacing or resurfacing roads with crushed rock aggregate; slide removal; seeding and mulching; constructing barricades; and removing all down trees from roadways. All road work shall comply with the contract Special Provisions, Specifications, and Exhibits.

Wood Creek Road System - - See Exhibit C2-2 & C2-4 For Maps

32-6-22.0 Road – Wood Creek (Pvt) – AGG/BST – Sub: 20Ft – Ditch: 3Ft – X-Sect: Crowned

| <u>MP</u> | <u>Description</u> |
|-----------|---|
| 0.00 | Jct w/ Windy Creek Road (County Road). Begin road renovation of aggregate surface road which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. The Purchaser shall be required to furnish and apply non-saline water, or approved equal, during dry hauling periods (dust abatement), when directed by the Contract Officer, for the purpose of laying nuisance dust and to prevent loss of surface material over the next 0.14 miles of road. |
| 0.07 | Existing bridge at Windy Creek crossing. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C11-2. |
| 0.14 | End of aggregate surface and beginning of BST surface. BST road renovation consists of clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. |
| 0.29 | End of bituminous surface and restart of aggregate surface. Continue typical road renovation of aggregate surface. |
| 0.43 | Existing HDPE culvert |
| 0.60 | Existing HDPE culvert |
| 0.69 | Existing HDPE culvert |
| 0.71 | Existing CMP at Wood Creek trib crossing. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C11-2. |
| 1.00 | Existing CMP |
| 1.06 | Existing CMP at Wood Creek trib crossing. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C11-2. |
| 1.12 | Existing HDPE culvert |
| 1.25 | Existing CMP |

Exhibit C5

Sale Name: Oh Windy

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| | |
|------|---|
| 1.40 | Existing CMP |
| 1.49 | Existing CMP |
| 1.63 | Existing CMP |
| 1.74 | Jct w/ 32-6-15.0 Road on right. |
| 1.91 | Jct w/ 32-6-15.3 Road on right. |
| 2.03 | Existing CMP |
| 2.06 | Existing CMP |
| 2.12 | Existing CMP |
| 2.22 | Existing CMP |
| 2.32 | End road renovation. Jct w/ 32-6-9.0 Road on right. |

32-6-9.0 Road – Wood Crk Sp 1 (Pvt) – AGG – Sub: 20Ft – Ditch: 3Ft – X-Sect: Crowned

| <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Jct w/ 32-6-22.0 Road. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; spot rocking; and roadside brushing and chipping. |
| 0.07 | Existing 72" CMP at Wood Creek Rt Frk crossing. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C11-2. |
| 0.11 | Jct w/ private spur on left. |
| 0.20 | Existing CMP |
| 0.27 | Existing CMP |
| 0.35 | Existing CMP |
| 0.41 | Existing CMP |
| 0.53 | Existing CMP |
| 0.73 | Existing CMP |
| 0.83 | Existing HDPE culvert |
| 0.97 | Existing CMP |
| 1.09 | Existing CMP |
| 1.18 | Existing CMP |
| 1.26 | Existing HDPE culvert |
| 1.32 | Jct w/ 32-6-3.0 Road on right. |
| 1.39 | Existing HDPE culvert |
| 1.57 | Existing CMP |
| 1.70 | Existing CMP |
| 1.83 | Existing CMP |
| 2.30 | Begin spot rocking with 100 CYs of 1-1/2"-minus crushed rock (rough 3" lift). |
| 2.40 | End spot rocking. |
| 2.58 | Three way intersection. Jct w/ 32-6-3.1 Road on right, 32-6-3.2 Road straight ahead, and 32-6-9.0 Road continues on left. End road renovation. |

32-6-3.1 Road – Logging Road (Pvt & BLM) – AGG – Sub: 16Ft – Ditch: 3Ft – X-Sect: Crowned

| <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Three way intersection. Jct w/ road 32-6-3.2 Road and 32-6-9.0 Road on left. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. |
| 0.01 | Existing CMP |
| 0.14 | Existing CMP |
| 0.23 | Jct w/ 32-6-3.6 Road on right. |

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Sale Name: Oh Windy

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- 0.28 Existing CMP
- 0.30 Property line into BLM. End Pvt road control/Begin BLM road control.
- 0.42 Existing CMP
- 0.43 End road renovation. Reconstruct turnaround area. WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.

32-6-3.2 Road – Logging Road (Pvt & BLM) – AGG – Sub: 16Ft – Ditch: 3Ft – X-Sect: Crowned

- | <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Three way intersection. Jct w/ 32-6-9.0 Road on left and 32-6-3.1 Road on right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. |
| 0.06 | Existing CMP |
| 0.27 | Existing CMP |
| 0.32 | Property line into BLM. End Pvt road control/Begin BLM road control. |
| 0.39 | Jct w/ Temp Route 03-04 on right. See Exhibit C2-5 for Temp Route map and specifications. |
| 0.40 | Jct w/ 32-6-3.4 Road on left. |
| 0.43 | Jct w/ 32-6-3.3 Road on left. |
| 0.50 | End road renovation. Construct truck turnaround. WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic. |

32-6-3.6 Road – No Name Spur – NAT – Sub: 16Ft – Ditch: 0Ft – X-Sect: Insloped

- | <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Jct w/ 32-6-3.1 Road. Begin road renovation which includes reshaping road surface (blading) to road specifications; clearing and reshaping inboard flowlines; constructing water dips, and roadside brushing and chipping. |
| 0.04 | Construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material. |
| 0.10 | Construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material. |
| 0.14 | End road renovation. Construct truck turnaround. WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic. |

32-6-3.0 Road – Wooden Bear (Pvt & BLM) – AGG/NAT – Sub: 15Ft – Ditch: 3/0Ft – X-Sect: Crowned/Outsloped

- | <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Jct w/ 32-6-9.0 Road. Beginning of aggregate surface road with ditches and crowned road prism. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; slide removal; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; constructing water dips; and roadside brushing and chipping. |
| 0.03 | Existing CMP at Wood Creek crossing. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C11-2. |
| 0.09 | Remove 5 CY slide from ditch line. Haul material to WDS at MP 0.37. |
| 0.19 | Remove 5 CY slide from ditch line. Haul material to WDS at MP 0.37. |
| 0.26 | Existing CMP at Wood Creek crossing. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C11-2. |

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- 0.37 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 0.40 Private quarry on right
- 0.42 Existing CMP
- 0.46 Jct w/ private spur on right.
- 0.60 End of aggregate surface; beginning of native surface road with no ditches. End of crowned road prism; beginning of outsloped road prism.
- 0.70 Existing CMP
- 0.86 Jct w/ private spur on right.
- 1.09 Construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 1.11 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 1.41 Jct w/ private spur on left.
- 1.43 Jct w/ Temp Route 11-02 on right. See Exhibit C2-6 for Temp Route map and specifications.
- 1.55 Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 1.60 Remove existing water bar.
- 1.61 Private quarry on left.
- 1.64 Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 1.75 Remove existing water bar.
- 1.76 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 1.78 Remove existing water bar
- 1.85 Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 1.91 Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 1.97 Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 2.02 Remove existing water bar
- 2.05 Remove existing water bar
- 2.09 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 2.10 Remove existing water bar
- 2.13 Remove existing water bar
- 2.17 Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 2.22 Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 2.27 Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.

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- material.
- 2.32 Remove existing water bar
- 2.36 Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 2.40 Remove existing water bar
- 2.44 Remove existing water bar
- 2.49 Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 2.51 Jct w/ private spur on left.
- 2.59 Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 2.69 Remove existing water bar
- 2.70 Jct w/ private spur on right.
- 2.71 Existing CMP
- 2.74 Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 2.80 Remove existing water bar
- 2.85 Remove existing water bar
- 2.89 Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 2.92 Jct w/ ODF spur on right.
- 2.95 Jct w/ ODF spur on left.
- 2.98 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 3.18 Jct w/ ODF spur on right.
- 3.33 Construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 3.46 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic
- 3.48 Jct w/ Temp Route 01-05 on left. See Exhibit C2-7 for Temp Route map and specifications.
- 3.61 Property line into BLM. End Pvt road control/Begin BLM road control.
- 3.65 Construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 3.89 Jct w/ 32-6-1.0 Road ahead. WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic. End road renovation. See below for continuation.

32-6-1.0 Road – Beyond Wooden Bear (BLM & PVT) – NAT – Sub: 15Ft– Ditch: 0Ft – X-Sect:

| <u>MP</u> | <u>Description</u> |
|-----------|---|
| 0.00 | Jct w/ 32-6-3.0 Road. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; constructing water dips; and roadside brushing and chipping. |

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- 0.11 Construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 0.24 Jct w/ skid road on left.
- 0.26 Saddle area. WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 0.34 Construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 0.40 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 0.44 Construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 0.53 End road renovation. Reconstruct turnaround area.

32-6-15.0 Road – Myrtlewood (BLM) – AGG – Sub: 16Ft– Ditch: 3Ft – X-Sect: Crowned

- | <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Jct w/ 32-6-22.0 Road. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. |
| 0.04 | Remove existing damaged gate and replace gate per specifications and Exhibit C13. |
| 0.07 | Existing CMP |
| 0.17 | Existing CMP |
| 0.24 | Existing CMP |
| 0.28 | Existing CMP |
| 0.31 | Property line into BLM. |
| 0.35 | WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic. |
| 0.38 | Existing CMP |
| 0.44 | Existing CMP |
| 0.48 | Existing CMP |
| 0.53 | Existing CMP |
| 0.58 | Existing CMP |
| 0.60 | WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic. |
| 0.66 | Existing CMP |
| 0.75 | Existing CMP |
| 0.82 | Existing CMP |
| 0.87 | Existing CMP |
| 0.90 | Existing CMP |
| 0.96 | Existing CMP |
| 0.99 | Jct w/ 32-6-15.1 Road on right. End road renovation. WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic. |

32-6-15.1 Road – Redwood (BLM) – AGG – Sub: 16Ft– Ditch: 0Ft – X-Sect: Insloped

- | <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Jct w/ 32-6-15.0 Road. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping inboard flowlines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. |

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- 0.02 Jct w/ ODF spur on left.
- 0.05 Jct w/ ODF spur on left. Property line into ODF.
- 0.24 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 0.28 Existing CMP
- 0.35 Existing CMP
- 0.36 Property line into BLM.
- 0.41 Existing CMP
- 0.42 Jct w/ 32-6-23.1 Road on right.
- 0.48 Property line into ODF.
- 0.57 Jct w/ 32-6-23.0 Road on right.
- 0.58 Property line into BLM.
- 0.66 End road renovation. Reconstruct turnaround area. WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.

32-6-23.0 Road – Sapwood (BLM) – AGG – Sub: 16Ft – Ditch: 0Ft – X-Sect: Insloped

- | <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Jct w/ 32-6-15.1 Road. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping inboard flowlines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. |
| 0.02 | Property line into BLM. |
| 0.07 | Existing CMP |
| 0.13 | Existing CMP |
| 0.20 | WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic. |
| 0.28 | Existing CMP. |
| 0.43 | End road renovation. Reconstruct turnaround area. WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic. |

32-6-23.1 Road – No Name (BLM) – NAT – Sub: 16Ft – Ditch: 0Ft – X-Sect: Outsloped

- | <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Jct w/ 32-6-15.1 Road. Begin road renovation which includes reshaping road surface (blading) to road specifications; constructing water dips; and roadside brushing and chipping. |
| 0.01 | Remove existing barricade. |
| 0.02 | Remove existing water bar. |
| 0.04 | Remove existing water bar |
| 0.05 | Construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material. |
| 0.06 | Remove existing water bar. |
| 0.09 | Remove existing water bar. |
| 0.11 | Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material. |
| 0.15 | Remove existing water bar. |
| 0.17 | Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material. |

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- 0.19 Remove existing water bar.
- 0.21 Remove existing water bar and construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 0.23 Remove existing water bar.
- 0.24 End road renovation at BLM property line. Construct turnaround area.

Bear Creek Road System - - See Exhibit C2-8 For Map

32-5-18.0 Road – Bear Ridge Rd (ODF & BLM) – AGG/NAT– Sub: 15Ft – Ditch: 3Ft – X-Sect:

Crowned/Outsloped

MP

Description

- 0.00 Jct w/ ODF's portion of the Windy Creek Road. Beginning of aggregate surface road with ditches and crowned road prism. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; constructing water dips; roadside brushing and chipping; replacing culverts; and rocking road surface.
Begin rocking road surface upon written acceptance of roadbed preparation. Properly place, water, and roll a 14' wide by 8" compacted in place depth of 1-1/2"-minus crushed rock material from an approved weed free commercial source per contract specifications (1200) and drawings.
- 0.10 Existing gate
- 0.50 Existing 42" CMP at Windy Creek trib crossing to be removed and replaced with a 48" x 60' CMP per project details and specifications. Drop new culvert outlet 4' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. Apply seed and mulch to disturbed areas to stabilize embankment material. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C11-2.
- 0.58 Existing HDPE culvert
- 0.60 Existing HDPE culvert
- 0.70 Existing HDPE culvert
- 0.76 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 0.77 Jct w/ ODF spur on right.
- 0.90 Existing HDPE culvert
- 1.03 Existing 18" CMP to be removed and replaced with a 30" x 50' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. Apply seed and mulch to disturbed areas to stabilize embankment material.
- 1.05 Jct w/ private road on right.
- 1.06 Existing HDPE culvert
- 1.09 Existing HDPE culvert
- 1.11 Property line into BLM.
- 1.12 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 1.17 Property line into ODF.
- 1.22 Existing HDPE culvert

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- 1.27 Jct w/ Temp Route 13-01-A on left. See Exhibit C2-9 for Temp Route map and specifications.
- 1.28 Existing HDPE culvert
- 1.71 Existing 24" CMP to be removed and replaced with a 30" x 45' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. Apply seed and mulch to disturbed areas to stabilize embankment material.
- 1.83 Existing HDPE culvert
- 1.90 Existing 18" CMP to be removed and replaced with a 24" x 45' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. Apply seed and mulch to disturbed areas to stabilize embankment material.
- 1.98 Existing 18" CMP to be removed and replaced with a 30" x 45' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. Apply seed and mulch to disturbed areas to stabilize embankment material.
- 2.02 Existing 66" CMP at Bear Creek crossing. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C11-2.
- 2.03 Jct w/ State spur on right. End of existing aggregate surface; beginning of native surface road with varying ditches. End road rocking with 1-1/2"-minus crushed rock. Begin rocking road surface upon written acceptance of roadbed preparation. Properly place, water, and roll a 14' wide by 8" compacted in place depth of 4"-minus screened rock material from an approved weed free commercial source per contract specifications (900) and drawings.
- 2.04 Existing CMP
- 2.08 Existing 24" CMP to be removed and replaced with a 24" x 38' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. Apply seed and mulch to disturbed areas to stabilize embankment material.
- 2.13 Existing HDPE culvert
- 2.25 Existing 30" CMP to be removed and replaced with a 36" x 50' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. Apply seed and mulch to disturbed areas to stabilize embankment material.
- 2.46 Existing HDPE culvert
- 2.52 Property line into BLM.
- 2.54 Existing 18" CMP to be removed and replaced with a 24" x 35' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. Apply seed and mulch to disturbed areas to stabilize embankment material.
- 2.64 Existing 18" CMP to be removed and replaced with a 24" x 42' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. Apply

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- seed and mulch to disturbed areas to stabilize embankment material.
- 2.70 Existing 18" CMP to be removed and replaced with a 24" x 40' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. Apply seed and mulch to disturbed areas to stabilize embankment material.
- 2.74 Jct w/ Temp Route 13-03 on left. See Exhibit C2-10 for Temp Route map and specifications.
- 2.89 Property line into ODF.
- 2.97 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 2.98 Jct w/ 32-6-14.0 Road on left. End of crowned road prism (Seg A); beginning of outsloped road prism (Seg B-G).
- 3.05 Property line into BLM.
- 3.14 Jct w/ Oper Spur 11-01G on left. See Exhibit C2-10 for map and specifications.
- 3.43 Jct w/ Temp Route 11-08 on right. See Exhibit C2-11 for Temp Route map and specifications.
- 3.68 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 3.99 Property line into ODF.
- 4.12 Property line into BLM.
- 4.77 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 4.90 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 4.94 Construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 4.99 Construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 5.09 Existing 18" CMP to be removed and replaced with a 24" x 35' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 5.18 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 5.22 Construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 5.29 Construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 5.35 Construct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 5.47 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 5.51 Jct w/ Temp Route 01-08 on left. See Exhibit C2-12 for Temp Route map and specifications.
- 5.97 Jct w/ spur road on left.
- 6.20 End road renovation and rocking. Reconstruct turnaround area. WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.

32-6-14.0 Road – ODF Spur (ODF) – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

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- 0.00 Jct w/ 32-5-18.0 Road and ODF spur. Begin road renovation which includes reshaping road surface (blading) to road specifications and roadside brushing and chipping.
- 0.10 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 0.43 End road renovation. Construct truck turnaround.

Windy Creek Road System - - See Exhibit C2-13 For Map

32-6-13.0 Road – Mud Hole (ODF) – AGG/NAT – Sub: 15Ft – Ditch: 3Ft – X-Sect: Crowned

- | <u>MP</u> | <u>Description</u> |
|-----------|---|
| 0.00 | Jct w/ ODF's portion of the Windy Creek Road. Beginning of aggregate surface road with ditches and crowned road prism. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; roadside brushing and chipping; installing/replacing culverts; and rocking road surface. Begin rocking road surface upon written acceptance of roadbed preparation. Properly place, water, and roll a 14' wide by 8" compacted in place depth of 1-1/2"-minus crushed rock material from an approved weed free commercial source per contract specifications (1200) and drawings. |
| 0.05 | Existing CMP. |
| 0.06 | Existing ODF railcar bridge across Windy Creek (CoHo). End road rocking with 1-1/2"-minus crushed rock. Construct by-pass road w/ temporary bridge spanning bank to bank to ensure safe passage across creek due to inability to load rate the existing ODF railcar bridge. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C11-2. See Exhibit C2-14 for by-pass road map and specifications. |
| 0.07 | End bridge. Beginning of native surface road with ditches and crowned road prism. Begin rocking road surface upon written acceptance of roadbed preparation. Properly place, water, and roll a 14' wide by 8" compacted in place depth of 4"-minus screened rock material from an approved weed free commercial source per contract specifications (900) and drawings. |
| 0.08 | Existing trash pile. Remove and properly dispose of material at transfer station. |
| 0.13 | Existing Gate |
| 0.18 | Existing 30" CMP to be removed and replaced with a 30" x 33' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. |
| 0.32 | Install a new 24" x 33' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. |
| 0.38 | Existing 18" CMP to be removed and replaced with a 24" x 33' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. |
| 0.57 | Existing 30" CMP to be removed and replaced with a 36" x 35' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. |

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- 0.64 Existing 18" CMP to be removed and replaced with a 30" x 35' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 0.77 Existing 30" CMP to be removed and replaced with a 36" x 35' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 0.90 Jct w/ ODF spur on left. WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 0.92 Existing 24" CMP to be removed and replaced with a 30" x 33' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 0.97 Existing 24" CMP to be removed and replaced with a 30" x 35' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 1.07 Install a new 24" x 33' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 1.10 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 1.17 Existing 30" CMP to be removed and replaced with a 36" x 40' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 1.28 Existing 18" CMP to be removed and replaced with a 24" x 36' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 1.34 Existing 18" CMP to be removed and replaced with a 24" x 40' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 1.42 Existing 24" CMP to be removed and replaced with a 30" x 45' CMP per project details and specifications. Drop new culvert outlet 2' lower than the existing outlet. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 1.53 Existing 18" CMP to be removed and replaced with a 24" x 34' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 1.57 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 1.77 Existing 18" CMP to be removed and replaced with a 24" x 32' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 1.99 Jct w/ new 32-5-18.1 Road on right. End road renovation. End road surfacing.

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32-5-18.1 Road – (BLM & Pvt) – New Road Construction/Reconstruction

| <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Jct w/ 32-6-13.0 Road. Begin road construction/reconstruction which includes clearing and grubbing; excavation; reshaping road surface (blading, watering, and rolling) to road specifications; installing/replacing culverts; roadside brushing and chipping; rocking road surface. Begin rocking road surface upon written acceptance of roadbed preparation. Properly place, water, and roll a 14' wide by 8" compacted in place depth of 4"-minus screened rock material from an approved weed free commercial source per contract specifications (900) and drawings. See Exhibit C12 Plan and Profile Sheets and Exhibit C4 Specification Sheets for road prism specifications and stationing. |
| 0.03 | Remove existing berm. |
| 0.05 | Property line into BLM. |
| 0.08 | Remove existing berm. |
| 0.13 | Remove existing berm. |
| 0.16 | Remove existing berm. |
| 0.23 | End road reconstruction. Begin new road construction. |
| 0.24 | Install a new 18" x 40' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. |
| 0.37 | Construct turnaround area. |
| 0.40 | Install a new 18" x 48' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. |
| 0.55 | Property line into Pvt. |
| 0.57 | Install a new 18" x 33' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. |
| 0.64 | CAUTION! Natural Gas Line Crossing. A minimum 5 feet of cover is required at crossing. The Purchaser or their designated representative is responsible for contacting Williams Pipeline a minimum of 72 hours prior to construction activities. A Williams Pipeline representative must be onsite. |
| 0.66 | End new road construction. Begin road reconstruction. Jct w/ pvt spur on right. |
| 0.95 | End road reconstruction. Begin new road construction. Jct w/ pvt spur on right. |
| 1.22 | Property line into BLM. |
| 1.33 | Construct turnaround area. |
| 1.37 | Install a new 18" x 43' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. |
| 1.41 | Property line into Pvt. |
| 1.45 | Install a new 18" x 33' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. |
| 1.53 | End new road construction. Begin road reconstruction. |
| 1.57 | Jct w/ Pvt spur on right. |
| 1.87 | Jct w/ Pvt spur and Temp Route 23-04 on right. See Exhibit C2-15 for Temp Route map and specifications. |
| 2.84 | End road reconstruction. Begin new road construction. |
| 2.90 | Install a new 18" x 33' CMP per project details and specifications. Supply and properly place |

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- 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 3.02 Install a new 18" x 33' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 3.13 Install a new 18" x 33' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 3.15 Property line into BLM.
- 3.24 Install a new 18" x 33' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 3.36 Install a new 18" x 35' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings.
- 3.40 Jct w/ Temp Route 27-3 on left. See Exhibit C2-16 for Temp Route map and specifications.
- 3.50 Construct turnaround area.
- 3.84 End new road construction. Construct turnaround area. End road rocking.

Fortune Branch Road System - - See Exhibit C2-17 For Map

32-5-20.0 Road – Buckhorn Mtn Rd (BLM) – BST/AGG – Sub: 16Ft – Ditch: 3Ft – X-Sect: Crowned

| <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Jct w/ County Rd (Azalea-Glendale Rd). Beginning of BST surface and BLM maintenance. |
| 0.35 | Existing Cattle Guard |
| 0.63 | Property line into BLM. |
| 0.64 | End of BST surface and BLM maintenance (Seg A). Begin of aggregate surface and Purchaser renovations (Seg B). Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; replacing culverts; rocking surface at culvert replacements; and roadside brushing and chipping. |
| 0.65 | First Jct w/ 32-5-17.0 Road on right |
| 0.67 | Existing 18" CMP to be removed and replaced with a 24" x 42' CMP per project details and specifications. Supply and properly place 2 CY's of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection per contract specifications and drawings. Begin spot rocking upon written acceptance of roadbed preparation after culvert replacement. Properly place, water, and roll a 14' wide by 6" compacted in place depth of 1-1/2"-minus crushed rock material from an approved weed free commercial source per contract specifications (1200) and drawings. |
| 0.68 | Second Jct w/ 32-5-17.0 Road on right |
| 0.74 | Existing bridge at Fortune Branch crossing. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C11-2. |
| 0.79 | Existing CMP |
| 0.90 | Existing CMP |
| 1.00 | Existing CMP |
| 1.06 | Jct w/ 32-5-17.1 Road on left. |
| 1.07 | Existing CMP |
| 1.11 | Existing CMP |

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- 1.14 Remove 2 CY slide from ditch line. Haul material to WDS at MP 1.22.
- 1.20 Existing CMP
- 1.22 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 1.25 Existing CMP
- 1.38 Existing CMP
- 1.46 Existing CMP
- 1.51 Existing CMP
- 1.55 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 1.59 Existing CMP
- 1.66 Existing CMP
- 1.77 Existing CMP
- 1.84 Existing CMP
- 1.90 Existing CMP
- 1.93 Existing CMP
- 2.08 Existing CMP
- 2.11 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 2.12 Jct w/ spur road on right
- 2.19 Existing CMP
- 2.30 Existing CMP
- 2.41 Existing CMP
- 2.48 Property line into State lands.
- 2.50 Existing CMP
- 2.64 Jct w/ 32-5-8.0 Road on left. End road renovation.

32-5-8.0 Road – Buckhorn Rdg Rd (BLM) – AGG – Sub: 15Ft – Ditch: 3Ft – X-Sect: Crowned

- | <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Jct w/ 32-5-20.0 Road. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. |
| 0.15 | Existing CMP |
| 0.18 | Property line into BLM. |
| 0.27 | Existing CMP |
| 0.34 | Existing CMP |
| 0.41 | WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic. |
| 0.44 | Existing CMP |
| 0.56 | Existing CMP |
| 0.60 | Four way intersection. Jct w/ 32-5-8.1 Road and 32-5-8.2 Road on right. WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic. |
| 0.73 | Existing CMP |
| 0.81 | Existing CMP |
| 0.96 | Existing CMP |
| 0.98 | WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic. |
| 1.07 | Existing CMP |

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- 1.18 Existing CMP
- 1.26 Existing CMP
- 1.34 Existing CMP
- 1.38 Existing CMP
- 1.45 Existing CMP
- 1.50 Existing CMP
- 1.54 Existing CMP
- 1.64 Existing CMP
- 1.74 Existing CMP
- 1.83 Existing CMP
- 1.89 Existing CMP
- 1.91 WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
- 1.95 End of aggregate surface; beginning of native surface. End of roadside ditches; beginning of outsloped road.
- 2.09 End road renovation. Reconstruct turnaround area.

32-5-8.1 Road – East Windy Ridge Road (BLM) – AGG – Sub: 17Ft – Ditch: 0Ft – X-Sect: Outsloped

- | <u>MP</u> | <u>Description</u> |
|-----------|--|
| 0.00 | Four way intersection. Jct w/ 32-5-8.0 Road on left and 32-5-8.2 Road on right. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; renovating existing water dips; roadside brushing and chipping; rocking road surface. Begin rocking road surface upon written acceptance of roadbed preparation. Properly place, water, and roll a 14' wide by 6" compacted in place depth of 4"-minus screened rock material from an approved weed free commercial source per contract specifications (900) and drawings. |
| 0.17 | Existing water dip. Reconstruct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material. |
| 0.36 | WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic. |
| 0.40 | Existing CMP |
| 0.45 | Existing water dip. Reconstruct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material. |
| 0.54 | Existing water dip. Reconstruct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material. |
| 0.59 | Existing water dip. Reconstruct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material. |
| 0.64 | Existing water dip. Reconstruct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material. |
| 0.82 | Existing water dip. Reconstruct water dip w/ armored outfall per specifications and details on Exhibit C11-1. Apply seed and mulch to fill slope area to stabilize side cast material. |
| 0.86 | Reconstruct turnaround area. WDS: Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic. |
| 0.90 | End road renovation. End road rocking. |

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Temporary Routes

All Temporary Routes are NAT surface, unless noted otherwise. Subgrade width shall not exceed 15 feet (not including turnouts and truck turn-arounds).

Temp Route 23-04(Tractor Unit)

| STA | Description |
|------|---|
| 0+00 | Jct w/ Windy Creek Road. Begin through-fill construction. See Exhibit C2-3 for map. The Purchaser or their designated representative is responsible for acquiring the proper Douglas County Right of Way Activity Permit prior to construction activities. Install gravel construction entrance 50' long x 14' wide x 4" deep 4"-minus screened rock apron at entrance to ensure native soil material is not transferred onto the Windy Creek Road. NO TRACKED EQUIPMENT WILL BE ALLOWED ON PAVED ROADS. |
| 0+30 | Install 18" X 30' HDPE temporary culvert. Place temp culvert in Windy Creek Rd ditch line matching existing flowline grade and begin temporary fill of road subgrade w/ borrow material from ahead. |
| 0+70 | Begin cut/fill portion of road construction. Utilize excavated embankment at entrance for temp culvert fill. |
| 1+79 | End temp route construction at jct w/ existing Powerline Road. The Purchaser or their designated representative is responsible for acquiring the proper utility company permit for road use prior to construction activities. See below for continuation. |

Powerline Road

| STA | Description |
|-------|---|
| -2+45 | NE end of road; approximate location of landing. Begin renovation which includes reshaping road surface (blading) to road specifications and constructing water dips. |
| -0+90 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 0+00 | Jct w/ Temp Route 23-04(tractor). Construct truck turn-around at Jct |
| 2+10 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 3+80 | SW end of road; approximate location of landing. End renovation. |

Temp Route 03-04

| STA | Description |
|------|--|
| 0+00 | Jct w/ 32-6-3.2 Road. Begin temp route construction. |
| 2+00 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 5+00 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 6+47 | End temp route construction along saddle. Construct truck turnaround area; 60FT radius. |

Temp Route 11-02

| STA | Description |
|------|--|
| 0+00 | Jct w/ 32-6-3.0 Road. Begin temp route construction. The first 250 feet of temp route shall be constructed under the terms and conditions set in the executed License Agreement and Crossing Plat with Juniper Property. |
| 2+50 | Boundary line. Leaving Juniper Property in Section 2 and entering BLM land in Section 11. |
| 2+80 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |

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| | |
|-------|--|
| 5+00 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 7+90 | High point/crest in p-line. |
| 10+00 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 10+85 | End temp route construction. Construct truck turnaround area; 60FT radius. |

Temp Route 01-05

| STA | Description |
|-------|--|
| 0+00 | Jct w/ 32-6-3.0 Road. Begin temp route construction. The first 745 feet of temp route shall be constructed under the terms and conditions set in the executed License Agreement and Crossing Plat with Oregon Dept. of Forestry. |
| 3+50 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 7+45 | Boundary line. Leaving Oregon Dept. of Forestry in Section 2 and entering BLM land in Section 1. |
| 9+00 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 11+00 | Construct truck turnaround area; 60FT radius. |
| 13+77 | End temp route construction. |

Temp Route 13-01-A

| STA | Description |
|-------|---|
| 0+00 | Jct w/ 32-5-18.0 Road. Begin temp route construction. The first 200 feet of temp route shall be constructed under the terms and conditions set in the executed License Agreement and Crossing Plat with Oregon Dept. of Forestry. |
| 2+00 | Boundary line. Leaving Oregon Dept. of Forestry in Section 12 and entering BLM land in Section 13. |
| 7+35 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 9+80 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 11+05 | Construct truck turnaround area; 60FT radius. |
| 14+00 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 16+00 | Jct w/ Temp Route 13-01-B on left. |
| 17+10 | Construct truck turnaround area; 60FT radius. |
| 19+50 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 23+90 | Low point/sag in p-line. Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 25+96 | High point/crest in p-line. |
| 28+00 | End temp route construction. Construct truck turnaround area; 60FT radius. |

Temp Route 13-01-B

| STA | Description |
|------|--|
| 0+00 | Jct w/ Temp Route 13-01-A. Begin temp route construction. |
| 2+50 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |

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- 5+00 Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope.
- 7+90 End temp route construction along saddle. Construct truck turnaround area; 60FT radius.

Temp Route 13-03

- | STA | Description |
|-------|---|
| 0+00 | Jct w/ 32-5-18.0 Road. Begin temp route construction. |
| 3+00 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 6+50 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 7+58 | Boundary line. Leaving BLM land in Section 11 and entering Oregon Dept. of Forestry in Section 14. This 259 feet of temp route shall be constructed under the terms and conditions set in the executed License Agreement and Crossing Plat with Oregon Dept. of Forestry. |
| 10+17 | Boundary line. Leaving Oregon Dept. of Forestry in Section 14 and entering BLM land in Section 13. |
| 11+90 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 13+80 | Construct truck turnaround area; 60FT radius. |
| 14+23 | End temp route construction. |

Operator Spur 11-01G - (Not appraised under engineering section – listed for reference only)

- | STA | Description |
|------|---|
| 0+00 | Jct w/ 32-5-18.0 Road. Begin operator spur construction. See timber appraisal for additional information. |
| 1+40 | End operator spur. |

Temp Route 11-08

- | STA | Description |
|------|--|
| 0+00 | Jct w/ 32-5-18.0 Road. Begin temp route reconstruction. |
| 0+92 | High point/crest in p-line. |
| 2+62 | End temp route construction. Construct truck turnaround area; 60FT radius. |

Temp Route 01-08

- | STA | Description |
|-------|--|
| 0+00 | Jct w/ 32-5-18.0 Road. Begin temp route construction. |
| 2+10 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 4+05 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 6+00 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 8+00 | High point/crest in p-line. |
| 9+20 | Construct truck turnaround area; 60FT radius. |
| 10+80 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 12+50 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 16+23 | End temp route construction. Construct truck turnaround area; 60FT radius. |

Exhibit C5

Sale Name: Oh Windy

Page 20 of 20

Temp By-Pass Road

| STA | Description |
|------|---|
| 0+00 | Jct w/ 32-6-13.0 Road. Begin temp by-pass road construction. Properly place, water, and roll a 14' wide by 12" compacted in place depth of 1-1/2"-minus crushed rock material from an approved weed free commercial source per contract specifications (1200) and drawings. |
| 0+40 | Install temporary 18" x 25' HDPE pipe keeping it in-line with existing culvert within ODF's 32-6-13.0 Road. |
| 1+85 | Intersect w/ center of Windy Creek (Coho habitat). Install temporary bridge/structure spanning from bank to bank. End rocking. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C6-2. |
| 2+30 | Jct w/ 32-6-13.0 Road. Grade to match existing road elevation. End temp by-pass road construction. |

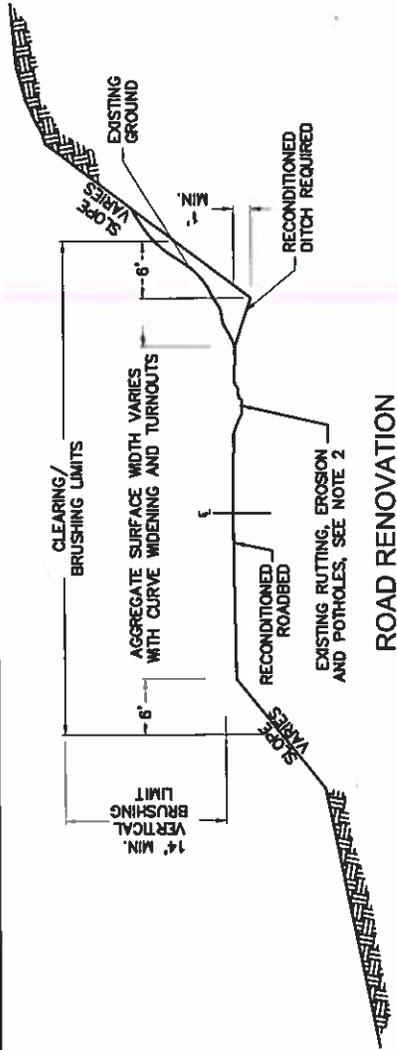
Temp Route 23-04 (Cable)

| STA | Description |
|------|---|
| 0+00 | Jct w/ 32-5-18.1 Road. Begin temp route reconstruction. The temp route shall be reconstructed under the terms and conditions set in the executed License Agreement and Crossing Plat with Weyerhaeuser Company. |
| 1+50 | Begin heavy blading of existing footprint to acquire maximum 18% CL grade. |
| 2+90 | End heavy blading of existing footprint. |
| 3+10 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 4+07 | End temp route reconstruction; begin temp route construction. |
| 4+40 | Boundary line. Leaving Weyerhaeuser Company in the SE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 23 and entering BLM land in the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 23. |
| 5+72 | End temp route construction. Construct truck turnaround area; 60FT radius. |

Temp Route 27-3

| STA | Description |
|------|--|
| 0+00 | Jct w/ 32-5-18.1 Road. Begin temp route construction. |
| 1+65 | Construct water dip per specifications and details on Exhibit C11-1 with the exception of armoring the fill slope. |
| 2+37 | End temp route construction. Construct truck turnaround area; 60FT radius. |

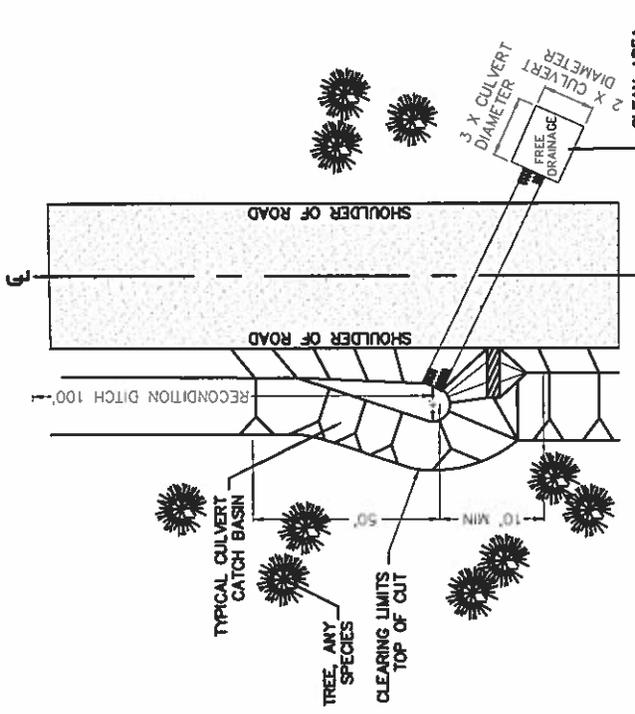
EXHIBIT C6



ROAD RENOVATION

NOTES:

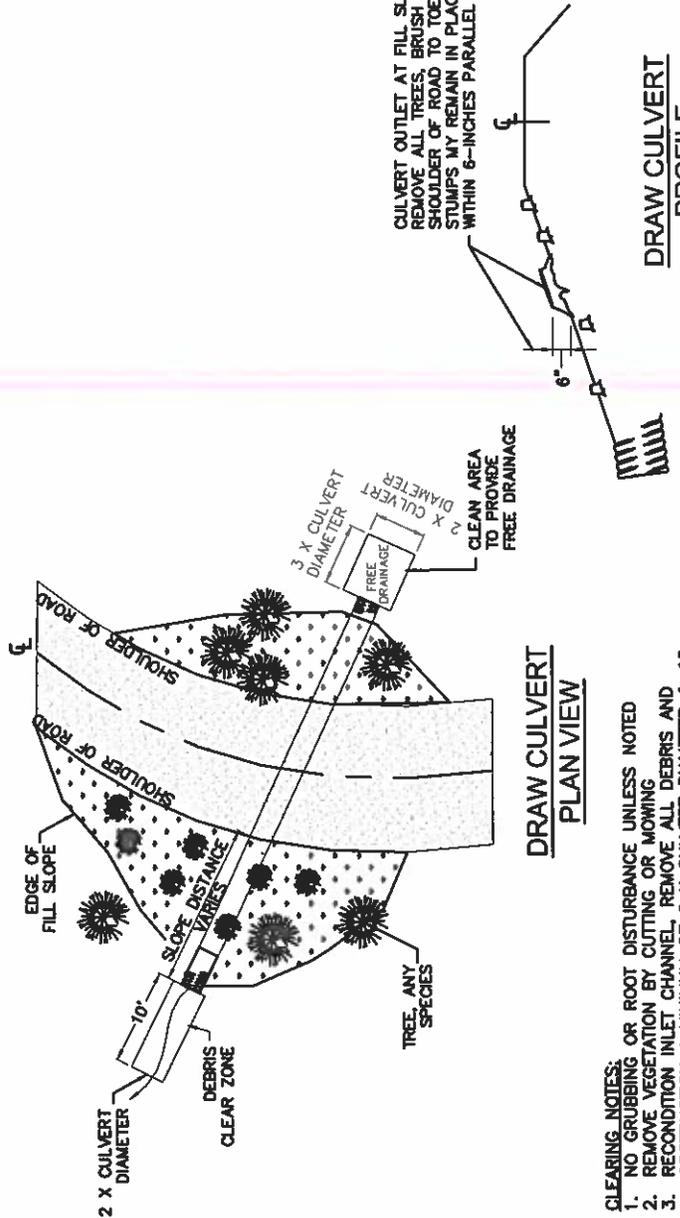
1. RECONITION ROADS AS SHOWN AND IN ACCORDANCE WITH SECTION 500 OF THE SPECIFICATIONS. REQUIRED RECONITIONING INCLUDES CURVE WIDENING AND TURNOUTS. DITCH RECONITIONING INCLUDES CLEANING CULVERT INLETS AND OUTLETS.
2. WHERE RUTTING, EROSION AND POTHOLES EXIST, SCARIFY TO DEPTH OF RUT/EROSION/POTHOLE, BLADE, SHAPE AND COMPACT EXISTING AGGREGATE OR NATIVE SURFACE MATERIAL.
3. REMOVE AND DISPOSE OF SLIDE, DITCH, AND CATCH BASIN MATERIAL DISPOSAL SITE LOCATIONS AS STAKED ON THE GROUND. DISPOSAL/WASTE SITES SHALL BE APPROVED BY THE AUTHORIZED OFFICER PRIOR TO USE. SEE VICINITY MAP FOR DISPOSAL SITE LOCATIONS/ OR AS STAKED ON GROUND.
4. MATCH EXISTING TRAVEL WAY CROSS SLOPE. THE TRAVELED WAY SHALL BE SHAPED TO THE EXISTING CROSS SLOPE. EXISTING ROADS WHICH ARE CROWNED SHALL BE AT 3% FROM CENTERLINE ROAD, INSLOPED AS IS, OUTSLOPED AS IS.



CROSS DRAIN CULVERT PLAN VIEW

CLEARING NOTES:

1. NO GRUBBING OR ROOT DISTURBANCE UNLESS NOTED
2. REMOVE VEGETATION BY CUTTING OR MOWING
3. RECONITION CULVERT CATCH BASIN A MINIMUM OF 4' FROM CULVERT INLET



DRAW CULVERT PLAN VIEW

CLEARING NOTES:

1. NO GRUBBING OR ROOT DISTURBANCE UNLESS NOTED
2. REMOVE VEGETATION BY CUTTING OR MOWING
3. RECONITION INLET CHANNEL REMOVE ALL DEBRIS AND OBSTRUCTION A MINIMUM OF 2 X CULVERT DIAMETER & 10 FEET LONG

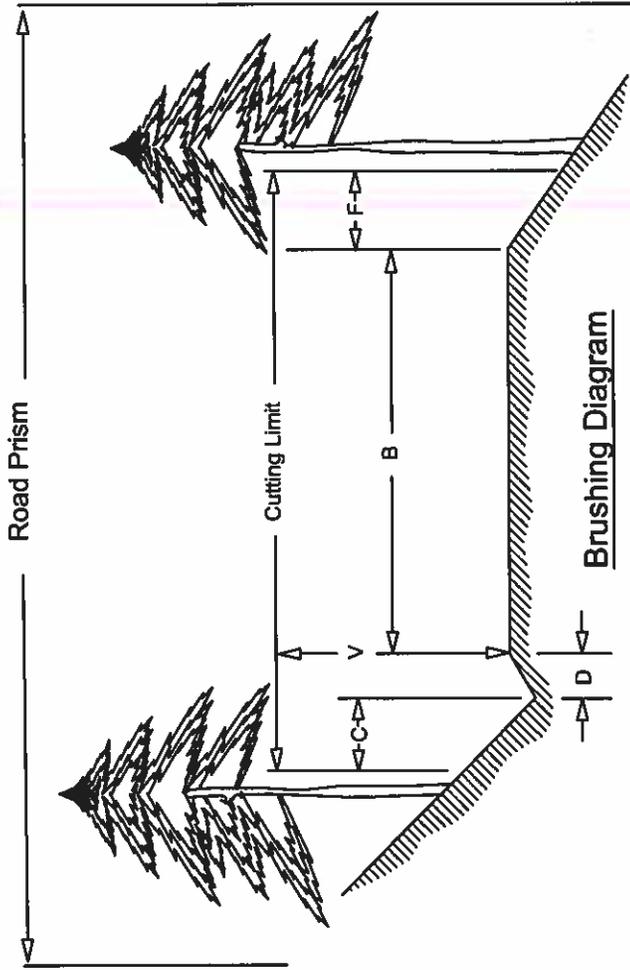
CULVERT OUTLET AT FILL SLOPE. REMOVE ALL TREES, BRUSH AND DEBRIS FROM SHOULDER OF ROAD TO TOE OF FILL. STUMPS MY REMAIN IN PLACE, FLUSH CUT WITHIN 6-INCHES PARALLEL TO THE SLOPE

ALWAYS
THINK
SAFETY

DRAW CULVERT PROFILE

| REV. NO. | DESCRIPTION | DATE | APPROV. |
|---|---------------|------|---------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE TYPICAL ROAD RENOVATION | | | |
| DRAFTED BY: BLM | SCALE: NONE | | |
| DATE: JULY 2019 | SHEET: 1 OF 1 | | |
| DRAWING NO.: OR-11-9113.4.4 | | | |

EXHIBIT C7



Brushing Diagram

Cutting Limit = C + D + B + F

B = Road Bed Subgrade (includes turnouts)

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

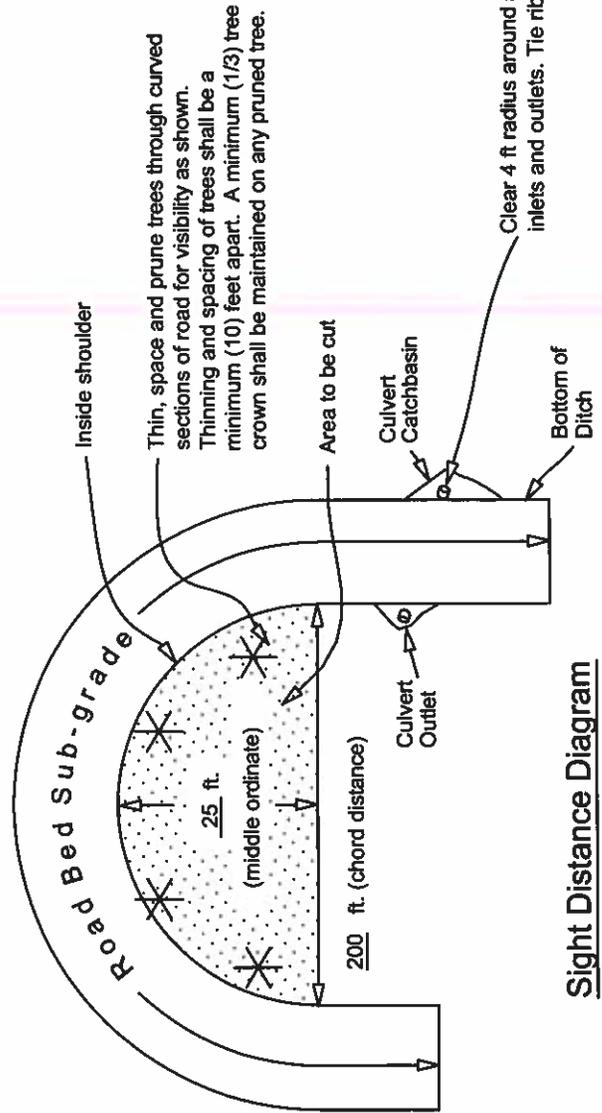
C = 6 ft. - Distance to be brushed on cut slope beyond centerline of ditch. Cut all vegetation to maximum height of 4".

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

F = 6 ft. - Distance to be brushed on fill slope beyond outside shoulder. Cut all vegetation to maximum height of 4".

V = 14 ft. - Height of vertical cutting limit

Inside Corner



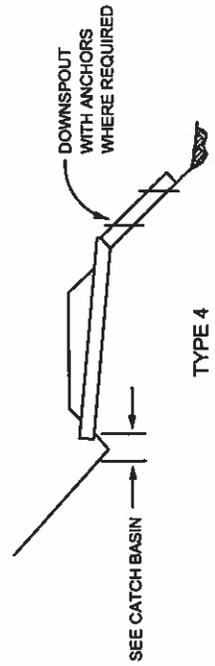
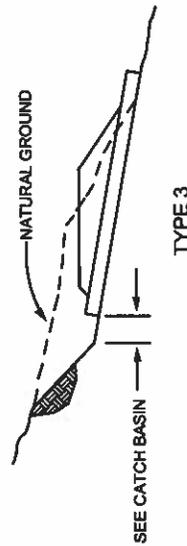
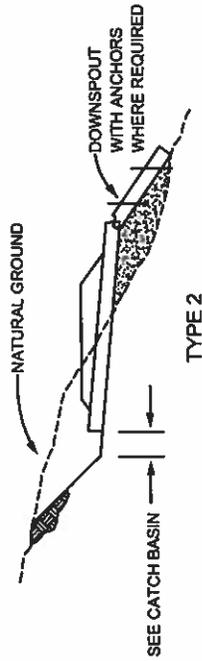
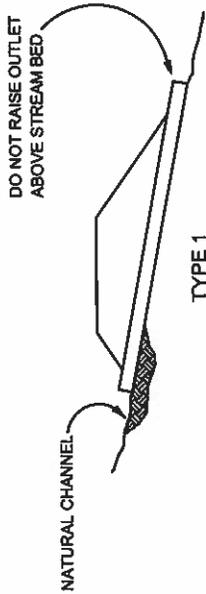
Sight Distance Diagram

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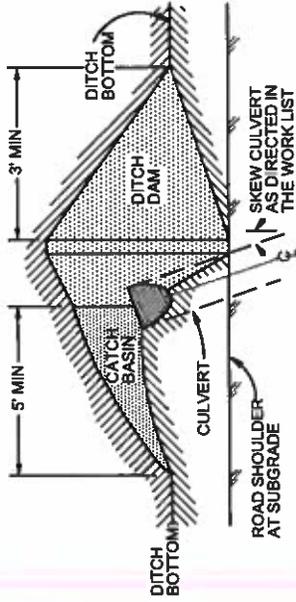
| REV. NO. | DESCRIPTION | DATE | APPROV. |
|---|---------------|------|---------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE | | | |
| ROADSIDE BRUSHING DETAIL | | | |
| DRAFTED BY: BLM | SCALE: NONE | | |
| DATE: JULY 2019 | SHEET: 1 OF 1 | | |
| DRAWING NO.: OR-11-91134-4 | | | |

EXHIBIT C9-1

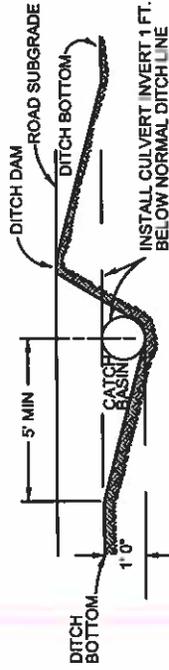
CULVERT INSTALLATION TYPES



CATCH BASIN

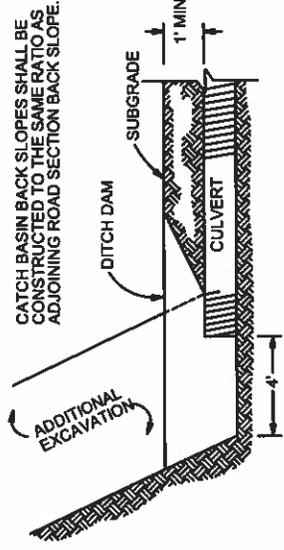


PLAN VIEW



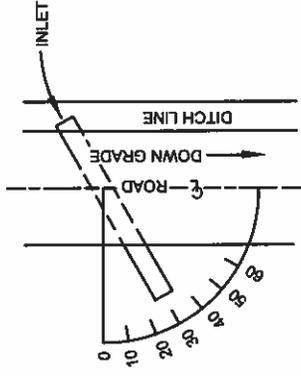
ELEVATION

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



CROSS SECTION AT CATCH BASIN

SKIEW DIAGRAM



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

| REV. NO. | DESCRIPTION | DATE | APPROV. |
|----------|-------------|------|---------|
| | | | |
| | | | |

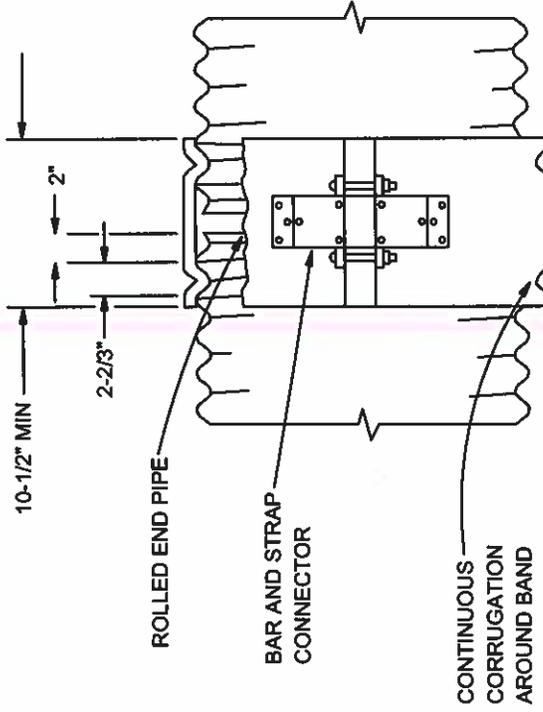
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

OH WINDY TIMBER SALE CULVERT INSTALLATION DETAILS

DRAFTED BY: BLM SCALE: NONE
DATE: JULY 2019 SHEET: 1 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

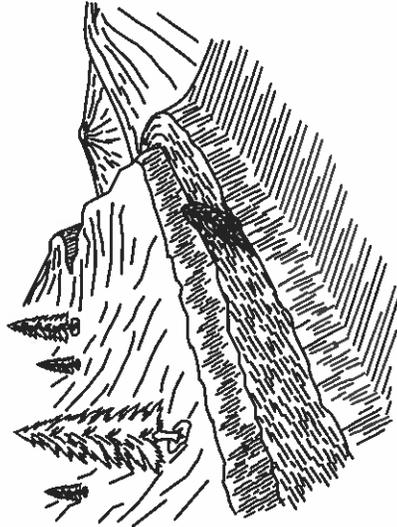
THE HUGGER COUPLER BAND OR AN APPROVED EQUIVALENT COUPLER BAND SHALL BE MADE OF THE SAME MATERIAL AND FINISH AS THE PIPES JOINED. THE COUPLER BANDS SHALL BE A MINIMUM OF 10-1/2 INCHES WIDE AND BE 16 GAUGE OR HEAVIER. THE BAND SHALL BE DESIGNED TO BE DRAWN TOGETHER WITH A MINIMUM OF TWO (2) 1/2 INCH BOLTS 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.

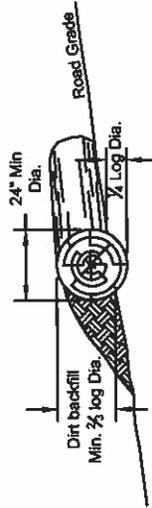
ALWAYS
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SAFETY

| REV. NO. | DESCRIPTION | DATE | APPROV. |
|---|-------------|---------------|---------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE CULVERT BAND DETAIL | | | |
| DRAFTED BY: BLM | | SCALE: NONE | |
| DATE: JULY 2019 | | SHEET: 1 OF 1 | |
| DRAWING NO.: OR-11-9113.4-4 | | | |

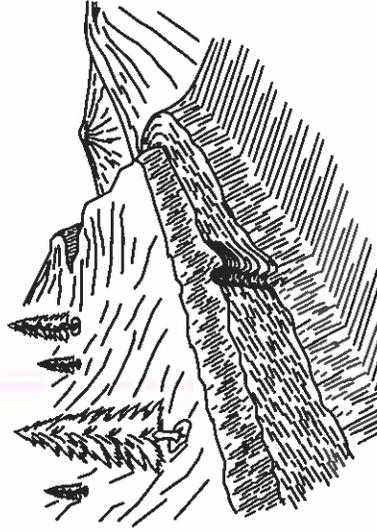
EXHIBIT C11-1



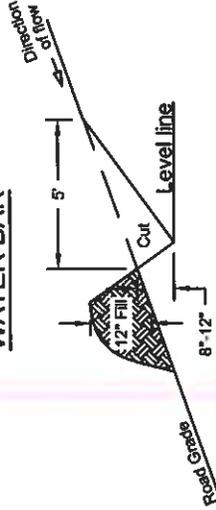
LOG BARRICADE



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



WATER 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.



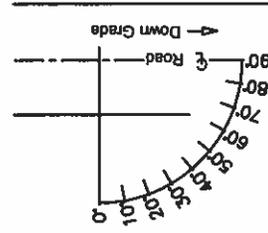
WATER DIP



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

ARMOR FILL SLOPE WITH CLASS 2 RIPRAP MATERIAL AT OUTLET. (3 CYS)

SKEW DIAGRAM



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WATER DIP SPACING*

| ROAD GRADE | SANDY LOAM | DECOMPOSED | CLAY & |
|------------|------------|--------------|-------------|
| % | LOAM | GRANITE/SAND | SILTY SOILS |
| | FEET | FEET | FEET |
| 2-3 | | 2000-1000 | 1200-600 |
| 4-7 | 1200-600 | 950-450 | 600-300 |
| 8-10 | 550-450 | 450-350 | 300-200 |
| 11-15 | 450-300 | 350-200 | 200-100 |
| 16+ | 300-250 | 200-150 | 100 |

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

WATER BAR SPACING* BY EROSION CLASS^A

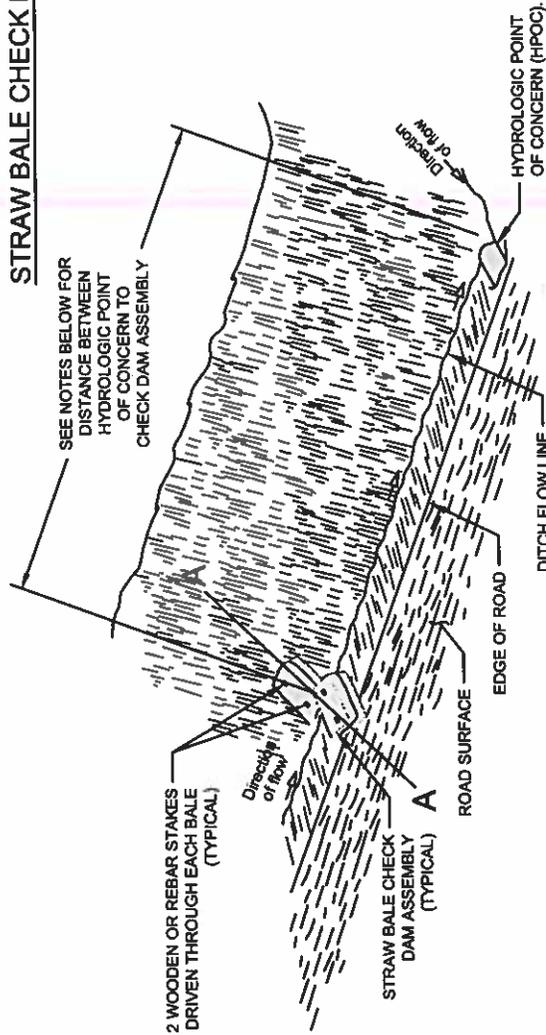
| ROAD GRADE | HIGH | MODERATE | LOW |
|------------|------|----------|------|
| % | FEET | FEET | FEET |
| 2-5 | 200 | 300 | 400 |
| 6-10 | 150 | 200 | 300 |
| 11-15 | 100 | 150 | 200 |
| 16-20 | 75 | 100 | 150 |
| 21-35 | 50 | 75 | 100 |
| 35+ | 50 | 50 | 50 |

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

^A The erosion classes include the following rock types:
 High: Granite, sandstone, andesite porphyry, glacial or alluvial deposits, soft matrix conglomerate, volcanic ash, and pyroclastics.
 Moderate: Basalt, andesite, quartzite, hard matrix conglomerate, and rhyolite.
 Low: Metasediments, metavolcanics, and hard shale.

| REV. NO. | DESCRIPTION | DATE | APPROV. |
|---|-------------|---------------|---------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE DRAINAGE & EROSION CONTROL DETAILS | | | |
| DRAFTED BY: BLM | | SCALE: NONE | |
| DATE: JULY 2019 | | SHEET: 1 OF 2 | |
| DRAWING NO.: OR-11-9113.4-4 | | | |

STRAW BALE CHECK DAM ASSEMBLY



PLAN

NOTES:

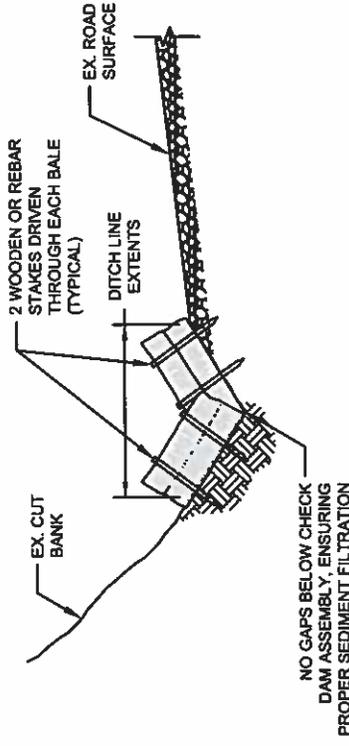
1. All straw bales will be from a weed free certified source.
2. Hydrologic Points of Concern (HPOC) are natural drainage features (ie. streams, creeks, draws) that intersect with existing or proposed roads.
3. If the HPOC is a bridge spanning across a noted or listed critical fish habitat (Coho) waterway,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

INSTALLATION NOTES:

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

INSPECTION/MAINTENANCE NOTES:

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



SECTION A-A

| REV. NO. | DESCRIPTION | DATE | APPROV. |
|---|---------------|------|---------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE DRAINAGE & EROSION CONTROL INSTALLATION | | | |
| DRAFTED BY: BLM | SCALE: NONE | | |
| DATE: JULY 2019 | SHEET: 2 OF 2 | | |
| DRAWING NO.: OR-11-9113-4-4 | | | |

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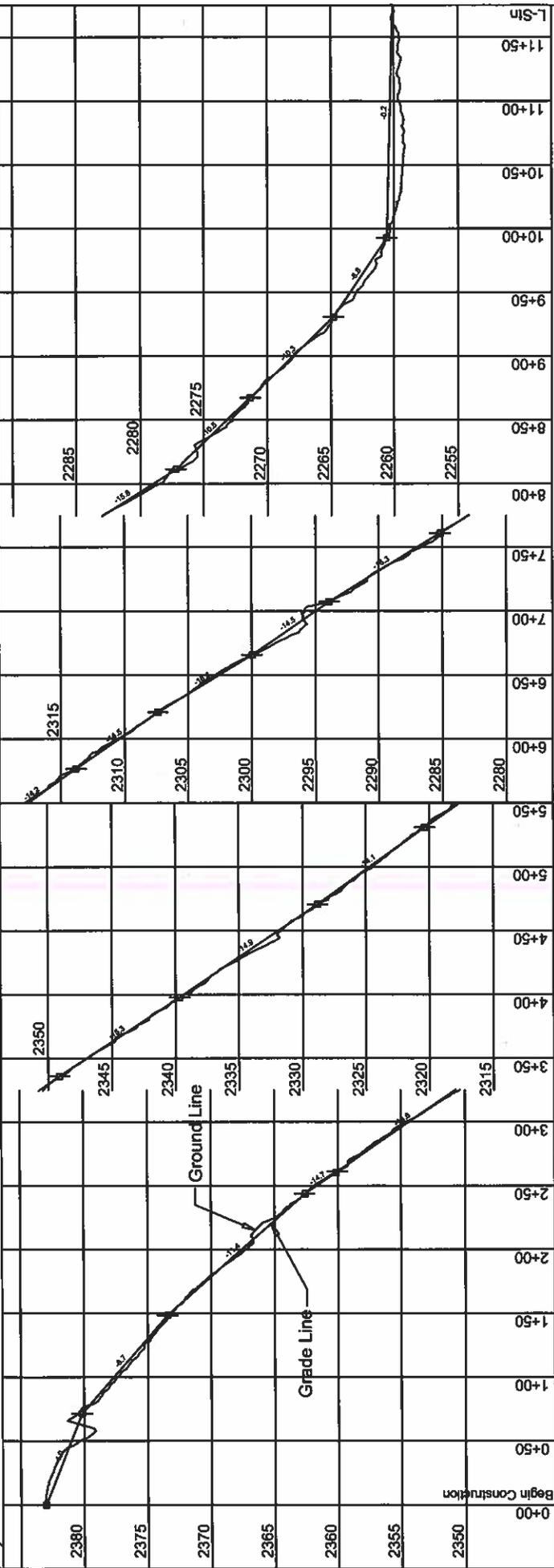
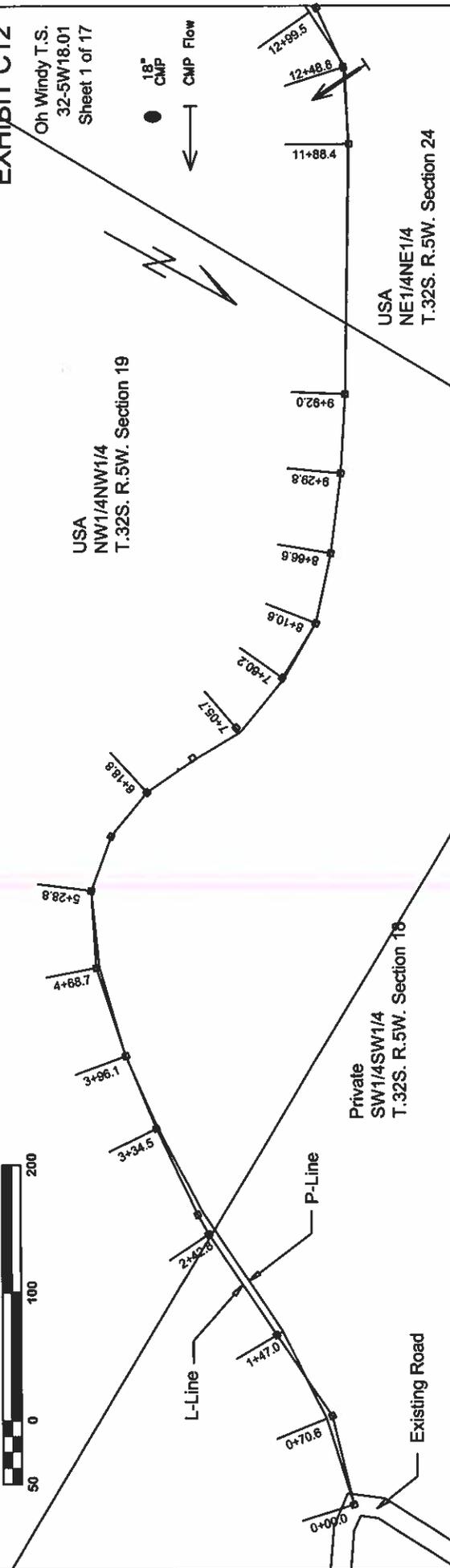
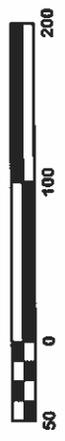
EXHIBIT C12

Oh Windy T.S.
32-5W18.01
Sheet 1 of 17

USA
NW1/4NW1/4
T.32S. R.5W. Section 19

USA
NE1/4NE1/4
T.32S. R.5W. Section 24

Private
SW1/4SW1/4
T.32S. R.5W. Section 18



| Station | Ground Elevation | Grade Elevation |
|---------|------------------|-----------------|
| 0+00 | 2350 | 2350 |
| 0+50 | 2355 | 2355 |
| 1+00 | 2360 | 2360 |
| 1+50 | 2365 | 2365 |
| 2+00 | 2370 | 2370 |
| 2+50 | 2375 | 2375 |
| 3+00 | 2380 | 2380 |
| 3+50 | 2345 | 2345 |
| 4+00 | 2340 | 2340 |
| 4+50 | 2335 | 2335 |
| 5+00 | 2330 | 2330 |
| 5+50 | 2325 | 2325 |
| 6+00 | 2320 | 2320 |
| 6+50 | 2315 | 2315 |
| 7+00 | 2310 | 2310 |
| 7+50 | 2305 | 2305 |
| 8+00 | 2300 | 2300 |
| 8+50 | 2295 | 2295 |
| 9+00 | 2290 | 2290 |
| 9+50 | 2285 | 2285 |
| 10+00 | 2280 | 2280 |
| 10+50 | 2275 | 2275 |
| 11+00 | 2270 | 2270 |
| 11+50 | 2265 | 2265 |
| 12+00 | 2260 | 2260 |
| 12+50 | 2255 | 2255 |

EXHIBIT C12

On Windy T.S.
32-5W18.01
Sheet 3 of 17

Private
E1/2NE1/4
T.32S. R.5W. Section 24

Private
SE1/4NE1/4
T.32S. R.5W. Section 24

USA
NE1/4NE1/4
T.32S. R.5W. Section 24

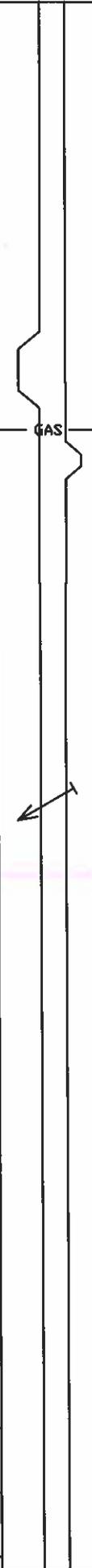
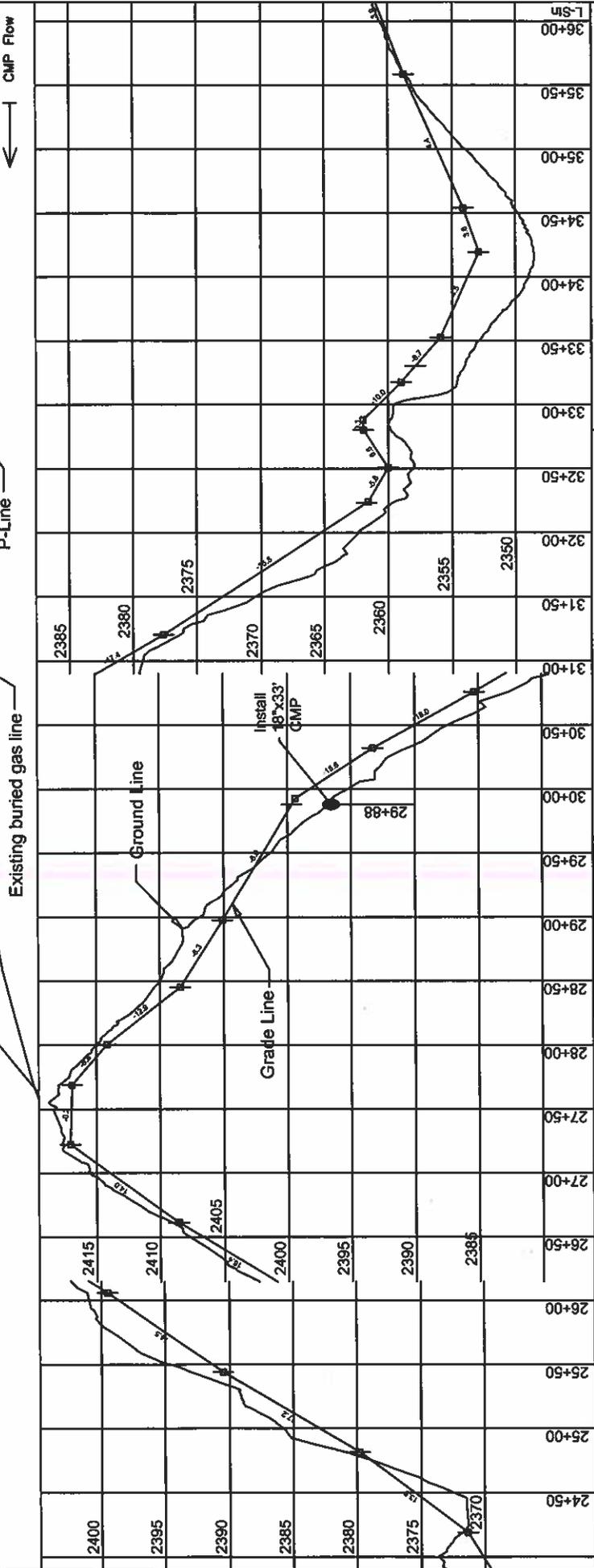
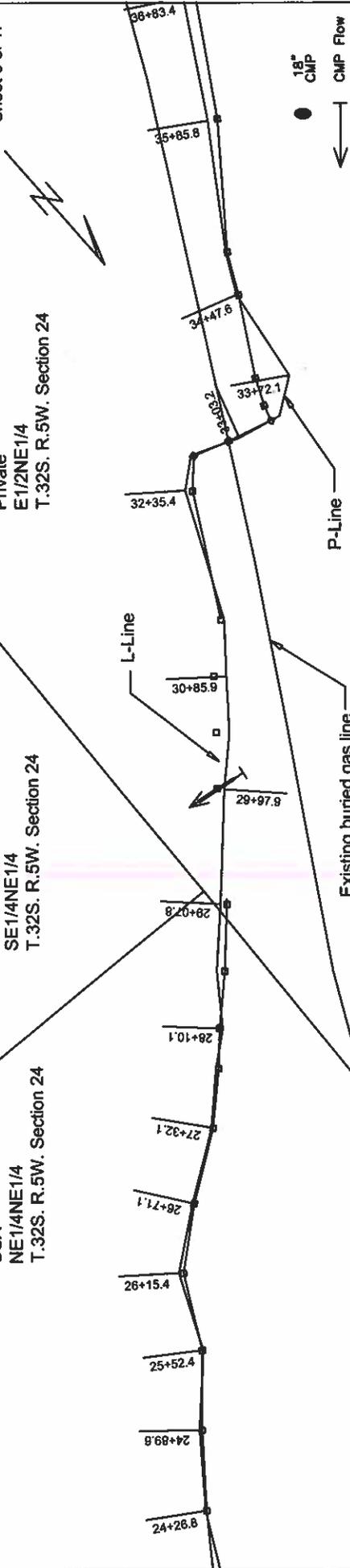
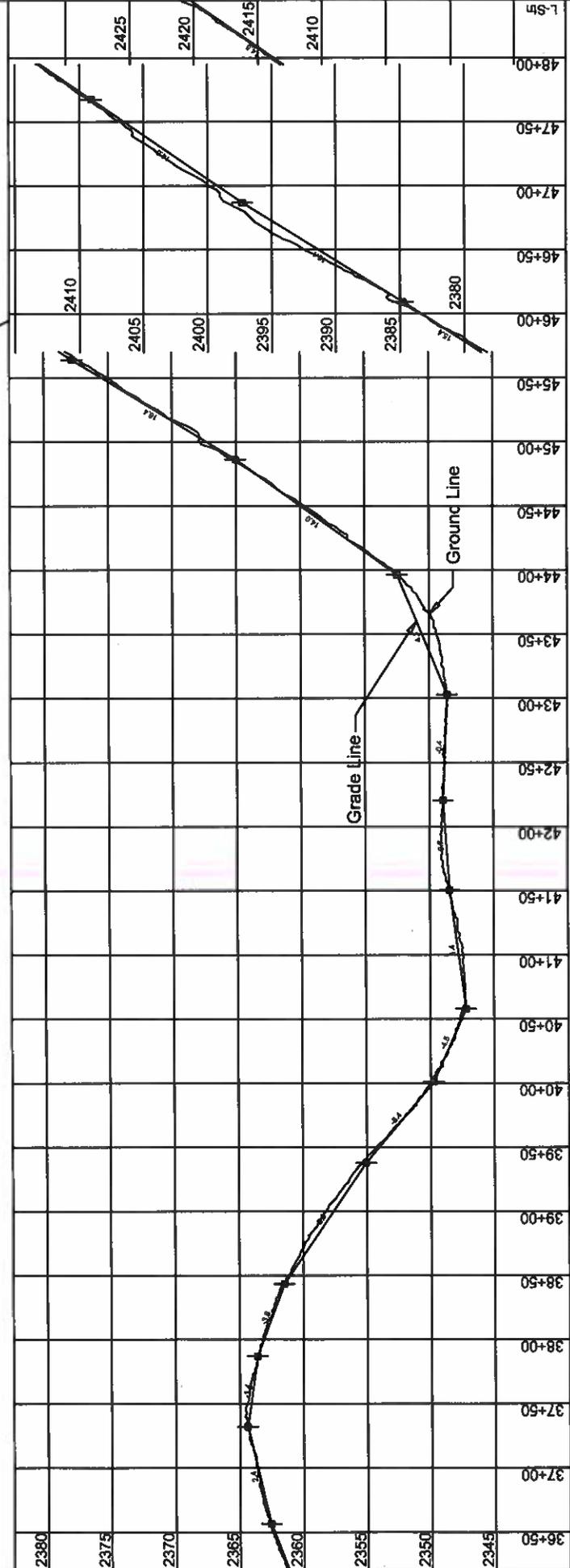
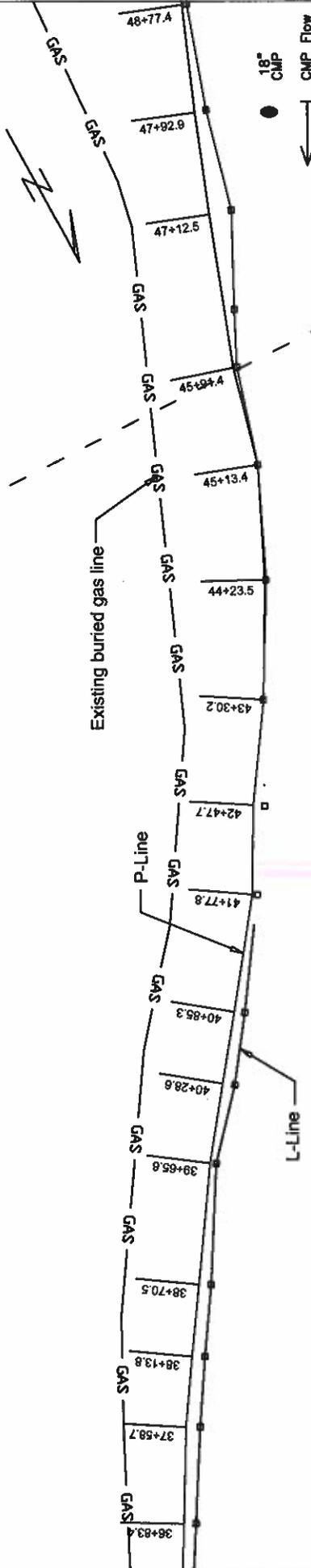


EXHIBIT C12

Oh Windy T.S.
32-5W18.01
Sheet 4 of 17

Private
NW1/4SE1/4
T.32S. R.5W. Section 24

Private
SW1/4NE1/4
T.32S. R.5W. Section 24



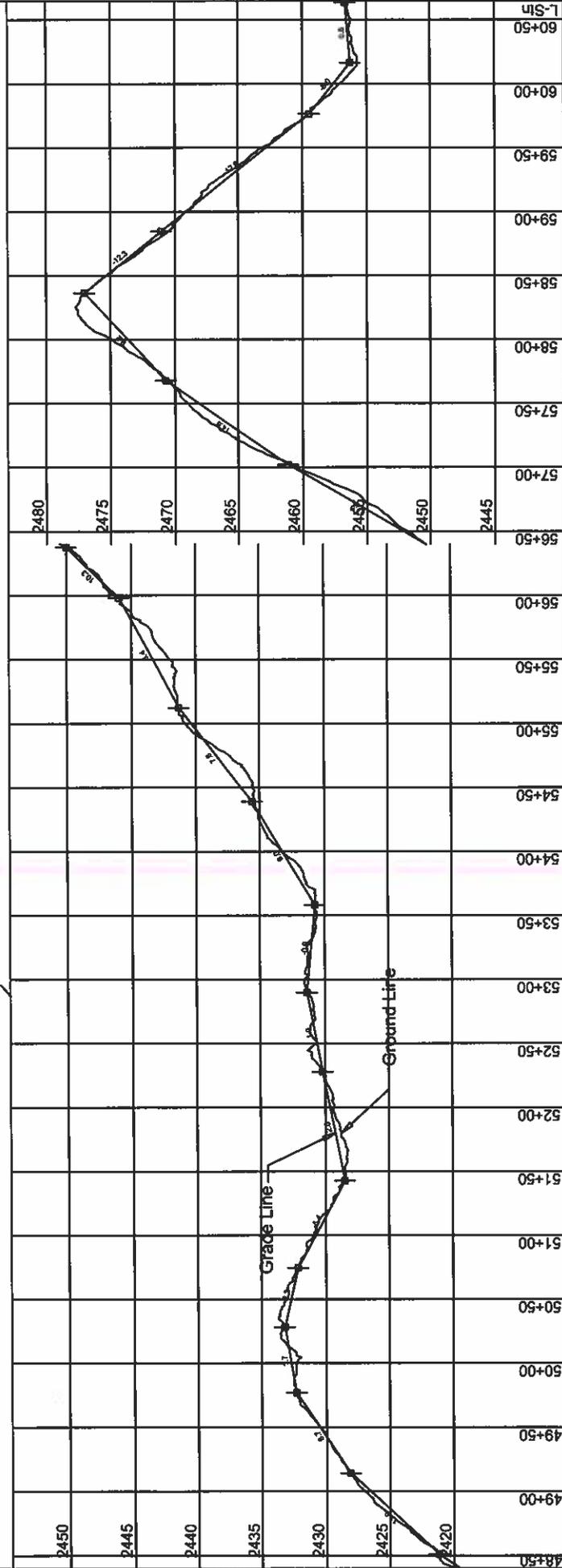
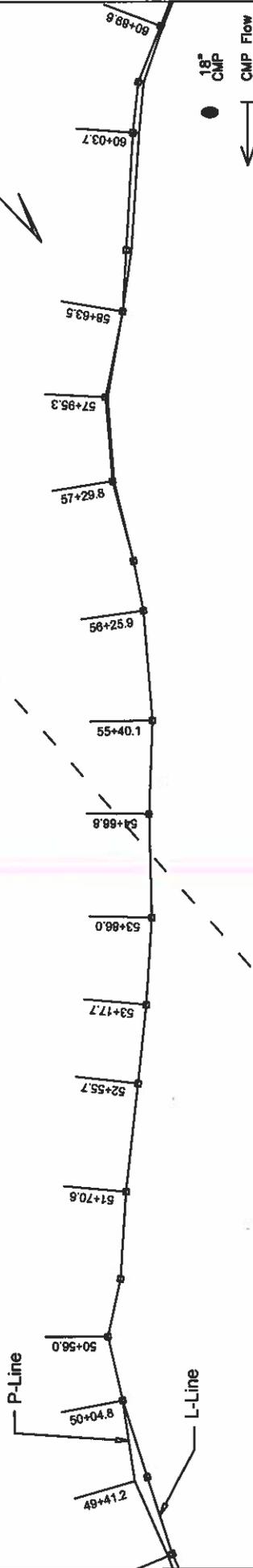
| Station | Ground Elevation (ft) | Grade Elevation (ft) |
|---------|-----------------------|----------------------|
| 36+50 | 2345 | 2345 |
| 37+00 | 2350 | 2350 |
| 37+50 | 2360 | 2360 |
| 38+00 | 2370 | 2370 |
| 38+50 | 2380 | 2380 |
| 39+00 | 2390 | 2390 |
| 39+50 | 2400 | 2400 |
| 40+00 | 2410 | 2410 |
| 40+50 | 2415 | 2415 |
| 41+00 | 2420 | 2420 |
| 41+50 | 2425 | 2425 |
| 42+00 | 2425 | 2425 |
| 42+50 | 2425 | 2425 |
| 43+00 | 2425 | 2425 |
| 43+50 | 2425 | 2425 |
| 44+00 | 2425 | 2425 |
| 44+50 | 2425 | 2425 |
| 45+00 | 2425 | 2425 |
| 45+50 | 2425 | 2425 |
| 46+00 | 2425 | 2425 |
| 46+50 | 2425 | 2425 |
| 47+00 | 2425 | 2425 |
| 47+50 | 2425 | 2425 |
| 48+00 | 2425 | 2425 |

EXHIBIT C12

On Windy T.S.
32-5W18.01
Sheet 5 of 17

Private
NW1/4SE1/4
T.32S. R.5W. Section 24

Private
NE1/4SW1/4
T.32S. R.5W. Section 24



48+50
49+00
49+50
50+00
50+50
51+00
51+50
52+00
52+50
53+00
53+50
54+00
54+50
55+00
55+50
56+00
56+50
57+00
57+50
58+00
58+50
59+00
59+50
60+00
60+50
L-Str

EXHIBIT C12

Oh Windy T.S.
32-5W18.01
Sheet 6 of 17

USA
SE1/4SW1/4
T.32S. R.5W. Section 24

Private
NE1/4SW1/4
T.32S. R.5W. Section 24

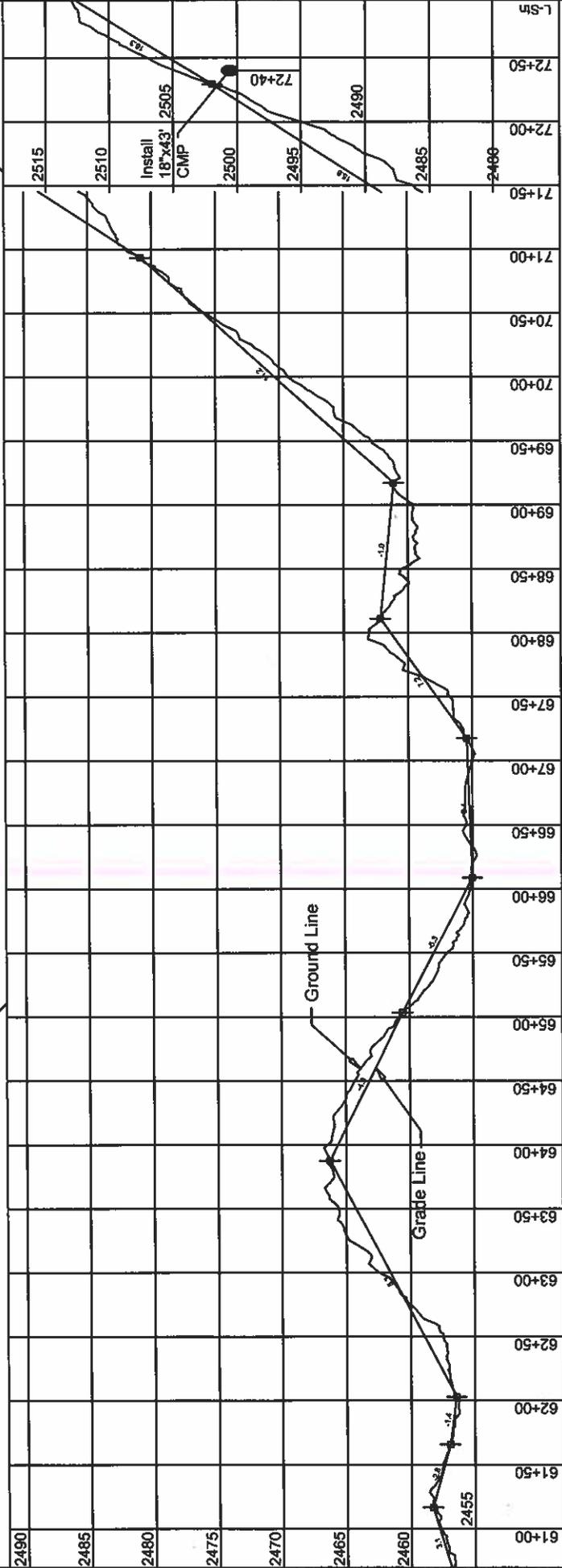
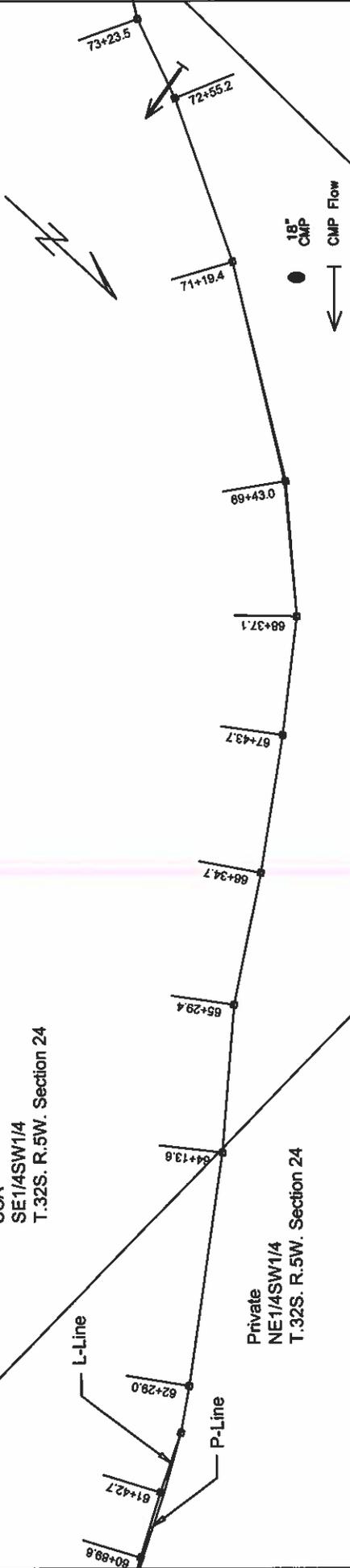


EXHIBIT C12

Oh Windy T.S.
92-5W18.01
Sheet 7 of 17

18" CMP

CMP Flow



USA
SE1/4SW1/4
T.32S. R.5W. Section 24

Private
SW1/4SW1/4
T.32S. R.5W. Section 24

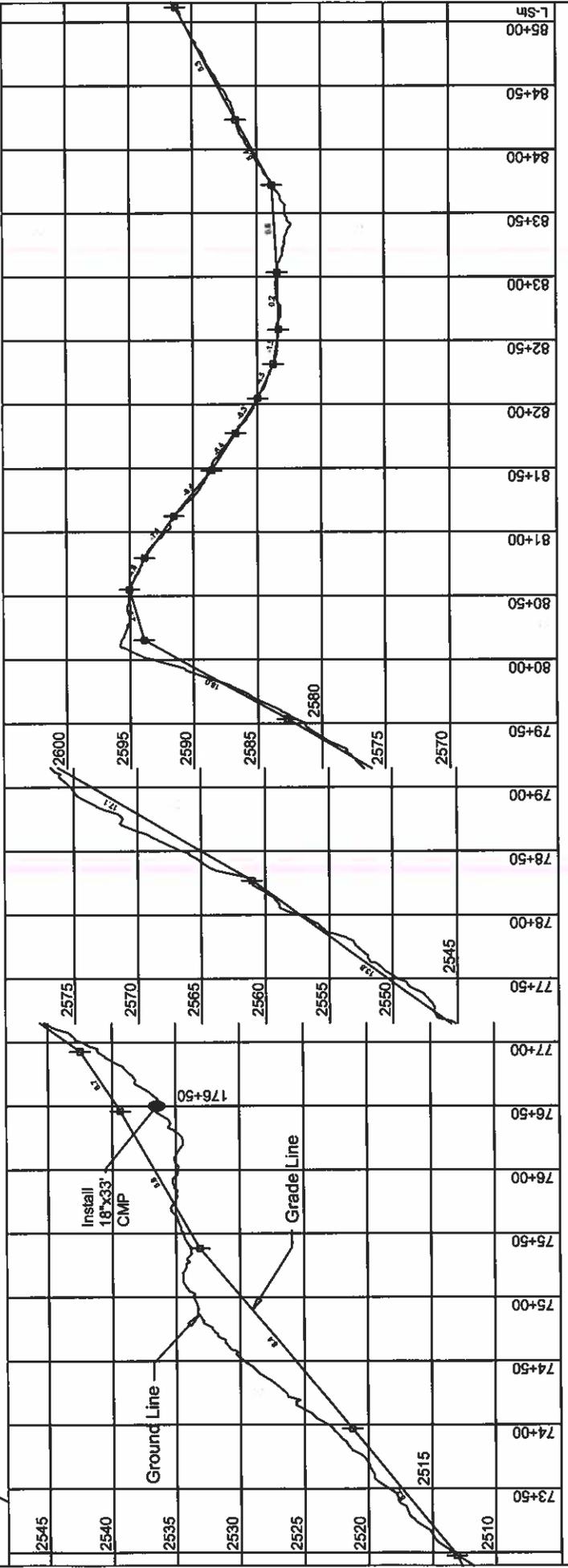
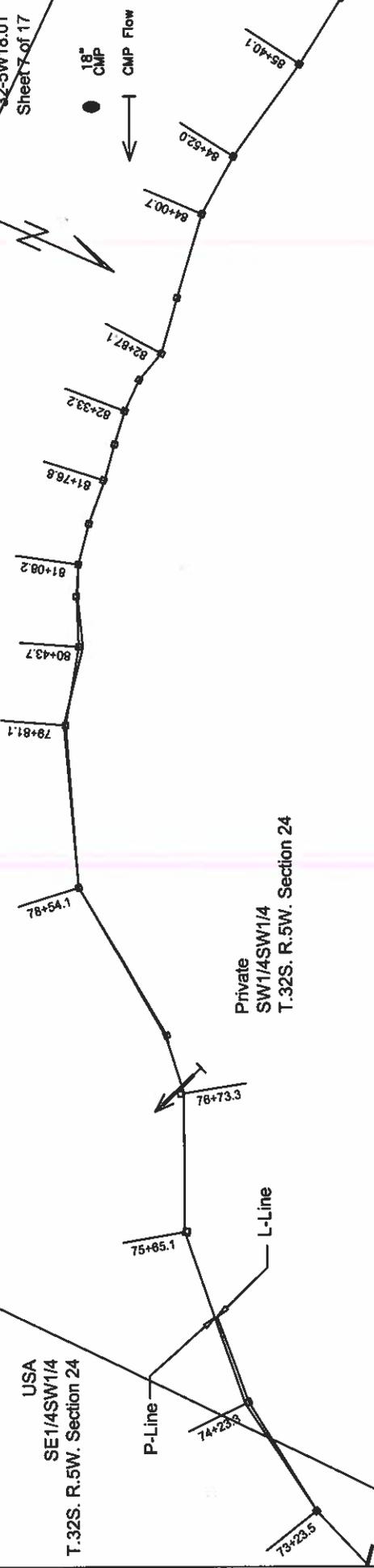


EXHIBIT C12

On Windy T.S.
32-5W/18.01
Sheet 9 of 18

Private
NW1/4NE1/4
T.32S. R.5W. Section 26

Private
NE1/4NE1/4
T.32S. R.5W. Section 26

Private
SE1/4SE1/4
T.32S. R.5W. Section 23

L-Line
P-Line

18" CMP
CMP Flow

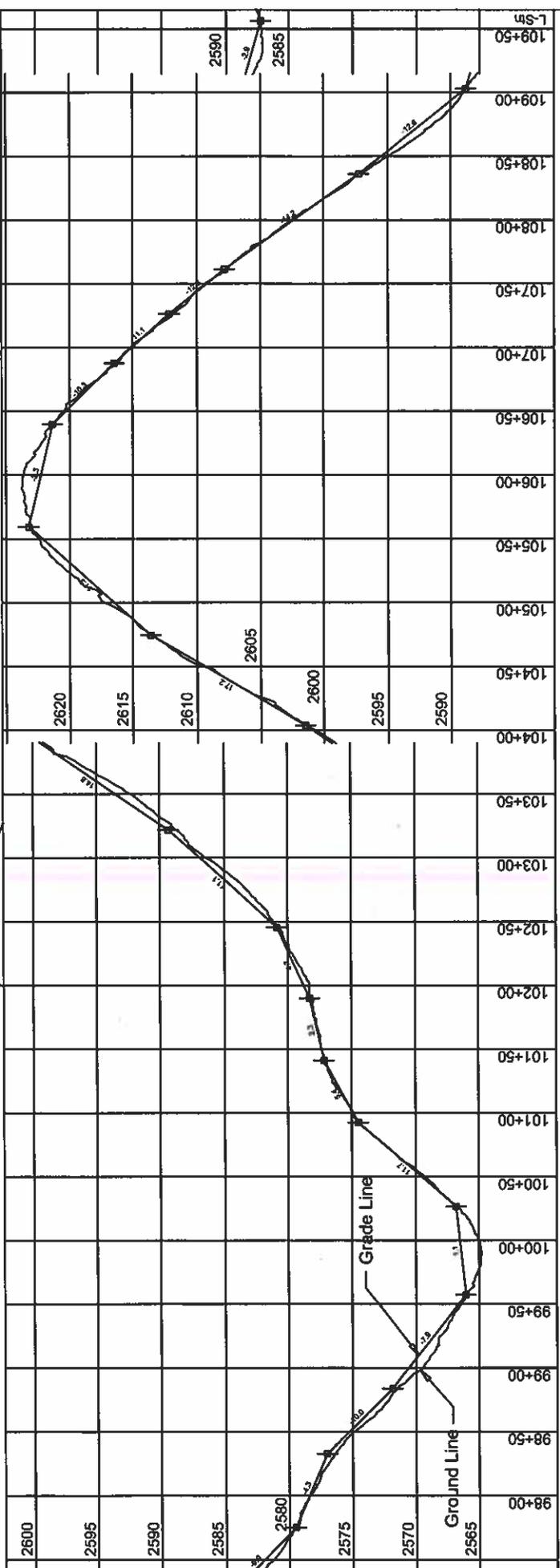
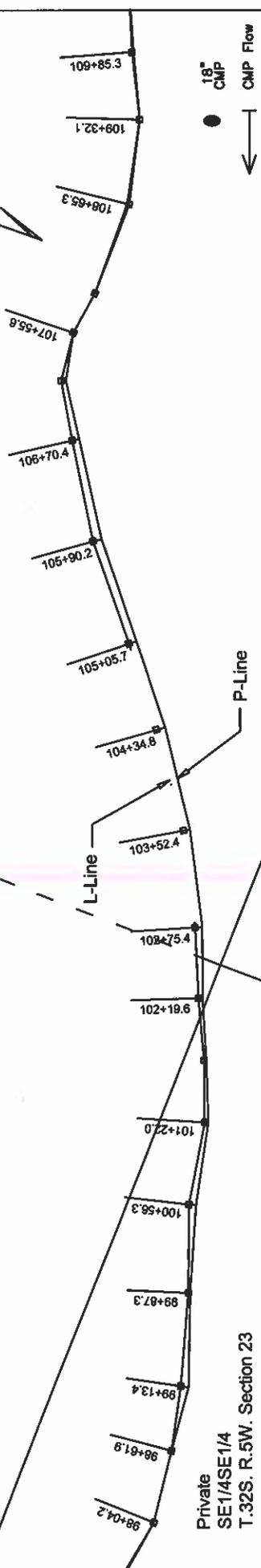
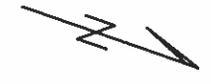


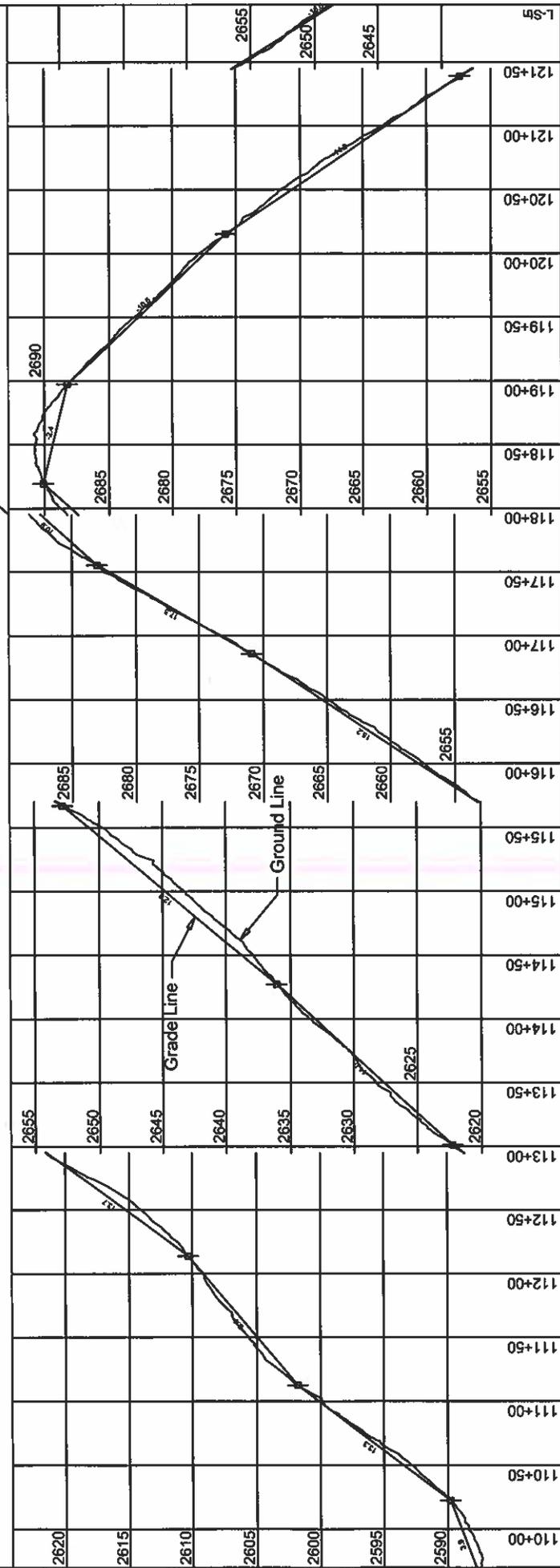
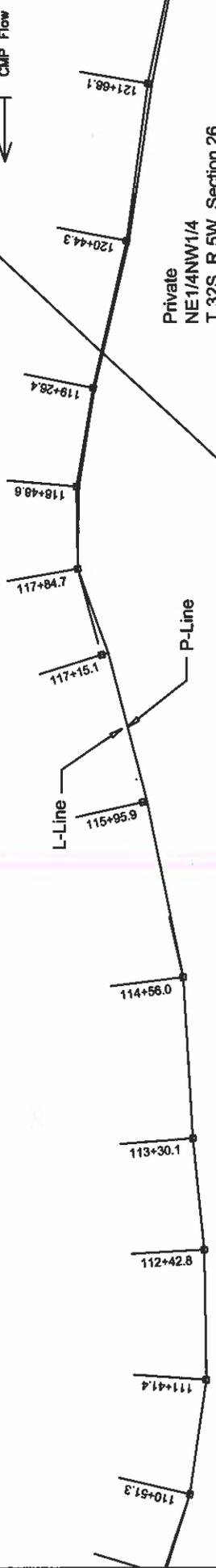
EXHIBIT C12

Oh Windy T.S.
32-5W18.01
Sheet 10 of 17



Private
NW1/4NE1/4
T.32S. R.5W. Section 26

Private
NE1/4NW1/4
T.32S. R.5W. Section 26



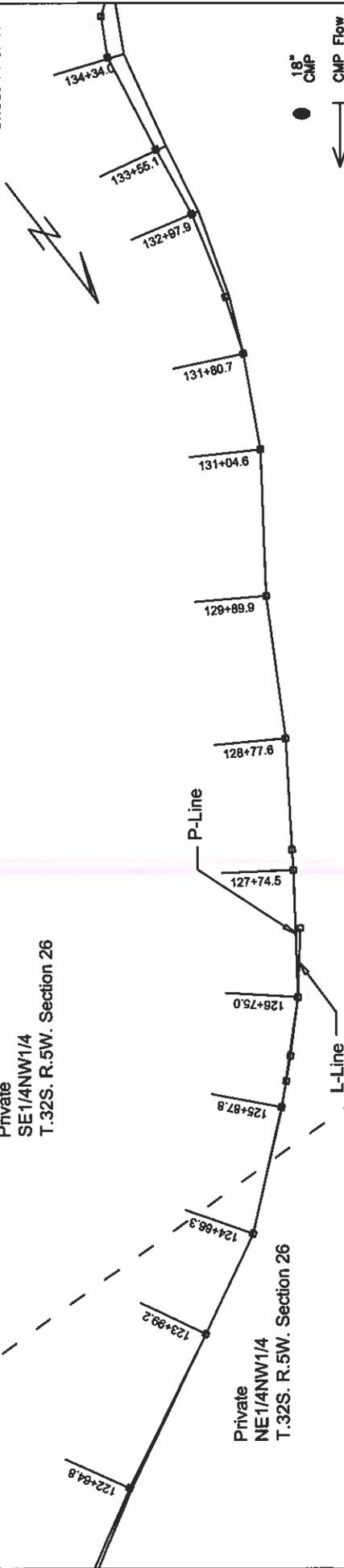
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|------------|-----------|
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| 110+50 | 2595 |
| 111+00 | 2600 |
| 111+50 | 2605 |
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| 112+50 | 2615 |
| 113+00 | 2620 |
| 113+50 | 2625 |
| 114+00 | 2630 |
| 114+50 | 2635 |
| 115+00 | 2640 |
| 115+50 | 2645 |
| 116+00 | 2650 |
| 116+50 | 2655 |
| 117+00 | 2660 |
| 117+50 | 2665 |
| 118+00 | 2670 |
| 118+50 | 2675 |
| 119+00 | 2680 |
| 119+50 | 2685 |
| 120+00 | 2690 |
| 120+50 | 2690 |
| 121+00 | 2690 |
| 121+50 | 2690 |

EXHIBIT C12

Oh Windy T.S.
32-5W18.01
Sheet 11 of 17

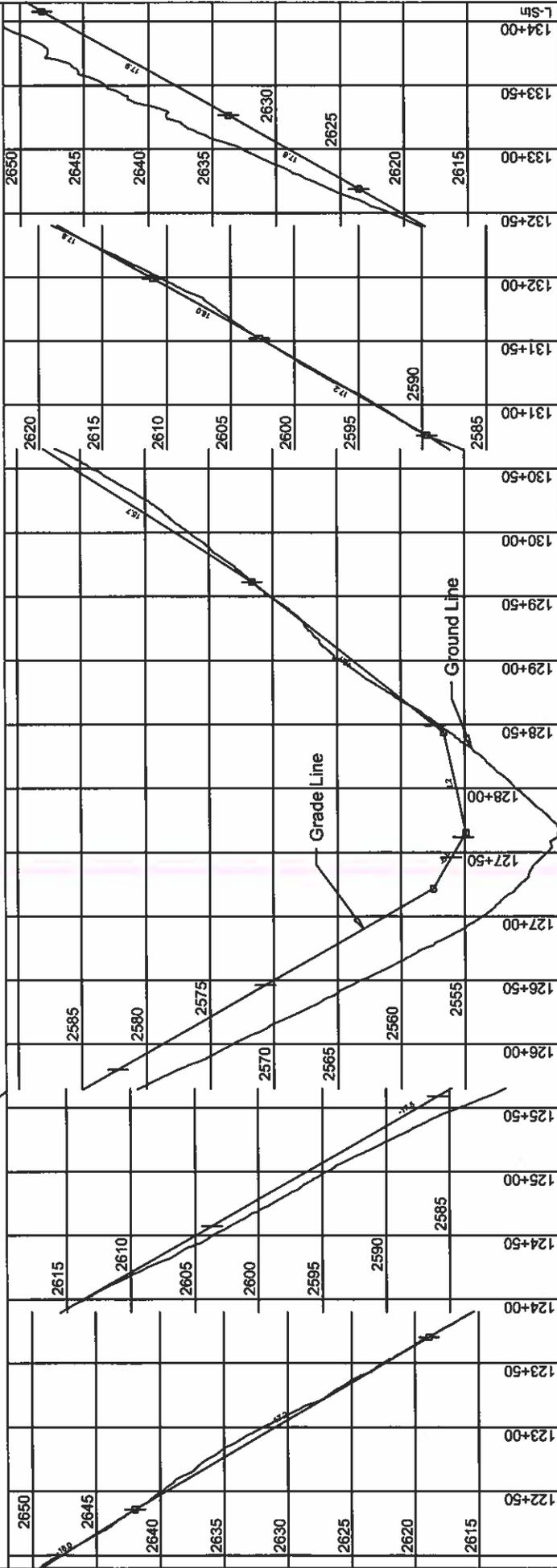
Private
NE1/4NW1/4
T.32S. R.5W. Section 26

Private
NE1/4NW1/4
T.32S. R.5W. Section 26



18" CMP

CMP Flow

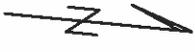


Ground Line

Grade Line

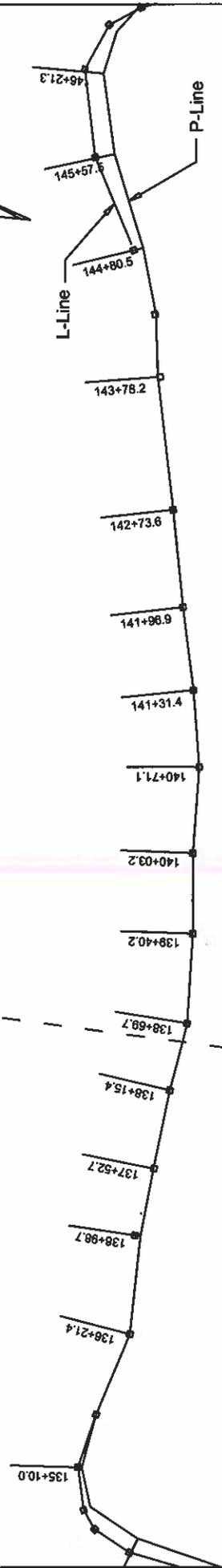
EXHIBIT C12

Oh Windy T.S.
32-5W/18.01
Sheet 12 of 17



Private
SW1/4NW1/4
T.32S. R.5W. Section 26

Private
SE1/4NW1/4
T.32S. R.5W. Section 26



● 18" CMP
↔ CMP Flow

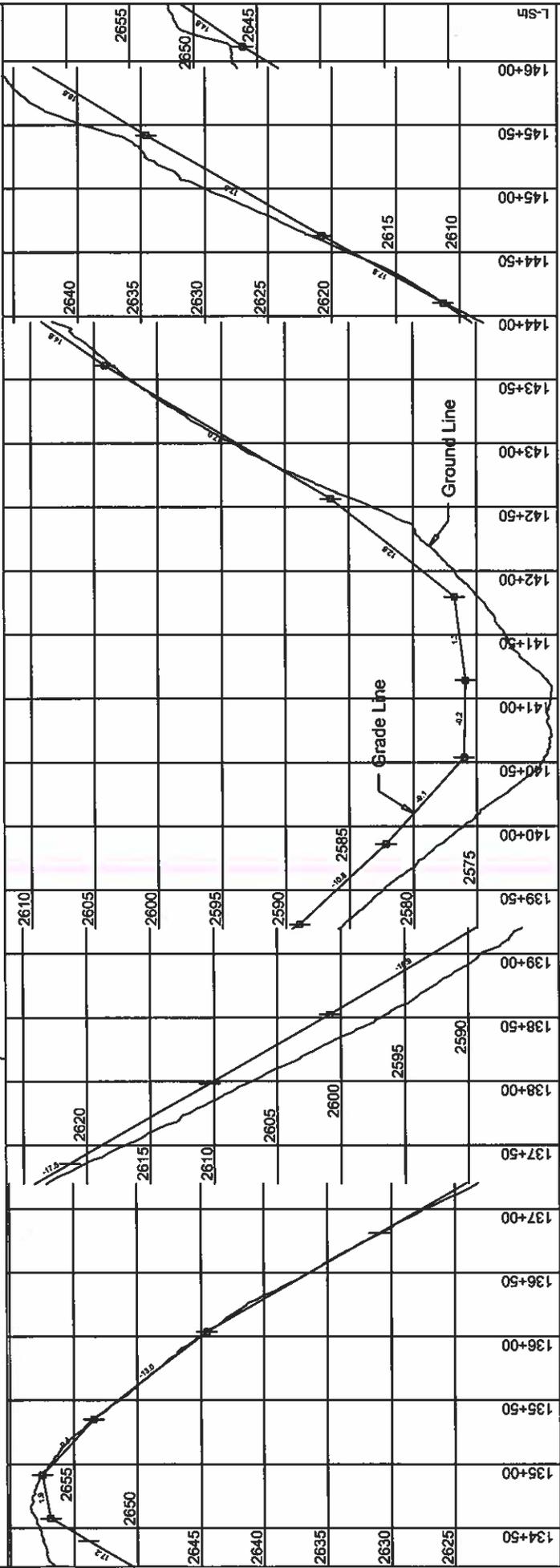


EXHIBIT C12

Oh Windy T.S.
32-5W18.01
Sheet 13 of 17



USA
NE1/4NE1/4
T.32S. R.5W. Section 27

Private
SW1/4NW1/4
T.32S. R.5W. Section 26



● 18" CMP
← CMP Flow

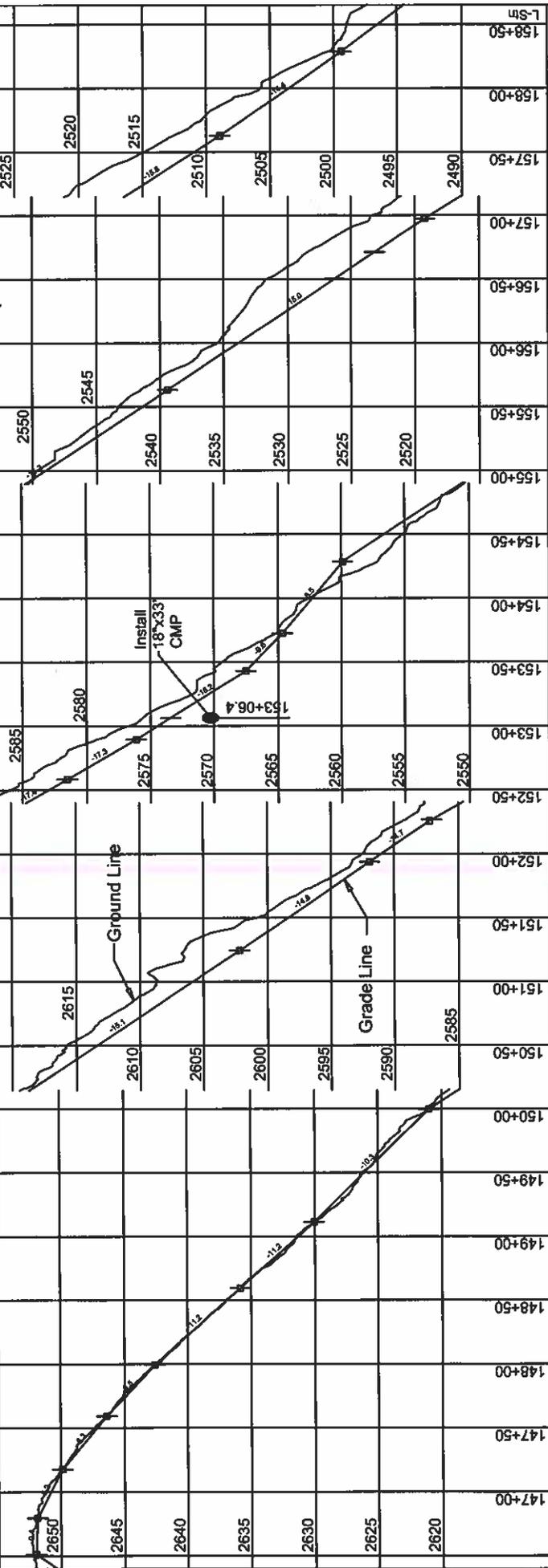
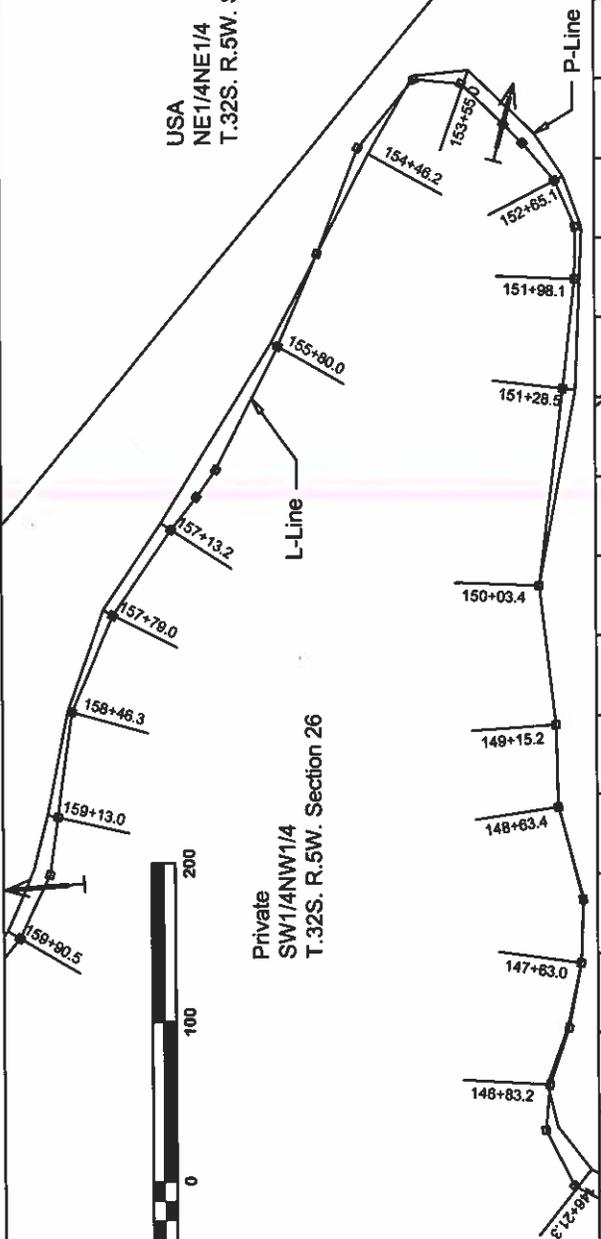


EXHIBIT C12

Oh Windy T.S.
32-5W18.01
Sheet 14 of 17

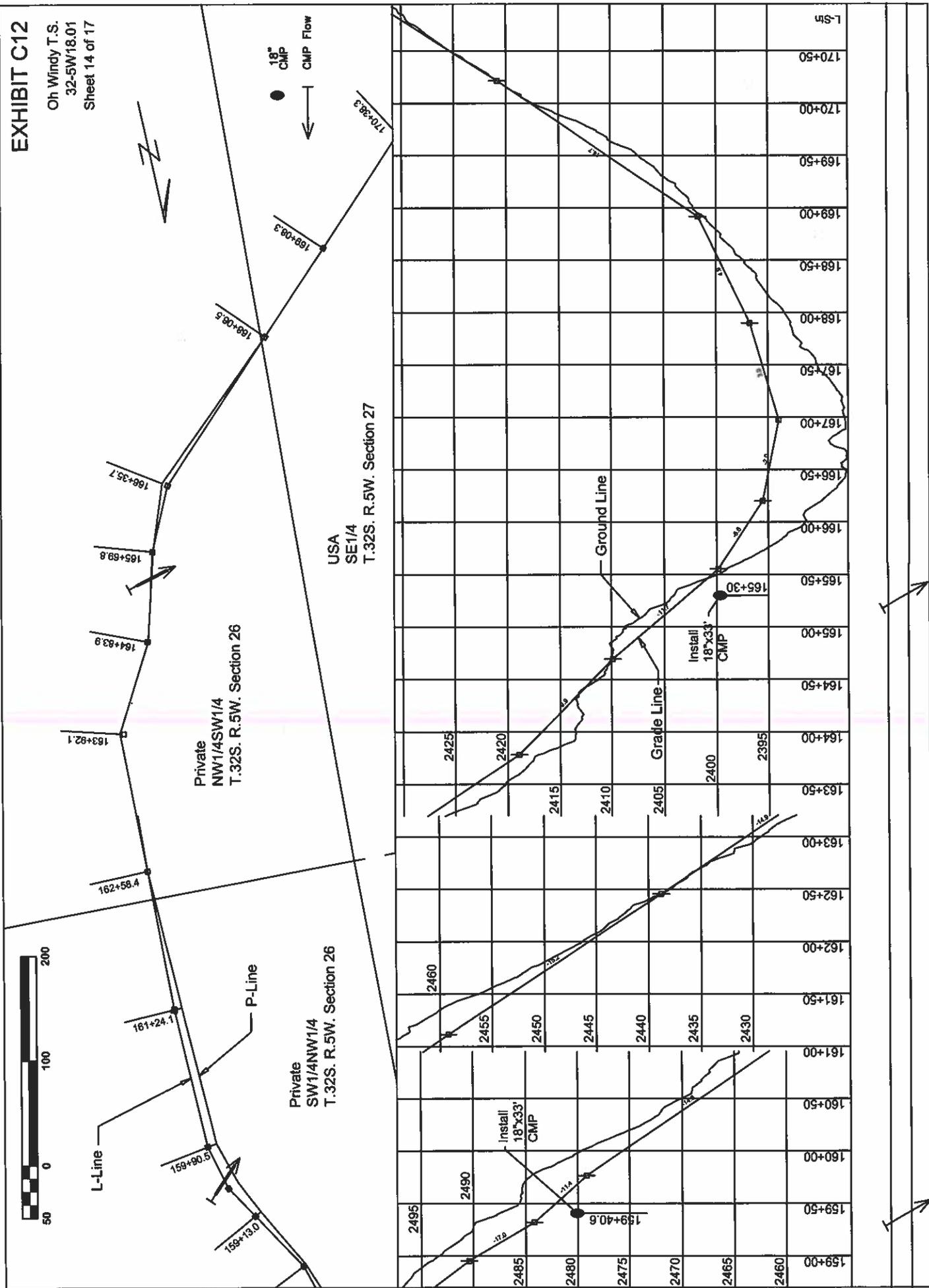
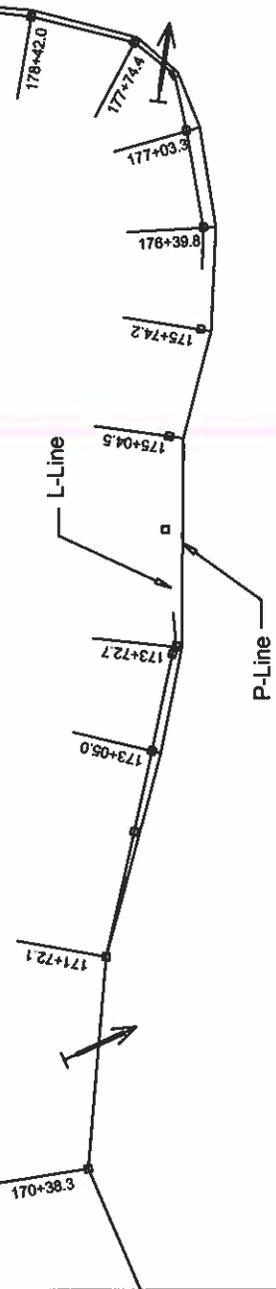
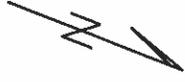


EXHIBIT C12

Oh Windy T.S.
32-5W/18.01
Sheet 15 of 17

USA
SE1/4
T.32S. R.5W. Section 27



● 18" CMP
↔ CMP Flow

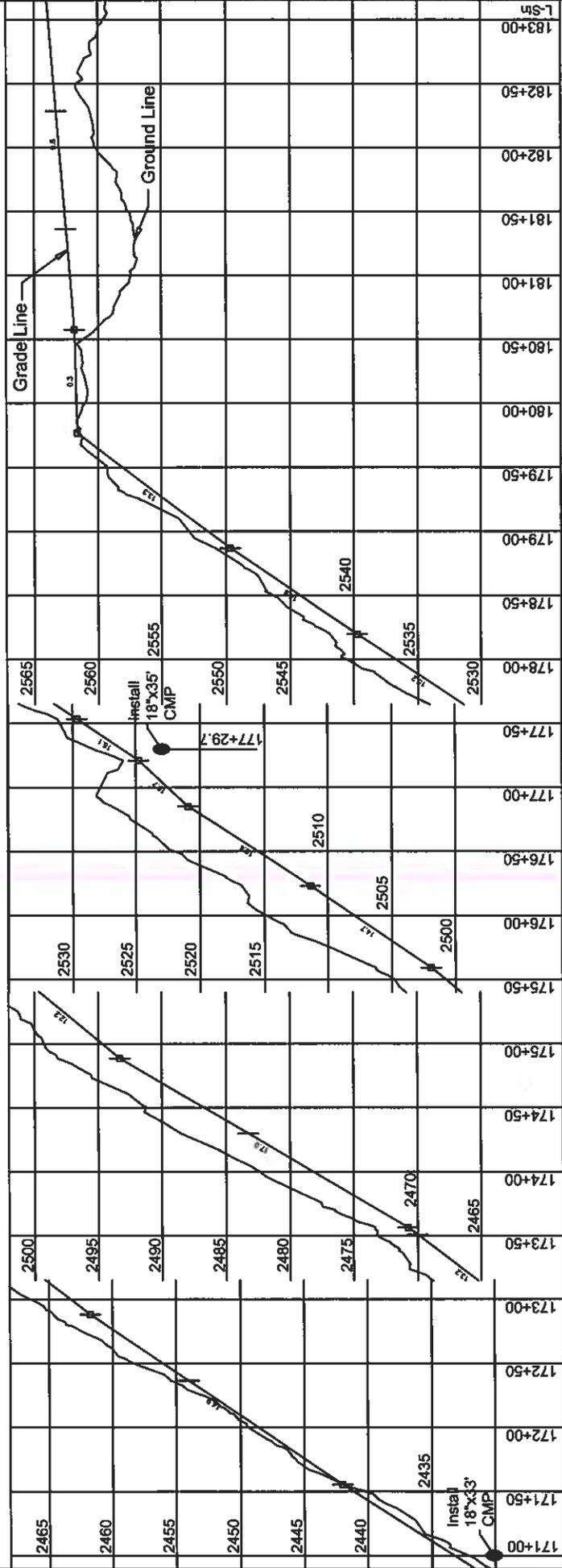
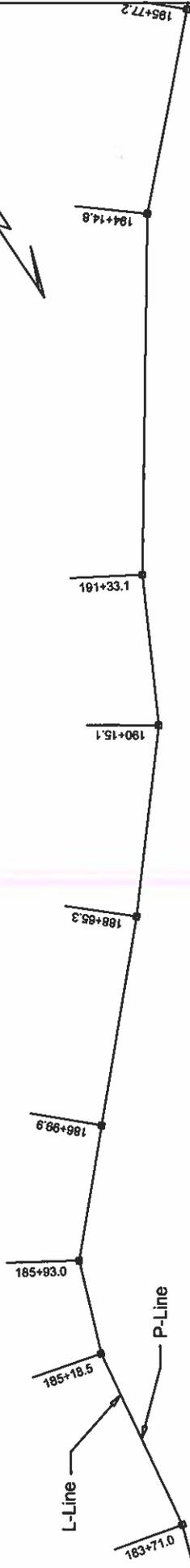


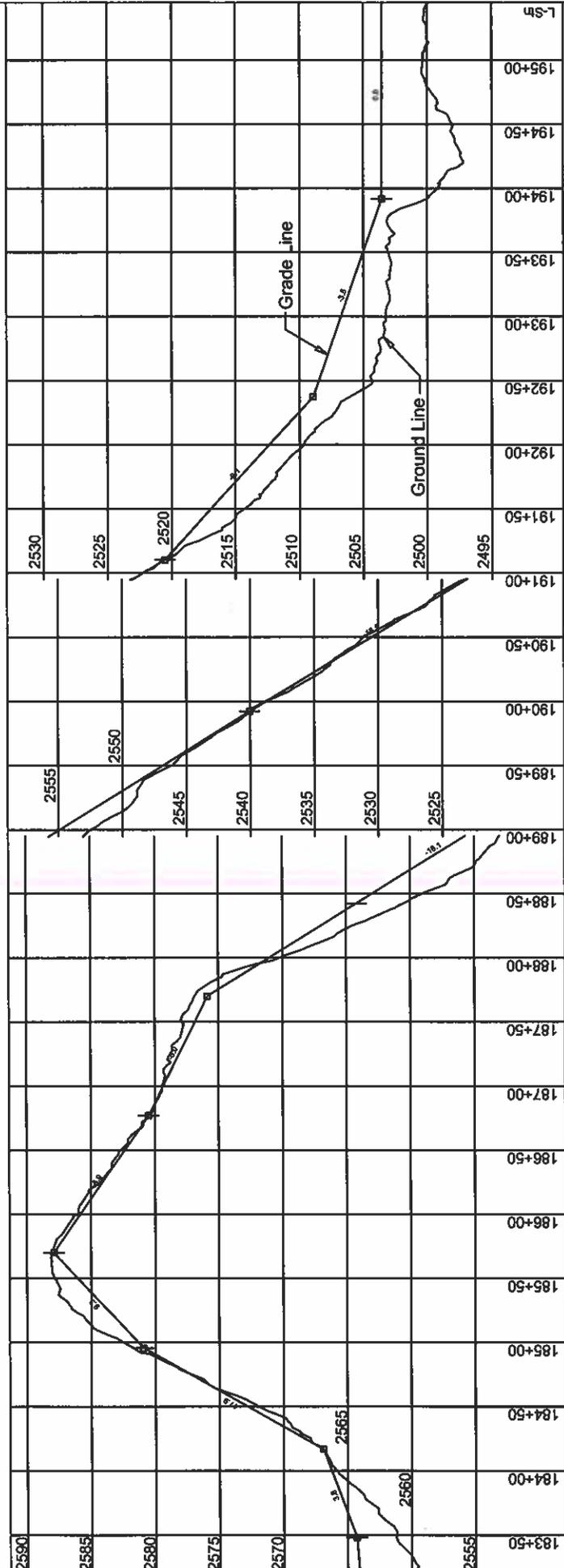
EXHIBIT C12

Oh Windy T.S.
32-5W18.01
Sheet 16 of 17

USA
SE1/4
T.32S. R.5W. Section 27



18" CMP
CMP Flow



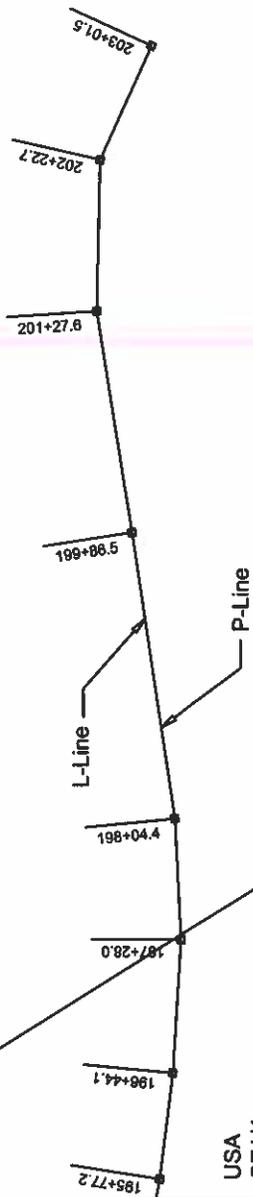
| Station | Elevation (ft) |
|---------|----------------|
| 183+50 | 2555 |
| 184+00 | 2560 |
| 184+50 | 2565 |
| 185+00 | 2570 |
| 185+50 | 2575 |
| 186+00 | 2580 |
| 186+50 | 2585 |
| 187+00 | 2590 |
| 187+50 | 2585 |
| 188+00 | 2580 |
| 188+50 | 2575 |
| 189+00 | 2570 |
| 189+50 | 2565 |
| 190+00 | 2560 |
| 190+50 | 2555 |
| 191+00 | 2550 |
| 191+50 | 2545 |
| 192+00 | 2540 |
| 192+50 | 2535 |
| 193+00 | 2530 |
| 193+50 | 2525 |
| 194+00 | 2520 |
| 194+50 | 2515 |
| 195+00 | 2510 |
| 195+50 | 2505 |
| 196+00 | 2500 |
| 196+50 | 2495 |

EXHIBIT C12

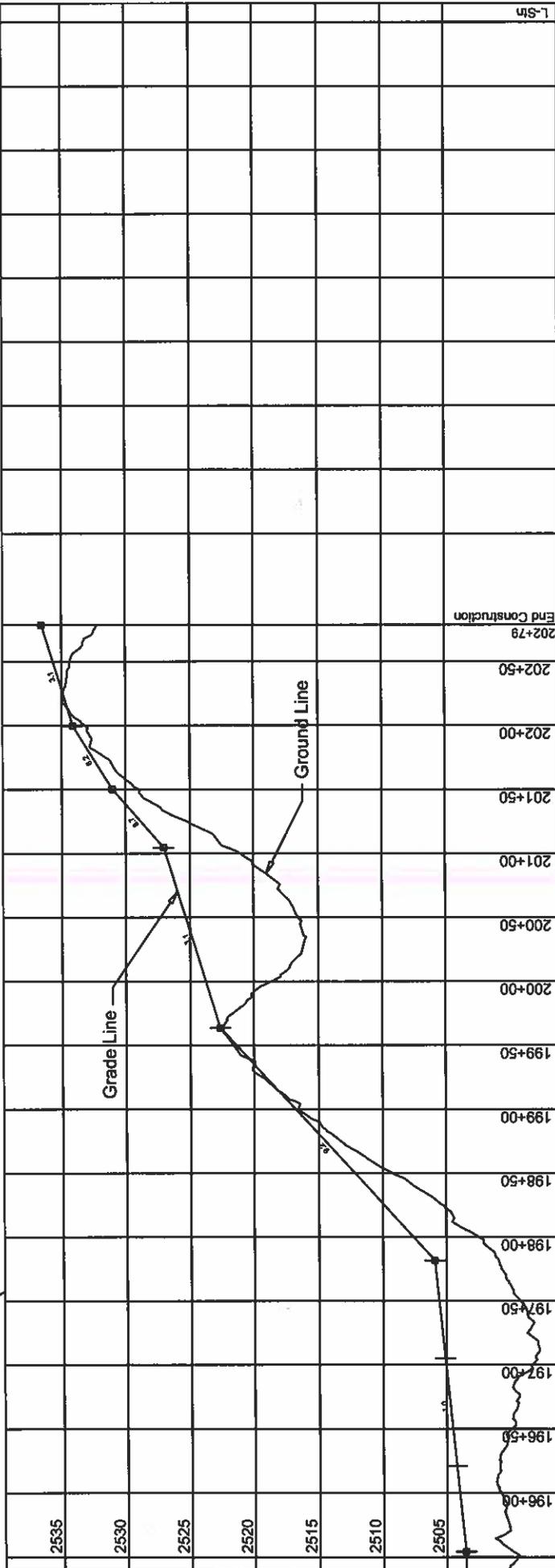
Oh Windy T.S.
32-5W/18.01
Sheet 17 of 17



USA
NW1/4NE1/4
T.32S. R.5W. Section 34

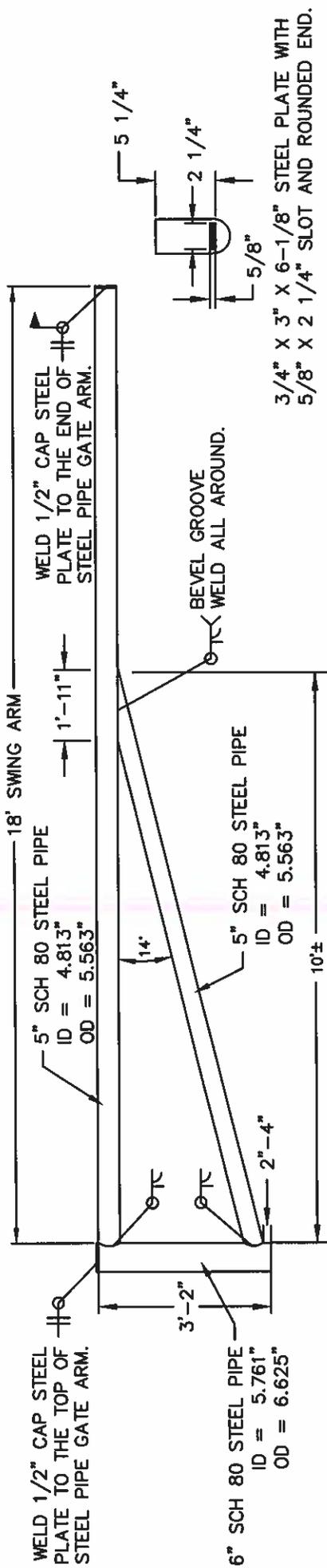


USA
SE1/4
T.32S. R.5W. Section 27



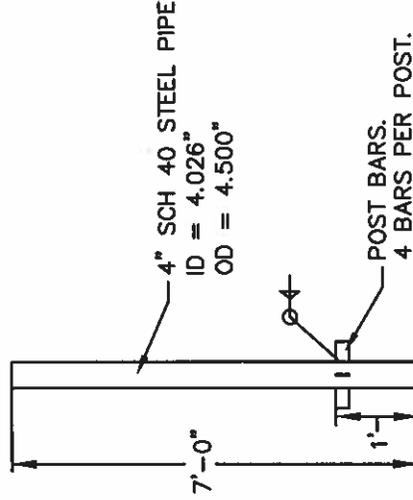
End Construction
202+79

EXHIBIT C13-1

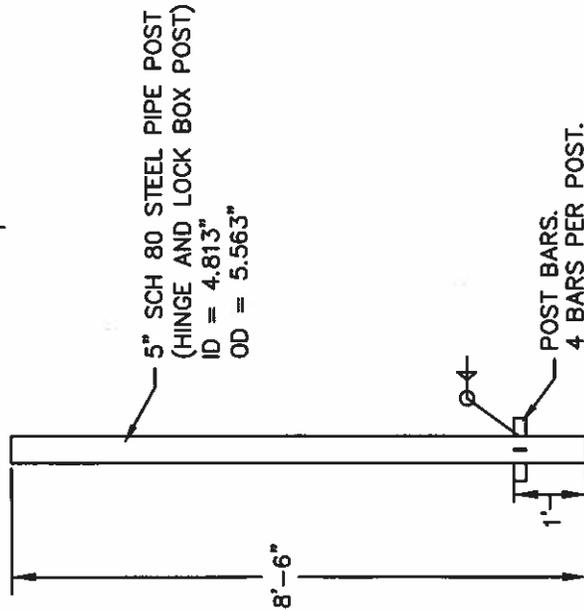


MEGA-GATE

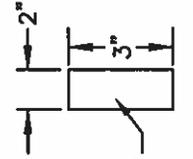
GATE TONGUE



LOCK-OPEN POST (TO SECURE GATE IN OPEN POSITION)



MEGA-GATE POST (2 EA)

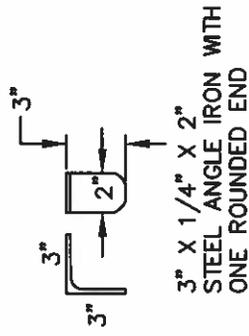


TYPICAL POST

POST BARS. 2" X 1/4"
LENGTH AS SHOWN.

POST BARS.
4 BARS PER POST
LOCATED AS SHOWN.

POST BARS
(12 EA)



CRADLE

| REV. NO. | DESCRIPTION | DATE | APPROV. |
|----------|-------------|------|---------|
| | | | |

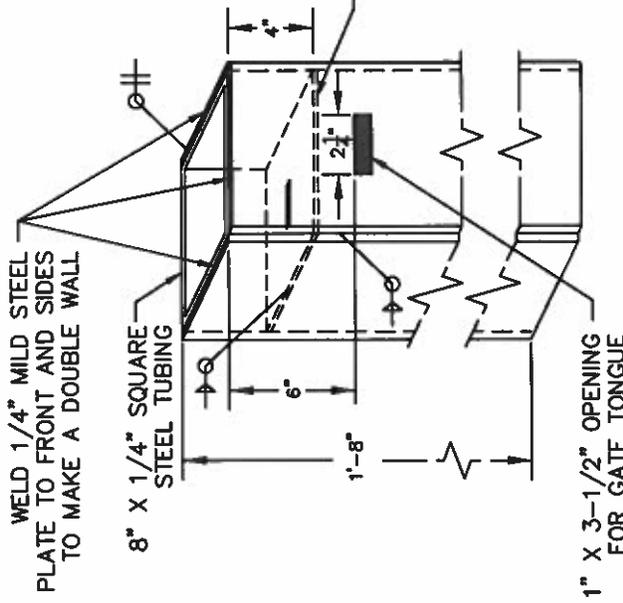
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

OH WINDY
TIMBER SALE
MEGA-GATE DETAILS
AND INSTALLATION

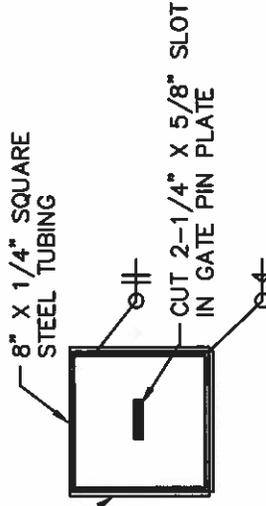
| | |
|-----------------------------|---------------|
| DRAFTED BY: ELF | SCALE: NONE |
| DATE: AUG 2018 | SHEET: 1 OF 4 |
| DRAWING NO.: OR-11-9113.4-4 | |

ALWAYS
THINK
SAFETY

EXHIBIT C13-2



LOCK BOX



**LOCK BOX
PLAN VIEW**

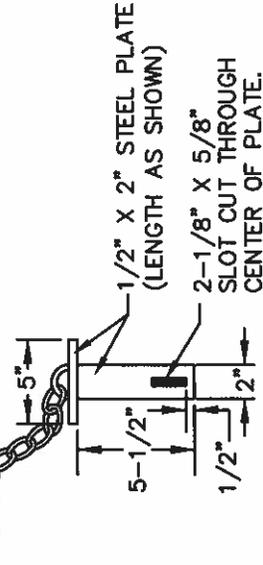


**LOCK BOX BARS
(2 EA)**

GATE PIN PLATE
1/2" X 7-1/2" X 7-1/2"
STEEL PLATE WITH 3/4" X 2-1/4"
SLOT FOR GATE PIN.
WELD PLATE INSIDE LOCK BOX AT
INDICATED POSITION

WELD 1/4" MILD STEEL
PLATE TO FRONT AND SIDES
TO MAKE A DOUBLE WALL

THE LOCKING PIN SHALL BE WELDED
TO THE INSIDE TOP OF THE LOCK
BOX WITH A 3/8" GALV.
PROOF-COIL CHAIN X 2' LONG



GATE PIN

NOTES:
PRIOR TO INSTALLATION, ALL BARE METAL SHALL BE
CLEANED AND GIVEN ONE COAT OF RUST-OLEUM
#7769 METAL PRIMER OR EQUIVALENT.

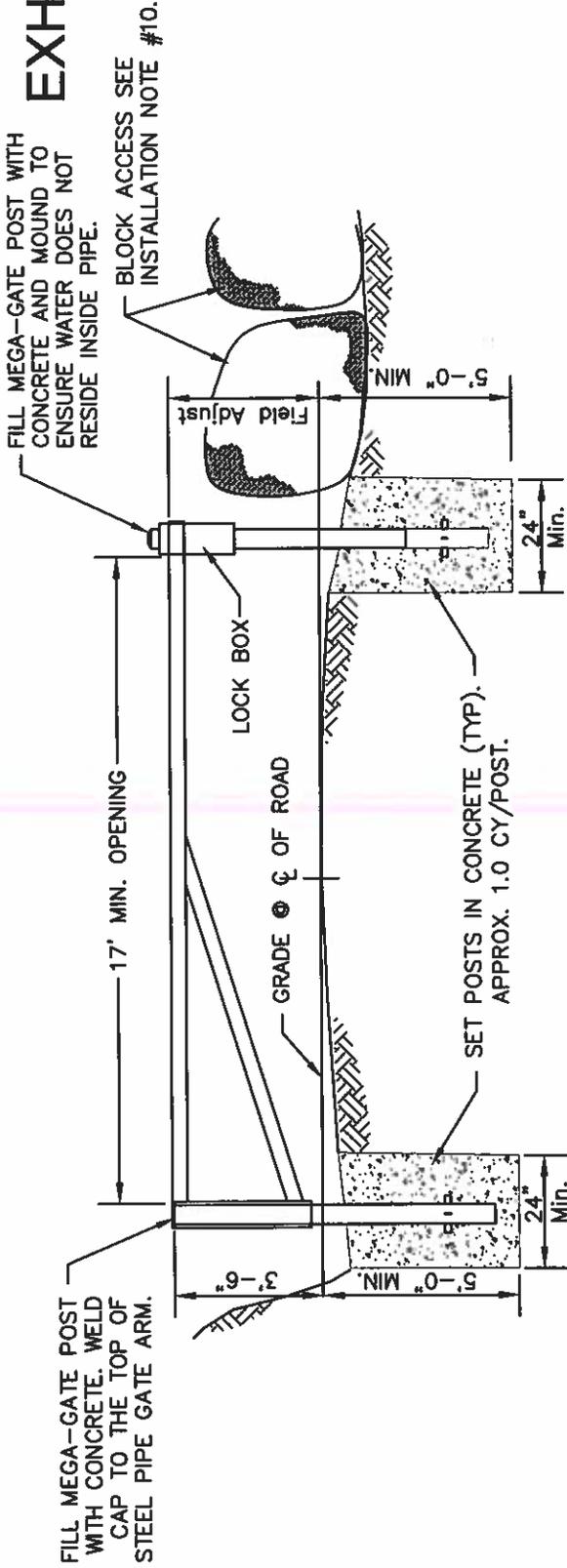
CONSTRUCT PER EACH GATE:

| | |
|-----------------|---------------------------|
| 1 GATE | 2 GATE POSTS |
| 1 CRADLE POST | 1 LOCK BOX W/ PIN & CHAIN |
| 2 LOCK BOX BARS | 1 GATE PIN |
| 1 CRADLE | 1 3/8" x 2' GALV. CHAIN |

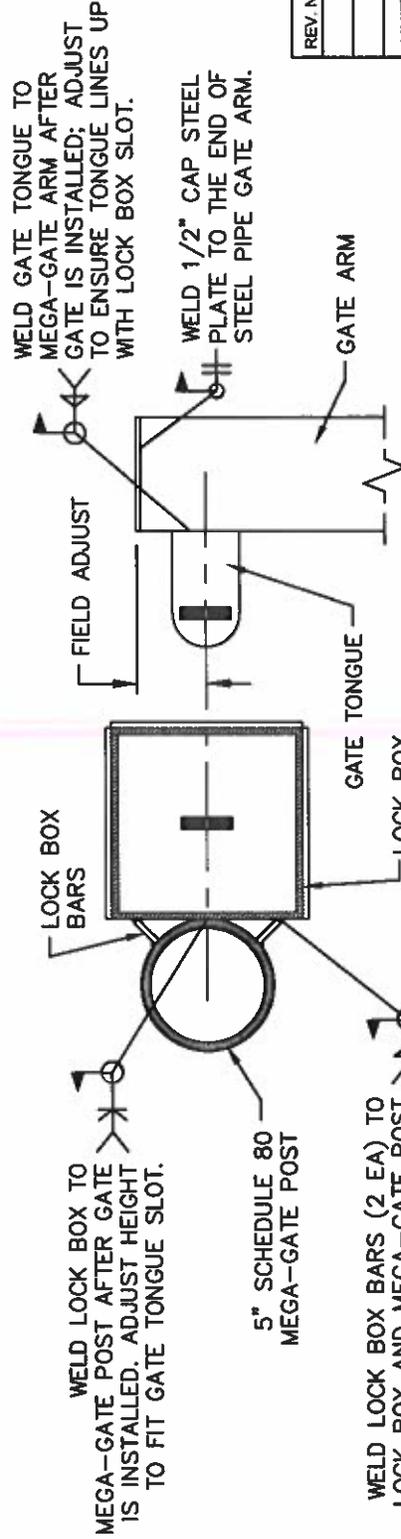
| REV. NO. | DESCRIPTION | DATE | APPROV. |
|---|---------------|------|---------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE MEGA-GATE DETAILS AND INSTALLATION | | | |
| DRAFTED BY: ELF | SCALE: NONE | | |
| DATE: AUG 2018 | SHEET: 2 OF 4 | | |
| DRAWING NO.: OR-11-9113.4-4 | | | |

ALWAYS
THINK
SAFETY

EXHIBIT C13-3



MEGA-GATE ELEVATION



LOCK BOX TOP VIEW

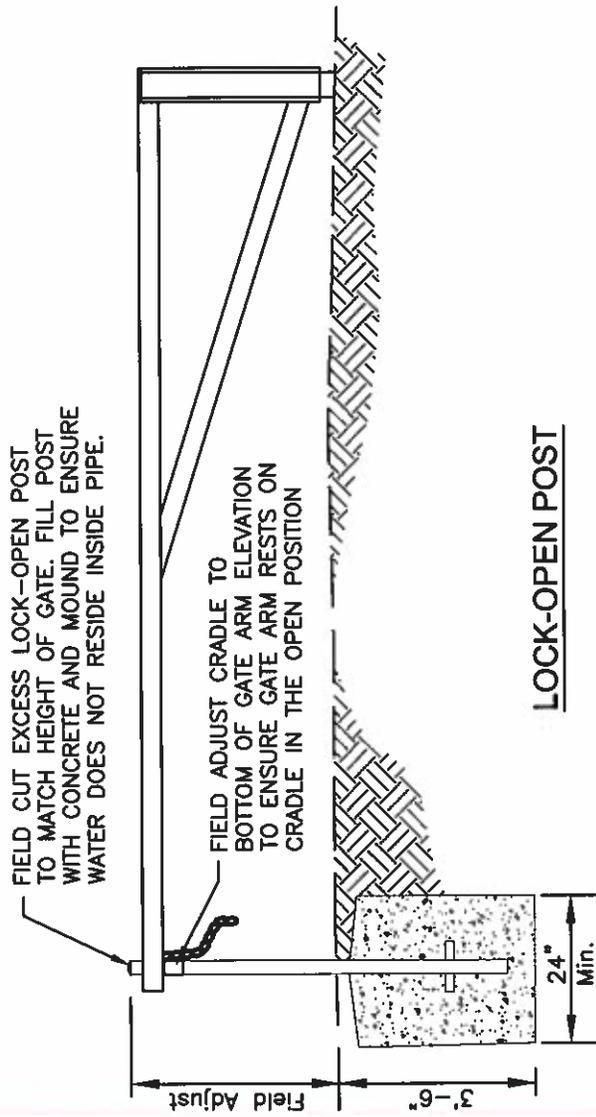
ALWAYS
THINK
SAFETY

| REV. NO. | DESCRIPTION | DATE | APPROV. |
|---|---------------|------|---------|
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| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE MEGA-GATE DETAILS AND INSTALLATION | | | |
| DRAFTED BY: ELF | SCALE: NONE | | |
| DATE: AUG 2018 | SHEET: 3 OF 4 | | |
| DRAWING NO.: OR-11-9113.4-4 | | | |

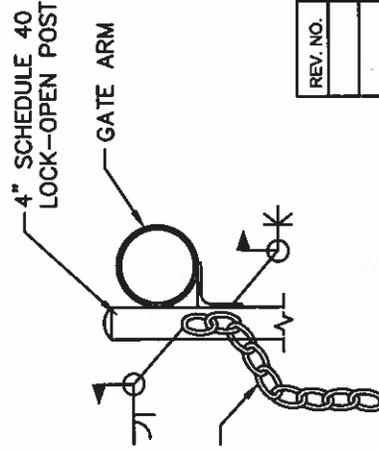
EXHIBIT C13-4

INSTALLATION NOTES:

1. PRIOR TO INSTALLATION, ALL BARE METAL SHALL BE CLEANED AND GIVEN ONE COAT OF RUST-OLEUM ZINSSER METAL PRIMER OR EQUIVALENT.
2. PRIOR TO FIELD INSTALLATION, FINAL GATE LOCATION SHALL BE DETERMINED OR APPROVED BY THE AUTHORIZED OFFICER.
3. POST HOLE WALLS SHALL BE NEAR VERTICAL AS SHOWN.
4. MEGA-GATE ASSEMBLY SHALL BE INSTALLED AS SHOWN. POSTS SHALL BE SET CENTERED IN THE POST HOLES ENSURING THEY ARE PLUMB IN THE CONCRETE AND THE GATE ARM SHALL HANG STRAIGHT AND LEVEL.
5. MEGA-GATE ASSEMBLY SHALL BE INSTALLED WITH HINGED SECTION ON THE CUT SLOPE SIDE OF THE ROAD UNLESS OTHERWISE DIRECTED BY THE AUTHORIZED OFFICER.
6. MEGA-GATE SHALL BE INSTALLED TO OPEN IN THE DIRECTION SPECIFIED BY THE AUTHORIZED OFFICER.
7. FIELD WELDS SHALL BE CLEANED OF SLAG AND GRIME.
8. CONCRETE SHALL BE 3000 PSI MINIMUM. CURE TIME: ALLOW CONCRETE TO CURE A MINIMUM OF 72 HOURS BEFORE PERFORMING OTHER WORK ON POSTS.
9. EXPOSED SURFACES OF CONCRETE SHALL BE CROWNED TO SHED WATER AWAY FROM GATE POSTS.
10. LARGE BOULDERS OR EARTHEN BARRICADE SHALL BE FURNISHED AND PLACED, IF NECESSARY, AT SIDES OF THE GATE TO PREVENT ACCESS BY MOTOR VEHICLES.
11. AFTER INSTALLATION IS COMPLETE, THE ENTIRE MEGA-GATE ASSEMBLY, INCLUDING MEGA-GATE, POSTS, LOCK BOX, CRADLE, AND PINS SHALL BE CLEANED AND GIVEN ONE FIELD COAT OF RUST-OLEUM EPOXY MASTIC SAFETY YELLOW #9144402 OR EQUIVALENT. PAINT SHALL BE APPLIED AS SPECIFIED BY THE MANUFACTURER.



LOCK-OPEN POST



CRADLE

WELD A 2' LONG X 3/8" Ø GALVANIZED PROOF-COIL CHAIN TO THE LOCK-OPEN POST BY THE CRADLE (AS SHOWN)

| REV. NO. | DESCRIPTION | DATE | APPROV. |
|---|---------------|------|---------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE MEGA-GATE DETAILS AND INSTALLATION | | | |
| DRAFTED BY: ELF | SCALE: NONE | | |
| DATE: AUG 2018 | SHEET: 4 OF 4 | | |
| DRAWING NO.: OR-11-9113.4-4 | | | |

ALWAYS
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SAFETY

SPECIAL PROVISIONS

1. GENERAL:

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. DAMAGE:

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. PERMITS AND FEES:

All permits and fees required are the responsibility of the Purchaser.

4. SEASONAL RESTRICTION: - Waivers may be granted if conditions are favorable.

| <u>ACTIVITY</u> | <u>START DATE</u> | <u>END DATE</u> |
|-----------------|-------------------|-----------------|
| Road renovation | May 15 | Oct. 15 |
| In stream | June 15 | Sept. 15 |

5. STREAMS:

All stream channel culverts and inlets shall be cleared and cleaned between **July 1ST and September 15th** in accordance with Oregon Department of Fish and Wildlife (ODFW) in-stream work period guidelines.

Construct silt fences 25 and 50 feet below culvert replacement sites (on live streams) to trap sediment and prevent it from entering nearby stream channels.

Live streams shall be diverted around or through the work area in a manner that will minimize sedimentation downstream. Keep excavation site dewatered so that installation of culverts can be carried out only under dry conditions. Dispose of excess water by using natural drainage ways or devices near the site to the extent of their natural capacity and in a manner that will avoid damage to adjacent property. Utilize dewatering methods such as temporary sediment traps and/or silt fences for areas to be excavated. Provide for downstream water flow without significant transport of excavated material or sediment during construction. At no time shall turbidity limits exceed DEQ's water quality standards.

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. WATER SOURCE:

The Purchaser is responsible for obtaining water, water sources shall be approved by the Authorized Officer prior to use. The Purchaser is responsible for all permits and fees from water sources on private or commercial sources.

7. EQUIPMENT:

Construction equipment shall be washed prior to entering BLM lands. Removal of all dirt, grease, and plant parts that may carry noxious weed seeds or vegetative parts is required. Equipment shall be inspected the Authorized Officer prior to entering BLM lands. Provide 48 hours' notice of inspection to BLM prior to mobilization.

8. SOIL STABILIZATION:

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.

9. ROAD RENOVATION:

Road renovation shall generally take place between May 15th and October 15th of the same year. Waivers may be granted from the Authorized Officer for working outside of this time period. Seasonal restrictions for stream work and wildlife may still apply.

Loose material cleaned from ditch lines and/or slide material shall not be side-cast or placed where it can enter wetlands, riparian reserves, floodplains, and waters of the State.

10. ROADSIDE BRUSHING:

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.**

While roadside brushing through private industry lands, conifer trees at the edges of the cleared area (see cutting limit, Exhibit C7) shall have the branches pruned rather than being felled.

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.

11. TEMPORARY ROUTES:

All temp routes and native surfaced roads (that were previously closed before timber sale activities began) shall be winterized if access is needed over two dry seasons by October 15th. Winterization includes water barring, seeding, mulching, and barricading. All temp routes shall be ripped, water barred, barricaded, seeded, and mulched after use unless otherwise specified.

Clearing, grubbing, and excavation activities of temporary spur routes shown on Exhibit C shall be performed in accordance with Exhibit C15.

Construction of temporary routes shall be to minimum width.

12. COMMERCIAL AGGREGATE:

Aggregate furnished for this work shall be from an accredited weed free quarry or shall have been stockpiled in the period between November 1st and June 15th immediately prior to application. Aggregate which has been stockpiled between June 16th and October 31st of prior years will not be accepted. Aggregate crushed between June 16th and October 31st of the same application year

shall not be stockpiled for more than two weeks before application.

13. WILDLIFE RESTRICTIONS:

Seasonally restrict mechanical roadside brushing activities (including chainsaws) and heavy equipment use to avoid disturbance to nesting NSOs and raptors from March 1st through September 30th within 200 feet of known NSO and raptor nests. This seasonal restriction could be waived if non-nesting status is determined.

14. WET SEASON HAUL:

The Purchaser may wet season haul, with the Authorized Officer's approval, on roads with durable rock surfacing and sufficient rock depth to resist rutting or development of sediment on road surfaces that drain directly to wetlands, floodplains, and waters of the State.

If hauling activities during the wet season causes or begins to cause road damage or the transport of sediment into streams, the Authorized Officer may suspend wet season haul or require additional erosion control devices to prevent damage or off-site transportation of sediment. Additional rock may be required at the Purchaser's expense to repair any damage that occurs to the road during wet season haul. Any costs for rocking and installation of additional drainage features will be at the Purchaser's expense and shall be completed in accordance with the plans and specifications shown in Exhibit C of this contract.

No hauling shall occur on native surface roads during the wet season (generally Oct. 15 – May 15); exceptions may be made during dry conditions of the wet season pending approval from a BLM Authorized Officer.

TIMBER SALE ROAD SPECIFICATIONS

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GENERAL – 100

101 - Prewrite Conference(s):

A prework conference will be held prior to the start of new construction, renovation operations, and surfacing. The Purchaser shall request the conference at least 72 hours prior to the time it is to be held. The conference will be attended by the Purchaser and/or their representative(s), subcontractor(s) and/or their representative(s), and the Authorized Officer and/or his representative(s).

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

102 - Definitions:

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

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

ACI - American Concrete Institute

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

ASTM - American Society for Testing and Materials.

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

BLM - Bureau of Land Management

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

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.

TIMBER SALE ROAD SPECIFICATIONS

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.

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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.

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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.

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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 density of soil.

Method A - 4" mold, soil passing a No. 4 sieve

25 blows/layer & 3 layers.

Method C - 4" mold, soil passing a 3/4 inch sieve

25 blows/layer & 3 layers.

Method D - 6" mold, soil passing a 3/4 inch sieve. 56 blows/layer & 3 layers.

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- AASHTO T 119 Slump of hydraulic cement concrete.
- AASHTO T 152 Air content of freshly mixed concrete.
- AASHTO T 166 Specific Gravity of compacted Bituminous Mixtures.
- 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-in drop height.
- 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 209 Maximum Specific Gravity of Bituminous Paving Mixtures.
- AASHTO T 210 Durability of aggregates based on resistance to produce fines.
- AASHTO T 224 Correction for coarse particles in the soil.
- AASHTO T 238 Density of Soil and Soil-Aggregate 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

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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.
- 103h - Drum drive self-propelled vibratory grid roller. The unit shall consist of one cylindrical drum with a drum diameter of not less than 56 inches, nor more than 66 inches and the drum width shall be 84 inches. Vibratory frequency shall be regulated in seeps from 1200 to 1800 vibrations per minute (VPM), and the centrifugal force developed shall be at least 40,000 pounds at 1800 RPM. The vibratory grid roller shall be self-propelled and have a power unit of not less than 112 horsepower. The "grid" design shall be a herringbone or z-bar pattern around the circumference of the drum. The grid bars shall be 1 inch in height and spaced not more than 8-1/2 inches apart.
- 103i - Other. Compaction equipment approved by the Authorized Officer.

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CLEARING AND GRUBBING - 200

- 201 - This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions within the clearing limits in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans and as staked on the ground.
- 202 - Where clearing limits have not been staked, established by these specifications or shown on the plans, the limits shall extend 5 feet back of the top of the cut slope and 5 feet out from the toe of the fill slope.
- 202b - Where clearing limits for roadside maintenance sections have not been staked or shown on the plans, the limits shall extend 6 horizontal feet back of the centerline of the ditch and 6 horizontal feet outside of the of the shoulder of the road.
- 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 as shown on the plans and as posted.
- 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 as staked on the ground 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 204a, 204c, and 204d between the top of the cut slope and the toe of the fill slope.
- 204a - Stumps including those overhanging cut banks, shall be removed within the required excavation limits.
- 204c - On excavated areas, roots and embedded wood shall be removed to a depth not less than 6 inches below the subgrade.
- 204d - On areas to be occupied by embankments having heights greater than 4 feet, no stump or portion thereof shall remain within 3 feet of embankment subgrades or slope surfaces after grubbing is completed.
- 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.

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- 206 - Clearing and grubbing debris shall be disposed of by chipping in accordance with Subsection 209 and/or scattering in accordance with Subsection 210 and/or piling in accordance with Subsection 211.
- 206a - Notwithstanding Subsections 204, 204a, 204d, and 205, clearing and grubbing debris resulting from landing construction shall be placed at disposal sites and shall not be covered with excavated material. Location of disposal sites will be determined by the Authorized Officer.
- 208b - Trees, firm logs, and other firm large pieces, 4 inches in diameter and 8 feet in length and larger and not removed from the contract area by the Purchaser, shall be piled at locations determined by the Authorized Officer.
- 209 - Clearing and grubbing debris shall be reduced to chips of an acceptable size and disposed of by scattering.
- 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 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.
- 210b - Clearing and grubbing debris and stumps and cull logs resulting from road construction on non-Government property shall be loaded and hauled to designated areas, as shown on the plan. Disposal shall be by scattering in accordance with Subsection 210 or piling in accordance with Subsection 211.
- 211 - Disposal of clearing and grubbing debris and stumps and cull logs shall be by piling on government lands outside of established clearing limits in an area and in a manner acceptable to the Authorized Officer.
- 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.

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EXCAVATION AND EMBANKMENT - 300

- 301 - This work shall consist of excavating, overhaul, placement of embankments, backfilling, borrowing, 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 lines, grades, dimensions, and typical cross sections shown on the plans.
- 302 - Excavation shall also consist of the excavation of road and landing cut sections, borrow sites, backfilling, leveling, ditching, grading, compaction, and other earth moving work necessary for the construction of the roadway in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and as marked on the ground with stakes.
- 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.
- 304 - Borrow shall consist of suitable material required for the construction of embankments or for other portions of the work; such material shall be obtained from sources selected by the Purchaser at his option and approved by the Authorized Officer.
- 305 - Embankment construction shall consist of the placement of excavated and borrowed materials, backfilling, leveling, grading, compaction, and other earth-moving work necessary for the construction of the roadway and landings in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and as marked on the ground with stakes.
- 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 embankments of earth material shall be placed in horizontal layers not exceeding 8 inches in depth.
- 305d - Where embankments are constructed predominantly of blasted rock material, depth of layers shall not exceed 4 feet. Rock fragments having dimensions greater than 4 feet will be permitted provided that they have no dimensions greater than 6 feet and that clearance between adjacent fragments is adequate for the placing and compacting of

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- material in horizontal layers as specified, and that no part of the larger fragments comes within 4 feet of subgrade.
- 306 - Layers of embankment material as specified under Subsections 305a and 305b, shall be moistened or dried to a uniform optimum moisture content suitable for maximum density and compacted to full width with compacting equipment conforming to requirements of Subsections 103f, 103g, 103h, and 103i.
- 306e - The final subgrade, except temporary routes, shall be compacted to full width with compacting equipment conforming to the requirements of Subsections 103f, 103g, 103h, and 103i. Minimum compaction shall be 1 hour of continuous compacting for each 4 stations of road or a fraction of as measured along the center line of the constructed road.
- 306f - Compaction of embankment layers for all temporary routes shall be accomplished by routing construction equipment over full width of embankment structures.
- 306g - All fill slopes shall be compacted to 75 percent of maximum density, either by walking with cat/excavator or by pressing with excavator bucket, to prevent surface erosion and raveling.
- 308 - In the case of rock fills, placement of material in layers is not required and such material may be placed by end-dumping or other methods approved by the Authorized Officer provided that the rock be reasonably prevented from escaping beyond the embankment toe.
- 311 - In solid rock cuts where pockets that will not drain are formed by blasting below the subgrade elevation, drainage shall be provided by ditching to the edge of the subgrade and backfilling to grade, and compacting the pockets and the ditch with rock fragments, gravel, or other suitable porous material.
- 313 - In cut areas where solid rock is encountered at, or near subgrade, the rock shall be excavated to a minimum depth of 6 inches below subgrade elevation and the excavated area backfilled with suitable material. The backfill material shall be processed to the optimum moisture content suitable for maximum density and compacted to full width in accordance with the requirements of Subsection 306.
- 314 - When heavy clays, muck, clay shale, or other deleterious material for forming the 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 borrow 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 306. Unsuitable

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- material shall be disposed of as directed by the Authorized Officer.
- 316 - Borrow material from sources selected at the Purchaser's option shall be inspected and approved in writing by the Authorized Officer prior to placement.
- 317 - Selected borrow shall consist of talus material, finely broken rock, gravel, or other material of granular or favorable characteristics from sources shown on the plans.
- 318 - Selected borrow or selected roadway excavation material shall be uniformly spread on the roadbed in lifts not to exceed 6 inches in depth until the required thickness shown on the plans is attained.
- Each layer shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width in accordance with the requirements of Subsection 306.
- 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 disposed of in accordance with Subsection 321c. Materials not disposed of in this manner shall be retrieved and disposed of at the Purchaser's expense and at the direction of the Authorized Officer.
- 321b - Excess construction material as specified under Subsection 321 shall be loaded, hauled, and disposed of at waste disposal sites identified on the plans.
- 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 required. Materials placed shall be sloped, shaped, and otherwise brought to a visible condition acceptable to the Authorized Officer.
- 322 - When so indicated on the plans, selected coarse rock encountered in the excavation shall be conserved for slope protection or special rock embankment purposes and placed in accordance with the requirements and details of section 1400 of these specifications and as shown on the plans.
- 323 - In the construction of channel changes and stream-crossing embankment sections, natural stream flow shall be maintained unless otherwise provided.

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- 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.

- 327 - The finished grading shall be approved in writing by the Authorized Officer in segments or for the total project. The Purchaser shall give the Authorized Officer a 3 day notice prior to final inspection of the grading operations and start of surfacing operations.

- 328 - The Purchaser shall adopt methods and procedures in using explosives, which will prevent damage to adjacent landscape features, and which will minimize scattering rocks and other debris outside the road prism.

- 328a - The Purchaser shall establish and be responsible for blasting techniques and shall furnish the Authorized Officer, prior to starting drilling operations, a blasting plan specifying drill-hole diameter, drill-hole spacing, depth of drilling, type of explosive to be used, loading pattern, sequence of firing, the location where the plan is to be used, and other relevant data. Acceptance of the drilling and blasting plan does not relieve the Purchaser of responsibility or liability for the results of the blasting.

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PIPE CULVERTS - 400

- 401 - This work shall consist of furnishing and installing pipe culverts and other erosion control devices in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Individual lengths and locations are approximate; final lengths and locations will be determined by the Authorized Officer and/or from established construction stakes and upon installation of the appurtenance structures. Additional pipe and erosion control devices may be required at the option of the Authorized Officer, in which case a reduction in the total purchase price shall be made to offset the cost of furnishing and installing such items. Costs will be based upon the unit prices set forth in the current BLM Timber Appraisal Production Cost Schedule.
- 403 - Grade culverts shall have a gradient of from 2 percent to 4 percent greater than the road grade. Grade culverts shall be skewed down grade 0-30 degrees as measured from the perpendicular to the centerline, as specified on the plans.
- 404 - Damage to the spelter, or burn back in excess of 3/8 inch, shall be wire brushed and painted with two coats of zinc-rich paint on zinc-coated, steel pipe and aluminum-rich paint on aluminum or aluminum-coated pipe.
- 405a - Corrugated-(aluminized) steel-welded pipe culverts and pipe-arch culverts and special sections shall conform to the requirements of AASHTO M 36 and AASHTO M 218, AASHTO M 274, or AASHTO M 289 as specified on the plans.
- 405e - Corrugated-polyethylene pipe for culverts 18-inch through 36-inch diameter shall meet the requirements of AASHTO M 294, Type S.

Installation will be subject to the same specification as other pipe materials.

- 406 - Coupling bands shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274 with the exception of band widths and the "Hugger"-type band which shall conform to the details, dimensions, and typical diagram shown on the plans.
- 406a - "Hugger"-type coupling bands shall only be used with annular corrugated pipe and pipe-arch culverts, or helically corrugated pipe and pipe-arch culverts having annular reformed ends. Annular reformed ends shall consist of two annular corrugations.
- 408 - Pipe culverts and pipe-arch culverts shall be placed on the bed starting at the downstream end with the inside circumferential laps pointing downstream and with the longitudinal laps at the side or quarter points. Coupling bands of the type required

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- 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 lines, grades, dimensions, and 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 and pipe-arch culverts shall be bedded on a selected granular or fine readily compactable soil material having a depth of not less than 6 inches as shown on plans. Foundation material shall be of uniform density throughout the length of the structure and shall be shaped to fit the pipe.
 - 415 - Inspection of pipe culverts having a diameter of 48 inches shall be made before backfill is placed. Culverts found to be out of alignment or damaged shall be replaced, reinstalled or repaired as directed by the Authorized Officer at the Purchaser's expense.
 - 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, is attained as

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- determined by AASHTO T 99, Method C.
- 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 catch basins and ditch dams conforming to lines, grades, dimensions and typical diagrams shown on the plans, shall be required for all culverts.
 - 424 - Construction of splash pads (energy dissipaters) conforming to lines, grades, dimensions and typical diagram shown on the plans, shall be required for culverts.
 - 427 - Record culvert sizes, lengths and location actually installed on a copy of the culvert list. This culvert list shall be furnished to the Authorized Officer.
 - 428 - Purchaser shall remove and dispose of old culverts in a legal manner and is responsible for any fees required. The Purchaser shall remove the old culverts from the work site within three 3 working days of completion of the culvert replacement work for each road.
 - 429 - Keep the excavation site dewatered so that the installation of culverts is completed under dry conditions. Dispose of excess water by using pumping or natural drainage ways near the site in a manner that will avoid damage to adjacent property. Provide for downstream water-flow with no more that 10% increase in natural stream turbidity due to transport of excavated material or sediment during construction. Diversion streams shall not be returned to the natural channel until all in-stream work has been completed.

TIMBER SALE ROAD SPECIFICATIONS

RENOVATION AND IMPROVEMENT OF EXISTING ROADS - 500

- 501 - This work shall consist of reconditioning and preparing the roadbed and shoulders, minor excavation and/or embankment, cleaning and shaping drainage ditches, trimming vegetation from cut and embankment slopes, and cleaning and repairing drainage structures of existing roads in accordance with these specifications, as shown on the plans.
- 501a - This work shall also include the removal and disposal of slides in accordance with these specifications.
- 502 - The existing road surface shall be bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans and as specified in the worklist.
- 502b - Drainage ditches shall be bladed and shaped in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans.
- 503a - Debris from slide removal, turn around construction and reconstruction, ditch repair, and all other road construction shall be hauled to a designated disposal site as approved by the Authorized Officer and/or as shown on the plans.
- 504 - Existing road surface 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, 103h, and 103i and as specified in the worklist.
- 504a - Minimum compaction required shall be 1 hour of continuous rolling for each 4 stations of road, or fraction thereof, as measured along the centerline per layer of material.
- 506 - The inlet end of existing drainage structures shall be cleared of vegetative debris and boulders that are of sufficient size to obstruct normal stream flow. Pipe inverts shall be cleared of sediment and other debris lodged in the barrel of the pipe. The outflow area of pipe structures shall be cleared of 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 and new drainage structures shall be replaced and placed with structures of the type, gauge, diameter, and length shown on the plans and in accordance with the placement requirements set forth under Section 400 of these specifications.
- 508 - Vegetation encroaching on the roadbed and the drainage ditches of existing roads shall be removed by cutting and disposed of in accordance with Section 2100 of these specifications.

TIMBER SALE ROAD SPECIFICATIONS

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

TIMBER SALE ROAD SPECIFICATIONS

WATERING - 600

- 601 - This work shall consist of furnishing and applying water required for the compaction of embankments, roadbeds, backfills, base courses, surface courses, finishing and reconditioning of existing roadbeds, laying dust, or for other uses in accordance with these specifications.
- 602 - Water, when needed for compaction or laying dust, shall be applied at the locations, in the amounts, and during the hours as directed by the Authorized Officer. Amounts of water to be provided will be the minimum needed to properly execute the compaction requirements in conformance with these specifications, and for laying dust during work periods.
- 603 - Water trucks used in this work shall be equipped with a distributing device of ample capacity and of such design as to ensure uniform application of water on the road bed.
- 605 - The Purchaser shall secure the necessary water permits and pay all required water fees for use of water sources selected by the Purchaser and approved by the Authorized Officer.

TIMBER SALE ROAD SPECIFICATIONS

AGGREGATE BASE COURSE - 900
SCREENED ROCK MATERIAL

- 901 - This work shall consist of furnishing, hauling, and placing one or more lifts of screened rock material on roadbeds approved for placing screened rock material in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans.
- 902a - Screened rock materials to be used in this work may be obtained from sources selected by the Purchaser, at his option, providing the rock materials furnished comply with these specifications and the sources are approved in writing by the Authorized Officer prior to use.
- 903 - Screened rock material shall conform to the following gradation requirements:

TABLE 903
SCREENED ROCK MATERIAL GRADATION REQUIREMENTS
 Percentage by Weight Passing Square Mesh Sieves
 (AASHTO T 27)

| Sieve Designation | Gradation | | | |
|-------------------|---------------|--------|--------|--------|
| | A | B | C | D |
| 4 inch | 100 | | | |
| 3 inch | 95-100 | 100 | | |
| 2 inch | | 95-100 | 100 | |
| 1-1/2 inch | | | 95-100 | 100 |
| 1 inch | | | | 95-100 |
| No. 4 | 11-44 | 16-49 | 21-54 | 26-59 |
| No. 200 | 2-15 | 2-15 | 0-15 | 0-15 |

- 904 - Screened 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.
- 904a - Screened rock material shall show a durability value of not less than 35 as determined

TIMBER SALE ROAD SPECIFICATIONS

- by AASHTO T 210.
- 905 - The roadbed as shaped and compacted under Sections 300 and 500 of these specifications, shall be approved in writing by the Authorized Officer prior to placement of screened rock materials. Notification for final inspection, prior to rocking, shall be 72 hours prior to that inspection and shall be 5 days prior to start of rock operations.
 - 906 - Screened rock material shall be placed in layers not to exceed 6 inches in thickness. Where the required total thickness is more than 6 inches, the rock material shall be shaped and compacted in two or more layers of approximately equal thickness.
 - 906a - Screened rock materials used to repair or reinforce a soft, muddy, frozen, yielding, or rutted subgrade shall not be construed as surfacing under this specification.
 - 907 - Filler or binder material obtained from sources approved by the Authorized Officer shall be uniformly blended with the screened rock material on the road. Filler or binder materials shall be free from stones, vegetative matter, and other deleterious materials.
 - 908 - Screened rock material shall be blade-processed and spread to required dimensions. Processing shall be performed in such a manner as to minimize aggregate segregation.
 - 910 - Screened rock material, bladed and shaped as specified, shall be moistened or dried to optimum moisture content for maximum compaction and compacted to full width by compaction equipment conforming to the requirements of Subsections 103b, 103f, 103g, 103h, and 103i. Minimum compaction shall be 6 passes over each full-width layer, or fraction thereof.

TIMBER SALE ROAD SPECIFICATIONS

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 and base courses 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 at the purchaser's expense.

- 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 these specifications.

- 1203 - When crushed rock material is produced from gravel, not less than 65 percent by weight of the particles retained on the No. 4 sieve will have 2 manufactured fractured faces.

- 1204 - Crushed rock material shall consist of hard durable rock fragments conforming to the following gradation requirements:

TABLE 1204
AGGREGATE SURFACE COURSE CRUSHED ROCK MATERIAL
 Percentage by weight passing square mesh sieves
 (AASHTO T 11 & T 27 GRADATION)

| 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 |

TIMBER SALE ROAD SPECIFICATIONS

| | | | | | | |
|---------|------|-------------|------|------|------|------|
| 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.
- 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:

TABLE 1207a

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

- 1208 - If additional binder or filler material is necessary to meet the grading or plasticity requirements or for satisfactory bonding of the material, it shall be uniformly blended with the crushed rock material at the crushing and screening plant prior to placing on the road, unless otherwise agreed. The material for such purposes shall be obtained from sources approved by the Authorized Officer and shall be free from stones, vegetative matter, and other deleterious materials.
- 1208a - Each layer of crushed rock material shall be thoroughly mixed on the roadbed by alternately blading, to full depth, until a uniform mixture has been obtained. The mixture shall then be spread to full width. When completed, the spreading shall produce a surface which is smooth, presents uniform shoulder lines, and conforms to the specified cross section.
- 1209 - Shaping and compacting of roadbed and/or base course shall be completed and approved in writing, prior to placing crushed rock material, in accordance to the requirements of Section 500 for placing on the roadbed and Sections 900 for placing on the base course.

TIMBER SALE ROAD SPECIFICATIONS

- 1210 - Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed and base course 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 lift shall be shaped, processed, compacted, and approved in writing 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 Subsection 103f. Minimum compaction shall be 4 passes over each full-width layer, or fraction thereof.

TIMBER SALE ROAD SPECIFICATIONS

SLOPE PROTECTION - 1400

- 1401 - This work shall consist of furnishing, hauling, and placing stone materials for slope protection structures and splash pads (energy dissipaters) in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross-sections shown on the plans.

- 1402 - Stone material shall consist of hard angular quarry rock of such quality that it will not disintegrate on exposure to water or weathering, and shall be graded in accordance with these specifications.

NOTE: Guide for relation between volume, size and weight. (175 lbs./cu./ft.):

| <i>Volume/Cubic Foot</i> | <i>Average Dimension in inches</i> | <i>Approximate Weight in Pounds</i> |
|------------------------------|--|---|
| <i>12</i> | <i>27.5 x 27.5 x 27.5</i> | <i>2100</i> |
| <i>6</i> | <i>21.8 x 21.8 x 21.8</i> | <i>1050</i> |
| <i>4</i> | <i>19.1 x 19.1 x 19.1</i> | <i>700</i> |
| <i>3</i> | <i>17.3 x 17.3 x 17.3</i> | <i>525</i> |
| <i>1</i> | <i>12.0 x 12.0 x 12.0</i> | <i>175</i> |
| <i>2/3</i> | <i>10.5 x 12.0 x 12.0</i> | <i>120</i> |
| <i>1/2</i> | <i>9.5 x 9.5 x 9.5</i> | <i>88</i> |
| <i>1/3</i> | <i>8.3 x 8.3 x 8.3</i> | <i>60</i> |
| <i>1/4</i> | <i>7.6 x 7.6 x 7.6</i> | <i>44</i> |
| <i>1/6</i> | <i>6.6 x 6.6 x 6.6</i> | <i>30</i> |
| <i>1/8</i> | <i>6.0 x 6.0 x 6.0</i> | <i>22</i> |
| <i>1/100</i> | <i>2.6 x 2.6 x 2.6</i> | <i>2</i> |

- 1404 - The material shall be well graded from the smallest to the maximum size specified. Stones smaller than the specified 10 percent size shall consist of spalls and fine rock fragments so distributed as to provide a stable compact mass.

TIMBER SALE ROAD SPECIFICATIONS

1405 - Rip rap shall conform to the following gradations:

TABLE 1405¹

| Class | Range of Intermediate Dimensions ² (inches) | Range of Rock Mass ³ (pounds) | % of Rock Equal or Smaller by Count |
|-------|---|---|-------------------------------------|
| 0 | 6-8 | 18-42 | 100 |
| | 5-6 | 10-18 | 85 |
| | 2-5 | 1-10 | 50 |
| | 0-2 | 0-1 | 15 |
| 1 | 9-15 | 59-270 | 100 |
| | 7-11 | 28-110 | 85 |
| | 5-8 | 10-42 | 50 |
| | 3-6 | 2-18 | 15 |
| 2 | 15-21 | 270-750 | 100 |
| | 11-15 | 110-270 | 85 |
| | 8-11 | 42-110 | 50 |
| | 6-8 | 10-42 | 15 |
| 3 | 21-27 | 750-1600 | 100 |
| | 15-19 | 270-560 | 85 |
| | 11-14 | 110-220 | 50 |
| | 8-10 | 42-81 | 15 |
| 4 | 27-33 | 1600-2900 | 100 |
| | 19-23 | 560-990 | 85 |
| | 14-17 | 220-400 | 50 |
| | 9-12 | 59-140 | 15 |

¹Gradation includes spalls and rock fragments to provide a stable, dense mass.

²The intermediate dimension is the longest straight-line distance across the rock that is perpendicular to the rock's longest axis on the rock face with the largest projection plane.

³Rock mass is based on a specific gravity of 2.65 (165#/cu.ft.) and 85 percent of the cubic volume as calculated using the intermediate dimension.

1406 - The placement of slope protection stones by the end dumping method shall be conducted to prevent the stones from escaping beyond the embankment toe.

1407 - Determination of the acceptability of the slope protection material gradation will be through visual inspection and physical measurements by the Authorized Officer.

TIMBER SALE ROAD SPECIFICATIONS

EROSION CONTROL - 1700

- 1701 - This work shall consist of measures to control soil erosion or water pollution during the construction operation through the use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains, and other erosion control devices or methods in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans.

- 1704 - The erosion control provisions specified under this Subsection shall be coordinated with the Soil Stabilization requirements of Section 1800.

- 1705 - The surface area of erodible earth material exposed at any one time by clearing and grubbing shall not exceed 21,780 square feet (0.50 acres) after October 15 without prior approval by the Authorized Officer.

- 1706 - The surface area of erodible earth material exposed at one time by excavation, borrow, or fill within the right-of-way shall not exceed 21,780 square feet (0.50 acres) after October 15 without prior approval by the Authorized Officer.

- 1707 - Completed and partially completed segments of the road at the following location:

| Road No. | From M.P. | To M.P. |
|-------------------|-----------|---------|
| 32-5W-18.01 | 0.00 | 3.84 |
| TR 23-04(T) | 0.00 | 0.03 |
| Powerline Road | 0.00 | 0.12 |
| TR 03-04 | 0.00 | 0.12 |
| TR 11-02 | 0.00 | 0.21 |
| TR 01-05 | 0.00 | 0.26 |
| TR 13-01-A | 0.00 | 0.53 |
| TR 13-01-B | 0.00 | 0.15 |
| TR 13-03 | 0.00 | 0.27 |
| TR 11-08 | 0.00 | 0.05 |
| TR 01-08 | 0.00 | 0.31 |
| Temp By-Pass Road | 0.00 | 0.05 |
| TR 23-04(C) | 0.00 | 0.11 |
| TR 27-3 | 0.00 | 0.04 |

carried over the winter and early spring periods shall be stabilized by seeding and mulching in accordance with Section 1800.

- 1708 - Newly constructed roads to be carried over the winter period, shall be blocked to

TIMBER SALE ROAD SPECIFICATIONS

- vehicular traffic.
- 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 energy dissipaters (splash pads) for pipe culverts conforming to the requirements and details shown on the respective exhibits and on the plans.

TIMBER SALE ROAD SPECIFICATIONS

SOIL STABILIZATION – 1800

- 1801 - This work shall consist of seeding and mulching on designated cut, fill, borrow, disposal, and special areas in accordance with these specifications. This work is required for road acceptance under Section 18 of this contract.
- 1802 - Soil stabilization work consisting of seeding and mulching shall be performed on existing roads and designated locations (culvert replacements and installations) in accordance with these specifications at the locations specified in the worklist.
- 1802a - Soil stabilization work consisting of seeding and mulching shall be performed on new road construction, landings, disturbed areas, and disposal sites in accordance with these specifications and as shown on the plans.
- 1803 - Soil stabilization work as specified under Subsections 1802 and 1802a shall be performed during the following seasonal periods:

| | |
|-----------------|------------------------------------|
| From: August 15 | To: October 15 (of the same year) |
|-----------------|------------------------------------|

If soil stabilization of disturbed areas is not completed by the specified fall date, the Purchaser shall treat disturbed areas in accordance with Subsection 1707 and then complete the requirements of Section 1800 the next construction season. The Authorized Officer may modify the above seasonal dates to conform to existing weather conditions and changes in the construction schedule.

- 1803a - The Purchaser shall begin soil stabilization work within 10 days of the starting work date when notified by the Authorized Officer.
- 1806a - Additional soil stabilization work consisting of seeding and mulching, may be required at the option of the Authorized Officer. Providing the additional stabilization is not due to Purchaser negligence as specified in 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 Production Cost Schedule.
- 1808 - Mulch materials conforming to the requirements of Subsection 1808a shall be furnished by the Purchaser in the amounts specified under Subsection 1811 and applied in accordance with Subsection 1812.
- 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.

TIMBER SALE ROAD SPECIFICATIONS

- 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.
- 1810 - Bulk mulching material required under these specifications shall be delivered to the work area bound either by twine, string or hemp rope. Wire binding will not be permitted.
- 1811 - The Purchaser shall furnish and apply to approximately **10.9** acres designated for treatment as shown on the plans and as specified under Subsections 1802 and 1806a, a mixture of grass seed and mulch material at the following rate of application:

a. Two Stage:

| | |
|------------|-----------------|
| Grass Seed | 20 lbs./acre |
| Mulch | 3,000 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 1802, 1802a, and 1806a, a mixture of 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, cultipaker seeders, or other approved mechanical seeding equipment may be used when seed and mulch are to be applied in dry form.
- 1818 - The maximum distance to be seeded and mulched from the road centerline shall be 20 feet for the cut slopes and 25 feet for the fill slopes.

TIMBER SALE ROAD SPECIFICATIONS

- 1819 - The Purchaser shall notify the Authorized Officer at least 3 days in advance of date he intends to commence the specified soil stabilization work.
- 1821 - Mulch that collects at the end of culverts or accumulates to excessive depths on the slopes shall be evenly spread by hand methods, as directed by the Authorized Officer.
- 1822 - No materials shall be applied when wind velocities would prevent a uniform application of the mix or slurry or when winds would drift the mix or slurry spray outside of the designated treatment area.
- 1824 - Twine, rope, sacks, and other debris resulting from the soil-stabilization operation shall be picked up and disposed of to the satisfaction of the Authorized Officer.

TIMBER SALE ROAD SPECIFICATIONS

ROADSIDE BRUSHING - 2100

- 2101 - This work shall consist of the removal of vegetation from the road prism - variable distance, and inside curves in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail of this exhibit, at designated locations as shown in the plans.
- 2102 - Roadside brushing may be performed mechanically with self-powered, self-propelled equipment and/or manually with hand tools, including chain saws.
- 2103 - Vegetation cut manually and/or mechanically less than 6 inches in diameter when measured at D.B.H. shall be cut to a maximum height of 3 inches above the ground surface or above obstructions such as rocks or stumps on cut and fill slopes and all limbs below the 2 inch area will be severed from the trunk.
- 2103a - Vegetation shall be cut and removed from the road bed between the outside shoulders and the ditch centerline and such vegetation shall be cut to a maximum height of 1 inch above the ground and running surface. Limbs below the 1 inch area will be severed from the trunk. Sharp pointed ends will not be permitted. Cuts shall be parallel to the ground line or running surface.
- 2104 - Trees in excess of 6 inches in diameter at D.B.H. 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 inches of the trunk to produce a smooth vertical face.
- 2106 - Vegetative growth capable of growing 1 foot in height or higher shall be cut, within the road prism-variable distance or as directed by the Authorized Officer.
- 2107 - Inside curves shall be brushed out for a sight distance of 200 feet chord distance or a middle ordinate distance of 25 feet, whichever is achieved first. Overhanging limbs and vegetation in excess of 1 foot in height, shall be cut within these areas.
- 2108 - Self-propelled equipment shall not be permitted on cut and fill slopes or in ditches.
- 2109 - Debris resulting from this operation shall be scattered (unless otherwise noted in the work list) downslope from the roadway. Debris shall not be allowed to accumulate in concentrations. Debris in excess of 1 foot in length and 2 inches in diameter shall not

TIMBER SALE ROAD SPECIFICATIONS

- be allowed to remain on cut slopes, ditches, roadways or water courses, or as directed by the Authorized Officer.
- 2110 - Vegetation 6 inches and smaller in diameter shall be chipped where indicated in the work list. Chips shall be scattered downslope from the roadway. Vegetation over 6 inches in diameter shall be disposed of by direction of the Authorized Officer.
 - 2114 - Sections of roadway to have vegetation removed will be marked at start and stop points with red-topped painted stakes.
 - 2115 - Mechanical brush cutters shall not be operated when there are people and occupied vehicles within 400 feet of the immediate operating area.
 - 2116 - Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the Manual on Uniform Traffic Devices.

ROAD MAINTENANCE SPECIFICATIONS

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| 3300 | Final Maintenance |
| 3400 | Other Maintenance |
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GENERAL - 3000

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

OPERATIONAL MAINTENANCE - 3100

- 3101 - The Purchaser shall blade and shape the road surface and shoulders with a motor grader. Banks shall not be undercut. Back blading with tractors or similar equipment will be allowed only around landings and other areas when approved by the Authorized Officer.
- 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.
- 3104b - The Purchaser shall be responsible for removal of all slides or slough, up to fifteen station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the purchaser.

Prior to removal of any slough or slide material exceeding 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, method of disposal, and the disposal site. Work may commence immediately after agreement.

Upon completion of agreed upon work, a reduction in timber sale purchase price will be made to offset the cost of the work, based on the current BLM Road Cost Guide.

Adjustments in purchase price for completed work shall be made as necessary and no less than once per year when actual work is ongoing.

3105 - The Purchaser shall be responsible for maintaining normal flow in drainage structures. This includes cleaning out drainage ditches, catch basins, clearing pipe inverts of sediment and other debris lodged in the barrel of the pipe, and maintaining water dips and water-bars using equipment specified in Subsection 3104 and other culvert cleaning and flushing equipment.

3106 - The Purchaser shall be responsible for repair and replacement of all materials eroded from road shoulders and fill slopes, up to 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 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.
- 3402 - The Purchaser shall be permitted to remove ice and snow from roads authorized for use under this contract only when prior written approval has been secured from the Authorized Officer. The Purchaser shall submit a written request for permission to remove ice and snow in advance of the date operations are to begin.

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

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

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

3404 - The Purchaser may at his option and expense substitute lignin sulfonate or magnesium chloride for water on any or all road segments listed in the contract 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.

3405a - Additional lignin sulfonate or magnesium chloride dust palliative may be required at the option of the Authorized Officer when the functional qualities of the dust palliative have been reduced or become ineffective due to third party damage, rain, or other events not under the control of the purchaser.

If additional dust palliative is required due to events controlled by the Purchaser, such as split hauling season, the Purchaser shall furnish and place such material at his own expense.

3405b - The Purchaser shall notify affected residents along the roads to be treated of the planned application of lignin sulfonate or magnesium chloride dust palliatives at least 3 days prior to the work 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 lignin sulfonate or 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 with the lignin sulfonate or magnesium chloride dust palliative material requirements specified under Subsection 3412b and 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 lignin sulfonate or 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, a lignin sulfonate or magnesium chloride dust palliative conforming to the material requirements of Subsection 3412b and 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 lignin sulfonate or magnesium chloride shall be field diluted within the application vehicle and be circulated at least 5 minutes to assure mixing. An air gap shall be provided between any water source and the materials being diluted. Accidental spills shall be contained to prevent entry in water courses or ponded water. The surface of adjacent structures and trees shall be protected from spattering or marring.

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

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

- 3412b - Specifications for Lignin Sulfonate:

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

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

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

| | |
|-------------|-----------|
| phosphorous | 25.00 ppm |
|-------------|-----------|

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

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

3412c - Specifications for Magnesium Chloride:

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

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

Concentration specifications for Magnesium chloride:

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

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

DECOMMISSIONING – 3500

- 3501 - Decommissioning shall consist of installing water bars, seeding with native seed, placement of slash and/or 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, unless noted to perform full decommissioning activities as described in Section 3520.

Exhibit D1

Sale Name: Oh Windy T.S.

Page 8 of 9

- 3504 - Decommissioning work shall be completed after timber extraction, logging activities, and after road use for unit maintenance activities associated with this timber sale.
- 3506 - Stockpiled slash shall be used to protect exposed areas created by the Purchaser's 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.
- 3507 - Culverts not designated as salvage by the Authorized Officer for the Government shall become the property of the Purchaser. The Purchaser shall be responsible for the proper disposal of materials in a legal manner and for payment of any fees required. Sale of material on site is not allowed unless authorized in writing by the Authorized Officer.
- 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 - Barricades shall be installed across full width of roadway at locations designated in the specifications. Barricades shall be constructed conforming to the lines, grades, dimensions and typical details as shown on [Exhibit D5](#).
- 3513 - Water bars shall be installed across full width of temporary routes at spacing shown in specifications. Water bars shall be constructed to the lines, grades, dimensions and typical details as shown on [Exhibit D6](#).
- 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.
- 3520 - Full Decommissioning work shall be performed on temporary routes identified in accordance with these specifications, and as shown on the plans. Full Decommissioning of temporary routes shall consist of all or part of the following treatments:
- a. Subsoiling shall be done using mechanical treatment to decompact the road surface to a depth 12 to 18 inches or to a point where 10 inch diameter stones are the dominant substrate (whichever is shallower). Where it is determined by the Authorized Officer that decompaction may cause unacceptable damage to the root systems of residual trees along a majority of the road, decompaction may be intermittent, or scarification may be used instead. Woody debris, brush, stumps, boulders, and other debris shall be placed along the roads entire length as determined by availability of materials to provide ground cover and discourage use. No live trees shall be cut or used without approval of the Authorized Officer.
- Where multiple entrances exist, the work shall include obscuring all road entrances. Ditchlines at intersecting roads shall be restored. The Purchaser shall use soil, boulders, brush, dead material, stumps, and other debris to disguise the road prism to the extent possible.

Exhibit D1

Sale Name: Oh Windy T.S.

Page 9 of 9

- b. All temporary culverts shall be removed from the temporary route for its entire length. Excavated culverts shall be left open to drain and layed back to slopes of 1 1/2:1. Where draw culverts are removed, the grade of the channel shall be restored to match the existing stream. Culverts not designated as salvage for the Government shall become the property of the Contractor. The Contractor shall be responsible for legally disposing of material.
 - c. Construct water bars along entire length of road at 200' spacing, or as staked or directed by the Authorized Officer's Representative.
 - d. The Purchaser shall Camouflaged the road entrance for a minimum of 100 feet or to the first curve or hillcrest. Camouflaged roads shall consist of using boulders, brush, dead material, stumps, and other debris to disguise the entire length of the road prism to the extent possible. No live trees should be used without approval by the Authorized Officer.
 - e. An earth berm or equivalent barricade shall be constructed near the beginning of road. The final location will be staked by the Authorized Officer's Representative.
-

EXHIBIT D2-1

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Maintenance Responsibility - Haul Roads

-  Purchaser Maintenance
-  BLM Maintenance
-  Third Party Maintenance

| Rev No. | Description | Date | Approval |
|---|-------------|---------------|----------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE | | | |
| ROAD MAINTENANCE MAP | | | |
| WOOD CREEK AREA | | | |
| DRAFTED BY: ELF | | | |
| DATE: AUG 2019 | | SHEET: 1 OF 5 | |

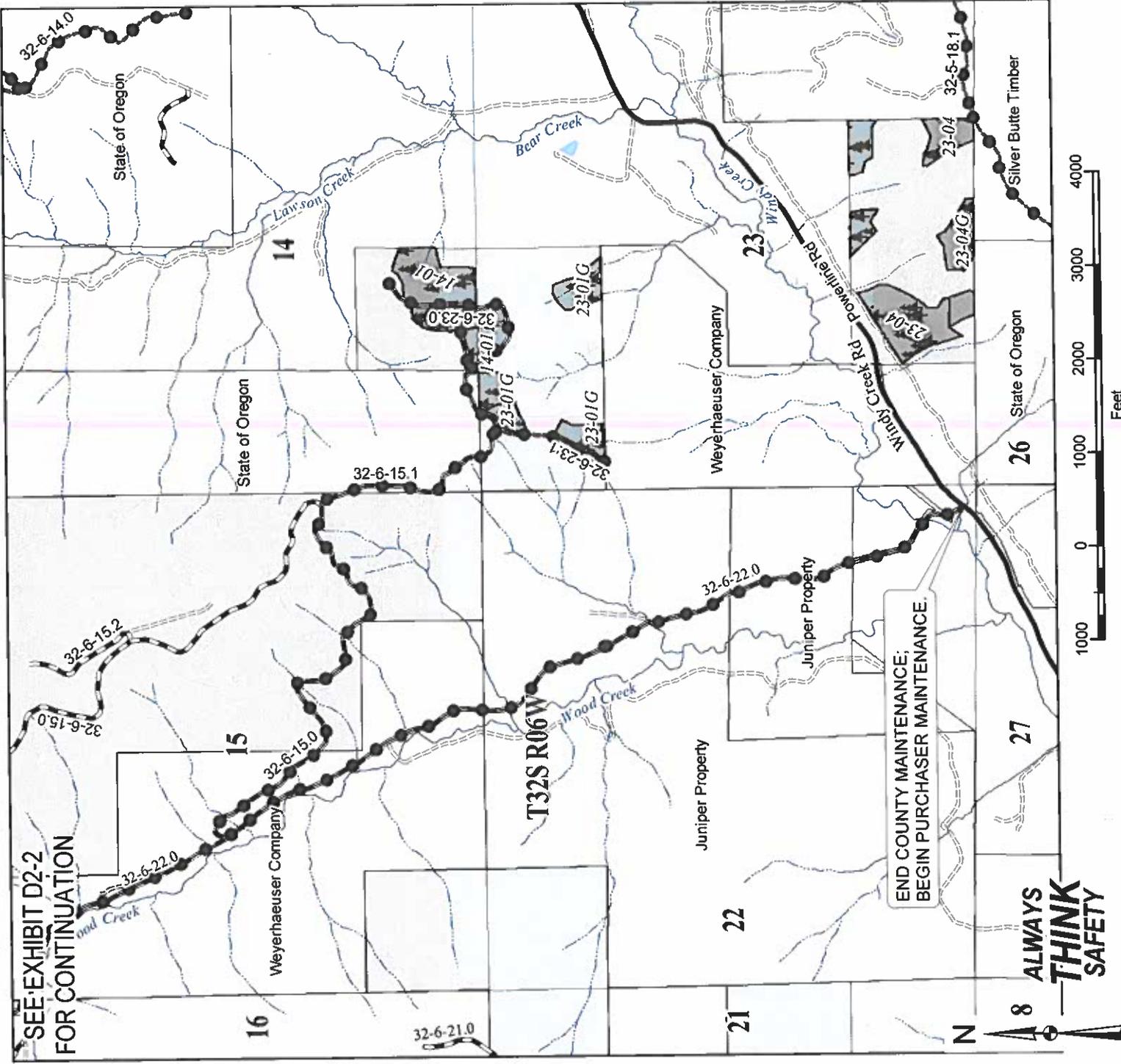


EXHIBIT D2-2

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Maintenance Responsibility - Haul Roads

-  Purchaser Maintenance
-  BLM Maintenance
-  Third Party Maintenance

| Rev No. | Description | Date | Approval |
|---------|-------------|------|----------|
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UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 MEDFORD DISTRICT - MEDFORD, OREGON

OH WINDY TIMBER SALE ROAD MAINTENANCE MAP WOOD CREEK AREA

DRAFTED BY: ELF

DATE: AUG 2019

SHEET: 2 OF 5

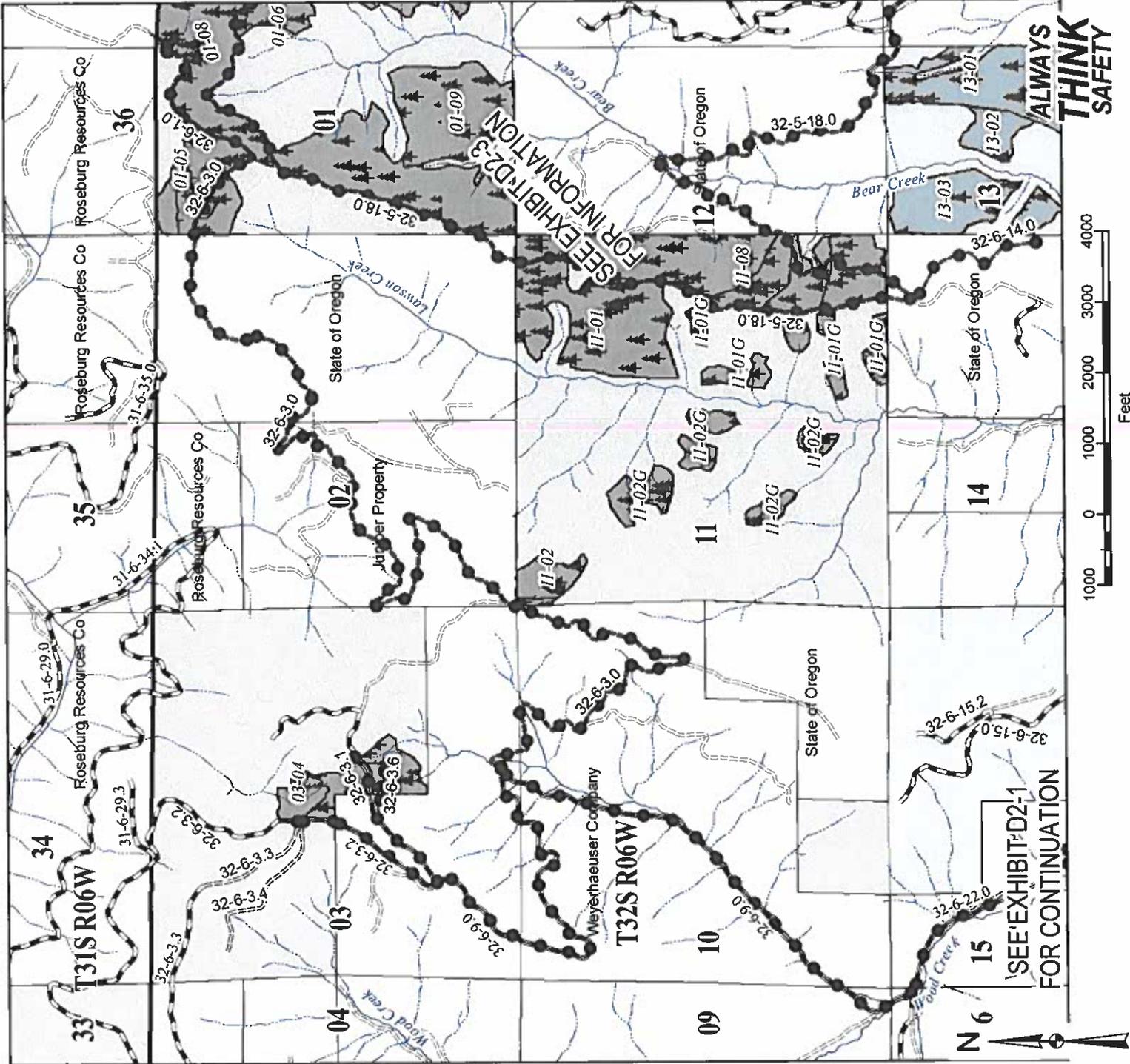


EXHIBIT D2-3

LEGEND

Land Ownership

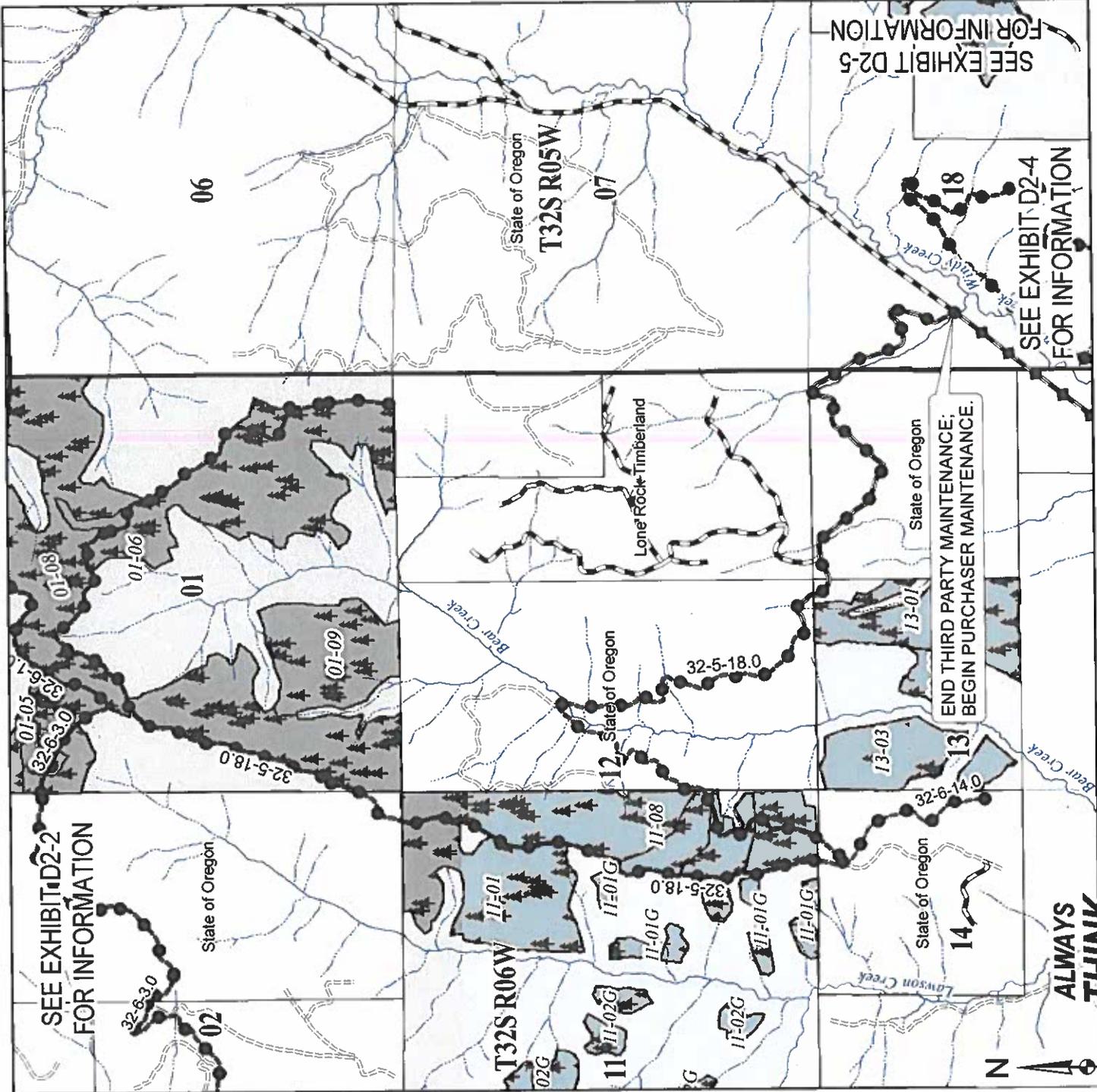
-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Maintenance Responsibility - Haul Roads

-  Purchaser Maintenance
-  BLM Maintenance
-  Third Party Maintenance



SEE EXHIBIT D2-2 FOR INFORMATION

SEE EXHIBIT D2-5 FOR INFORMATION

END THIRD PARTY MAINTENANCE; BEGIN PURCHASER MAINTENANCE.

SEE EXHIBIT D2-4 FOR INFORMATION

ALWAYS
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| Rev No. | Description | Date | Approval |
|---|-------------|------|---------------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE ROAD MAINTENANCE MAP BEAR CREEK AREA | | | |
| DRAFTED BY: ELF | | | SHEET: 3 OF 5 |
| DATE: AUG 2019 | | | |

EXHIBIT D2-4

LEGEND

Land Ownership

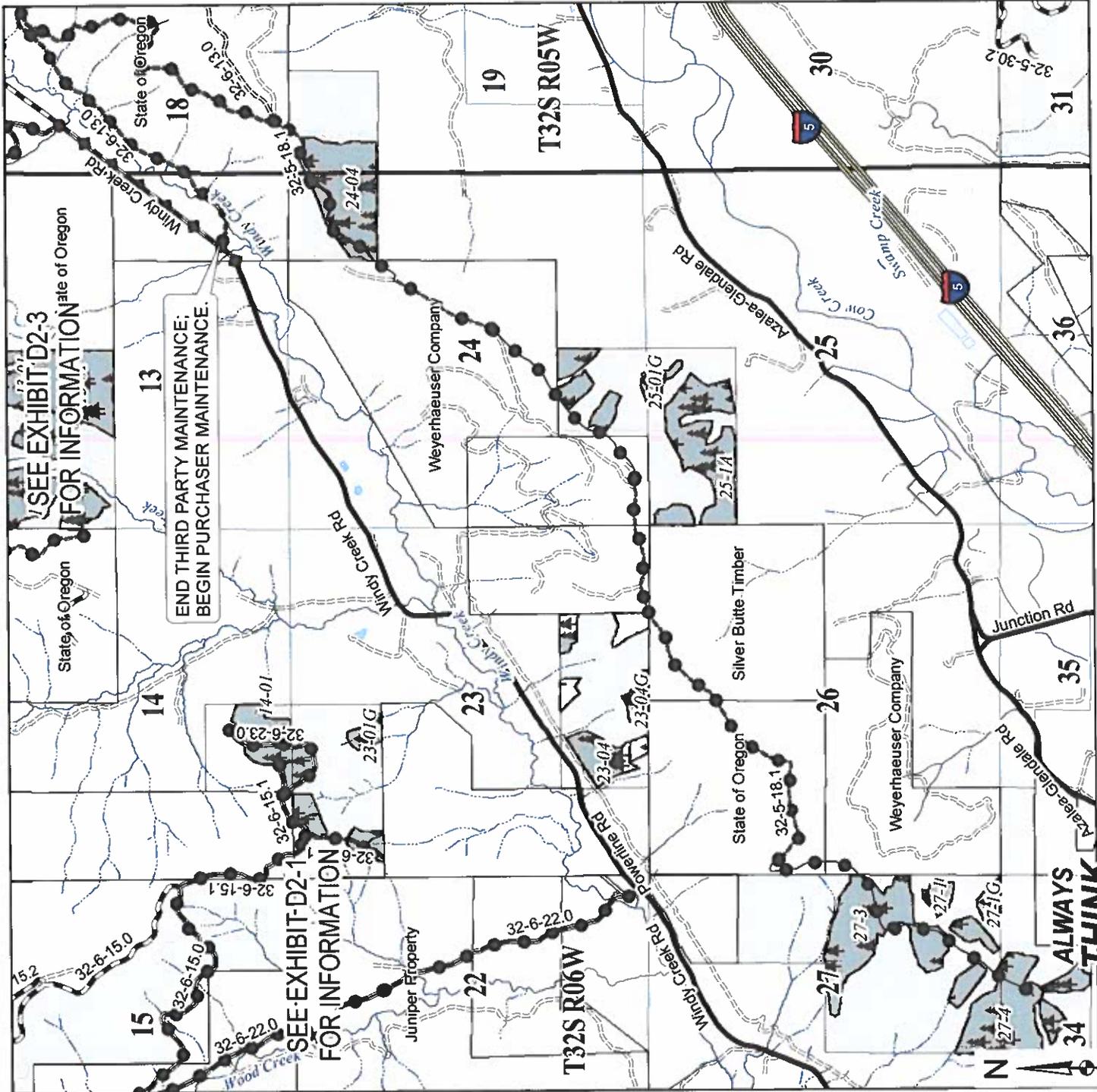
-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Maintenance Responsibility - Haul Roads

-  Purchaser Maintenance
-  BLM Maintenance
-  Third Party Maintenance



SEE EXHIBIT D2-3 FOR INFORMATION

END THIRD PARTY MAINTENANCE; BEGIN PURCHASER MAINTENANCE.

SEE EXHIBIT D2-1 FOR INFORMATION

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|---|-------------|------|---------------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE ROAD MAINTENANCE MAP WINDY CREEK AREA | | | |
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| DATE: AUG 2019 | | | |

EXHIBIT D2-5

LEGEND

Land Ownership

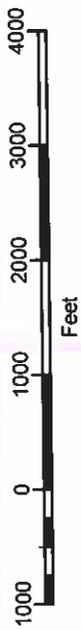
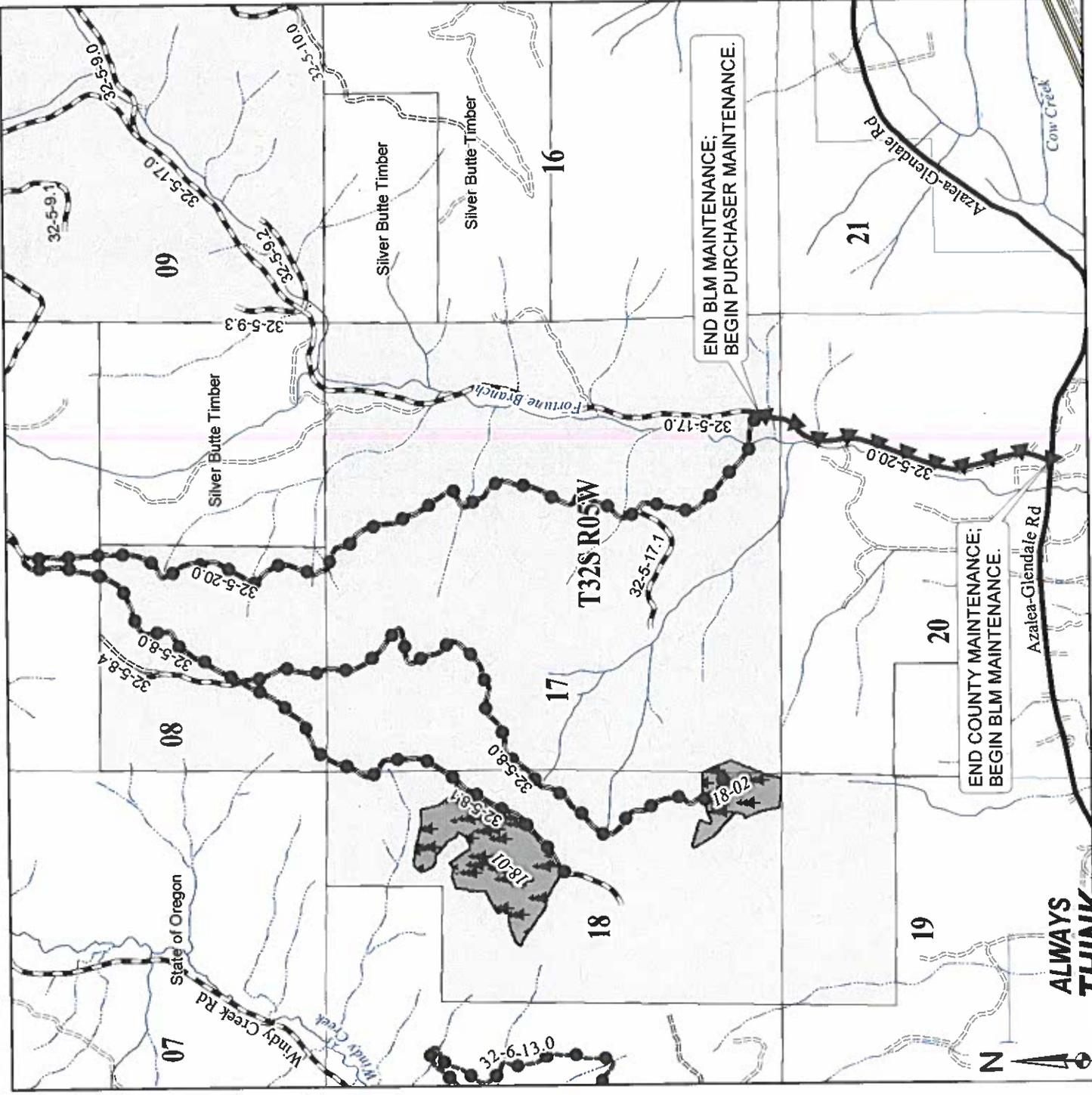
-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Maintenance Responsibility - Haul Roads

-  Purchaser Maintenance
-  BLM Maintenance
-  Third Party Maintenance



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|---|-------------|------|---------------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE ROAD MAINTENANCE MAP FORTUNE BRANCH AREA | | | |
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| DATE: AUG 2019 | | | |

EXHIBIT D3-1

LEGEND

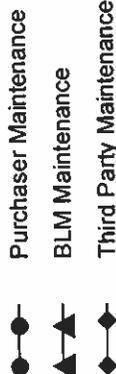
Land Ownership



Roads - Surface Type



Maintenance Responsibility - Haul Roads



Road Decommissioning



| Rev No. | Description | Date | Approval |
|---|-------------|------|---------------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE DECOMMISSIONING MAP WOOD CREEK AREA | | | |
| DRAFTED BY: ELF | | | SHEET: 1 OF 7 |
| DATE: AUG 2019 | | | |

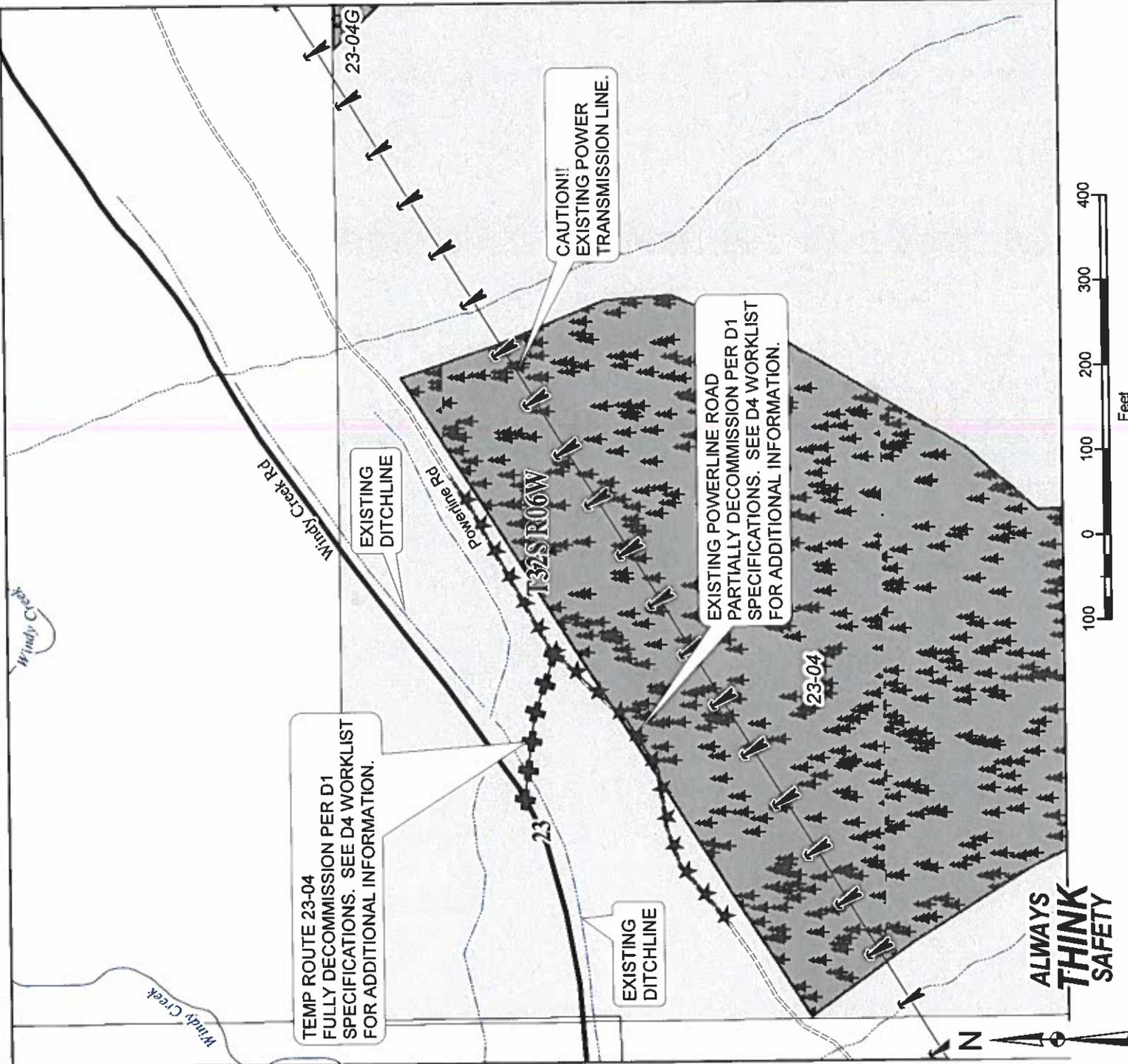


EXHIBIT D3-2

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

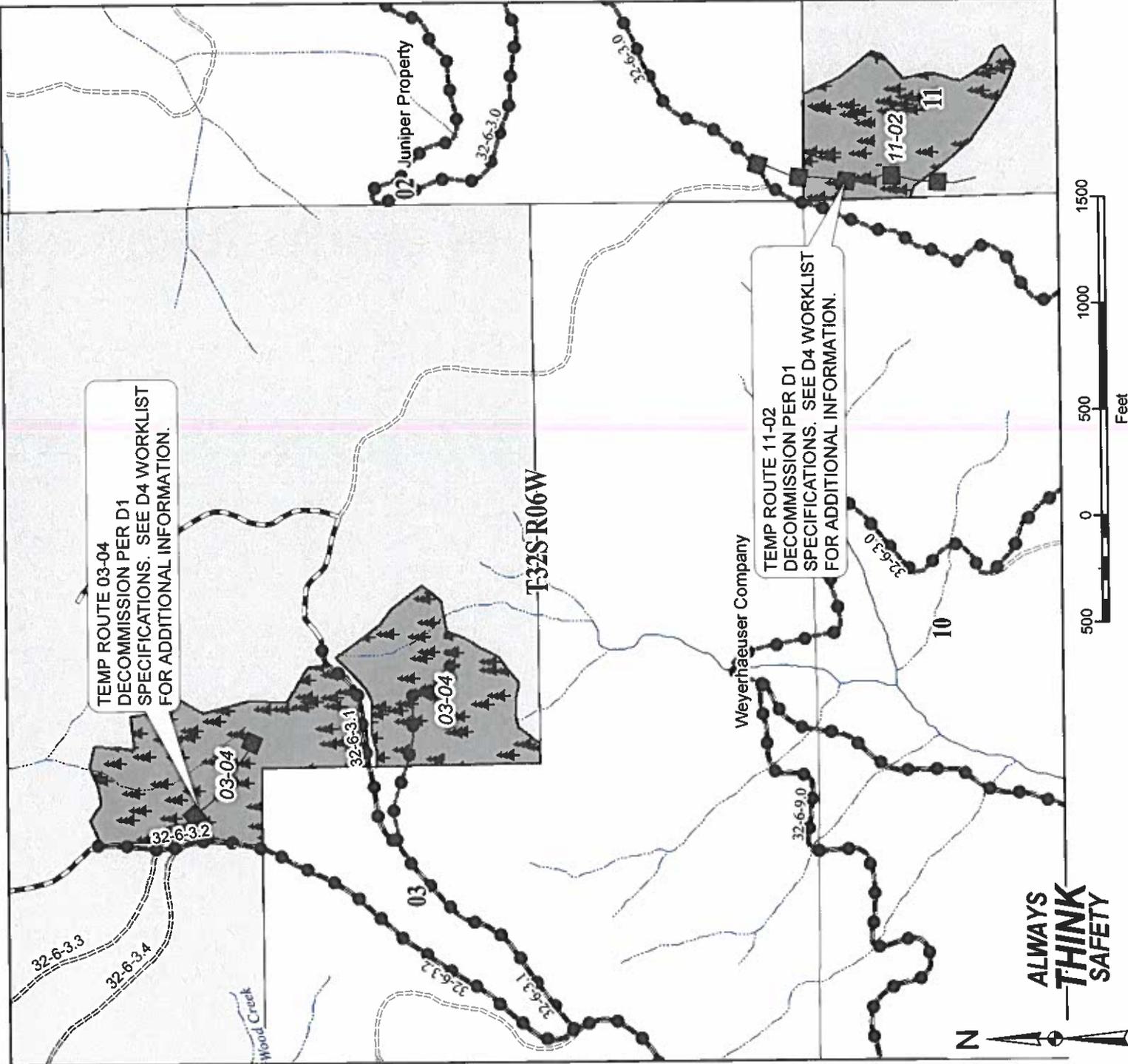
-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Maintenance Responsibility - Haul Roads

-  Purchaser Maintenance
-  BLM Maintenance
-  Third Party Maintenance

Road Decommissioning

-  Fully Decommission
-  Decommission
-  Partial Decommission



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|--|-------------|------|---------------|
| | | | |
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| BUREAU OF LAND MANAGEMENT | | | |
| MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE | | | |
| DECOMMISSIONING MAP | | | |
| WOOD CREEK AREA | | | |
| DRAFTED BY: ELF | | | SHEET: 2 OF 7 |
| DATE: AUG 2019 | | | |

EXHIBIT D3-3

LEGEND

- Land Ownership**
- BLM
 - Non-BLM
 - Timber Units
- Roads - Surface Type**
- Bituminous
 - Aggregate
 - Natural
 - Unknown

Maintenance Responsibility - Haul Roads

- Purchaser Maintenance
- BLM Maintenance
- Third Party Maintenance

Road Decommissioning

- Fully Decommission
- Decommission
- Partial Decommission

| Rev No. | Description | Date | Approval |
|---|-------------|------|---------------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE DECOMMISSIONING MAP WOOD CREEK AREA | | | |
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| DATE: AUG 2019 | | | |

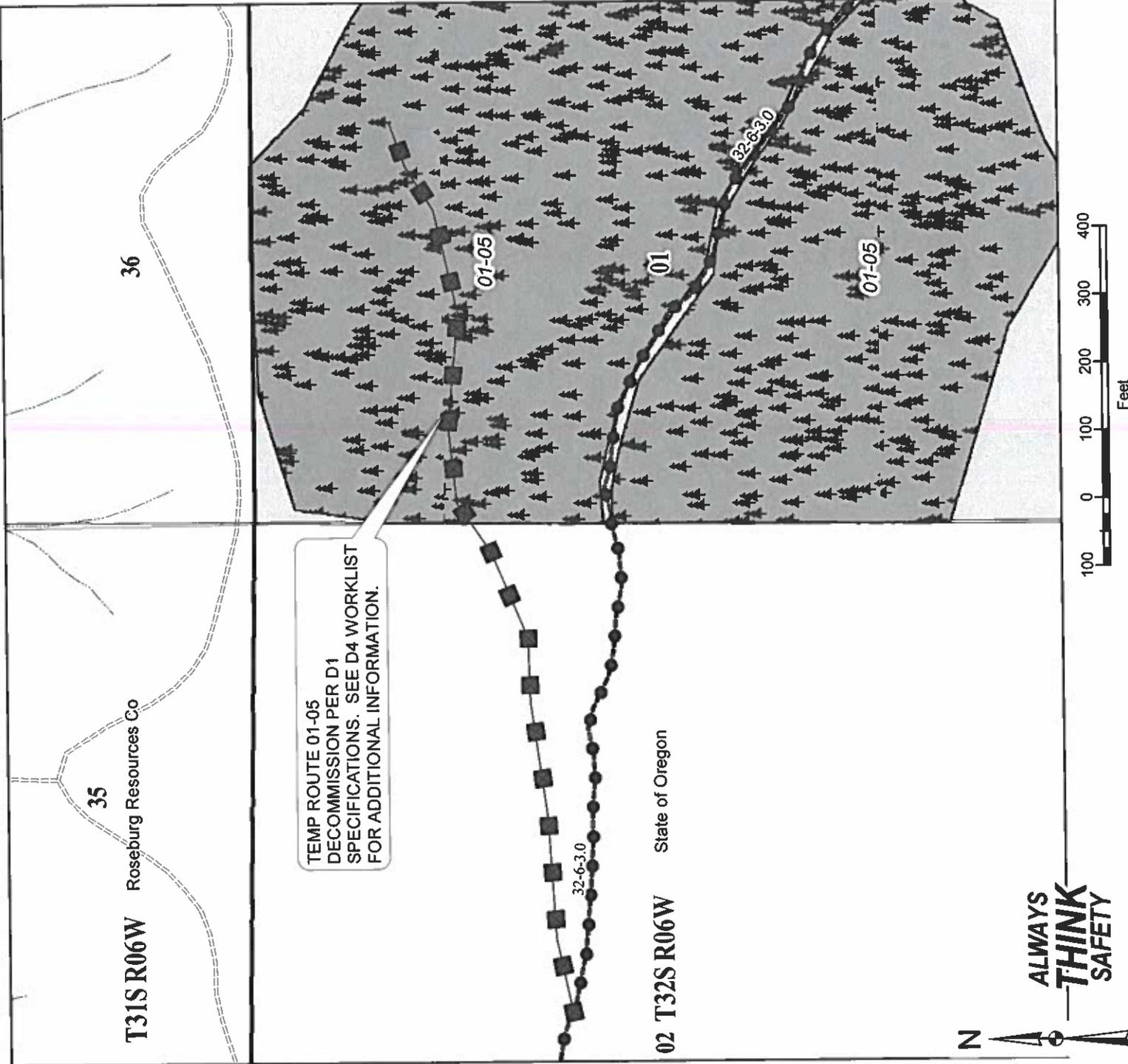


EXHIBIT D3-4

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

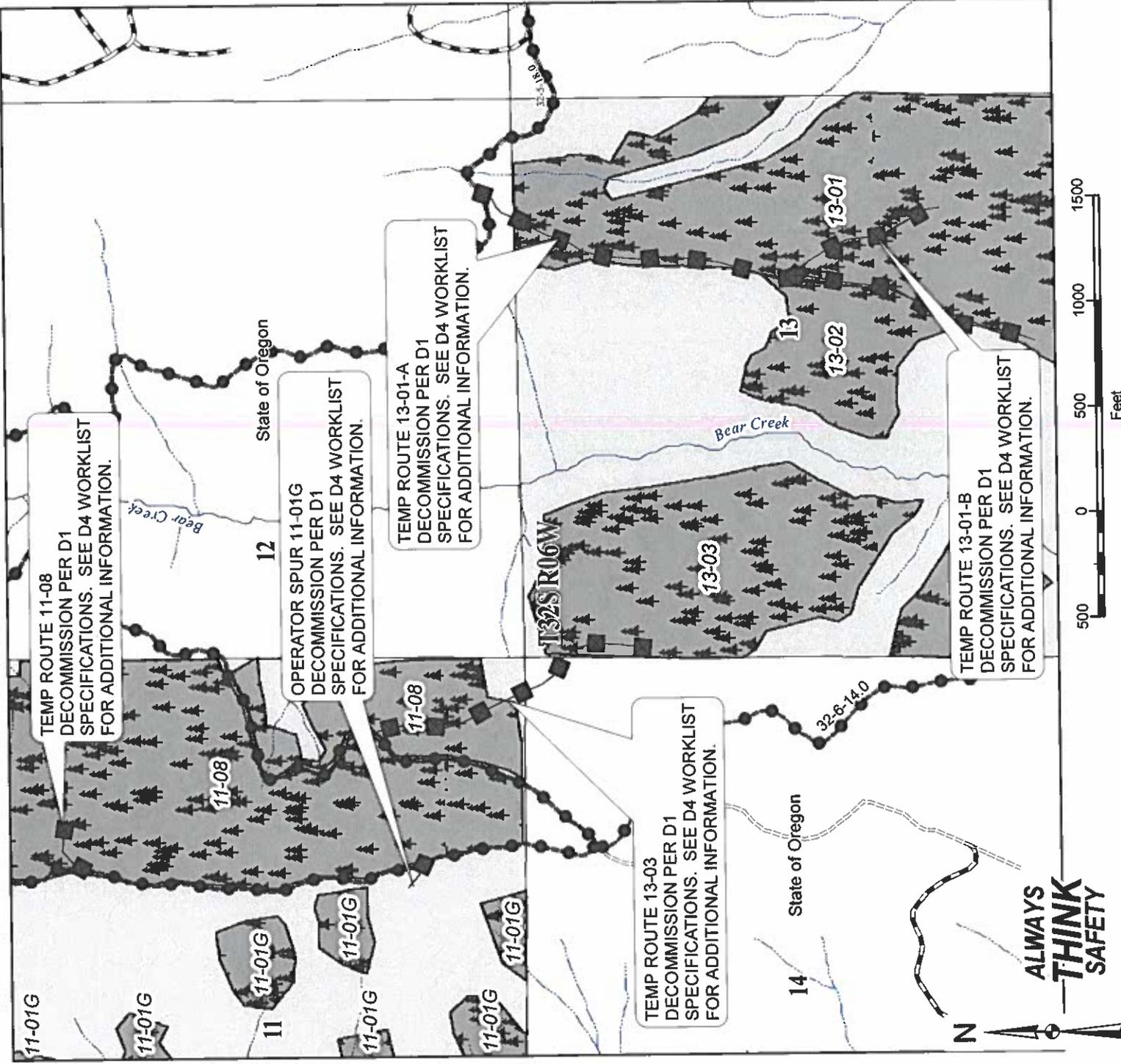
-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Maintenance Responsibility - Haul Roads

-  Purchaser Maintenance
-  BLM Maintenance
-  Third Party Maintenance

Road Decommissioning

-  Fully Decommission
-  Decommission
-  Partial Decommission



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|---|-------------|---------------|----------|
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| OH WINDY TIMBER SALE DECOMMISSIONING MAP BEAR CREEK AREA | | | |
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| DATE: AUG 2019 | | SHEET: 4 OF 7 | |

EXHIBIT D3-5

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

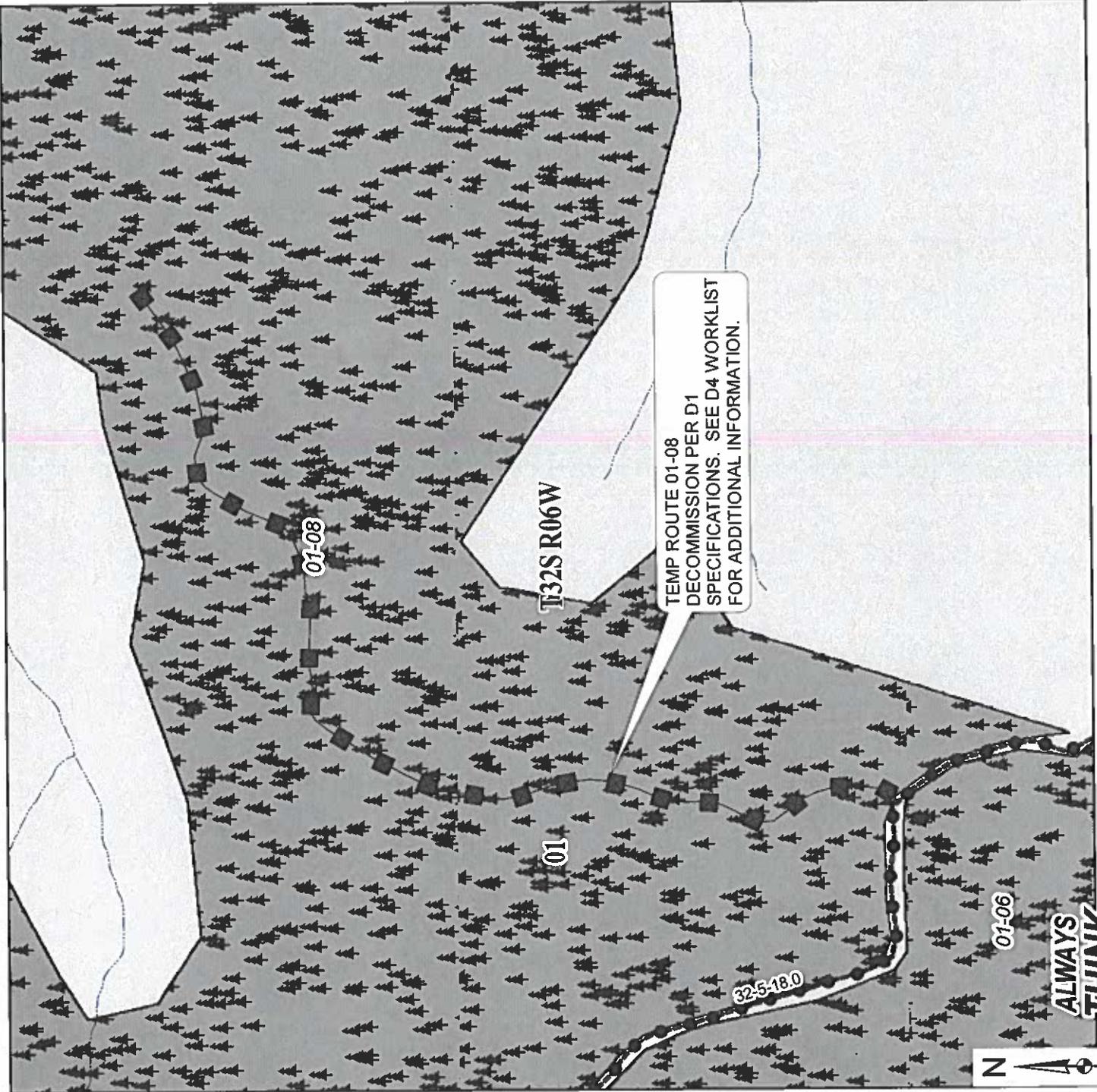
-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Maintenance Responsibility - Haul Roads

-  Purchaser Maintenance
-  BLM Maintenance
-  Third Party Maintenance

Road Decommissioning

-  Fully Decommission
-  Decommission
-  Partial Decommission



| Rev No. | Description | Date | Approval |
|---|-------------|------|---------------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE DECOMMISSIONING MAP BEAR CREEK AREA | | | |
| DRAFTED BY: ELF | | | SHEET: 5 OF 7 |
| DATE: AUG 2019 | | | |

**ALWAYS
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EXHIBIT D3-6

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

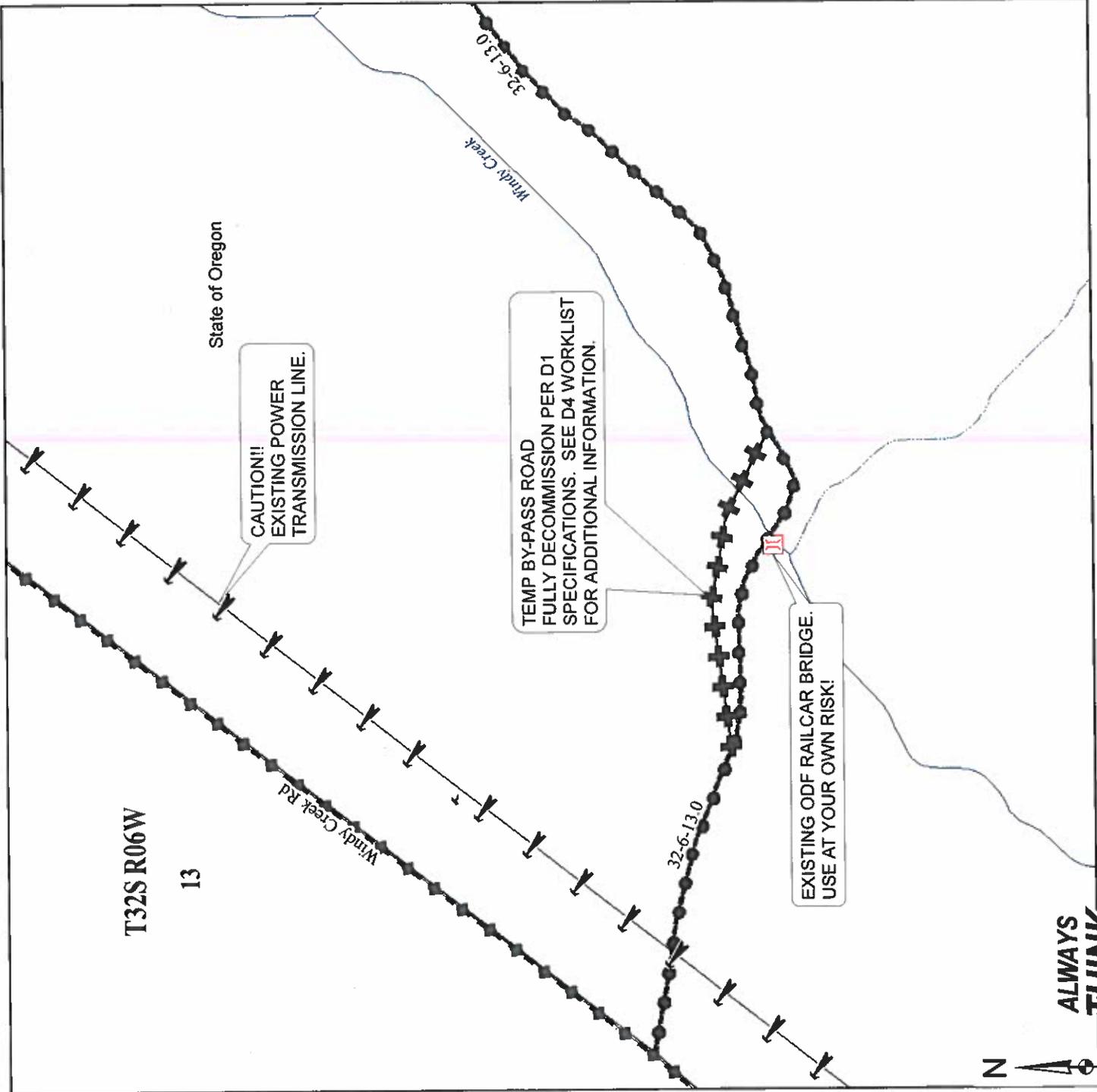
Maintenance Responsibility - Haul Roads

-  Purchaser Maintenance
-  BLM Maintenance
-  Third Party Maintenance

Road Decommissioning

-  Fully Decommission
-  Decommission
-  Partial Decommission

 ODF Railcar Bridge



T32S R06W
13

State of Oregon

CAUTION!!
EXISTING POWER
TRANSMISSION LINE.

TEMP BY-PASS ROAD
FULLY DECOMMISSION PER D1
FULLY DECOMMISSION
SPECIFICATIONS. SEE D4 WORKLIST
FOR ADDITIONAL INFORMATION.

EXISTING ODF RAILCAR BRIDGE.
USE AT YOUR OWN RISK!



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|---|-------------|---------------|----------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE DECOMMISSIONING MAP WINDY CREEK AREA | | | |
| DRAFTED BY: ELF | | | |
| DATE: AUG 2019 | | SHEET: 6 OF 7 | |

EXHIBIT D3-7

LEGEND

Land Ownership

-  BLM
-  Non-BLM
-  Timber Units

Roads - Surface Type

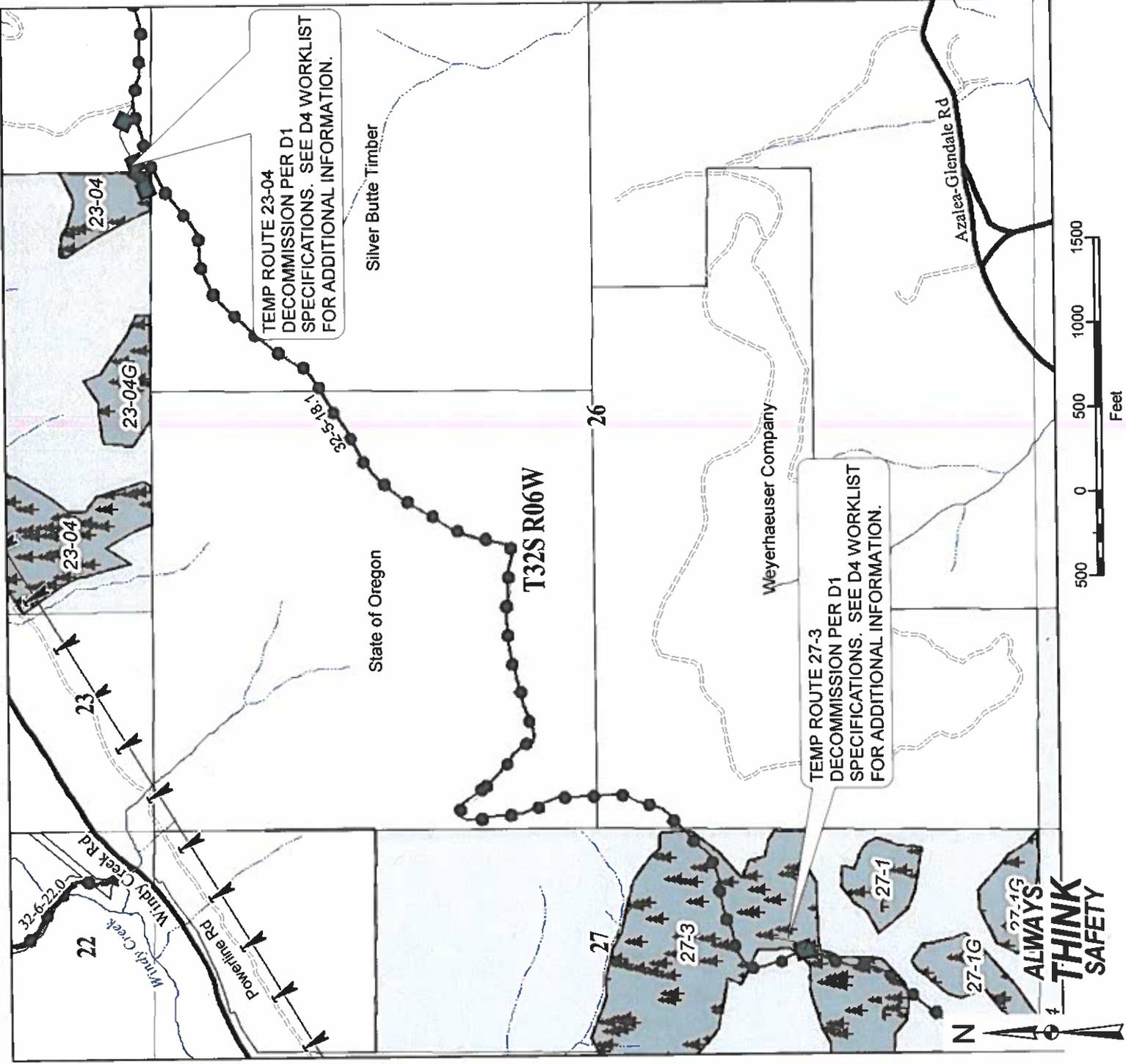
-  Bituminous
-  Aggregate
-  Natural
-  Unknown

Maintenance Responsibility - Haul Roads

-  Purchaser Maintenance
-  BLM Maintenance
-  Third Party Maintenance

Road Decommissioning

-  Fully Decommission
-  Decommission
-  Partial Decommission



| Rev No. | Description | Date | Approval |
|---|-------------|---------------|----------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE DECOMMISSIONING MAP WINDY CREEK AREA | | | |
| DRAFTED BY: ELF | | | |
| DATE: AUG 2019 | | SHEET: 7 OF 7 | |

Exhibit D4

Sale Name: Oh Windy T.S.

Page 1 of 4

Decommissioning Work List

Upon completion of timber operations, all Temp Routes are to be decommissioned or fully decommissioned as identified below. See Exhibit D1, Section 3500 for decommissioning specifications.

General Definitions:

Decommission: Decommissioning shall include installing water bars per the Water Bar Spacing by Erosion Class Table shown on Exhibit D7, and barricading. All exposed or disturbed soils shall be seeded with approved native seed species and mulched with weed-free straw or approved native slash materials.

Full Decommission: Full decommissioning shall include removing temporary culverts, decompacting the surface to a depth of 8 to 12 inches (ripping, sub-soiling, or pitting), installing water bars per the Water Bar Spacing by Erosion Class Table shown on Exhibit D7, and camouflaging and barricading entrances. All disturbed soils shall be seeded with approved native seed species and mulched with weed-free straw or approved native slash materials. Camouflaged entrances shall consist of logs, slash, boulders and others debris placed along road entrances for a minimum of 100 feet or to the first curve or hillcrest to discourage vehicle use per Exhibit D8.

Partial Decommission: Partial decommissioning shall include installing water bars per the Water Bar Spacing by Erosion Class Table shown on Exhibit D7. All exposed or disturbed soils shall be seeded with approved native seed species and mulched with weed-free straw or approved native slash materials.

Temp Route 23-04(Tractor Unit)

| STA | Description |
|------|---|
| 0+00 | Jct w/ Windy Creek Road. Begin temp route full decommissioning. See Exhibit D3-1 for map. Begin fill removal. NO TRACKED EQUIPMENT WILL BE ALLOWED ON PAVED ROADS. |
| 0+30 | Remove temporary culvert from the Windy Creek Rd ditch line. Regrade existing ditch line and remove any loose material from flowline. |
| 1+79 | Jct w/ existing Powerline Road. End temp route full decommissioning. See below for continuation. |

Powerline Road – NAT– Sub: 15Ft– Ditch: 0Ft – X-Sect: Outsloped

| MP | Description |
|-------|---|
| -2+45 | NE end of road; approximate location of landing. Begin partial decommissioning. See Exhibit D3-1 for map. |
| -1+50 | Construct water bar |
| -0+90 | Ensure constructed water dip is functional. |
| 0+00 | Jct. w/ Temp Route 23-04(tractor). Decommission constructed turnaround area. |
| 2+10 | Ensure constructed water dip is functional. |
| 3+10 | Construct water bar |
| 3+80 | SW end of road; approximate location of landing. End partial decommissioning. |

Temp Route 03-04

| STA | Description |
|------|---|
| 0+00 | Jct w/ 32-6-3.2 Road. Begin temp route decommissioning. See Exhibit D3-2 for map. |
| 0+40 | Construct barricade per Exhibit D7. |
| 2+00 | Ensure constructed water dip is functional. |
| 3+50 | Construct water bar |
| 5+00 | Ensure constructed water dip is functional. |

Exhibit D4

Sale Name: Oh Windy T.S.

Page 2 of 4

6+47 End temp route decommissioning. Decommission constructed turnaround area.

Temp Route 11-02

| STA | Description |
|-------|---|
| 0+00 | Jct w/ 32-6-3.0 Road. Begin temp route decommissioning. See Exhibit D3-2 for map. |
| 0+40 | Construct barricade per Exhibit D7. |
| 1+40 | Construct water bar |
| 2+50 | Boundary line. Leaving Juniper Property in Section 2 and entering BLM land in Section 11. |
| 2+80 | Ensure constructed water dip is functional. |
| 3+90 | Construct water bar |
| 5+00 | Ensure constructed water dip is functional. |
| 6+50 | Construct water bar |
| 7+90 | High point/crest in p-line. |
| 9+00 | Construct water bar |
| 10+00 | Ensure constructed water dip is functional. |
| 10+85 | End temp route decommissioning. Decommission constructed turnaround area. |

Temp Route 01-05

| STA | Description |
|-------|--|
| 0+00 | Jct w/ 32-6-3.0 Road. Begin temp route decommissioning. See Exhibit D3-3 for map. |
| 1+50 | Construct water bar |
| 3+50 | Ensure constructed water dip is functional. |
| 5+00 | Construct water bar |
| 7+45 | Boundary line. Leaving Oregon Dept. of Forestry in Section 2 and entering BLM land in Section 1. |
| 7+50 | Construct barricade per Exhibit D7. |
| 7+60 | Construct water bar |
| 9+00 | Ensure constructed water dip is functional. |
| 10+00 | Construct water bar |
| 11+00 | Decommission constructed turnaround area. |
| 12+25 | Construct water bar |
| 13+50 | Construct water bar |
| 13+77 | End temp route decommissioning. |

Temp Route 13-01-A

| STA | Description |
|-------|--|
| 0+00 | Jct w/ 32-5-18.0 Road. Begin temp route decommissioning. See Exhibit D3-4 for map. |
| 0+40 | Construct barricade per Exhibit D7. |
| 1+50 | Construct water bar |
| 2+00 | Boundary line. Leaving Oregon Dept. of Forestry in Section 12 and entering BLM land in Section 13. |
| 3+00 | Construct water bar |
| 4+50 | Construct water bar |
| 6+00 | Construct water bar |
| 7+35 | Ensure constructed water dip is functional. |
| 8+60 | Construct water bar |
| 9+80 | Ensure constructed water dip is functional. |
| 11+00 | Construct water bar |
| 11+05 | Decommission constructed turnaround area. |
| 12+50 | Construct water bar |
| 14+00 | Ensure constructed water dip is functional. |
| 15+50 | Construct water bar |

Exhibit D4

Sale Name: Oh Windy T.S.

Page 3 of 4

| | |
|-------|---|
| 16+00 | Jct w/ Temp Route 13-01-B on left. |
| 16+75 | Construct water bar |
| 17+10 | Decommission constructed turnaround area. |
| 19+50 | Ensure constructed water dip is functional. |
| 21+00 | Construct water bar |
| 22+50 | Construct water bar |
| 23+90 | Low point/sag in p-line. Ensure constructed water dip is functional. |
| 25+00 | Construct water bar |
| 25+96 | High point/crest in p-line. |
| 27+25 | Construct water bar |
| 28+00 | End temp route decommissioning. Decommission constructed turnaround area. |

Temp Route 13-01-B

| STA | Description |
|------|--|
| 0+00 | Jct w/ Temp Route 13-01-A. Begin temp route decommissioning. See Exhibit D3-4 for map. |
| 1+00 | Construct water bar |
| 2+50 | Ensure constructed water dip is functional. |
| 3+50 | Construct water bar |
| 5+00 | Ensure constructed water dip is functional. |
| 6+50 | Construct water bar |
| 7+90 | End temp route decommissioning. Decommission constructed turnaround area. |

Temp Route 13-03

| STA | Description |
|-------|--|
| 0+00 | Jct w/ 32-5-18.0 Road. Begin temp route decommissioning. See Exhibit D3-4 for map. |
| 0+40 | Construct barricade per Exhibit D7. |
| 1+50 | Construct water bar |
| 3+00 | Ensure constructed water dip is functional. |
| 4+50 | Construct water bar |
| 6+50 | Ensure constructed water dip is functional. |
| 7+58 | Boundary line. Leaving BLM land in Section 11 and entering Oregon Dept. of Forestry in Section 14. |
| 8+00 | Construct water bar |
| 9+50 | Construct water bar |
| 10+17 | Boundary line. Leaving Oregon Dept. of Forestry in Section 14 and entering BLM land in Section 13. |
| 10+50 | Construct water bar |
| 11+90 | Ensure constructed water dip is functional. |
| 13+25 | Construct water bar |
| 13+80 | Decommission constructed turnaround area. |
| 14+23 | End temp route decommissioning. |

Operator Spur 11-01G

| STA | Description |
|------|---|
| 0+00 | Jct w/ 32-5-18.0 Road. Begin operator spur decommissioning. See Exhibit D3-4 for map. |
| 0+40 | Construct barricade per Exhibit D7. |
| 0+75 | Construct water bar |
| 1+40 | End operator spur decommissioning. |

Temp Route 11-08

| STA | Description |
|------|--|
| 0+00 | Jct w/ 32-5-18.0 Road. Begin temp route decommissioning. See Exhibit D3-4 for map. |

Exhibit D4

Sale Name: Oh Windy T.S.

Page 4 of 4

| | |
|------|---|
| 0+40 | Construct barricade per Exhibit D7. |
| 0+92 | High point/crest in p-line. |
| 2+00 | Construct water bar |
| 2+62 | End temp route decommissioning. Decommission constructed turnaround area. |

Temp Route 01-08

| STA | Description |
|-------|--|
| 0+00 | Jct w/ 32-5-18.0 Road. Begin temp route decommissioning. See Exhibit D3-5 for map. |
| 0+40 | Construct barricade per Exhibit D7. |
| 1+00 | Construct water bar |
| 2+10 | Ensure constructed water dip is functional. |
| 3+10 | Construct water bar |
| 4+05 | Ensure constructed water dip is functional. |
| 5+00 | Construct water bar |
| 6+00 | Ensure constructed water dip is functional. |
| 7+00 | Construct water bar |
| 8+00 | High point/crest in p-line. |
| 9+20 | Decommission constructed turnaround area. |
| 9+60 | Construct water bar |
| 10+80 | Ensure constructed water dip is functional. |
| 12+50 | Ensure constructed water dip is functional. |
| 14+00 | Construct water bar |
| 15+25 | Construct water bar |
| 16+23 | End temp route decommissioning. Decommission constructed turnaround area. |

Temp By-Pass Road

| STA | Description |
|------|--|
| 0+00 | Jct w/ 32-6-13.0 Road. Begin temp by-pass road full decommissioning. See Exhibit D3-6 for map. Begin fill removal. |
| 0+40 | Remove temporary pipe. |
| 1+85 | Intersect w/ center of Windy Creek (Coho habitat). Remove temporary bridge/structure. Hydrologic Point of Concern: Ensure check dams, or other approved BMP's, are fully functional. |
| 2+30 | Jct w/ 32-6-13.0 Road. End temp by-pass road full decommissioning. |

Temp Route 23-04 (Cable)

| STA | Description |
|------|--|
| 0+00 | Jct w/ 32-5-18.1 Road. Begin temp route decommissioning. See Exhibit D3-7 for map. |
| 0+40 | Construct barricade per Exhibit D7. |
| 1+50 | Construct water bar |
| 3+10 | Ensure constructed water dip is functional. |
| 4+40 | Boundary line. Leaving Weyerhaeuser Company in the SE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 23 and entering BLM land in the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 23. |
| 4+50 | Construct water bar |
| 5+72 | End temp route decommissioning. Decommission constructed turnaround area. |

Temp Route 27-3

| STA | Description |
|------|---|
| 0+00 | Jct w/ 32-5-18.1 Road. Begin temp route decommissioning. |
| 0+40 | Construct barricade per Exhibit D7. |
| 1+65 | Ensure constructed water dip is functional. |
| 2+37 | End temp route decommissioning. Decommission constructed turnaround area. |

EXHIBIT D5-1

| ROAD NUMBER | FROM | | TO | | LENGTH MILE/STA | MAINTENANCE RESPONSIBILITY | | | DUST ABATEMENT MILE | LOOKING MILE | ROAD CLOSURE AND DECOMMISSIONING | | | | |
|-------------------------|----------|----------|----------|----------|--------------------|----------------------------|----------------------------------|------------------------------------|------------------------|-----------------|---|----------------------------|-----------------------------|--|--|
| | MILE/STA | MILE/STA | MILE/STA | MILE/STA | | BLM MAINTENANCE MILE | PURCHASER MAINTENANCE MILE | THIRD PARTY MAINTENANCE MILE | | | INSTALL EARTH/LOG BARRICADE EA | INSTALL MEGA-GATE EA | INSTALL WATER BARS EA | CAMOUFLAGE ROAD ENTRANCE (100 FT) EA | SUB-SOIL/ RIPPING/ DECOMPACT SUBGRADE MILE/STA |
| WOODS CREEK AREA | | | | | | | | | | | | | | | |
| 32-6-22.0 | 0.00 | 2.32 | 2.32 | 2.32 | 2.32 | | | | | | | | | | |
| 32-6-9.0 | 0.00 | 2.58 | 2.58 | 2.58 | 2.58 | | 2.32 | | 0.14 | | | | | | |
| 32-6-3.1 | 0.00 | 0.43 | 0.43 | 0.43 | 0.43 | | 2.58 | | | | | | | | |
| 32-6-3.2 | 0.00 | 0.50 | 0.50 | 0.50 | 0.50 | | 0.43 | | | | | | | | |
| 32-6-3.6 | 0.00 | 0.14 | 0.14 | 0.14 | 0.14 | | 0.50 | | | | | | | | |
| 32-6-3.0 | 0.00 | 3.89 | 3.89 | 3.89 | 3.89 | | 0.14 | | | | | | | | |
| 32-6-1.0 | 0.00 | 0.53 | 0.53 | 0.53 | 0.53 | | 3.89 | | | | | | | | |
| 32-6-15.0 | 0.00 | 0.99 | 0.99 | 0.99 | 0.99 | | 0.53 | | | | | | | | |
| 32-6-15.1 | 0.00 | 0.66 | 0.66 | 0.66 | 0.66 | | 0.99 | | | | | | | | |
| 32-6-23.0 | 0.00 | 0.43 | 0.43 | 0.43 | 0.43 | | 0.66 | | | | | | | | |
| 32-6-23.1 | 0.00 | 0.24 | 0.24 | 0.24 | 0.24 | | 0.43 | | | | | | | | |
| BEAR CREEK AREA | | | | | | | | | | | | | | | |
| WINDY CRK RD | 0.00 | 0.63 | 0.63 | 0.63 | 0.63 | | 0.24 | | | | | | | | |
| 32-5-18.0 | 0.00 | 6.20 | 6.20 | 6.20 | 6.20 | | | 0.63 | | | | | | | |
| 32-6-14.0 | 0.00 | 0.43 | 0.43 | 0.43 | 0.43 | | 6.20 | | | | | | | | |

| REV. NO. | DESCRIPTION | DATE | APPROVAL |
|---|-------------|---------------|----------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE ESTIMATE OF QUANTITIES* | | | |
| DRAFTED BY: BLM | | SCALE: NONE | |
| DATE: JULY 2019 | | SHEET: 1 OF 3 | |
| DRAWING NO.: OR-11-9113.4-1 | | | |

*ALWAYS
THINK
SAFETY*

DECOMMISSIONING NOTES

- ALL TEMP ROUTE ARE TO BE DECOMMISSIONED PER EXHIBIT D SPECIFICATIONS AND DETAILS.
- DECOMMISSIONING SHALL INCLUDE WATER BARRING, SEEDING & MULCHING, AND BARRICADING.
- FULL DECOMMISSIONING SHALL INCLUDE RIPPING, WATER BARRING, SEEDING & MULCHING, AND BARRICADING.

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

EXHIBIT D5-3

| ROAD NUMBER | FROM | | TO | | LENGTH MILE/STA | MAINTENANCE RESPONSIBILITY | | | DUST ABATEMENT/ MILE | WORKING MILE | ROAD CLOSURE AND DECOMMISSIONING | | | | | |
|--------------------|----------|-------|----------|-----|--------------------|----------------------------|-----------------------|-------------------------|-------------------------|-----------------|----------------------------------|-------------------|--------------------|-----------------------------------|--------------------------------------|-----------------------------------|
| | MILE/STA | | MILE/STA | | | BLM MAINTENANCE | PURCHASER MAINTENANCE | THIRD PARTY MAINTENANCE | | | INSTALL EARTHLOG BARRICADE | INSTALL MEGA-GATE | INSTALL WATER BARS | CAMOUFLAGE ROAD ENTRANCE (100 FT) | SUB-SOIL RIPPING/ DECOMPACT SUBGRADE | SOIL STABILIZATION (SEED & MULCH) |
| | MILE | STA | MILE | STA | | MILE | MILE | MILE | | | EA | EA | EA | EA | MILE/STA | ACRE |
| Temp Route 23-04T | 0+00 | 1+79 | 0+03 | | 0.03 | | | | | | 1 | 0.03 | 0.1 | | | |
| Powerline Road | -2+45 | 3+80 | 0.12 | | 0.12 | | | | | 2 | | | 0.2 | | | |
| Temp Route 03-04 | 0+00 | 6+47 | 0.12 | | 0.12 | | | 1 | | 1 | | | 0.3 | | | |
| Temp Route 11-02 | 0+00 | 10+85 | 0.21 | | 0.21 | | | 1 | | 4 | | | 0.5 | | | |
| Temp Route 01-05 | 0+00 | 13+77 | 0.26 | | 0.26 | | | 1 | | 6 | | | 0.6 | | | |
| Temp Route 13-01-A | 0+00 | 28+00 | 0.53 | | 0.53 | | | 1 | | 13 | | | 1.3 | | | |
| Temp Route 13-01-B | 0+00 | 7+90 | 0.15 | | 0.15 | | | | | 3 | | | 0.4 | | | |
| Temp Route 13-03 | 0+00 | 14+23 | 0.27 | | 0.27 | | | 1 | | 6 | | | 0.6 | | | |
| Oper Spur 11-01G | 0+00 | 1+40 | 0.03 | | 0.03 | | | 1 | | 1 | | | 0.1 | | | |
| Temp Route 11-08 | 0+00 | 2+62 | 0.05 | | 0.05 | | | 1 | | 1 | | | 0.1 | | | |
| Temp Route 01-08 | 0+00 | 16+23 | 0.31 | | 0.31 | | | 1 | | 7 | 1 | 0.05 | 0.7 | | | |
| Temp By-Pass Road | 0+00 | 2+30 | 0.05 | | 0.05 | | | | | | | | 0.1 | | | |
| Temp Route 23-04 | 0+00 | 5+72 | 0.11 | | 0.11 | | | 1 | | 2 | | | 0.3 | | | |
| Temp Route 27-3 | 0+00 | 2+37 | 0.04 | | 0.04 | | | 1 | | 1 | | | 0.1 | | | |

DECOMMISSIONING NOTES

- ALL TEMP ROUTE ARE TO BE DECOMMISSIONED PER EXHIBIT D SPECIFICATIONS AND DETAILS.
- DECOMMISSIONING SHALL INCLUDE WATER BARRING, SEEDING & MULCHING, AND BARRICADING.
- FULL DECOMMISSIONING SHALL INCLUDE RIPPING, WATER BARRING, SEEDING & MULCHING, AND BARRICADING.

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

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| REV. NO. | DESCRIPTION | DATE | APPROVAL |
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| | | | |

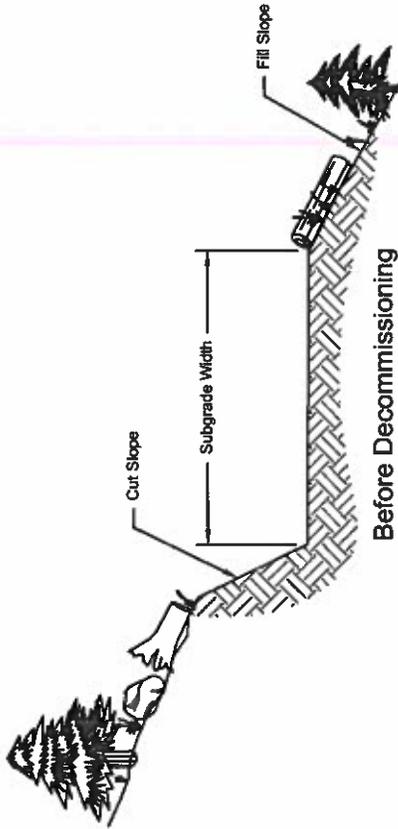
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

OH WINDY
TIMBER SALE
ESTIMATE OF QUANTITIES*

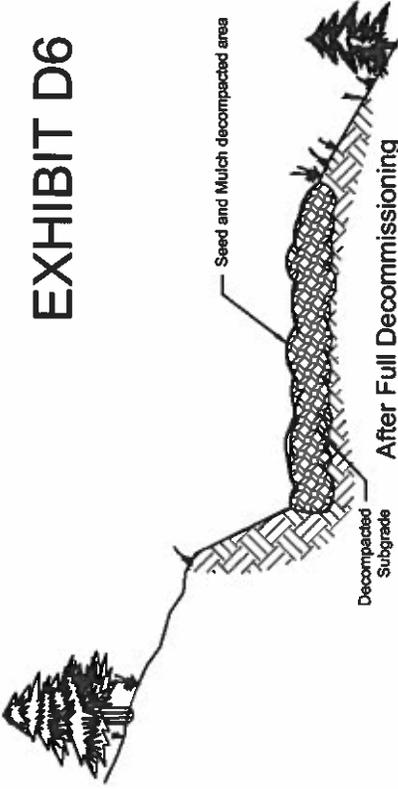
DRAFTED BY: BLM
DATE: JULY 2019
DRAWING NO.: OR-11-9113.4-1

SCALE: NONE
SHEET: 3 OF 3

EXHIBIT D6



Before Decommissioning



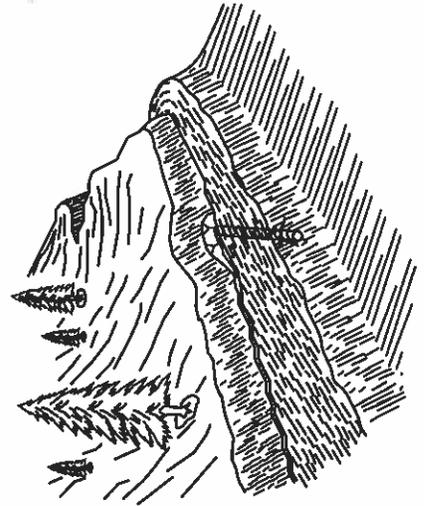
After Full Decommissioning

Typical Full Decommission

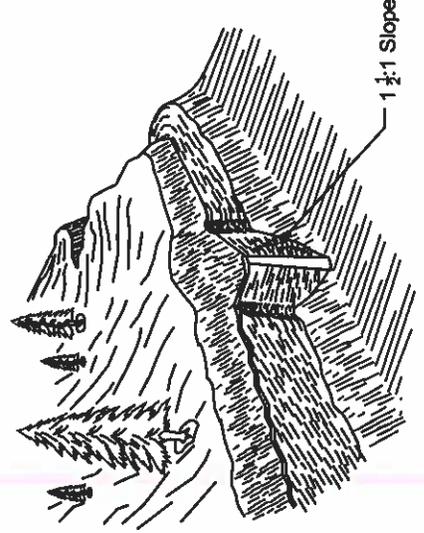
Notes:

1. The Purchaser shall barricade, and decompact the temp route subgrade. Barricades shall be constructed as shown in Exhibit D7.
2. Ditch lines at intersecting existing system roads will be restored.
3. Road surface shall be decompact for its entire length using mechanical equipment. Decompact road surface to a depth of 8 to 12 inches. Where it is determined by the Authorized Officer that decompaction may cause unacceptable damage to the root systems of residual trees along a majority of the temp route, decompaction may be intermittent, or scarification may be used instead. Decompacted areas shall be seed and mulched after completion.
4. All temporary culverts (if any) shall be removed from temp routes entirely. Excavated culverts shall be left open to drain and have slopes of 1½:1. Where draw culverts are removed, the grade of the channel shall be restored to match existing stream. Culverts not designated as salvage for the Government shall become the property of the Contractor. The Contractor shall be responsible for legally disposing of material.
5. See Section 1800 for Seeding and Mulching Specifications.

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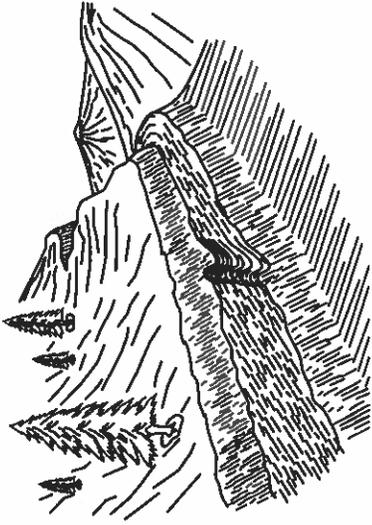
Typical Culvert Removal - Before



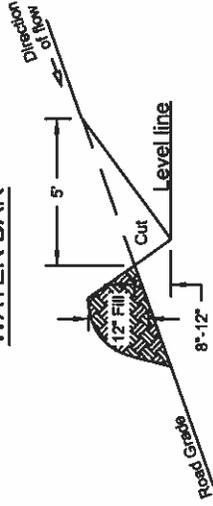
Typical Culvert Removal - After

| REV. NO. | DESCRIPTION | DATE | APPROV. |
|---|-------------|---------------|---------|
| | | | |
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE DECOMPACTION AND CULVERT REMOVAL DETAILS | | | |
| DRAFTED BY: BLM | | SCALE: NONE | |
| DATE: JULY 2019 | | SHEET: 1 OF 1 | |
| DRAWING NO.: OR-11-9113.4-4 | | | |

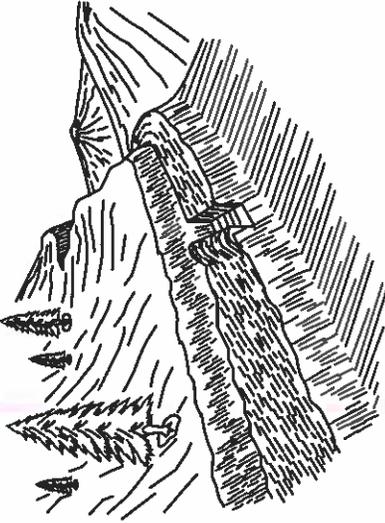
EXHIBIT D7



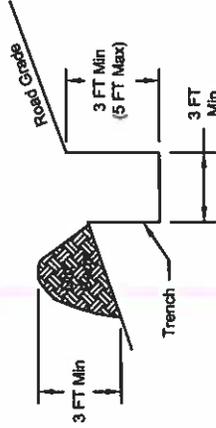
WATER BAR



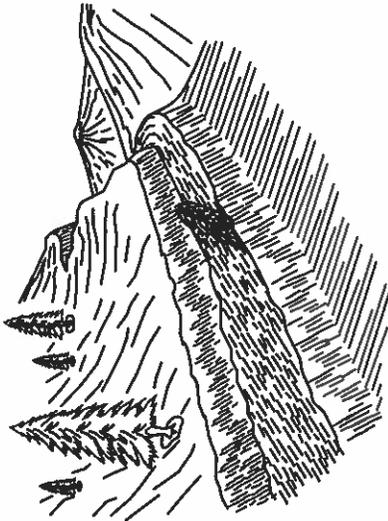
1. Water bars shall be constructed as shown above.
2. Exact location will be flagged by the Authorized Officer prior to construction.
3. All water bars shall be skewed 30 degrees.
4. Upon completion of skidding logs, for the logging season, each skid road will have cross drainage constructed as shown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



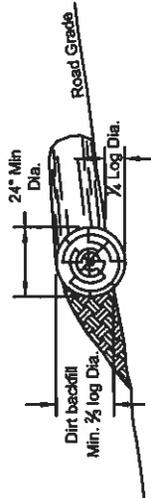
TRENCH BARRICADE



1. Barricade length shall extend across the entire road surface to a point sufficient to prohibit motor vehicle traffic.
2. Exact location is listed in the Work List.
3. All barricades shall be skewed as needed to drain or as directed by the Authorized Officer.



LOG BARRICADE



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

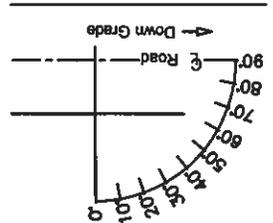
WATER BAR SPACING* BY EROSION CLASS^A

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

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

^A The erosion classes include the following rock types:
 High: Granite, sandstone, andesite porphyry, glacial or alluvial deposits, soft matrix conglomerate, volcanic ash, and pyroclastics.
 Moderate: Basalt, andesite, quartzite, hard matrix conglomerate, and rhyolite.
 Low: Metasediments, metavolcanics, and hard shale.

SKREW DIAGRAM



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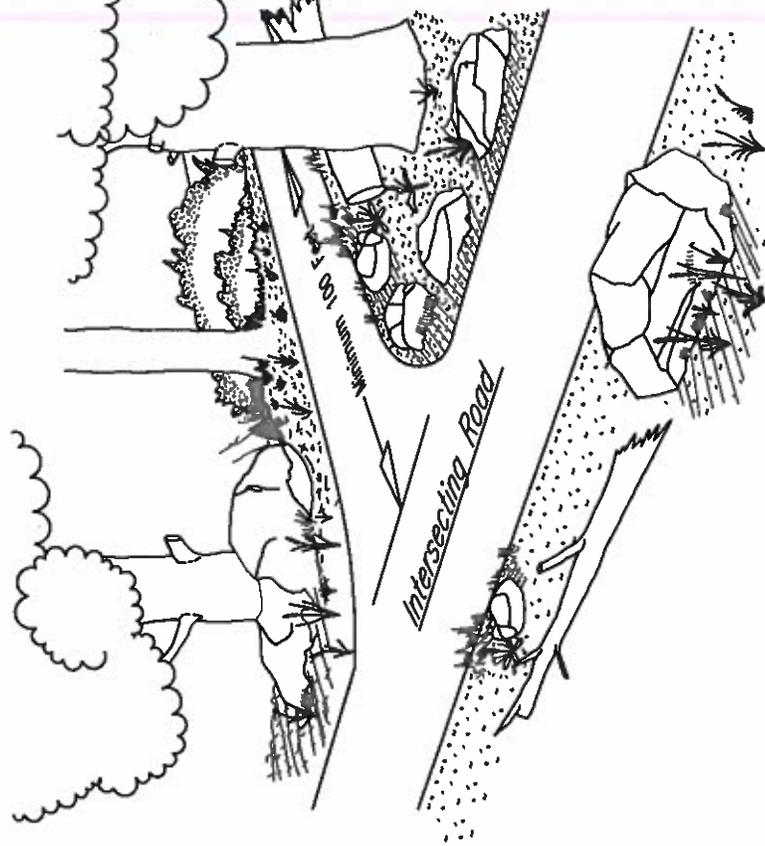
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UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 MEDFORD DISTRICT - MEDFORD, OREGON

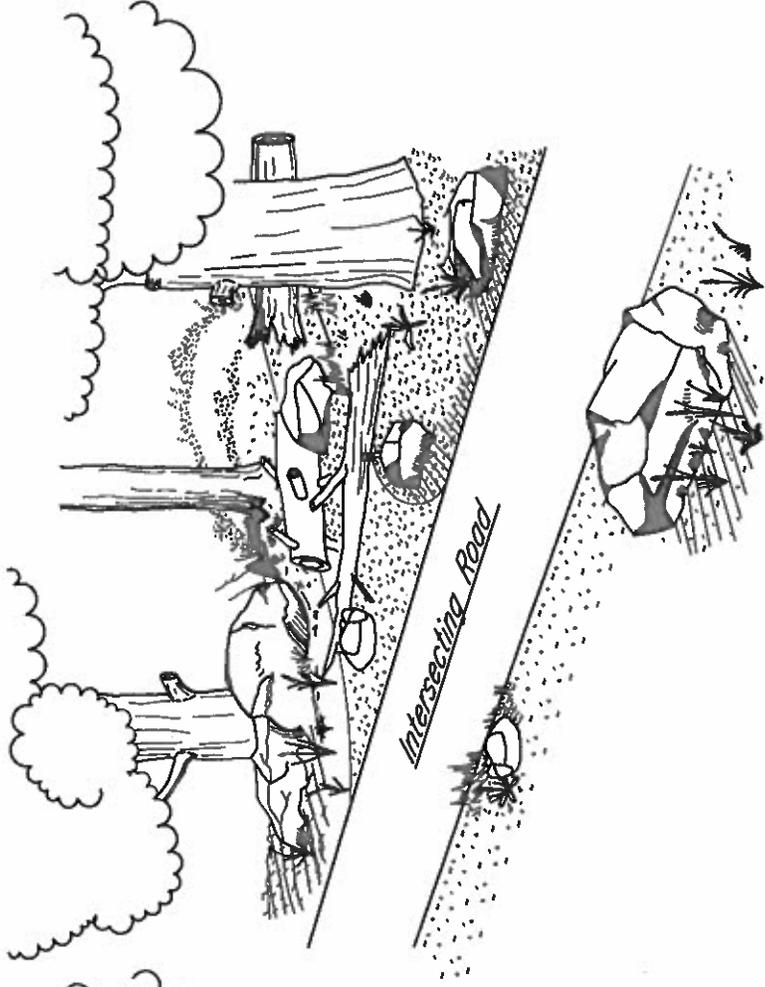
OH WINDY
 TIMBER SALE
 BARRICADE AND
 WATER BAR DETAILS

DRAFTED BY: BLM SCALE: NONE
 DATE: JULY 2019 SHEET: 1 OF 1
 DRAWING NO.: OR-11-9113.44

EXHIBIT D8



Typical Entrance - Before

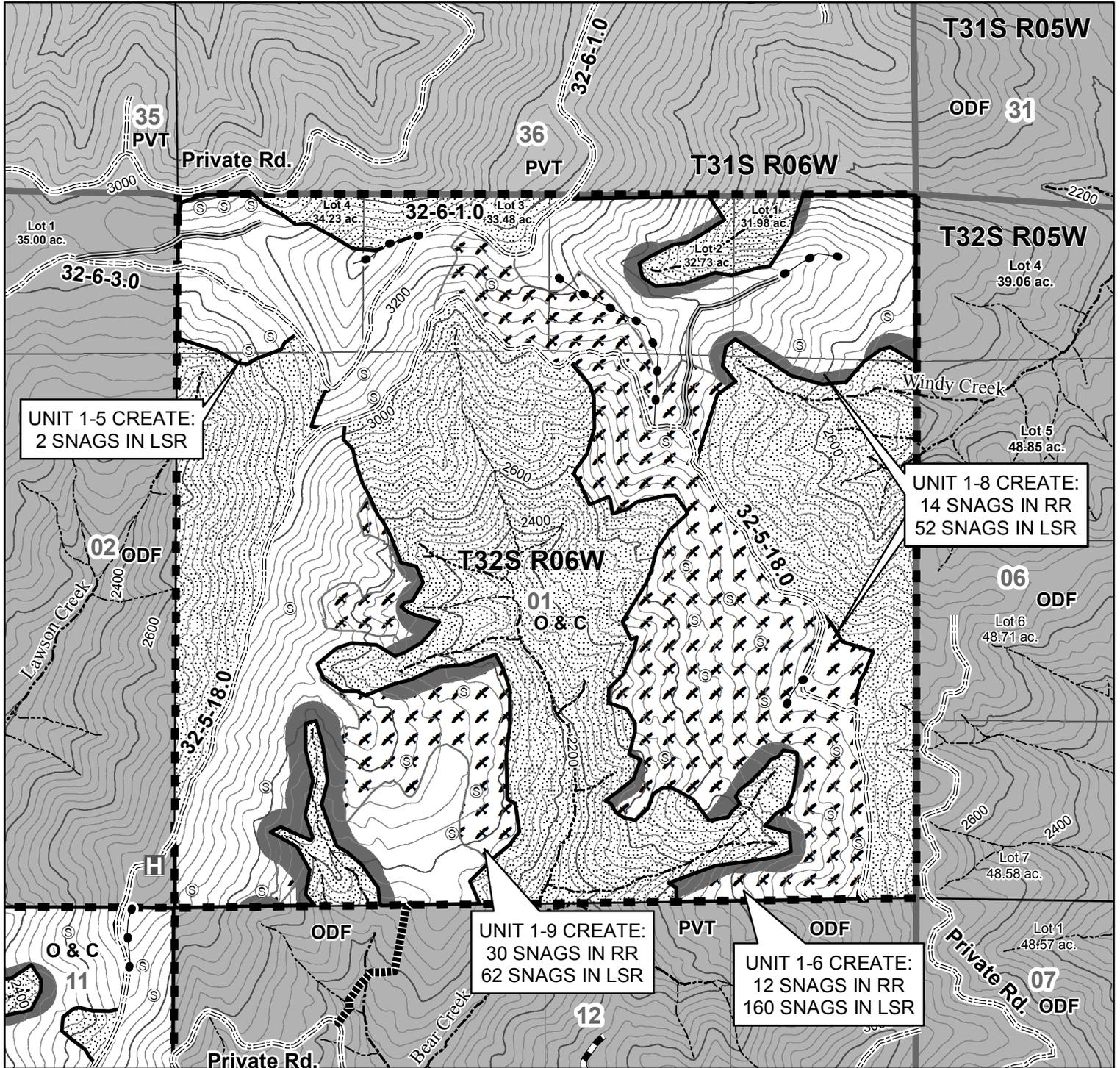


Typical Entrance - After

Notes:

1. The Purchaser shall barricade and Camouflage the road prism and disguise the roadbed so that the road entrance and roadway are indiscernible from the intersecting road. Camouflaged entrances shall consist of logs, slash, boulders and others debris placed along road entrances for a minimum of 100 feet or to the first curve or hillcrest to discourage vehicle use. An Earth Berm or equivalent barricade shall be constructed at road entrance as approved by the Authorized Officer.
2. Where multiple entrances exist, the work shall include obscuring all road entrances. Ditchlines at intersecting roads will be restored as indicated on plan view. The Purchaser shall use soil, boulders, brush, dead material, stumps, and other debris to disguise the road prism to the extent possible. No live trees should be used without approval of the Authorized Officer.

| REV. NO. | DESCRIPTION | DATE | APPROV. |
|---|-------------|---------------|---------|
| | | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON | | | |
| OH WINDY TIMBER SALE TYPICAL ROAD CAMOUFLAGE DETAIL | | | |
| DRAFTED BY: BLM | | SCALE: NONE | |
| DATE: JULY 2019 | | SHEET: 1 OF 1 | |
| DRAWING NO.: | | | |



- ⊙ Skips
- Gate
- H Potential Helicopter Landing
- Powerline
- Pipeline
- Road Construction
- Temp Route Construction
- Temp Route Reconstruction
- Tractor Swing
- Potential Harvester Route
- Natural Surface Road
- Paved Road
- Rocked Road
- Intermittent Stream
- Perennial Stream
- Intermediate 40-ft contour
- Index 200-ft contour
- Oh Windy Timber Sale Unit

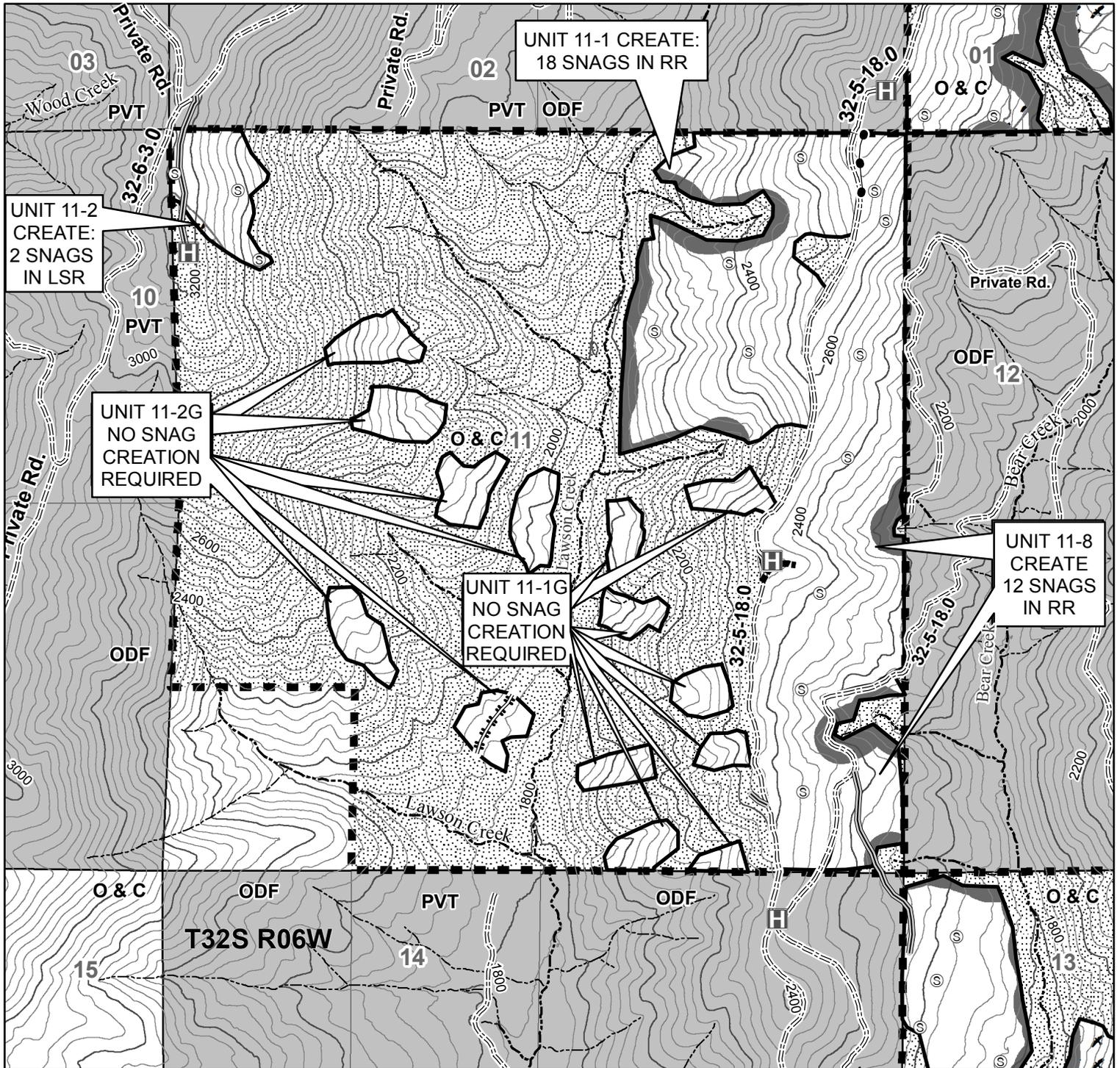
- Oh Windy Snag Creation Areas**
- Land Use Allocation**
- Late Seral Reserve (LSR)
 - Riparian Reserve (RR)
 - Contract Area Boundary
 - Reserve Area
- Ownership**
- Bureau of Land Management
 - Other

0 500 1,000 2,000 Feet

40 FOOT CONTOUR INTERVAL

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

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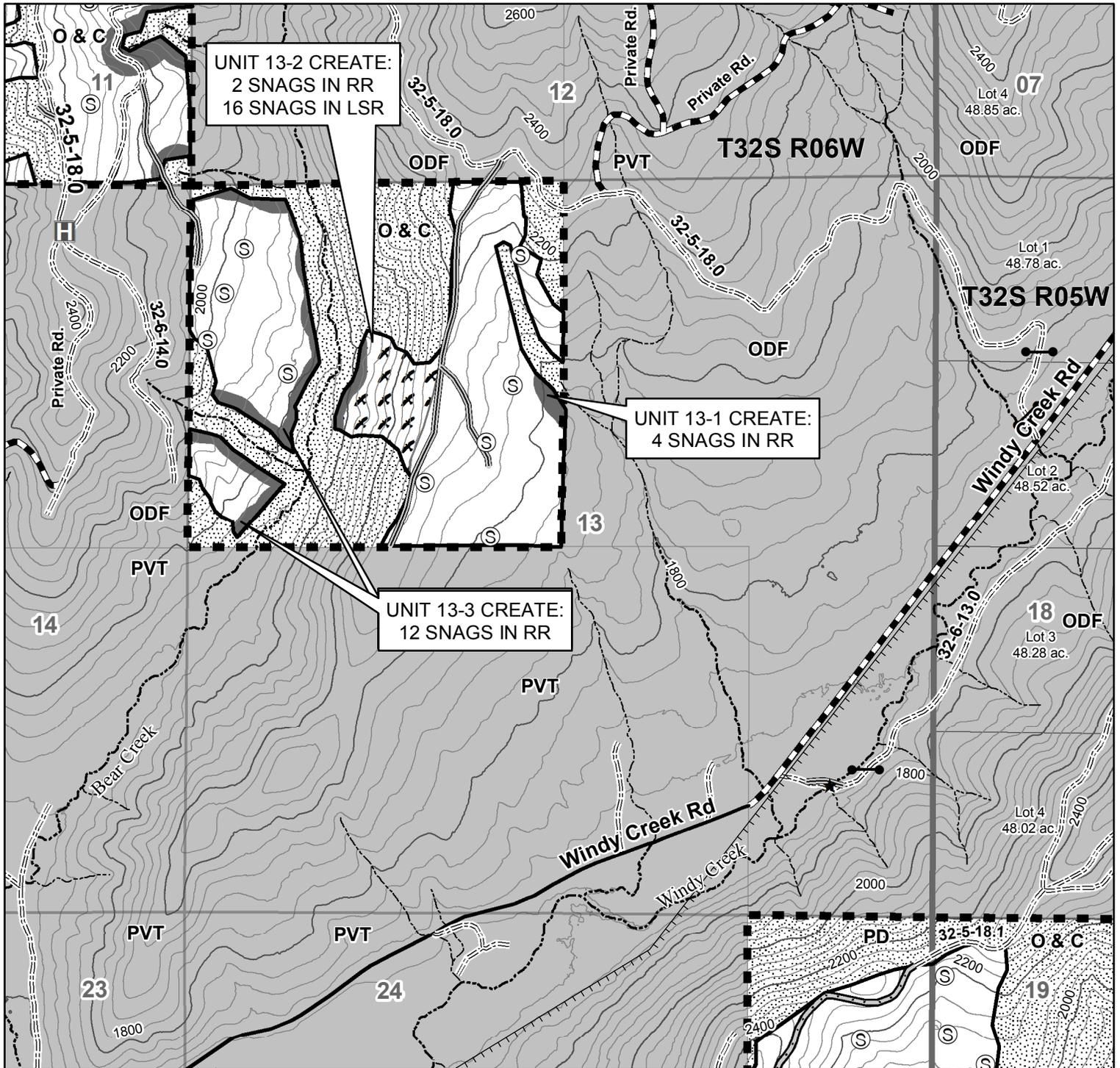
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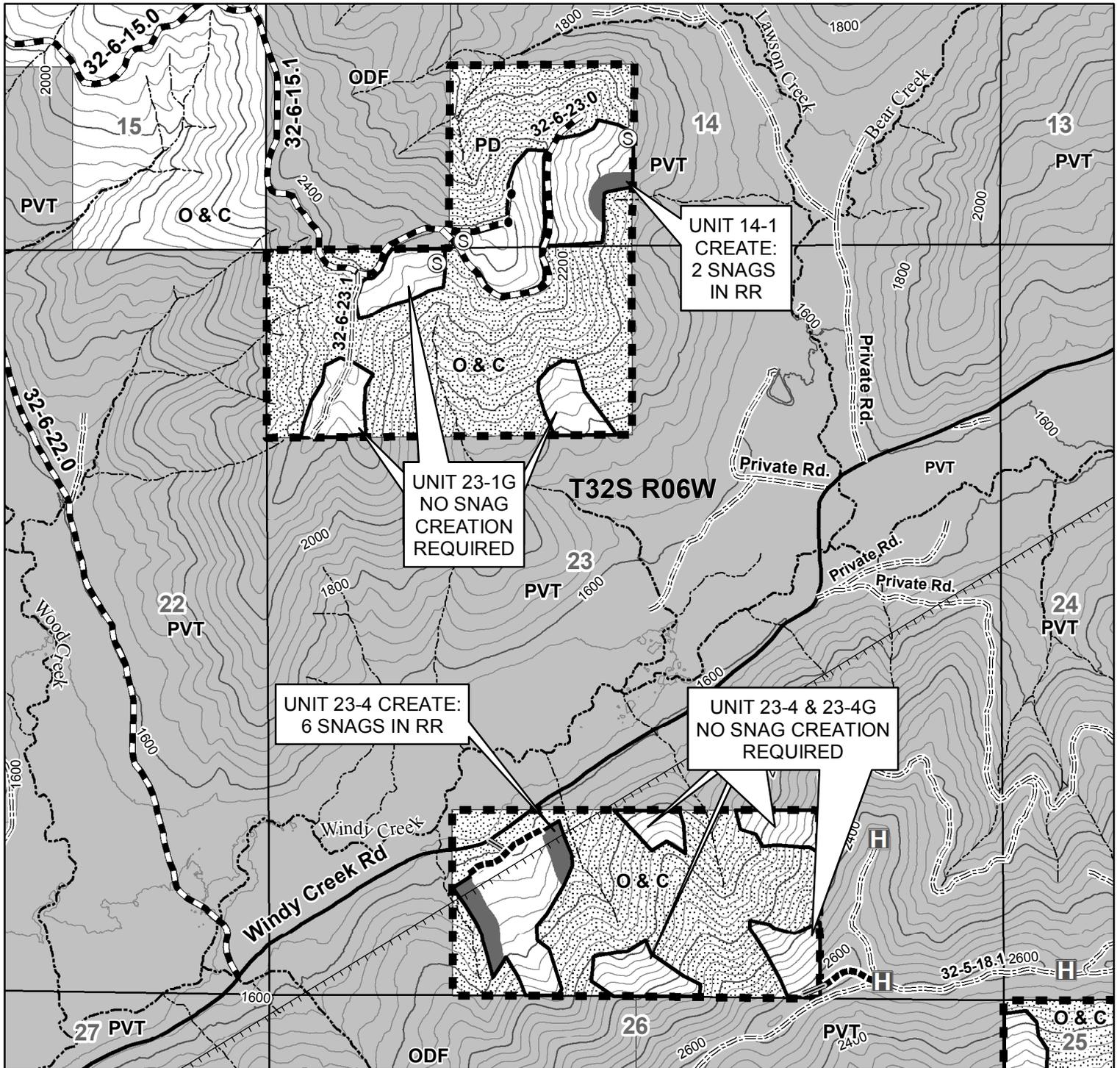


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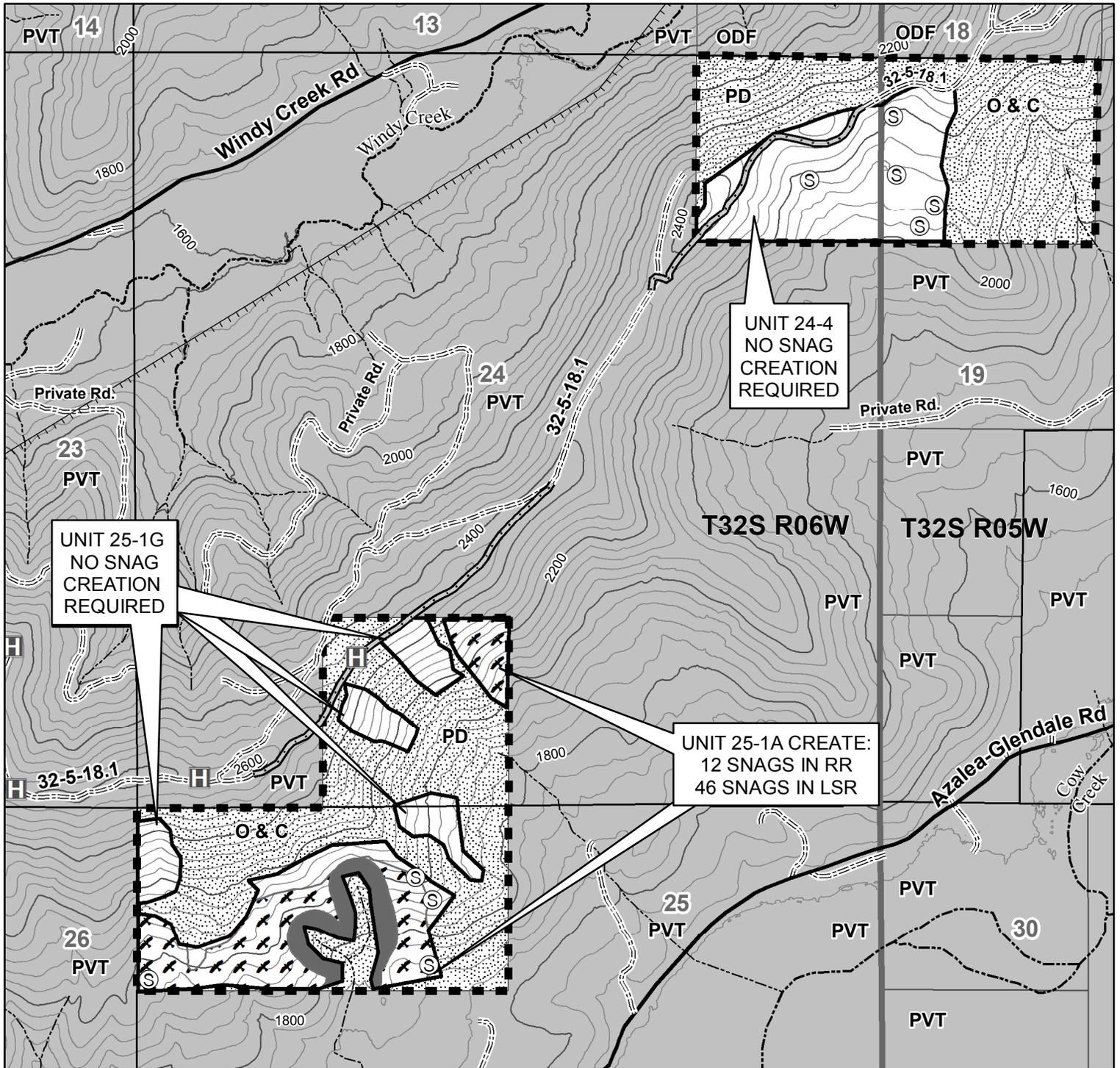
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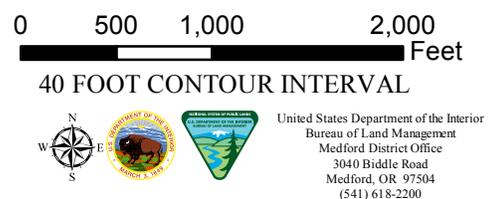
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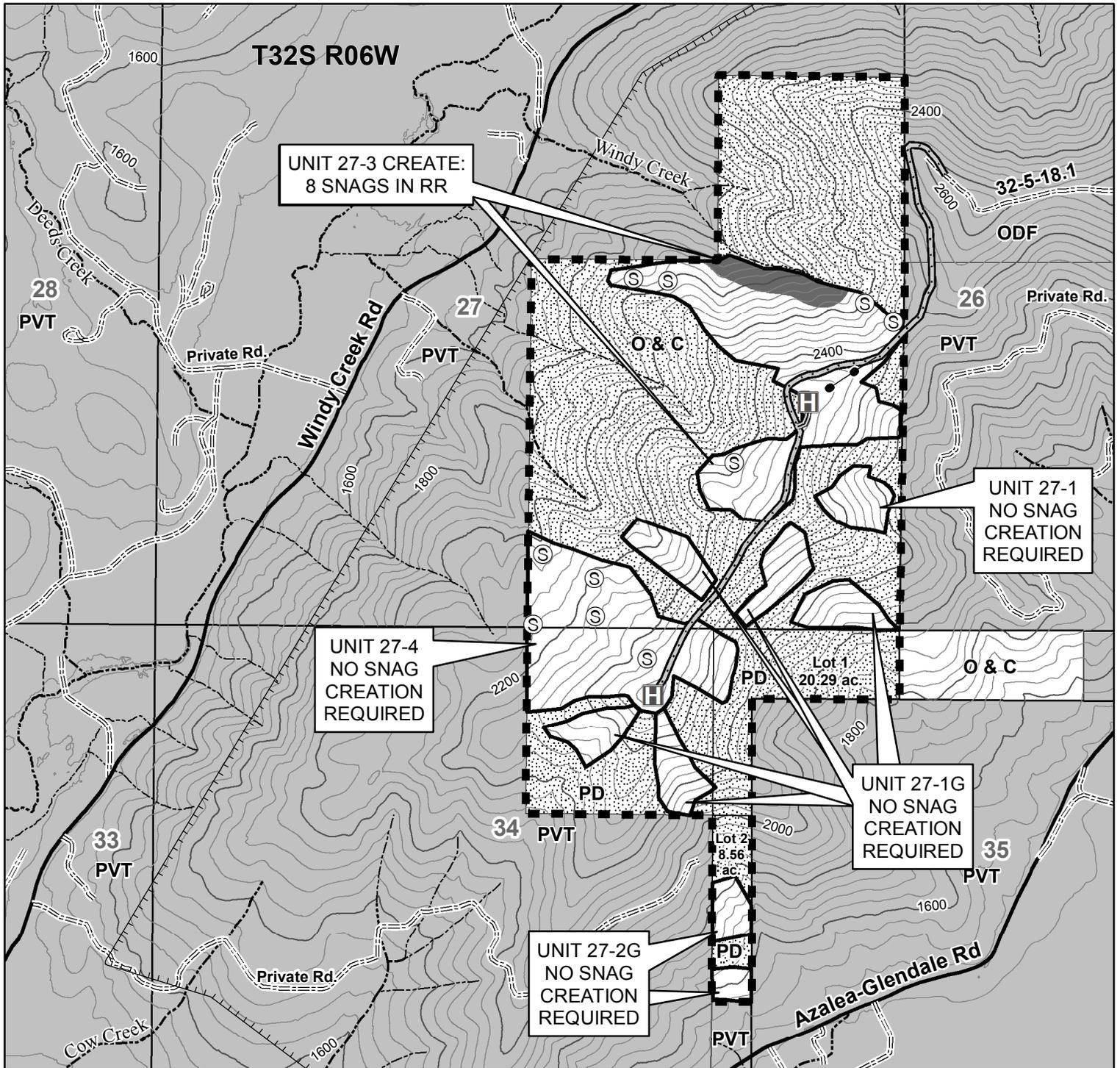


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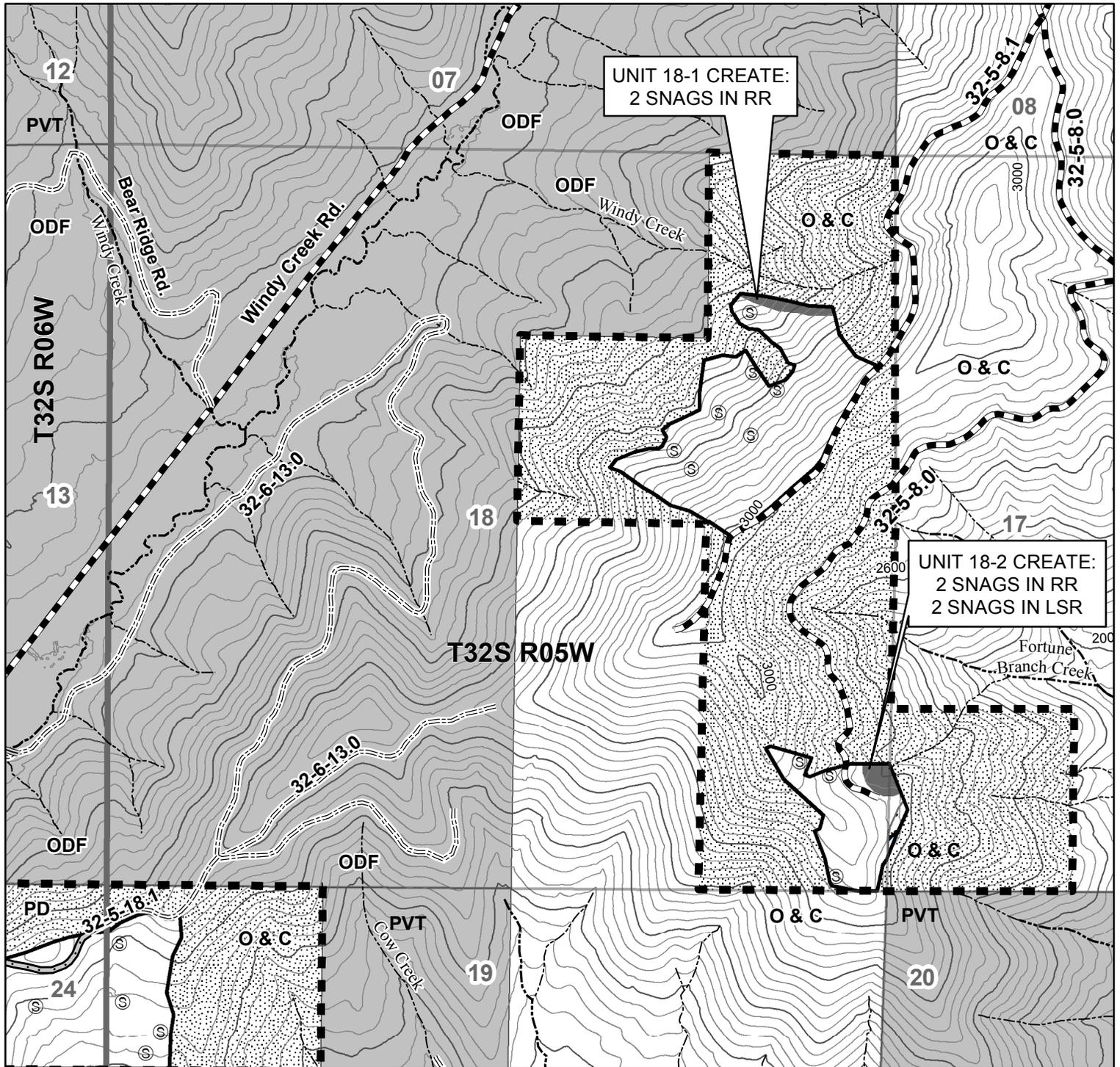


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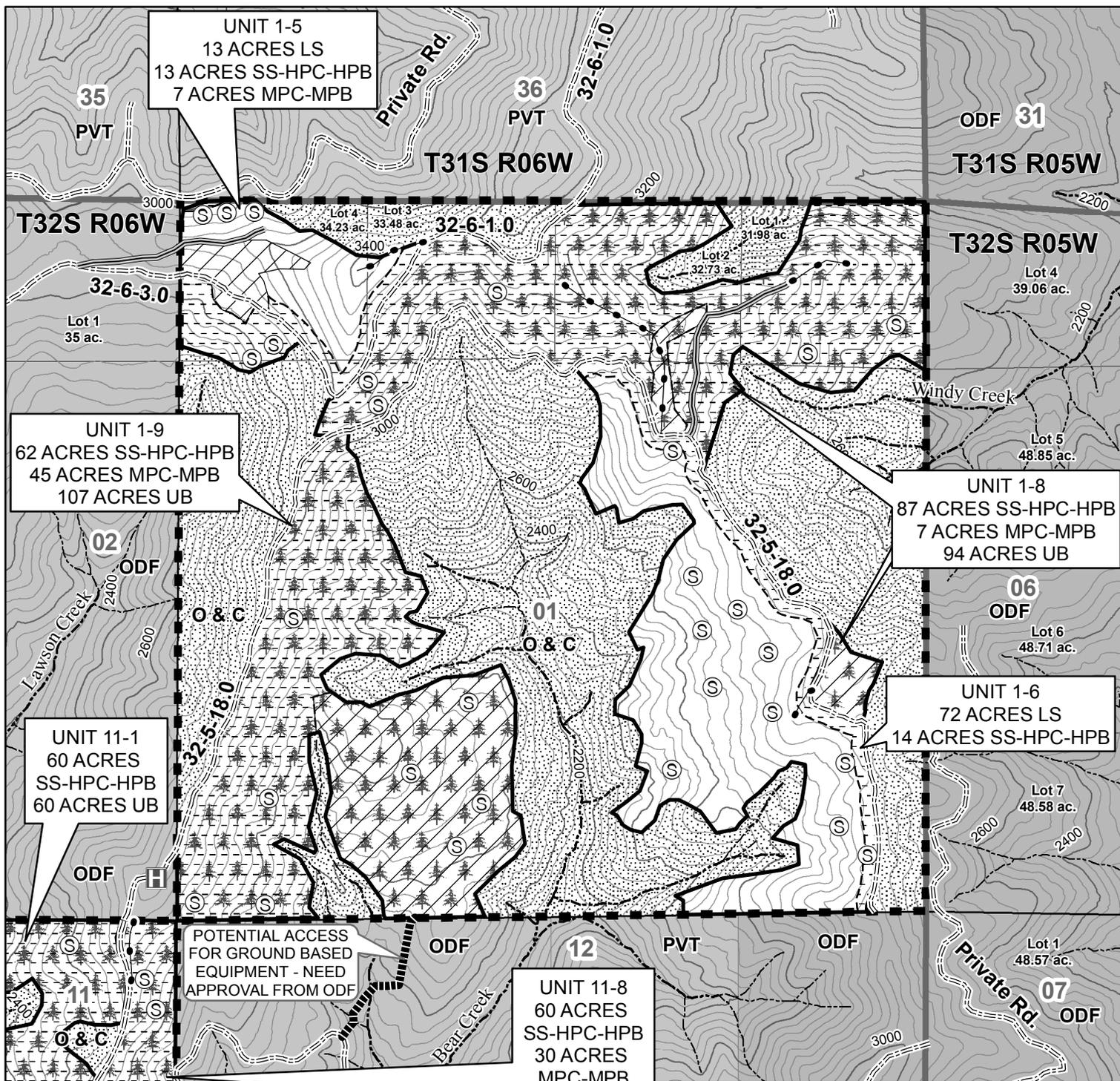
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1 inch = 1,000 feet

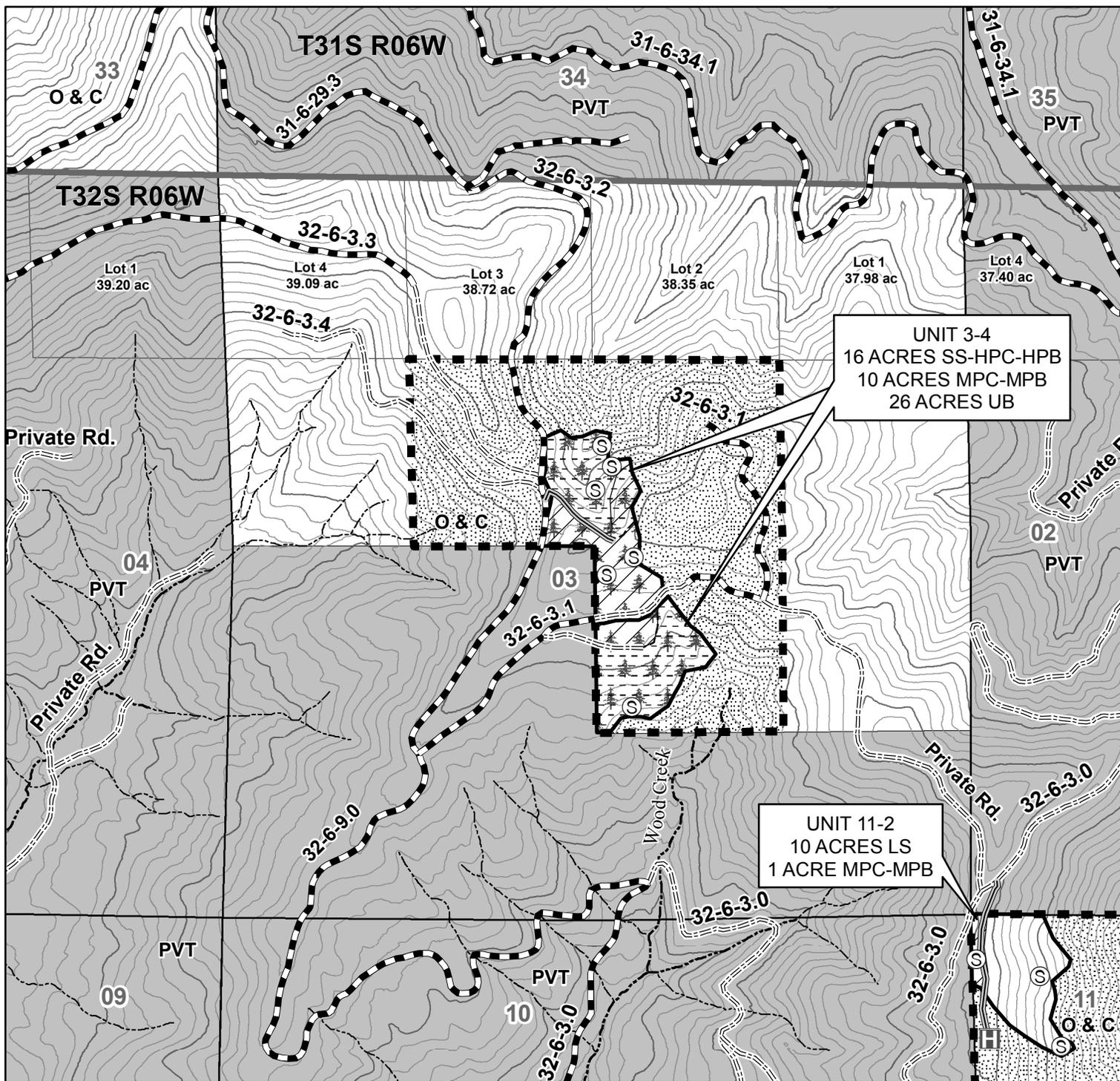
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Map created by SDT
 6/13/2019



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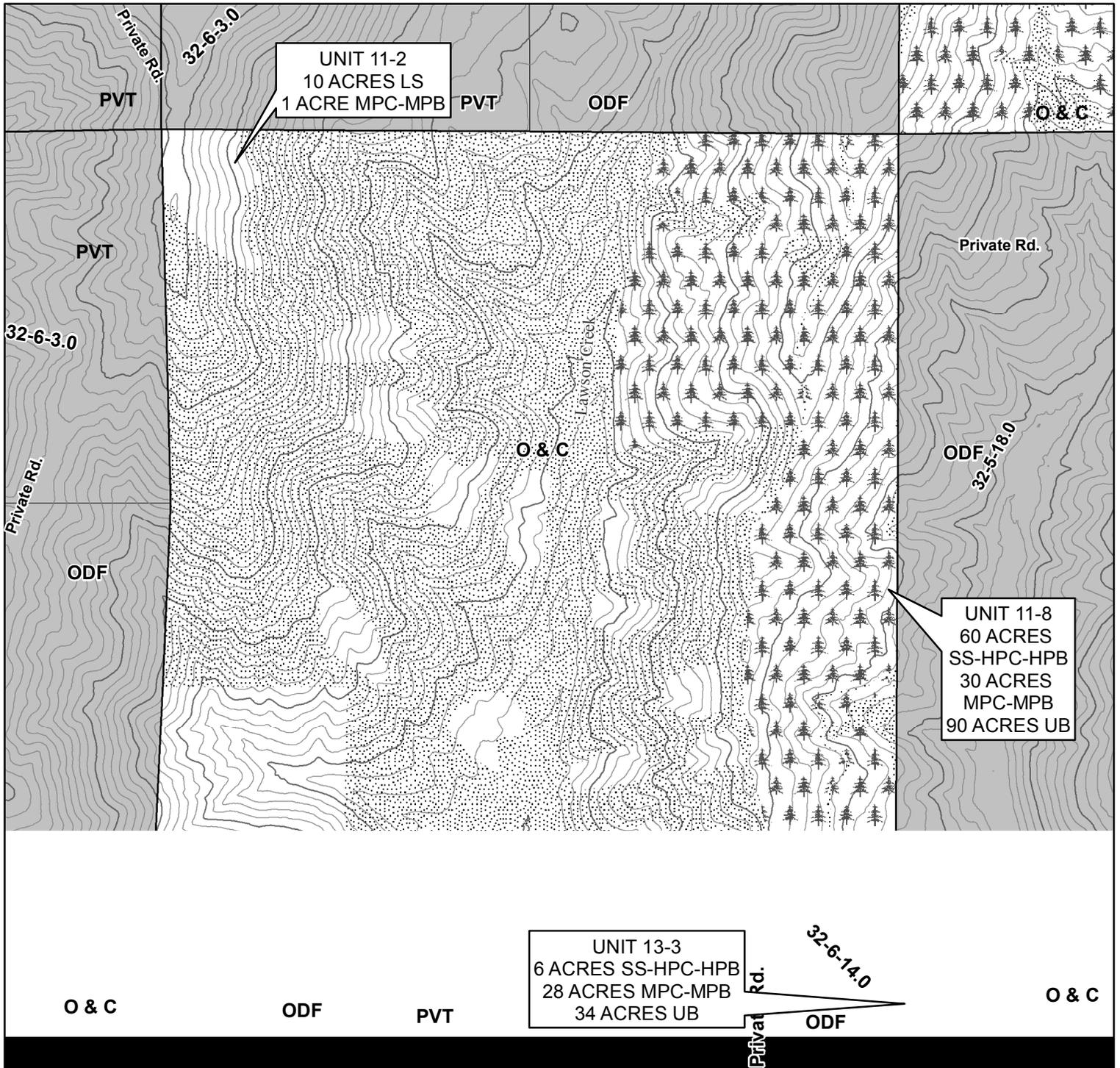
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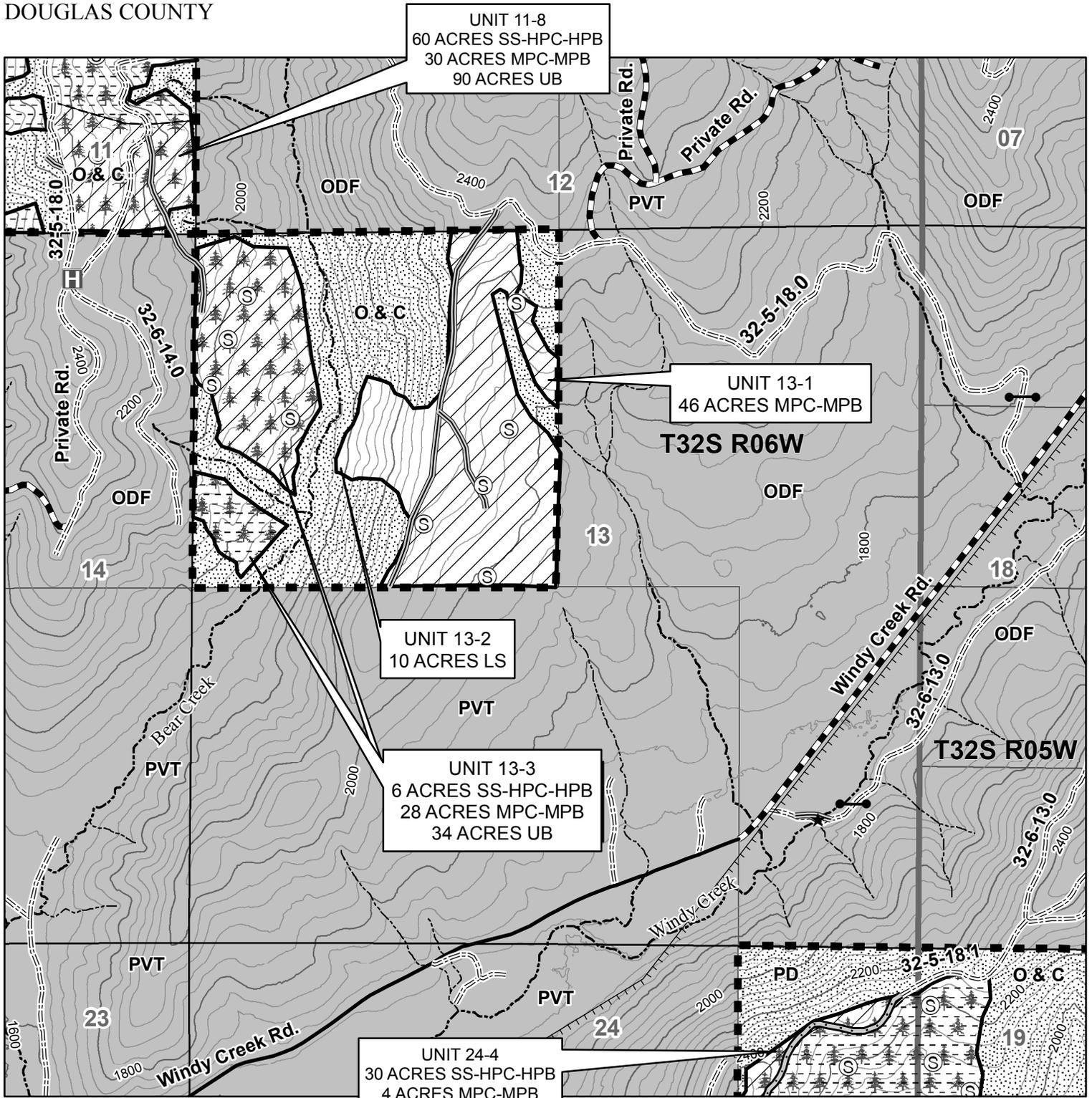
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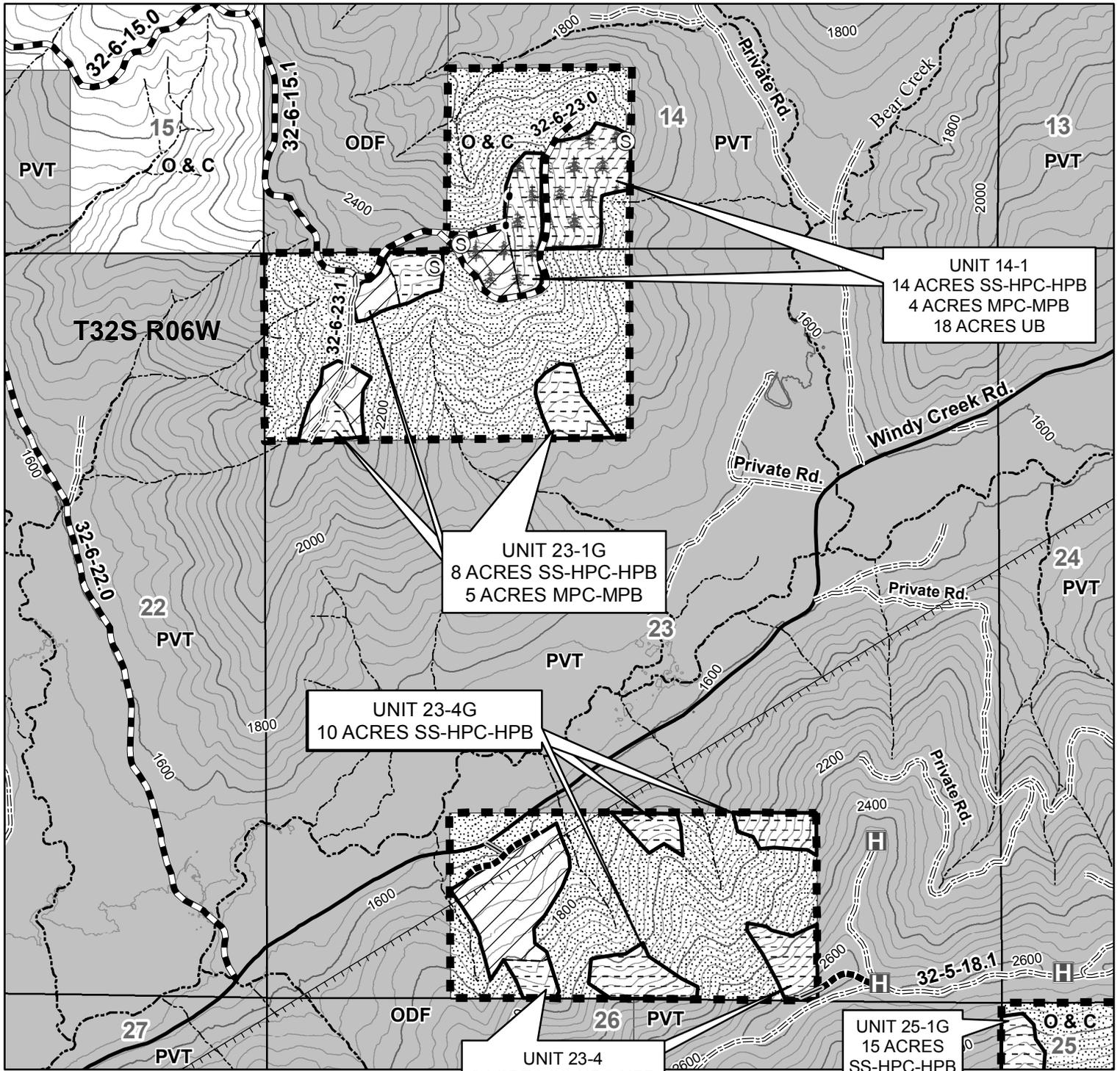
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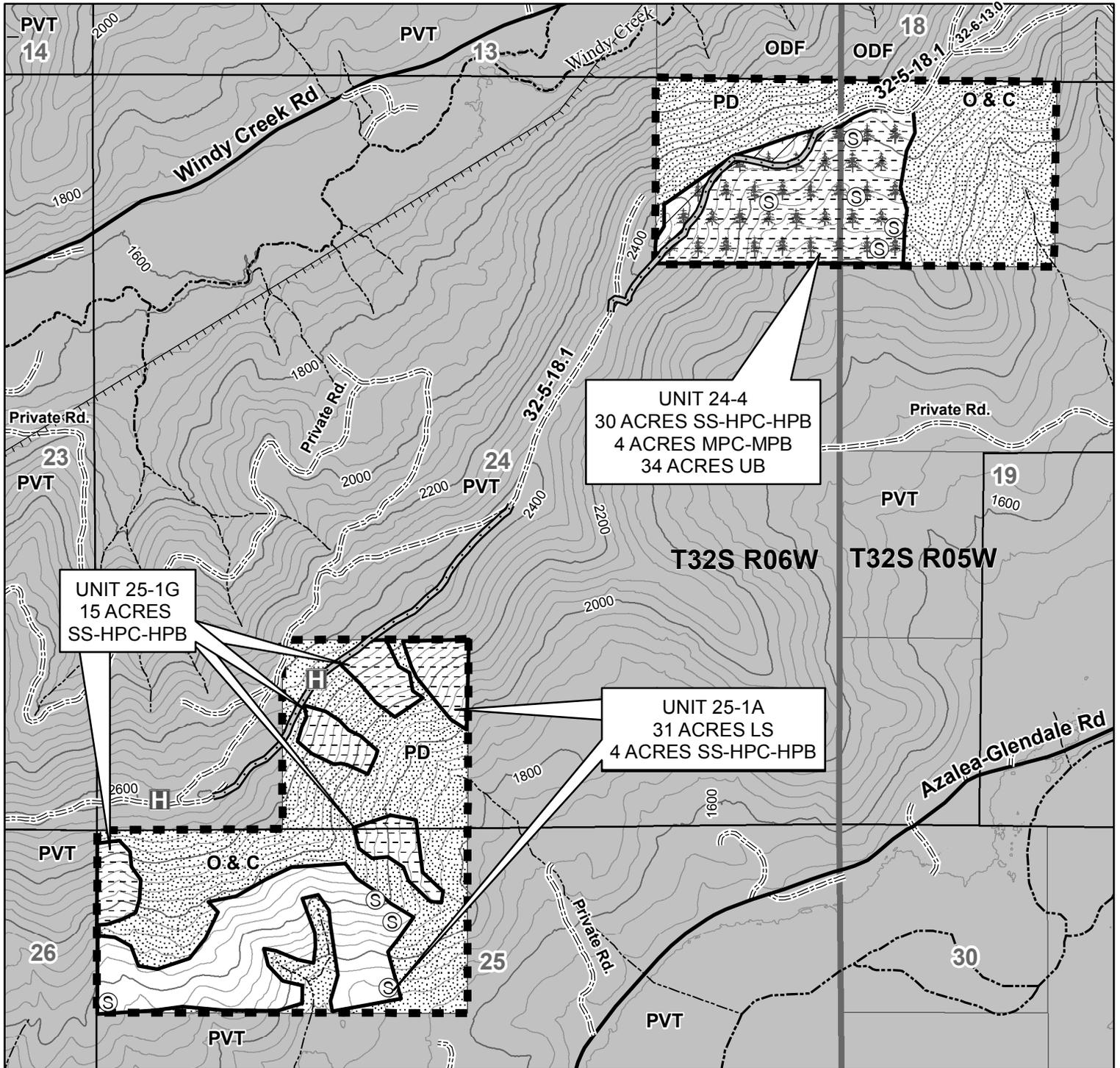
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UNIT 24-4
 30 ACRES SS-HPC-HPB
 4 ACRES MPC-MPB
 34 ACRES UB

UNIT 25-1G
 15 ACRES
 SS-HPC-HPB

UNIT 25-1A
 31 ACRES LS
 4 ACRES SS-HPC-HPB



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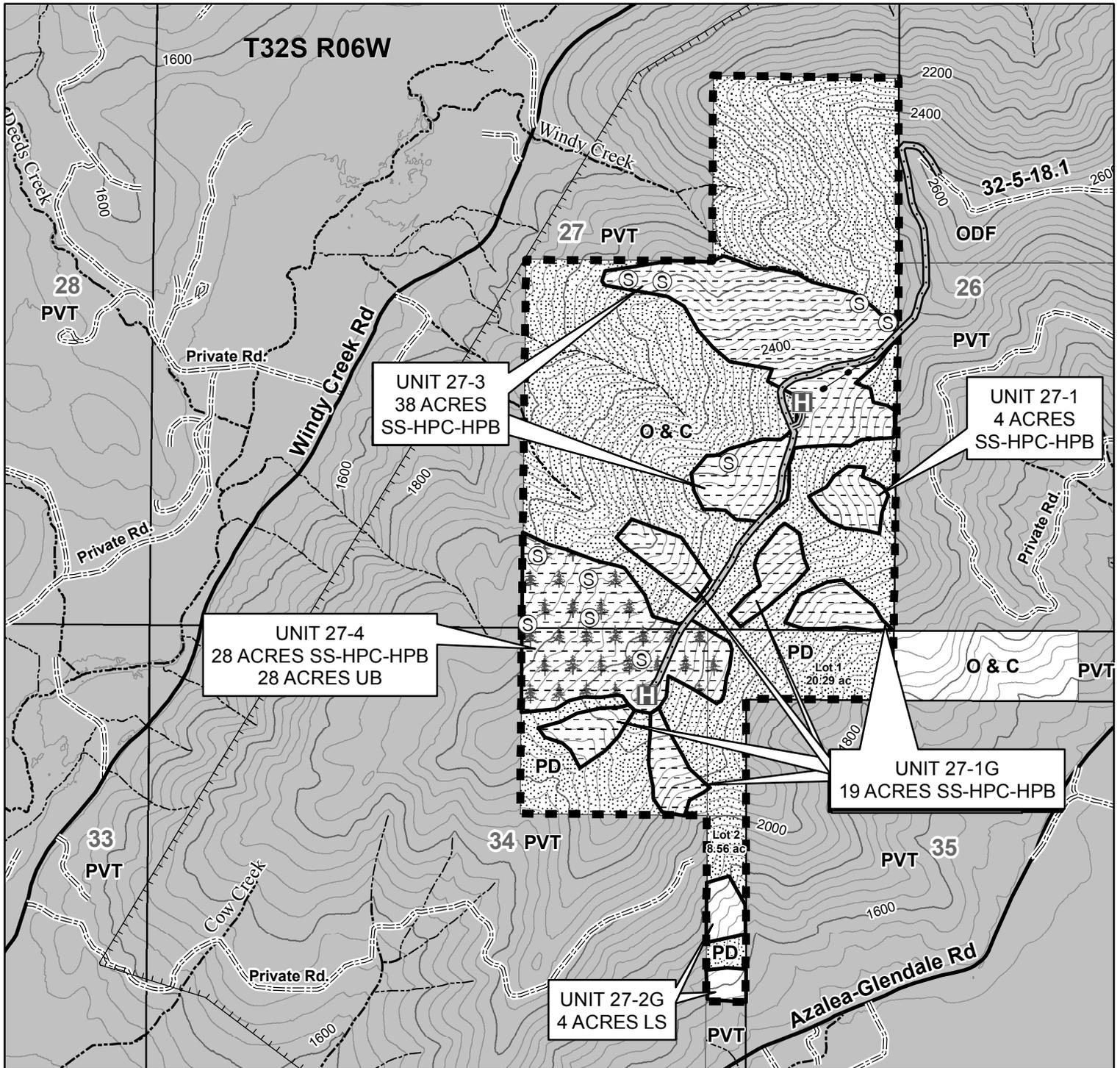
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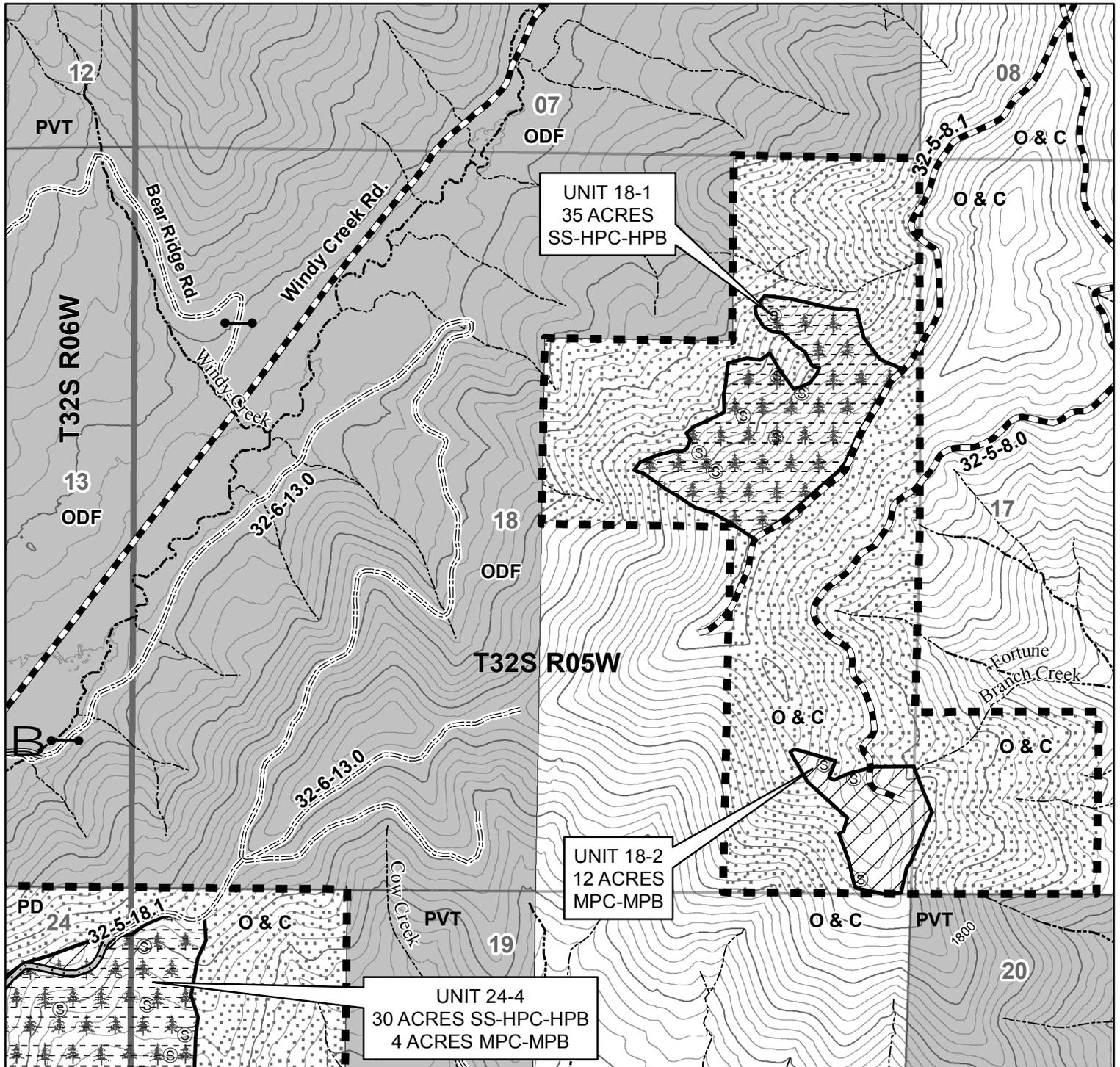
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Map created by SDT
 6/13/2019



LEGEND

| UNIT | SLASH DISPOSAL TREATMENT ACRES | SLASH DISPOSAL TREATMENT PRESCRIPTION | HAND PILE WIDTH FROM ROAD |
|---------------|--------------------------------|---------------------------------------|---|
| 1-5 | 33 | LS/SS-HPC-HPB/MPC-MPB | 100 FT |
| 1-6 | 86 | LS/SS-HPC-HPB | 100 FT |
| 1-8 | 94 | SS-HPC-HPB/MPC-MPB/UB | WHOLE CABLE PORTION OF UNIT |
| 1-9 | 107 | SS-HPC-HPB/MPC-MPB/UB | WHOLE CABLE PORTION OF UNIT |
| 3-4 | 26 | SS-HPC-HPB/MPC-MPB/UB | WHOLE CABLE PORTION OF UNIT |
| 11-1 | 60 | SS-HPC-HPB/UB | WHOLE UNIT |
| 11-1G | 20 | SS-HPC-HPB | WHOLE UNIT |
| 11-2 | 11 | LS/MPC-MPB | N/A |
| 11-2G | 25 | SS-HPC-HPB | N/A |
| 11-8 | 90 | SS-HPC-HPB/MPC-MPB/UB | WHOLE CABLE PORTION OF UNIT |
| 13-1 | 46 | MPC-MPB | N/A |
| 13-2 | 10 | LS | N/A |
| 13-3 | 34 | SS-HPC-HPB/MPC-MPB/UB | WHOLE CABLE PORTION OF UNIT |
| 14-1 | 18 | SS-HPC-HPB/MPC-MPB/UB | WHOLE CABLE PORTION OF UNIT |
| 18-1 | 35 | SS/HPC-HPB/UB | WHOLE UNIT |
| 18-2 | 12 | MPC-MPB | N/A |
| 23-1G | 13 | SS-HPC-HPB/MPC-MPB | WHOLE CABLE PORTION OF UNIT |
| 23-4 | 17 | SS-HPC-HPB/MPC-MPB | WHOLE CABLE & HELICOPTER PORTIONS OF UNIT |
| 23-4G | 10 | SS-HPC-HPB/UB | WHOLE UNIT |
| 24-4 | 34 | SS-HPC-HPB/MPC-MPB/UB | WHOLE CABLE PORTION OF UNIT |
| 25-1G | 15 | SS-HPC-HPB | WHOLE UNIT |
| 25-1A | 35 | LS/SS-HPC-HPB | WHOLE CABLE PORTION OF UNIT |
| 27-1 | 4 | SS-HPC-HPB | WHOLE UNIT |
| 27-1G | 19 | SS-HPC-HPB | WHOLE UNIT |
| 27-2G | 4 | LS | N/A |
| 27-3 | 38 | SS-HPC-HPB | WHOLE UNIT |
| 27-4 | 28 | SS-HPC-HPB/UB | WHOLE UNIT |
| 32-5-18.1 ROW | 2 | MPC-MPB | N/A |
| TOTAL | 926 | | |

* BOUNDARIES OF HARVEST UNITS ARE POSTED AND PAINTED IN ORANGE

LS = LOP & SCATTER

SS = SELECTIVE SLASHING

HPC-HPB = HAND PILE & COVER, HAND PILE BURN

MPC-MPB = MACHINE PILE & COVER, MACHINE PILE BURN

UB = UNDERBURN

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SLASH DISPOSAL SUMMARY BY UNIT AND PRESCRIPTION

| UNIT | UNIT ACRES | LOP & SCATTER ACRES | SELECTIVE SLASHING ACRES | HAND PILE, COVER & BURN ACRES | MACHINE PILE, COVER & BURN ACRES | UNDERBURN ACRES |
|---------------|------------|---------------------|--------------------------|-------------------------------|----------------------------------|-----------------|
| 1-5 | 33 | 13 | 13 | 13 | 7 | |
| 1-6 | 86 | 72 | 14 | 14 | | |
| 1-8 | 94 | | 87 | 87 | 7 | 94 |
| 1-9 | 107 | | 62 | 62 | 45 | 107 |
| 3-4 | 26 | | 16 | 16 | 10 | 26 |
| 11-1 | 60 | | 60 | 60 | | 60 |
| 11-1G | 20 | | 20 | 20 | | |
| 11-2 | 11 | 10 | | | 1 | |
| 11-2G | 25 | | 25 | 25 | | |
| 11-8 | 90 | | 60 | 60 | 30 | 90 |
| 13-1 | 46 | | | | 46 | |
| 13-2 | 10 | 10 | | | | |
| 13-3 | 34 | | 6 | 6 | 28 | 34 |
| 14-1 | 18 | | 14 | 14 | 4 | 18 |
| 18-1 | 35 | | 35 | 35 | | 35 |
| 18-2 | 12 | | | | 12 | |
| 23-1G | 13 | | 8 | 8 | 5 | |
| 23-4 | 17 | | 6 | 6 | 11 | |
| 23-4G | 10 | | 10 | 10 | | |
| 24-4 | 34 | | 30 | 30 | 4 | 34 |
| 25-1G | 15 | | 15 | 15 | | |
| 25-1A | 35 | 31 | 4 | 4 | | |
| 27-1 | 4 | | 4 | 4 | | |
| 27-1G | 19 | | 19 | 19 | | |
| 27-2G | 4 | 4 | | | | |
| 27-3 | 38 | | 38 | 38 | | |
| 27-4 | 28 | | 28 | 28 | | 28 |
| 32-5-18.1 ROW | 2 | | | | 2 | |
| TOTAL | 926 | 140 | 574 | 574 | 212 | 526 |

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6/13/2019

Legend

- ▲ Mountain Peaks
- Gate
- Powerline
- ==== Pipeline
- Potential Ground-based
Equipment
Route Into Unit 1-9
- ##### Historic Railroad Grade in
Unit 11-2G
- ⊙ Skips
- ⊠ Potential Helicopter Landing
- Intermittent Stream
- Perennial Stream
- Intermediate 40-ft contour
- Index 200-ft contour

Roads

Surface Type

- ===== Natural
- Paved Road
- ▬▬▬▬ Rocked Road

Road Construction

Construction Type

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

Oh Windy Timber Sale Unit

Slash Disposal Treatment

- Lop & Scatter
- ▨ Machine Pile & Cover, Machine Pile Burn
- ▨ Selective Slash, Hand pile & Cover, Hand pile Burn
- ▨ Underburn
- ▣ Contract Area Boundary
- ▨ Reserve Area

Ownership

- O & C Bureau of Land Management O & C Lands
- PD Bureau of Land Management Public Domain Lands
- ▣ PVT Private
- ▣ ODF State
- ▣ Township and Range
- Section
- Lot

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SCALE SALE

| |
|----------------------------------|
| Name of Bidder |
| Tract Number ORM07-TS-19-24 |
| Sale Name Oh Windy |
| Sale Notice (dated) 9/11/2019 |
| 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 **\$72,200.00** 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 – SCALE 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 | 12,635 | X\$ | =\$ | X\$ | =\$ |
| Incense-cedar | MBF | 628 | X\$68.10 | =\$42,766.80 | X\$68.10 | =\$42,766.80 |
| White Fir | MBF | 260 | X\$42.50 | =\$11,050.00 | X\$42.50 | =\$11,050.00 |
| Ponderosa Pine | MBF | 50 | X\$33.70 | =\$1,885.00 | X\$33.70 | =\$1,885.00 |
| Western Hemlock | MBF | 48 | X\$36.80 | =\$1,766.40 | X\$36.80 | =\$1,766.40 |
| Sugar Pine | MBF | 23 | X\$34.00 | =\$782.00 | X\$34.00 | =\$782.00 |
| TOTAL | | 13,644 | 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 | |
| Signature of Authorized Corporate Signing Officer | <i>(To be completed following oral bidding)</i> 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 bondsmen 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.