P R O S P E C T U S

LUMP SUM SALE

BUTTE FALLS FIELD OFFICE
JACKSON MASTER UNIT

Medford Sale # ORM05-TS-2023.0008
August 24, 2023 (KD)

Dead West (5900) Jackson County, O&C

BID DEPOSIT REQUIRED: $ 44,700.00

All timber designated for cutting in;

Sec. 19, Lot 8, SE1/4, Sec 21, SE1/4, E1/2NE1/4, Sec 28 E1/2NW1/4, E1/2SW1/4, E1/2NE1/4. Sec 29, Sec. 30, Lot 3, Lot 4, Sec. 31, SE1/4NW1/4, Lot4, E1/2SW1/4, SE1/4SE1/4, Sec. 32, S1/2NW1/4, SW1/4SW1/4, Sec. 33, NW1/4, W1/2SW1/4, NE1/4SW1/4, SE1/4, NE1/4, Sec. 34; NW1/4SW1/4, T.32S., R.01W.; Sec. 1, Lot15, Lot 16, T.33S., R.02W.; Sec 3, Lot 6, Lot 7, SE1/4SW1/4, W1/2SE1/4, NE1/4SE1/4, Sec. 5, Lot12, Lot 13, Lot 15, Lot 16, Lot 17, SW1/4NE1/4SW1/4, Sec. 7, Sec. 9, W1/2NW1/4, SE1/4NW1/4, NW1/4SE1/4, E1/2SE1/4, S1/2NE1/4, NE1/4NE1/4, Sec. 10, Lot 1, Lot 2, E1/2NW1/4, W1/2NE1/4, T.33S., R.01W.; 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
16,209	3,147	Douglas-fir	3,940	$96.70	$380,998.00
4,345	853	White Fir	1,062	$45.20	$48,002.40
1,486	210	Ponderosa Pine	276	$27.80	$7,672.80
2,809	159	Incense Cedar	205	$46.60	$9,553.00
45	4	Sugar Pine	6	$24.40	$146.40
24,894	4,373		5,489		$446,372.60

*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.

CRUISE INFORMATION - Douglas-fir, White fir, Ponderosa Pine, and Incense cedar have been cruised using the 3-P sampling methods to select sample trees. Sugar Pine and was 100% cruised. Maps showing the location and description of these sample trees are available at the Medford District Office. The sample trees have been measured using the volt system of measurement, and the volume expanded to a total sale volume. With respect to merchantable trees of all conifer species: the average tree is 15.2 inches DBHOB; the average gross merchantable log contains 64 bd. ft.; the total gross volume is approximately 5,938 MBF; and 92% recovery is expected (Average DF is 16 inches DBHOB; average gross merchantable log DF contains 69 bd. ft.). 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.

LOG EXPORT AND SUBSTITUTION RESTRICTIONS - 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 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-five (25) units containing approximately five hundred ninety (590) acres must be logged. Approximately three (3) right of way acre must be clear-cut for temporary road construction.

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 public roads and through the contract area using BLM Roads and via a license agreement with the Forest Service, via Right-of-way and Road Use Agreement M-2000C with Lone Rock Timberland Co., via Right-of-Way and Road Use Agreement M-660 with Siskiyou Timberlands, and via Right-of-way and Road Use Agreement M-660 with System Global Timberlands, LLC.

Among other conditions, license agreement with the Forest Service requires completion of a license agreement between the Purchaser and Forest Service, road maintenance to be performed by the Purchaser or BLM and an estimated payment of a road surface replacement fee of $816.05.

Among other conditions, agreement M-2000C with Lone Rock Timberland Co. requires completion of a license agreement between the Purchaser and Lone Rock Timberland Co., road maintenance to be performed by the Purchaser or BLM and an estimated payment of a road surface replacement fee of $557.57.

Among other conditions, agreement M-660 with Siskiyou Timberlands, LLC requires completion of a license agreement between the Purchaser and Siskiyou Timberlands, LLC, road maintenance to be performed by the Purchaser or BLM, and an estimated payment of a road surface replacement fee of $38.54.

Among other conditions, agreement M-660 with Systems Global Timberlands LLC requires completion of a license agreement between the Purchaser and Siskiyou Timberlands LLC, road maintenance to be performed by the Purchaser or BLM, and an estimated payment of a road surface replacement fee of $120.30.

ROAD MAINTENANCE- The Purchaser will be required to maintain all temporary routes (41.18 stations) they construct plus 18.6 miles of existing BLM and private roads. The BLM will maintain the approximately14.1 miles of existing BLM and private roads.

ROAD CONSTRUCTION - The contract will require the Purchaser to construct 41.18 stations of temporary roads.

SOIL DAMAGE PREVENTION: Pursuant to Section 26 of Form 5450-3, Timber Sale Contract, the Purchaser shall not operate or cause to have operated on the contract area any tractor-type logging equipment when soil moisture content at six (6) inch depth exceeds twenty-five (25) percent by weight as determined by the oven dry method.

EQUIPMENT REQUIREMENTS

1. A yarding tractor not greater than 9 feet in track width equipped with a integral arch and winch system capable of lining logs at least 75 feet.
2. A subsoiler, wing-toothed subsoiler, excavator with ripping attachment, or equivalent is required.
3. A yarder capable of achieving lead end suspension.
4. A helicopter with a minimum dropline length of 200 feet.

SLASH DISPOSAL - Perform logging residue reduction and site preparation work on approximately four hundred twenty-five (425) acres of harvest area as directed by the Authorized Officer.

CONTRACT TERMINATION - Section 42 of the contraction 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;
2. Comply with a court order, or;

3. Protect species which were identified for protection in accordance with management direction established in
the ROD and RMP. 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. Unit 7-3 as shown on exhibit A, is a commercial thinning harvest prescription, all other units are selection harvest prescriptions.
3. There are roadside vegetation maintenance units
4. No extension of time beyond the normal 30 days will be granted for completing bonding and contract signing requirements.
5. This contract includes an additional special provision to ensure the Purchaser understands he/she is required to conduct all operations in compliance with Contract Section 12 (Purchaser's Contractual Responsibilities for Liability) and Contract Section 29 (Safety and Health) and the Special Provisions included in Section 44 of this Contract.
6. Purchaser shall be responsible for complying with all county, state, and federal laws and regulations that relate to the execution of this contract (See Sec. 29 of contract).
7. Directional falling is required.
8. There are predesignated skid trails in unit 7-1, 7-3, 7-3b, 19-3, 29-12SYA, 31-2.
9. Warning signs and a flagger(s) must be placed in advance of active operations or other equivalent protection must be used on roads to control traffic where hazardous conditions are created from forest activities as per OR-OSHA division 7 rules.
10. There are daily and seasonal restrictions in place on this sale.
11. Cleaning of equipment to eliminate noxious weed seeds is required prior to move-in of equipment onto federal lands.
12. There are lockable gates within the contract area.
13. Dust abatement may be required.
14. There are slash treatment and pile placement requirements in place for this sale (see SD-1 in the contract)
15. Purchaser should be aware there are logging residue reduction costs assessed under SD-5. Refer to the appraisal for total assessed costs of logging residue reduction.
16. The Purchaser may wet season haul, with the Authorized Officer's approval on the following roads: 32-1W-19.0 A-B, D-E, and H; 33-1W-20.00; 32-1W-28.00; 32-1W-29.02; 32-1W-29.03; 32-1W-29.08; 32-1W-33.01 A-C; 32-1W-33.02 A-C; and 33-1W-8.00. If the use of these roads 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.

    The Purchaser may wet season haul on these roads that will be rocked under Exhibit C work, with the Authorized Officer's approval on the following roads: 32-1W-21.02; 32-1W-31.05; 32-1W-33.03; 32-1W-33.04; 33-1W-33.05; and 33-1W-5.04. If the use of these roads 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.

    The Purchaser shall have the option to rock road numbers 32-1W-19.0 C; 32-1-19.03; 32-1-19.04; and 32-1-19.05 for wet weather haul. Purchaser option rocking depths will be determined and approved by the Authorized Officer. 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 show in Exhibit C of this contract.

17. Purchaser should be aware that additional wildlife restrictions could be applied if the species of concern is found within the distances listed to the contract area

    - No confirmed den sites are located within 50 feet of proposed treatment areas, however, if a

confirmed fisher den site is found: Maintain ≥ 80 percent canopy cover within at least 50 feet of documented fisher natal and maternal dens. No activities may occur within stands. Maintain sufficient (at least 60%) canopy clover on a within-stand average basis. containing known fisher den sites from March 1 to July 30. Protect fisher denning structures by retaining ≥ 24" diameter snags, down woody material, and live trees with cavities in the stand and if, for safety concerns, it is necessary to fall such snags or live trees with cavities, retain those cut trees or snags in the stand as additional down woody material. Do not apply vegetation treatments to all portions of the stand.

- Seasonally restrict timber harvest activities from March 1 to June 30 but may be extended up to September 30 if late nesting or nesting re-attempts are confirmed, within 0.25-mile of known active NSO sites or within 0.5-mile for helicopter operations and blasting. The seasonal restriction could be waived if non-nesting status is determined. If any new owls are discovered in harvest units following the sale date, activities would be halted until mitigation options are determined. Follow USFWS recommended noise disturbance distances for activities other than timber harvest to avoid disturbance to NSOs. This already applies to section 21 of T32S R01W but could be expanded if other NSO are found.
- Seasonally restrict prescribed burning and site preparation with chainsaws from March 1 to July 15 within 0.25-mile of known active NSO nests. The seasonal restriction could be waived if non-nesting status is determined. This already applies to section 21 of T32S R01W but could be expanded if other NSO are found.
- If a gray wolf den or rendezvous site is identified prior to or during project activities, implement a seasonal restriction from April 1 to July 15 and suspend project activities located within one mile of a known den or rendezvous site. Because these sites are difficult to locate and can change from year to year, this would be assessed on an ongoing basis throughout the life of this project through annual updates and communication with the USFWS and Oregon Department of Fish and Wildlife.

NARRATIVE DESCRIPTION OF HOW TO GET TO THE TIMBER SALE AREA -
From the city of Medford take the Rogue Valley Express Way for 4.4 miles, turn left onto OR-62 and stay on it for 16.9 miles. Turn left on the Hwy 227 and continue for 6.2 miles and turn left onto the BLM Road 33-1-5.0 road and arrive.

ENVIRONMENTAL ASSESSMENT - Environmental assessment (DOI-BLM-ORWA M050-2021-0006-EA) were prepared for this sale, and a Finding of No Significant Impact has been documented for each environmental assessment. These documents are available for inspection as background for this sale at the Medford District Office.

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. 43. 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 Area(s) as shown on Exhibit A and all orange painted and posted trees which are on or mark the boundaries of the Reserve Area(s).

(B) IR-1 Approximately twenty-six thousand two hundred and thirty-six (26,236) trees marked with orange paint above and below stump height in units 1-1, 3-2, 5-2, 7-1, 7-1 SYA, 7-3, 7-3B, 7-3 SYA, 7-5, 7-6 SYA, 7-8, 19-1, 19-4 SYA, 29-7, 29-9, 31-2, 31-3 and 32-1 as shown on exhibit A.

(C) IR-2 All timber except approximately four thousand sixty (4060) trees marked for cutting heretofore by the Government with blue paint above and below stump height in units 3-1, 3-2, 3-5, 9-1, 9-3, 9-11, 9-11 SYA, 19-2, 19-3, 21-1, 21-2, 21-3, 21-5, 28-1, 28-3, 29-3, 29-12, 29-12B, 29-12C, 29-12 SYA, 29-13, 29-14, 29-14B, 33-1, 33-4, 33-11, 33-13, 33-14 and all RVM units as shown on Exhibit A.

(D) IR-5 All young growth conifers less than eight (8) inches in diameter D.B.H.O.B. not damaged in the normal course of logging in all units as shown on Exhibit A.

(E) IR-13 All dominant madrone, bigleaf maple and oak trees > 24 inches DBH in all units as shown on Exhibit A (which do not present a safety hazard as determined by the authorized officer). Trees felled for safety reasons shall be retained on site.

(F) IR-13 All snags in all units as shown on Exhibit A (which do not present a safety hazard as determined by the authorized officer). Snags felled for safety reasons shall be retained on site.

(G) IR-14 Within all commercial harvest units as shown on Exhibit A retain existing large down woody material >20 inches in diameter at the large end and >20 feet in length; and down woody material 6-20 inches in diameter at the large end and >20 feet in length in decay classes III, IV, and V (USDI 2016c, pp. 62-63).

Section 44

(A) Log Exports

(1) LE-1 Unless otherwise authorized in writing by the Contracting Officer, the Purchaser shall brand clearly and legibly one end of all logs with a scaling diameter (small end inside bark) of over ten (10) inches, prior to the removal of timber from the contract area. All loads of eleven (11) logs or more will have a minimum of ten (10) logs clearly and legibly branded on one end regardless of the diameter of the logs. All logs will be branded on loads of ten (10) logs or less. One end of all branded logs to be processed domestically will be marked with a three (3) square inch spot of highway yellow paint. The purchaser will stop trucks for accountability monitoring at mutually agreed upon locations when notified by the Authorized Officer.

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

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

(B) Logging

(1) L-1 Before beginning operations on the contract area for the first time or after a shutdown of seven (7) days or more, the Purchaser shall notify the Authorized Officer in writing of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if they intend to cease operations for any period of seven (7) or more days.

(2) L-2 Prior to the commencement of operations, the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract which shall include measures needed to assure protection of the environment and watershed. (A pre-work conference between the Purchaser's authorized representative and the Authorized Officer's representative must be held at a location designated by the Authorized Officer before the logging plan will be approved.) All logging shall be done in accordance with the plan.

(3) L-4 All trees designated for cutting shall be cut so that the resulting stumps shall not be lower than six (6) inches nor higher than twelve (12) inches measured from the ground on the uphill side of the tree. This height requirement may be reduced if approved by the Authorized Officer.

(4) L-7 In all ground-based units shown on Exhibit A, all trees over twenty-one (21) inches DBH designated for cutting shall be felled and cut into log lengths not to exceed forty-four (44) feet. before being yarded.

(5) L-7 In all cable units shown on Exhibit A, all trees designated for cutting shall be felled and cut into log lengths not to exceed forty-four (44) feet before being yarded.

(6) L-8 In all ground-based units, as shown on Exhibit A, all trees twenty-one (21) inches D.B.H.O.B. and smaller 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 logs shall be completely limbed and bucked into a max log length of forty-four (44) feet prior to being yarded.

(7) L-10 In the contract area shown on Exhibit A (except Unit 9-3, see L-12), all trees designated for cutting which are within one hundred seventy-five (175) feet of the unit boundary shall be felled way from the unit boundary. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).

(8) L-10 In the contract area shown on Exhibit A, all trees designated for cutting which are within one hundred seventy-five (175) feet of a private property line shall be felled away from the private property line. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).

(9) L-10 In the contract area shown on Exhibit A, all trees designated for cutting which are within one hundred seventy-five (175) feet of the corner monument shall be felled away from the corner monument. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).

(10) L-10 In the contract area shown on Exhibit A, all trees designated for cutting which are within one hundred seventy-five (175) feet of any plant site, or reserve area boundary as shown on Exhibit A shall be felled away from the painted and posted boundary. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).

(11) L-12 Yarding on the areas designated herein and shown on Exhibit A shall be done in accordance with the yarding requirements or limitations for the designated area.

Designated Area	Yarding Requirements or Limitations
All Units	During logging or forest management operations, use techniques, such as directional falling, to prevent damage to fences, cattle guards, livestock watering troughs and other improvements. If damage to range improvements does occur, the BLM shall be notified immediately, and proper repair or replacement would occur within two weeks. Proper repair of fences and gates includes keeping wire properly attached to posts, splicing or replacing broken wire in kind, repairing structures such as corners, stress panels or gates, and any other work necessary to keep improvements functional. Repair of structures such as stress or corner panels and gates requires pre-approval by BLM staff. Repair or cleaning of cattle guards damaged or filled with sediment by logging activities would require approval of BLM road engineering staff for structural integrity and public safety compliance. During logging and forest management activities, operators shall keep all gates closed and all livestock containment systems functional to keep livestock in authorized areas. Do not machine pile slash within Riparian Reserves (RRs) unless in established landing in RRs and approved by the authorizing officer after consulting with Soils and/or Hydrologist to make sure that it is located in a stable location with no hydrologic connectivity. Locate temporary routes, permanent roads, and landings on stable locations, such as ridge tops, stable benches, or flats where feasible. Use existing jeep roads, skid trails, and landings where possible. Locate newly constructed routes and landings away from slide areas, headwalls, seeps, springs, high landslide hazard locations, and RRs, unless there is no practicable alternative. Locate new routes in locations to minimize stream crossings. Locations would be approved by the Authorized Officer before construction. Logging system breaks are flagged in orange/white. Silviculture breaks are flagged in yellow.

Oversized Tree Restrictions (7-3, 7-3SYA)	All trees over 40 inches DBH with a birthdate prior to 1850 felled for skid trails or safety reasons must be felled, bucked, and removed to an area adjacent to and outside of the skid trail ROW. Where trees are bucked at the large ends, the purchaser shall put a "X" of paint with a color approved by the authorized officer These trees/logs shall not be yarded to the landing.
Oversized Tree Restrictions (All other units beside 7-3, 7-3SYA)	All trees over 36 inches DBH with a birthdate prior to 1850 felled for skid trails or safety reasons must be felled, bucked, and removed to an area adjacent to and outside of the skid trail ROW. Where trees are bucked at the large ends, the purchaser shall put a "X" of paint with a color approved by the authorized officer These trees/logs shall not be yarded to the landing.
Ground Based Units (1-1, 3-1, 3-2, 9-1, 9-11, 9-11sya, 5-2, 7-1, 7-3, 7-3b,7-6sya, 7-8, 19-3, 19-4, 21-2, 29-12, 29-12b, 29-12c, 29-12sya 29-14, 29-14b, 29-9, 33-6, 33-11, 33-13, 31-2, 31-3,)	Mechanized felling equipment must have an arm capable of reaching at least twenty (20) feet. No front-end loaders are permitted. Yarding tractor width will not be greater than twelve (12) feet as measured from the outer edges of the standard width dozer blade in the straight position, or nine (9) feet as measured from the outer edges of standard width track shoes. Yarding tractors will be equipped with integral arches capable of suspending one end of the log clear of the ground and winch systems capable of lining logs at least seventy-five (75) feet. One end suspension is required in all ground based units. No yarding up or down draw bottoms is permitted. The use of skid trails and/or skidding logs through plant site buffers shown on exhibit A will not be allowed. Do not operate machinery for timber harvest within 50 feet of streams (slope distance), except where machinery is on improved roads, designated stream crossings, or where equipment entry into the 50-foot zone would not increase the potential for sediment delivery into the stream.

	Incorporate existing skid trails and landings as a priority over creating new trails and landings where feasible, into a designated trail network for ground-based harvesting equipment. Limit designated skid trails to <15 percent of the harvest unit area to reduce displacement or compaction to acceptable limits. Consider proper spacing (on average 100 feet), skid trail direction and location relative to terrain and stream channel features. Locate skid trails to minimize disturbance to down woody material. Where skid trails encounter large down woody material, a section would be bucked out for equipment access. The remainder would be left in place and would not be disturbed unless they pose a safety hazard. Limit width of skid trails to single-width or what is operationally necessary for the approved equipment. Where multiple machines are used, provide a minimum sized pullout for passing. Limit non-specialized skidders or tracked equipment to slopes generally less than 35 percent except when using previously constructed trails or accessing isolated ground-based harvest areas requiring short trails over steeper pitches. Limit non-specialized skidders or tracked equipment to slopes less than 35 percent, except when using previously constructed trails or accessing isolated ground-based harvest areas requiring short trails over steeper pitches. End-line yarding may occur on slopes over 35 percent for short distances where needed. Ground-based equipment would be stationed outside of the area greater than 35 percent unless the conditions above are met. Also, limit the use of this equipment when surface displacement creates trenches, depressions, excessive removal of organic horizons, or when disturbance would channel water and sediment as overland flow. Limit the use of specialized ground-based mechanized equipment (those machines specifically designed to operate on slopes greater than 35 percent) to slopes less than 50 percent, except when using previously constructed skid trails or accessing isolated short skid trails over steeper pitches. Also, limit the use of this equipment when surface displacement creates trenches, depressions, excessive removal of organic horizons, or when disturbance would channel water and sediment as overland flow. Unit design would be determined based on specific equipment and operator capabilities and would be monitored during implementation by the Authorized Officer with input from the soil scientist and/or hydrologist.

	The use of specialized ground-based mechanized equipment would not be allowed in skips identified for unstable soil reasons and helicopter units. If operator requests the use of tethered equipment or other specialized equipment, units would be cleared by the soil scientist based on the specific capabilities of the operator and the units to avoid unstable soils. The location of the tractor skid roads must be clearly designated on the ground, at locations approved by the Authorized Officer Block skid trails to prevent public motorized vehicle use and other unauthorized use by October 15 of the year of harvest unless a waiver is in place for ground-based yarding to extend the dry season. Place woody debris or other appropriate barriers (e.g., rocks, logs, and slash) on the first 100 feet of skid trails leading off system roads or landing areas in all ground-based yarding units upon completion of yarding to block and discourage unauthorized vehicle use. If there is not enough available slash to cover the first 100 feet of skid trails, apply seed and mulch to the area. If operators are using feller-bunchers or cut-to-length harvesters off designated skid trails: Allow mechanized equipment capable of creating and walking on slash (such as a cut-to-length system) to work off designated skid trails for one or two passes on at least eight inches of slash and under dry soil conditions (less than 25% soil moisture content. The Authorized Officer, with input from the soil scientist, can provide waiver for soil moisture if minimal soil disturbance is expected to occur due to site conditions. Allow mechanized equipment (feller-buncher systems) to work off designated skid trails during the dry season (soil moisture content less than 20%) for one or two passes only (one round-trip). The BLM may issue a waiver of the soil moisture if minimal soil disturbance would occur based on site conditions. Use low, ground-pressure equipment off designated skid trails. Restrict all other use of ground-based equipment to designated skid trails. Stop equipment use off designated skid trails if logging equipment is causing soil disturbance above a Class 1 (Page-Dumroese, Abbott, Rice 2009, p. 6, 14, 15, and 27-33), or as determined by the Authorized Officer. Landing location must be approved by the authorized officer. Limit landings to 0.5-acre or less for tractor.

	In upland units, allow harvesting operations (cutting and transporting logs) when ground is frozen or adequate snow cover exists to prevent soil compaction and displacement. The Authorized Officer would consult with a watershed specialist (hydrologist, soils scientist, or fisheries biologist) to determine appropriate conditions. If conditions change during operations where detrimental soil compaction and displacement is occurring, operations would be stopped immediately. During logging or forest management operations, use techniques, such as directional falling, to prevent damage to fences, cattle guards, livestock watering troughs and other improvements. If damage to range improvements does occur, the BLM shall be notified immediately, and proper repair or replacement would occur within two weeks. Proper repair of fences and gates includes keeping wire properly attached to posts, splicing or replacing broken wire in kind, repairing structures such as corners, stress panels or gates, and any other work necessary to keep improvements functional. Repair of structures such as stress or corner panels and gates requires pre-approval by BLM staff. Repair or cleaning of cattle guards damaged or filled with sediment by logging activities would require approval of BLM road engineering staff for structural integrity and public safety compliance. During logging and forest management activities, operators shall keep all gates closed and all livestock containment systems functional to keep livestock in authorized areas. Minimize the area where more than half of the depth of the organically enriched upper horizon (topsoil) is removed when conducting forest management operations. For all units with predesignated skid trails use skid trails as shown on exhibit A and flagged in the field with yellow/white candy stripe tied with red.
7-3B (Ground Based)	Where trees are cut for yarding corridors, skid trails, landings, road construction, maintenance, and improvement in the Inner Zone or Middle Zone, retain cut trees in adjacent stands as down woody material or move cut trees for placement in streams for fish habitat restoration, at the discretion of the BLM. In the Outer Zone, retain

	cut trees in adjacent stands as down woody material, move cut trees for placement in streams for fish habitat restoration, or sell trees, at the discretion of the BLM.
3-2 (Ground Based)	Domestic water pipe north of road flagged with green/white flagging. Shall avoid clearing or disturbing where pipe is located.
7-3B (Ground Based)	All logs must be bucked and delimbed within the harvest unit. Predesignated skid trail and landing within riparian shall be used and no other landings along the 33-1.81 road will be authorized. Loading and decking will be done within the road prism and the existing ROW will not be expanded
9-11 SYA	Requires directional felling or endline/bull line as no equipment is allowed in harvest unit due to steeper slopes.
7-1 SYA and 7-6 SYA	Yarding will occur on existing skids only, directional fell and line logs as needed.
7-3 SYA	Requires lining of logs and directional fell. No equipment is allowed within the unit.
29-12 SYA	Shall be logged from predesignated skid trail or suitable ground using directional felling and lining of logs.
7-5 (endline)	Requires machine winch capable of yarding logs as approved by the authorized officer.
Cable Units (19-2, 21-1, 21-3, 29-3, 29-13)	Prior to marking or falling any timber in the unit, all yarding corridors, tail/lift trees and/or intermediate support trees shall be identified by the purchaser and approved by the Authorized Officer. No yarding up or down draw bottoms is permitted. Limit landings to 0.5-acre or less for cable.

	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. Bucked logs will be completely delimbed prior to being yarded. Use full or partial suspension when skyline-cable yarding. Require full suspension over flowing streams, non-flowing streams with highly erodible beds and banks, and jurisdictional wetlands. Prevent streambank and hillslope disturbance on steep slopes (generally >60%) by requiring full suspension within 50 feet of definable stream channels. Yard the remaining areas across the RR using at least one-end suspension. Limit the width of skyline corridors to be as narrow as operationally feasible; do not exceed a 15-foot width. As practicable, set corridor spacing where they cross the streams to no less than 100 feet apart when physical, topography, or operational constraints demand, with an overall desire to keep an average spacing of 200 feet apart. If possible, use natural openings or areas with non-commercial sized trees when selecting corridor locations that cross a riparian area. Seed and mulch the top 20 feet of skyline-cable yarding corridors where yarding logs to the road results in extended soil exposure. Will require a machine capable of cable yarding without guylines or will require machine, deadman or log deck anchors for part of the harvest unit due to lack of suitable guyline anchors.
Helicopter Units (9-3, 10-1, 19-4, 28-1, 28-3, 29-7, 32-1, 33-1, 33-4)	Keep service pad and helispot construction no larger than necessary and obtain approval from the Contract Administrator before construction. Lift logs vertically (without horizontal movement) to a height above the adjacent leave trees. Vertically lift multiple log turns from a small enough radius to result in minimal damage to the residual forest stand as determined by the Authorized Officer. Restrict aerial operations within 0.5 miles of any residence to an operating time of 6:00am to 6:00pm, Monday through Friday.

	A dropline with a minimum length of two hundred (200) feet is required. For Helicopter units whole tree yarding will be allowed as long as residual stand damage is minimized. Yarding of unmerchantable material is not required. If excessive stand damage occurs as determined by the authorized officer, trees will be required to be bucked into lengths no longer than forty-four (44) feet and will be completely limbed prior to being yarded.
9-3	Where necessary trees can be felled toward the timber reserve tags and into the special operations areas as shown on exhibit A to facilitate logging.
Roadside Vegetation Maintenance Units	Mechanized logging equipment shall be restricted to the existing roads where clearing is to occur.

(12) L-14 No falling, yarding or loading is permitted in or through the timber reserve area as shown in Exhibit A and as posted (unless otherwise approved by the Authorized officer).

(13) L-17 Landings shown on new road construction shall be placed at the approximate location(s) as shown on Exhibit A. Any alternative landing sites must be approved by the Contracting Officer in the written operations and logging plan.

(14) L-19 No road construction, landing construction, skid trail construction, skid trail blocking, road renovation, road reconstruction, road decommissioning, road blocking/barricade construction, rocking, water bar construction, soil ripping, shall be conducted within contract area between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive, or when soil moisture exceeds 25% as directed by the contracting officer.

(15) L-19 No ground-based yarding and soil decompaction operations shall be conducted within contract area between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive, or when soil moisture exceeds 25% as directed by the contracting officer.

(16) L-19 No landing operations, rock haul and log haul between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive.

The Purchaser may wet season haul, with the Authorized Officer's approval on the following roads: 32-1W-19.0 A-B, D-E, and H; 33-1W-20.00; 32-1W-28.00; 32-1W-29.02; 32-1W-29.03; 32-1W-29.08; 32-1W-33.01 A-C; 32-1W-33.02 A-C; and 33-1W-8.00. If the use of these roads 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. The Purchaser may wet season haul on these roads that will be rocked under Exhibit C work, with the Authorized Officer's approval on the following roads: 32-1W-21.02; 32-1W-31.05; 32-1W-33.03; 32-1W-33.04; 33-1W-33.05; and 33-1W-5.04. If the use of these roads 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. The Purchaser shall have the option to rock road numbers 32-1W-19.0 C; 32-1-19.03; 32-1-19.04; and 32-1-19.05, for wet weather haul. Purchaser option rocking depths will be determined and approved by the Authorized Officer. 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 show in Exhibit C of this contract.) are determined to have adequate surfacing or adequate rock is added as determined by the Contracting Officer landing operations, rock haul and log haul will be allowed.

(17) L-20 No operations within section 21 of T32S R01W as shown on Exhibit A shall be conducted between March 1 and July 15 of the same calendar year, both days inclusive. This restriction will not apply if it can be shown from NSO protocol surveys conducted in accordance with accepted standards, as approved by the Contracting Officer, that NSO nesting and/or fledging activities are not occurring during the year and/or time of harvest.

(18) L-20 No operations within section 21 of T32S R01W as shown on Exhibit A shall be conducted between July 16 1 and September 30 of the same calendar year, both days inclusive. This restriction will not apply if it can be shown from NSO protocol surveys conducted in accordance with accepted standards, as approved by the Contracting Officer, that NSO nesting and/or fledging activities are not occurring during the year and/or time of harvest.

(19) L-24 Before cutting and removing any trees necessary to facilitate logging in all units as shown on Exhibit A, the Purchaser shall identify the location of skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the Logging Plan. Said Purchaser identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding the following conditions must be met:

(a) All skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees 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 contact and shall be limited to the minimum width necessary for yarding of logs with a minimum of damage to reserve trees; however, unless otherwise approved in writing by the Authorized Officer, the width of each skid road shall be limited to twelve (12) feet, and cable yarding roads shall be limited to fifteen (15) feet.

(b) The Purchaser may immediately cut and remove additional timber to clear skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees when the trees have been marked with green paint above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Sec. 3.(b) of the contract or sufficient bonding has been provided in accordance with Sec. 3.(e). 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 as shown on Exhibit B of this contract unless: the value of the timber must be reappraised subject to the terms for contract extension set forth in Sec. 9 of the contract; or, 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 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 sof the contract or in accordance with Sec. 8 or Sec. 9 of the contract as determined by the Authorized Officer in accordance with this provision. The Contracting Officer may issue a written order to the Purchaser to suspend, delay, or interrupt any or all contract work for the period of time deemed necessary and appropriate for the Government to safely measure and mark additional timber.

(f) The Government may reserve trees previously designated for cutting and removal by applying orange paint or blacking out blue 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 prescription(s). 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 as shown on 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.

(20) L-32 In ROW 31, where road improvement is required for logging access as shown on exhibit A, Purchaser shall during road construction fell, buck, and remove to an area adjacent to and outside of the road right-of-way two (2) trees marked with blue "C/L" which are greater than or equal to thirty-six (36) inch diameter at breast height and a birthdate prior to 1850. Where trees are bucked at the large ends, the purchaser shall put a "X" of paint with a color approved by the authorized officer to ensure that the logs are not yarded and shipped. No adjustments of volume or value shall be made to meet these requirements. The Purchaser shall tally all trees by diameter class and species on a daily basis. The tally may be requested by the Authorized Officer at any

time during falling operations. At the end of falling operations a completed tree tally shall be submitted to the Authorized Officer.

(21) L-32 In ROW 5 where new road construction crosses the riparian zone as shown on exhibit A, Purchaser shall during road construction fell, buck, and remove to an area adjacent to and outside of the landing right-of-way sixty-seven (67) trees marked with blue "C/L" which are within the inner zone of the riparian. Out of the 67 trees marked with blue "C/L" there are 11 trees marked with purple "fish". The fish logs shall be bucked to a minimum of 44 feet, the remaining portions will stay in the adjacent unit. The fish logs shall be moved to the junction of the 33-1-5.0 road as shown on exhibit A prior to decommissioning the road. Where trees are bucked at the large ends, the purchaser shall put a "X" of paint with a color approved by the authorized officer to ensure that the logs are not yarded and shipped. No adjustments of volume or value shall be made to meet these requirements. The Purchaser shall tally all trees by diameter class and species on a daily basis. The tally may be requested by the Authorized Officer at any time during falling operations. At the end of falling operations a completed tree tally shall be submitted to the Authorized Officer.

(22) L-32 In ROW 7 where new road construction or skid trails are within the riparian zone as shown on exhibit A, Purchaser shall during road construction fell, buck, and remove to an area adjacent to and outside of the landing right-of-way forty (40) trees marked with blue "C/L" which are within the inner zone of the riparian. Where trees are bucked at the large ends, the purchaser shall put a "X" of paint with a color approved by the authorized officer to ensure that the logs are not yarded and shipped. No adjustments of volume or value shall be made to meet these requirements. The Purchaser shall tally all trees by diameter class and species on a daily basis. The tally may be requested by the Authorized Officer at any time during falling operations. At the end of falling operations a completed tree tally shall be submitted to the Authorized Officer.

(C) ROAD CONSTRUCTION, MAINTENANCE, AND USE

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

(2) R-1a Any required construction, improvement, or renovation of structures and roads 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.

(3) R-1b The Purchaser shall construct, use and decommission temporary routes T33 R1W; TR 7-3, TR 7-2, TR 5-1 and T32 R1W; TR 19-3, TR 19-4 by October 15th of the same respective operating season.

(4) R-2 The Purchaser is authorized to use the roads listed and shown on Exhibit D-2 Section 3000 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 Provision R-2b. The Purchaser shall pay current Bureau of Land Management maintenance fees and rockwear for the sale of additional timber under modification to the contract.

(5) R-2a With the prior written approval of the Authorized Officer, the Purchaser may arrange for cooperative maintenance with other users of roads included in Provision R-2f of this contract; provided, that such cooperative arrangement shall not relieve the Purchaser of his liability for the maintenance and repair of such roads resulting from wear or damage, in accordance with this contract. The Purchaser shall furnish the Authorized Officer a copy of any cooperative maintenance agreements entered into with other users on these roads.

(6) R-2b The Purchaser shall pay the Government a road maintenance and rockwear fee of **Sixteen Thousand Three Hundred Twenty-one and 78/100 dollars ($16,321.78)** for the transportation of timber included in this contract price over said roads. The above maintenance amount is for the use of 32.21 miles of road or less. If the total road maintenance and rockwear fee does not exceed five hundred and no/100 dollars ($500.00), the Purchaser shall pay such amount in full prior to

use of such roads. If the total road maintenance 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.

(7) 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 Exhibit D-2 Section 3000. 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.

(8) R-2f The Purchaser shall perform any required road repair and maintenance work on roads identified as Purchaser maintenance, under the terms of Exhibit D, Road Maintenance Specifications, of this contract, which is attached hereto and made a part hereof. 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.

(9) R-3 In the use of Road Nos FS1632-112, 32-1-19.0 B1, 32-1-19.0 B2, 32-1-19.0 B3, 32-1-19.0 B4, 32-1-19.0 C, 32-1-19.0 D1, 32-1-19.0 D2, 32-1-19.0 D3, 32-1-19.0 E the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement dated May 20, 1980 between the United States and U.S. Forest Service. This document is available for inspection at the Medford District Office.

These conditions include:

(a) Payment of a road rockwear obligation of **Eight Hundred Sixteen and 05/100 dollars ($816.05)** to the U.S. Forest Service, payable at the time indicated in the License Agreement.

(b) Payment of a road use obligation of **Zero and 00/100**

dollars ($0.00) to the U.S Forest Service, payable at the time indicated in the License Agreement.

(c) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.

(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.

(10) R-3 In the use of Road No. 32-1-19.0 Seg A, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No M-768 between the United States of America and Lone Rock Timber Company. This document is available for inspection at the Medford District Office.

These conditions include:

(a)Payment of a road rock wear obligation of **Five Hundred Fifty-seven and 57/100 dollars ($557.57)** to Lone Rock Timber Company, payable at the time indicated in the License Agreement.

(b) Payment of a road use obligation of **Zero and 00/100 dollars ($0.00)** to Lone Rock Timber Company, payable at the time indicated in the License Agreement.

(c)Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.

(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-3 In the use of Road Nos 33-2-1.02 A, and 33-1-6.0 B the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No M-660, between the United States of America and Siskiyou Timberlands LLC. This document is available for inspection at the Medford District Office.

These conditions include:

(a) Payment of a road rockwear obligation of **Thirty-eight and 54/100 dollars ($38.54)** to Siskiyou Timberlands LLC., payable at the time indicated in the License Agreement.

(b) Road use obligation to be swapped out between Siskiyou Timberlands LLC., and BLM.

(c) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.

(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.

(12) R-3 In the use of Road No. and 33-1-6.0 A the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No M-660, between the United States of America and Systems Global Timberlands LLC. This document is available for inspection at the Medford District Office.

These conditions include:

(a) Payment of a road rockwear obligation of **One Hundred**

Twenty and 30/100 dollars ($120.30) to System Global Timberlands LLC., payable at the time indicated in the License Agreement.

(b) Payment of a road use obligation of **Zero and 00/100 dollars ($0.00)** to Siskiyou Timberlands LLC., payable at the time indicated in the License Agreement.

(c) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.

(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.

(13) R-3c The Purchaser agrees that if they elect to use any other private road, which is the subject of a right-of-way agreement with the Government for the removal of Government timber sold under the terms of this contract, Purchaser shall request and agree to the modification of this contract to provide for such use and for allowances for amortization of the Government's share of the capital investment of any such road.

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

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

Details shall include:

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

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

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

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

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

(D) Environmental Protection

(1) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall prepare a Spill Prevention, Control, and Countermeasure Plan for all hazardous substances to be used in the contract area. Such plan shall include identification of Purchaser's representatives responsible for supervising initial containment action for releases and subsequent cleanup. In addition, such plan shall follow all applicable State of Oregon Department of Environmental Quality guidelines for spill prevention and containment of petroleum products (Oregon Administrative Rules, Chapter 340, Department of Environmental Quality, Division 142, Oil and Hazardous Materials Emergency Response Requirements).
During operations the operator would be required to have a BLM-approved spill plan or other applicable contingency plan. In the event of any release of oil or hazardous substance, as defined in Oregon Administrative Rules (OAR) 340-142-0005 (9)(d) and (15), into the soil, water, or air, the operator would immediately implement the site's plan. As part of the plan, the operator would be required to have spill containment kits present on the site during operations. The operator would be required to be in compliance with OAR 629-605-0130 of the Forest Practices Act, Compliance with the Rules and Regulations of the Department of Environmental Quality. Notification, removal, transport, and disposal of oil, hazardous substances, and hazardous wastes would be accomplished in accordance with OAR 340-142, Oil and Hazardous Materials Emergency Response Requirements, contained in Oregon Department of Environmental Quality regulations (SP-05, SP-06, and SP-07).

(2) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall store all hazardous materials and petroleum products in durable containers placed outside of Riparian Reserves. Locate so an accidental spill would be contained nor drain into any stream system (SP-03).

Refuel equipment a minimum of 175 feet from streams, ponds, or other wet areas. Store equipment containing reportable quantities of toxic fluids outside of the Riparian Reserve. Hydraulic fluid and fuel lines would be in proper working condition in order to minimize leakage into streams (SP-03).

(3) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall restrict ground-based yarding and soil decompaction operations from October 15 to May 15 generally, or when soil moisture exceeds 25%. The Authorized Officer may issue a waiver, with support from the BLM soil scientist and based on site conditions.

(4) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall comply with the following. Road renovation and improvement would occur during the dry season (May 15 to October 15). Variations in these dates would be permitted dependent upon weather and soil moisture conditions and with a specific

erosion control plan (e.g., rocking, waterbarring, seeding, mulching, barricading) as determined by the Authorized Officer in consultation with aquatic and/or soils scientists. All road and landing construction activities would be stopped when a storm event resulted in degrading conditions as evidenced by turbid runoff, turbid ditch flow, ponding, or rutting or other displacement in excess of two inches. Watershed specialists would closely monitor storms that result in precipitation and would convey pertinent information to the Authorized Officer. Similarly, the Authorized Officer would convey road, landing, and ditch conditions to the aquatic and/or soil specialists.

(5) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall construct road barricades as specified on Exhibit C, at locations where an existing barricade has been removed to provide for harvest access. Barricades shall be in place by October 15 of each calendar year.

(6) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall block skid trails to prevent public motorized vehicle use and other unauthorized use by October 15 of the year of harvest unless a waiver is in place for ground-based yarding to extend the dry season. Place woody debris or other appropriate barriers (e.g., rocks, logs, and slash) on the first 100 feet of skid trails leading off system roads or landing areas in all ground-based yarding units upon completion of yarding to block and discourage unauthorized vehicle use. If there is not enough available slash to cover the first 100 feet of skid trails, apply seed and mulch to the area.

(7) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall revegetate disturbed soils with locally adapted native seeds and plant materials as prescribed by the field office botanist, and mulch. Need would be determined by the authorized officer in consultation with the field office botanist, based on the level of disturbance and the presence of priority non-native invasive plants. Planting and/or seeding would occur between September 1 to March 31 or as otherwise approved by authorized officer in consultation with the field office botanist.

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 roemeri, Koeleria macrantha, Poa secunda, Vulpia microstachys*

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

The proportion of each species in the mixture shall be prescribed by the Authorized Officer.

The Purchaser shall apply prescribed seed and straw mulch to acres designated for treatment, as directed by the Authorized Officer, at the following rates of application:

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

The Purchaser shall apply seed and straw mulch between September 1 March 31of the year of harvest. 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:

Test	Grasses (%)	Forbs (%)
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.

(8) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall Ensure hay, straw, and mulch are certified as free of prohibited noxious vegetative parts or seeds. Hay must be from native grasses only. Straw or hay must be obtained from the BLM or purchased from growers certified by the Oregon Department of Agriculture's Weed Free Forage and Mulch Program or approved by the project botanist. Apply native seed and certified weed-free mulch to areas, such as cut and fill slopes and waste disposal sites, that have the potential for sediment delivery to wetlands, Riparian Reserves, floodplains and waters of the state. Apply seed upon completion of construction and as early as practicable to increase germination and growth.

(9) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall apply erosion-control techniques (e.g. water bar, seed, mulch, scatter chipped material, or scatter limbs and other fine material) on skid trails, forwarder trails, yarding corridors, landings, and other disturbed areas where potential for soil erosion or delivery to waterbodies, floodplains, and wetlands exist, or as identified by the Authorized Officer.

(10) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall Decommission temporary roads upon completion of use. Decompact (using equipment approved by Authorized Officer) and water bar all temporary routes and associated landings, and roads identified for full decommissioning to a depth of 18 inches or bedrock (whichever is shallower). Avoid subsoiling areas near tree roots and where there are rocks larger than 2 feet across. Apply seed and mulch and block upon completion of use. Seeding and mulching would occur in the same operational season that construction activities.

(11) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall seed and mulch the top 20 feet of skyline-cable yarding corridors where yarding logs to the road results in extended soil exposure.

(12) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall Restrict the use of motorized equipment and vehicles to existing roads within the following naturally occurring special habitats to maintain their ecological function: seeps, springs, wetlands, natural ponds, and natural meadows.

(13) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall when installing temporary culverts, use washed rock as backfill material. Use geotextile fabric as necessary where washed rock will spread with traffic and cannot be practicably retrieved.

(14) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall remove temporary crossing structures promptly after use. Follow practices under the closure/decommissioning section for removing stream crossing drainage structures and reestablishing the natural drainage.

(15) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not cut vegetation within the extent of the unstable areas that are above or adjacent to stream channels and are likely to deliver material such as sediment and logs to the stream if the unstable area fails. Extend the Riparian Reserves to include

stable areas between such an unstable area where there is potential for the failure to reach the stream.

(16) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not cut vegetation within 25 feet of natural ponds < 1 acre or wetlands <1 acre (including seeps and springs), and constructed water impoundments (e.g., canal ditches and pump chances of any size.

(17) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not operate machinery for timber harvest within 50 feet of streams (slope distance), except where machinery is on improved roads, designated stream crossings, or where equipment entry into the 50-foot zone would not increase the potential for sediment delivery into the stream.

(18) E-2 The water bars to be constructed as required by Sec. 26(c) shall be constructed in accordance with the specifications shown on Exhibit C Package (special provisions), which is attached hereto and made a part hereof.

(a) Water-bar all pre-designated skid trails, designated skid trails, and forwarder trails used for logging activities in all ground based units shown on Exhibit A., at locations approved by the authorized officer, by October 15 of the year of harvest.

(b) Install water-bars at the same time as subsoiling (if both are required) unless skid trails are needed to complete harvest the following season. In that case, water bars would be constructed and straw would be applied to exposed soil prior to fall rains to reduce sedimentation during winter months. Water-bar spacing on tractor skid trails would be based on the RMP erosion-control measures for timber harvest, which considers slope and soil series.

(19) 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 owls may not be allowed during this time period.

(20) E-7 In order to prevent the spread of noxious weeds (and Phythophthora lateralis), the Purchaser shall (steam clean or pressure wash) all equipment traveling off system roads or temporary routes prior to entry onto BLM lands (and between sale locations if operating in areas infested with weeds.) as directed by the Authorized Officer. Cleaning shall be defined as removal of all dirt, grease, plant parts and material that may carry noxious weed seeds.

(E) Miscellaneous

(1) M-2 The Government at its option may check scale any portion of the timber removed from the contract area. The Purchaser hereby agrees to make such contract timber available for scaling at a location designated by the Authorized Officer. In the event that BLM elects to check scale and if such check scaling causes a delay in log transportation time, an adjustment will be made to the purchase price as follows. If the entire sale is check scaled, the purchase price of this contract shall be reduced by fourteen hundred thirty-two dollars and fifty cents ($1,432.50). In the event that only a portion of the contract timber is scaled, the purchase price shall be reduced by that portion of $0.75 per net thousand board foot of timber scaled which is equal to the percentage of timber sold which was actually scaled by the Government. For purposes of computing this price reduction, the percentage of timber sold which has been scaled shall be determined by the Government. Any reduction in purchase price under the terms of this provision shall be full compensation to the Purchaser for any expense or loss incurred as a result of such scaling.

(F) Fire Prevention and Control

(1) F-1a Fire Prevention and Control. Primarily for purposes of fire prevention and control, the Purchaser shall comply with the following provisions:

1. Prior to the operation of power driven equipment in construction or logging operations under this contract during the closed fire season or periods of fire danger, the purchaser shall ensure that planned operations will be in full compliance with the current Fire Season Requirements issued by the State of Oregon, Department of Forestry and the Medford District Bureau of Land Management.

Current State of Oregon, Department of Forestry requirements can be found online at: https://www.oregon.gov/ODF/Fire/Pages/Restrictions.aspx

(G) Slash Disposal and Site Preparation

(1) SD-4 Logging Residue Reduction. In addition to the requirements of Sect.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 logging residue reduction and site preparation measure(s) required by this contract:

Prior to commencement of any operation under this section of the contract, a slash disposal and site preparation pre-work conference between the purchaser's representative and the Authorized Officer must be held at a location designated by the Authorized Officer. All slash disposal and site preparation shall be done in accordance with the plans developed at this pre-work conference.

Slash, as defined for this section, shall mean all material (brush, limbs, tops, unmerchantable stems, and chunks) severed or knocked over as a result of purchasers operations under the terms of this contract, including material cut during slashing activities for the purposes of fuels reduction.

Refueling of chainsaws and other equipment will be done no closer than one hundred fifty (150) feet of any stream or wet area. Spilled fuel and oil would be cleaned-up and would be disposed of at an approved disposal site.

1. For Igniting, Burning, Mop-up of Piles on Units:

   a. One work leader(s) Firefighter Type 1 (FFT1) qualified according to National Wildfire Coordinating Group (NWCG) Wildland Fire Qualifications System guide, PMS 310-1) to supervise crew and equipment operations, and to serve as Purchaser's representative.

   b. Two-person crew Firefighter Type 2 (FFT2) qualified according to National Wildfire Coordination Group (NWCG) Wildland Fire Qualifications System guide, PMS 310-1, with sufficient fuel for burning, four (3) drip torches, one (1) power saw, and one (1) backpack pump, one (1) tool for each crew member.

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

   d. All ignition and mop-up personnel will be directly supervised by a BLM representative.

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

All listed personnel shall be physically fit, experienced and fully capable of functioning as required. In addition, all listed personnel shall be qualified according to the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System Guide, PMS-310-1 and provide documentation of these qualifications. On the day of ignition all listed personnel shall be fluent in speaking and understanding English, clothing shall consist of long pants and long sleeved shirts, and be of approved aramid fabric (Nomex™ or equivalent), as well as being free of diesel fuel oil. All personnel shall wear lug sole boots with minimum eight (8) inch tall uppers that provide ankle support, approved hardhats and leather gloves. Personnel who do not meet these requirements or do not have proper clothing and personal protective equipment (PPE) will not be allowed to participate. 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 cutting unit shown on Exhibit A for seventy-two (72) hours, as directed by the Authorized Officer within a five (5) day period commencing at 8:00 a.m. the day following the completion of ignition in that unit, or until released from such service by the Government, whichever occurs first.

In event of a fire escapement, the Purchaser's personnel and equipment shall, under supervision of the Authorized Officer, take action to control and mop up the escaped fire until released from such service by the Government. If it becomes necessary to use furnished personnel and equipment for the suppression of a fire which escapes from the prescribed fire area for a period beyond the remainder of the day in which the fire escapes, then the Government shall, at its option: (1) reimburse the Purchaser for such additional use of personnel and equipment at wage rates shown in the current Administratively Determined Pay Rates for the Western Area and at equipment rates shown in the current Oregon-Washington Interagency Fire Fighting Equipment Rental Rates schedule until the Purchaser is released from such service by the Government; or (2) release the Purchaser from additional suppression work and assume responsibility for suppressing the escaped fire.

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

(2) SD-1a LOP AND SCATTER Lop and scatter all slash as directed by the Authorized Officer , concurrently with normal felling operations. All tops and side branches must be free of the central stem so that such slash is reduced to the point that it is within eighteen (18) inches of the ground at all points.

(3) SD-1b HANDPILE AND BURN Handpile all slash as directed by the Authorized Officer in accordance with the following specifications:

1. Piling shall be accomplished by hand. Finished piles shall be tight and free of earth.

2. Pile all slash which is between one (1) and six (6) inches in diameter on the large end and exceeds three (3) feet in length.

3. A six (6) foot by six (6) foot sheet of four (4) mil polyethylene black plastic shall be placed in each pile in a manner such that approximately one-third (⅓) of the pile lies above it to hold it in place and so that a two (2) foot by two (2) foot dry ignition point is maintained for one (1) year or until burned. The ignition point will consist of fine fuel material such as needles, small limbs, and branches less than one-half (½) inch in diameter and free of dirt. Piles shall be constructed by aligning individual pieces in the same direction and placing the heavier slash on top. Piles shall have a stable base to prevent toppling. The long axis of individual pieces shall be oriented up and down the slope. Protruding pieces shall be trimmed to allow covering in a manner that permits the pile to shed water. Height shall be no less than four (4) feet and no greater than six (6) feet; width shall not exceed six (6) feet; piles shall be circular and not windrowed. No pile shall be located within sixty (60) feet of fish-bearing, perennial streams or within thirty five (35) feet from non-fish-bearing, intermittent streams. Piles shall not be located on

down logs, stumps, talus slopes, roadways, or drainage ditches. No pile shall be located within ten (10) feet of reserve trees, any other pile, or unit boundary. No pile shall be located within twenty five (25) feet of designated wildlife trees. No portion of the pile will be under the crown of any living conifer tree.

4. Operations required by this provision shall be kept current with yarding as directed by the Authorized Officer and shall be conducted as follows:

   a. Units shall be piled and covered during the same season that they are logged. Piling shall be completed in each unit or portion thereof, within eight (8) weeks after being notified of BLM site treatment determination.

(4) SD-1c EXCAVATOR PILE AND BURN. Pile all slash in units or portions of units as designated by the Authorized officer in accordance with the following specifications:

1. Piling shall be accomplished with a track-mounted excavator with track shoes producing less than ten (10) pounds per square inch ground pressure. The excavator shall be equipped with a hydraulic thumb or rotating, controllable grapple head. The machine shall have a minimum reach of twenty five (25) feet. Finished piles shall be tight and free of earth. No portion of the excavator pile will be within 25 feet of the dripline of any living conifer tree.

2. Pile all slash, brush and downed hardwoods which are greater than two (2) inch and less than sixteen (16) inches in diameter on the large end and exceed two (2) feet in length. Existing coniferous species in piled areas and landing areas shall be protected from damage and having landings piled next to and under where feasible.

3. Unmerchantable logs greater than sixteen (16) inches on the small end shall be left in place, or positioned so that they will not be burned.

4. Prior to the commencement of piling work, all equipment shall meet the approval of the Authorized Officer.

5. Excavators are limited to designated skid roads approved by the Authorized Officer.

6. Additional trails needed shall be approved by the Authorized Officer, and the excavator shall be limited to one pass on these trails. The excavator shall pile by walking over the slash and working back to the designated trails. Existing reproduction of commercial coniferous species shall be protected where feasible.

7. A ten (10) foot by ten (10) foot cover of four (4) mil black plastic or equivalent material shall cap each excavator pile to maintain a dry ignition point. The cover shall be firmly fixed to each pile to hold it in place. Covering shall be done at time of piling.

8. Operations required by this provision shall be kept current with yarding as directed by the Authorized Officer and shall be conducted as follows: Units shall be piled and covered during the same season that they are logged. Piling shall be completed in each unit or portion thereof, within eight (8) weeks after being notified of BLM site treatment determination

(5) SD-1f LANDING PILES In all units as shown in the Exhibit A, pile all slash located within fifty (50) feet on each side of each landing, around each landing shall be free of slash and burnable material. Slash shall be piled by a grapple loader. Finished piles shall be tight and free of earth. Larger cull logs can be placed adjacent to landing pile for firewood cutting use.

1. A ten (10) foot by ten (10) foot cover of four (4) mil black plastic shall cap each pile to maintain a dry ignition point that contains fine fuels (i.e. kindling). The cover shall be firmly fixed to each pile to hold it in place. Landings shall be piled and covered during the same season that they are logged. No portion of the landing pile will be within 50 feet of the dripline of any living conifer tree.

(6) SD-5 Perform logging residue reduction and site preparation work on approximately four hundred twenty five (425) acres of harvest area as directed by the Authorized Officer.

(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.

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

Treatment/Level	Cost Per Acre	Number of Acres	Total Cost Per Treatment Type
Hand Pile/Cover Slash	$545.00	50	$27,250.00
Hand Pile Burn	$75.00	50	$3,750.00
Excavator Pile/Cover	$490.00	75	$36,750.00
Excavator Pile Burn	$65.00	75	$4,875.00
Lop and Scatter	$48.00	300	$14,400.00
Total Appraised Cost			$87,025.00

(c) The total Purchase Price set forth in Section 2 shall be adjusted by the amount that the total cost of the site preparation treatments designated pursuant to Section 41(G)(2)(a) differs from: eighty seven thousand and twenty five dollars ($87,025.00) as calculated by using the estimated acres determined by the Authorized Officer and the per acre costs listed in Section 41(G)(2)(a).

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

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

Seasonal Restriction Matrix

Dead West Timber Sale

ORM05-TS-2023.0008

Restricted Times are Shaded

Possible Waived Times are Hatched

Sale Area	Activity	Restriction for	Jan		Feb		Mar		Apr		May		June		July		Aug		Sept		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
All Units	Ground Based yarding and all landing operations*	Wet Season [1]																								
	Rock/Log Hauling*	Wet Season [1,2]																								
	Road and/or landing construction, Road Reconstruction, Road Renovation, Road/skid trail barricading, waterbar construction and soil ripping*	Wet Season [1]																								
	Seeding, mulching	Seeding Season																								

Sale Area	Activity	Restriction for	Jan		Feb		Mar		Apr		May		June		July		Aug		Sept		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
Haul Routes	Road Rocking*	Wet Season [1,2]																								
	Road Grading*	Wet Season [1,2]																								
	Timber Haul*	Wet Season [1,2]																								
	Rock Haul*	Wet Season [1,2]																								
	Instream work	Instream Work Window																								

Sale Area	Activity	Restriction for	Jan		Feb		Mar		Apr		May		June		July		Aug		Sept		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
Units and Roads in T32S R01W Sec21	Light road maintenance (e.g., Road brushing and grading), burning (prscribed fired), and Log haul within 0.25 miles of owl site	Northern Spotted Owl																								
	Chainsaw and Heavy equipment use within 200 feet of owl site	Northern Spotted Owl																								
	Blasting and Helicopter use within 0.5 miles of owl site	Northern Spotted Owl																								
	Pile Driving, rock crushing and Screening Equipment use within 400 feet of owl site	Northern Spotted Owl																								
	Tree Climbing within 100 feet	Northern Spotted Owl																								

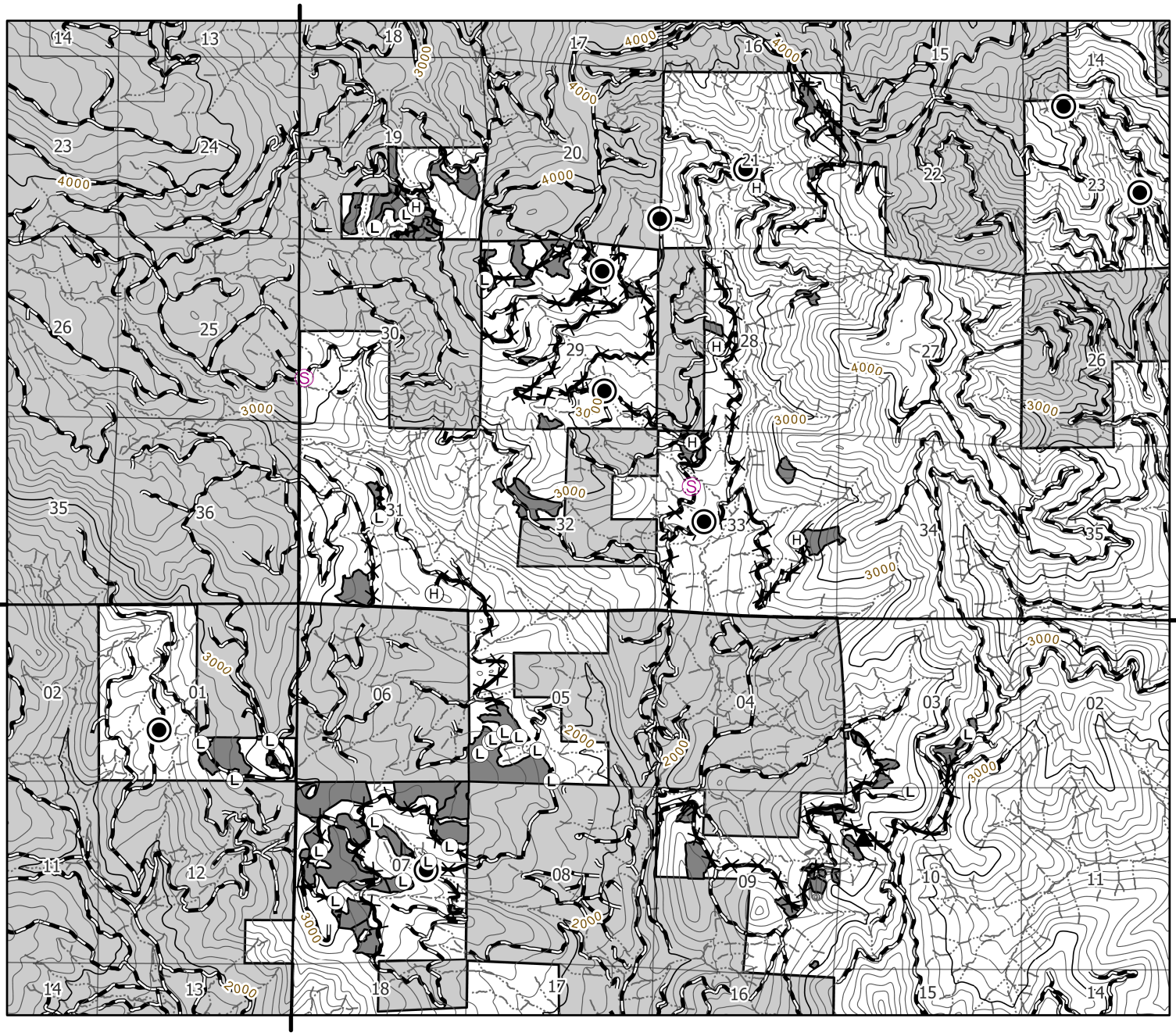
[1] Wet season restrictions may be shortened or extended depending on weather conditions (see L-19 in special provisions)

[2] Hauling restriction may be shortened or extended (see L-19 in special provisions)

*Additional restrictions will apply if a spotted owl nest site is found within 0.25 miles for most harvest related activities or 0.5 miles for blasting, if a gray wolf den is found within one mile of a treament area, if a fisher den site is found within 50 feet of proposed treatment area, or if a bald/golden eagle is found within 660 feet of a treatment area (see section 42). State fire restrictions may apply.

U.S.D.I. BLM MEDFORD DISTRICT
DEAD WEST TIMBER SALE
BUTTE FALLS FIELD OFFICE
JACKSON COUNTY

EXHIBIT A MAP
CONTRACT NO. ORM05-TS-2023.0008



Medford District BLM
August 2023

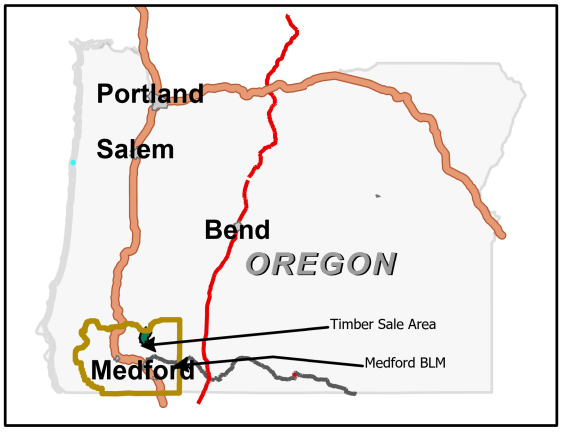
- (H) Helicopter
- ▲ Heli/Service
- (L) Log
- (S) Service
- ◉ Fire Water Source

- Roadside Units
- Harvest Units
- Bureau of Land Management
- Other

1 inch equals 1 miles

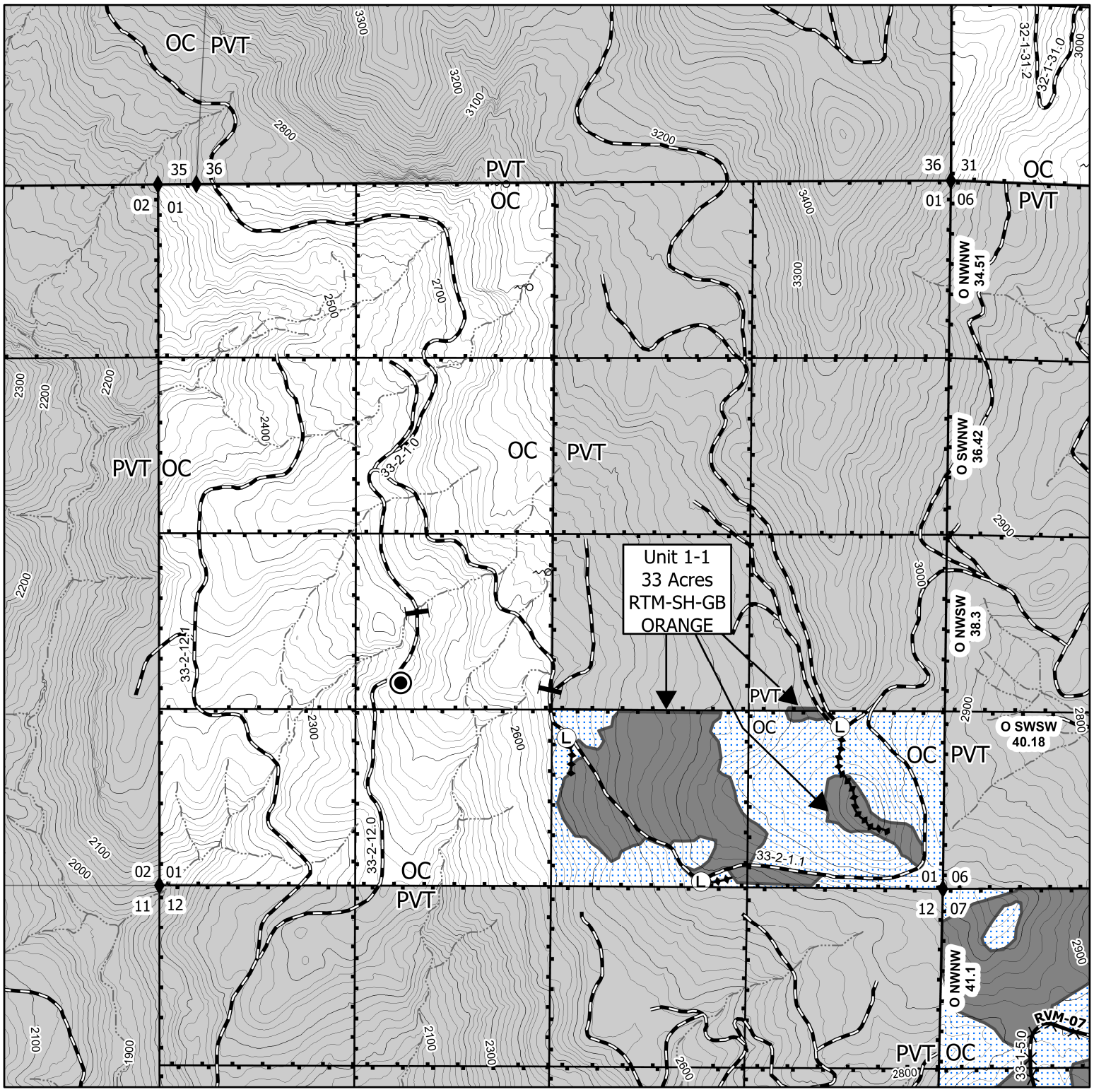
Contours = 100 feet

0 ½ 1 Miles



U.S.D.I. BLM MEDFORD DISTRICT
DEAD WEST TIMBER SALE
T33S-02W SECTION 01, WILL. MER

EXHIBIT A MAP
CONTRACT NO. ORM05-TS-2023.0008



Medford District BLM
August 2023

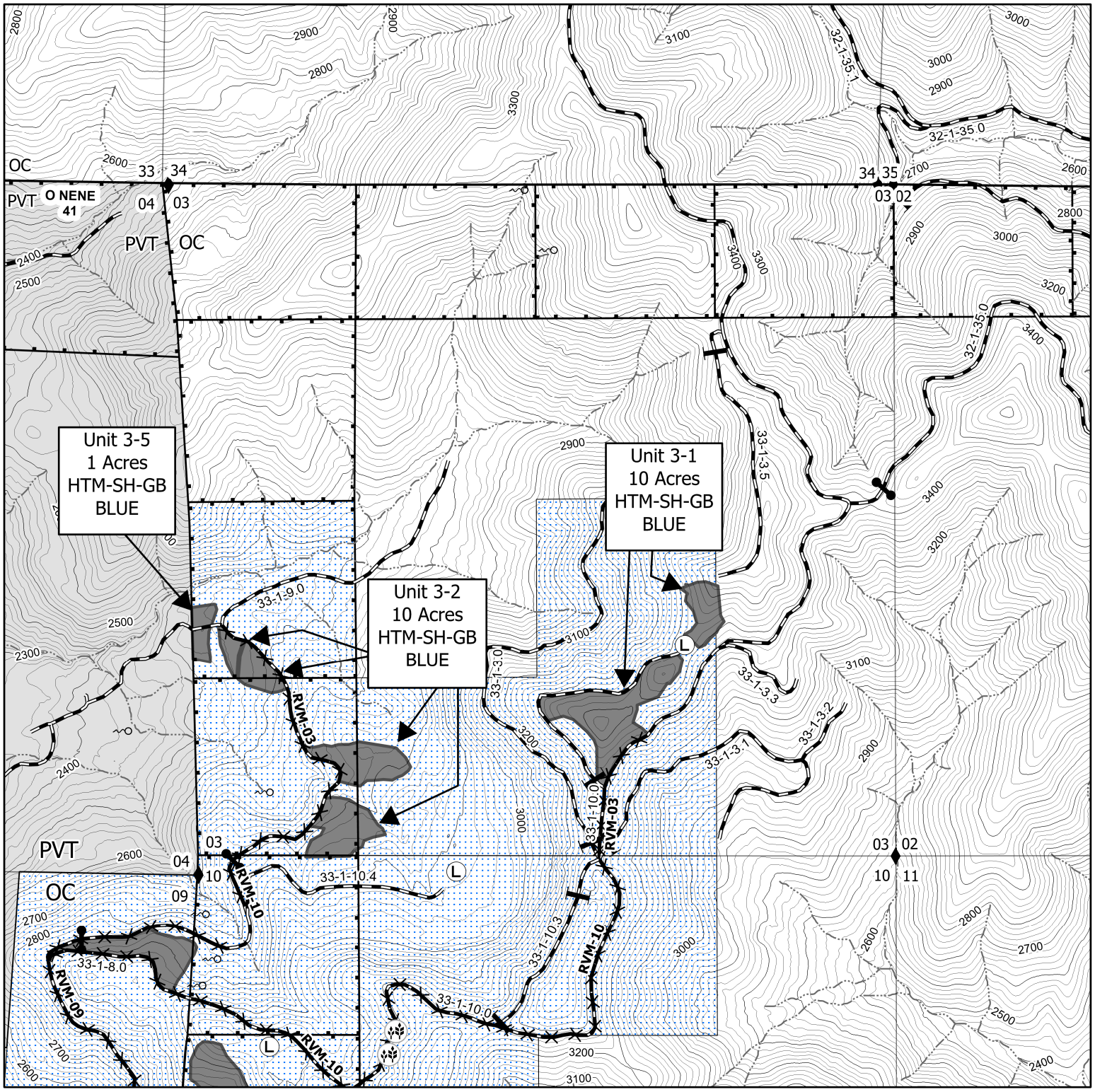
Contours = 20 feet

0 0.25 0.5 Miles

No warranty is made by the Bureau of Land Management as the 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.

U.S.D.I. BLM MEDFORD DISTRICT
DEAD WEST TIMBER SALE
T33S-01W SECTION 3, WILL. MER

EXHIBIT A MAP
CONTRACT NO. ORM05-TS-2023.0008



Medford District BLM
August 2023

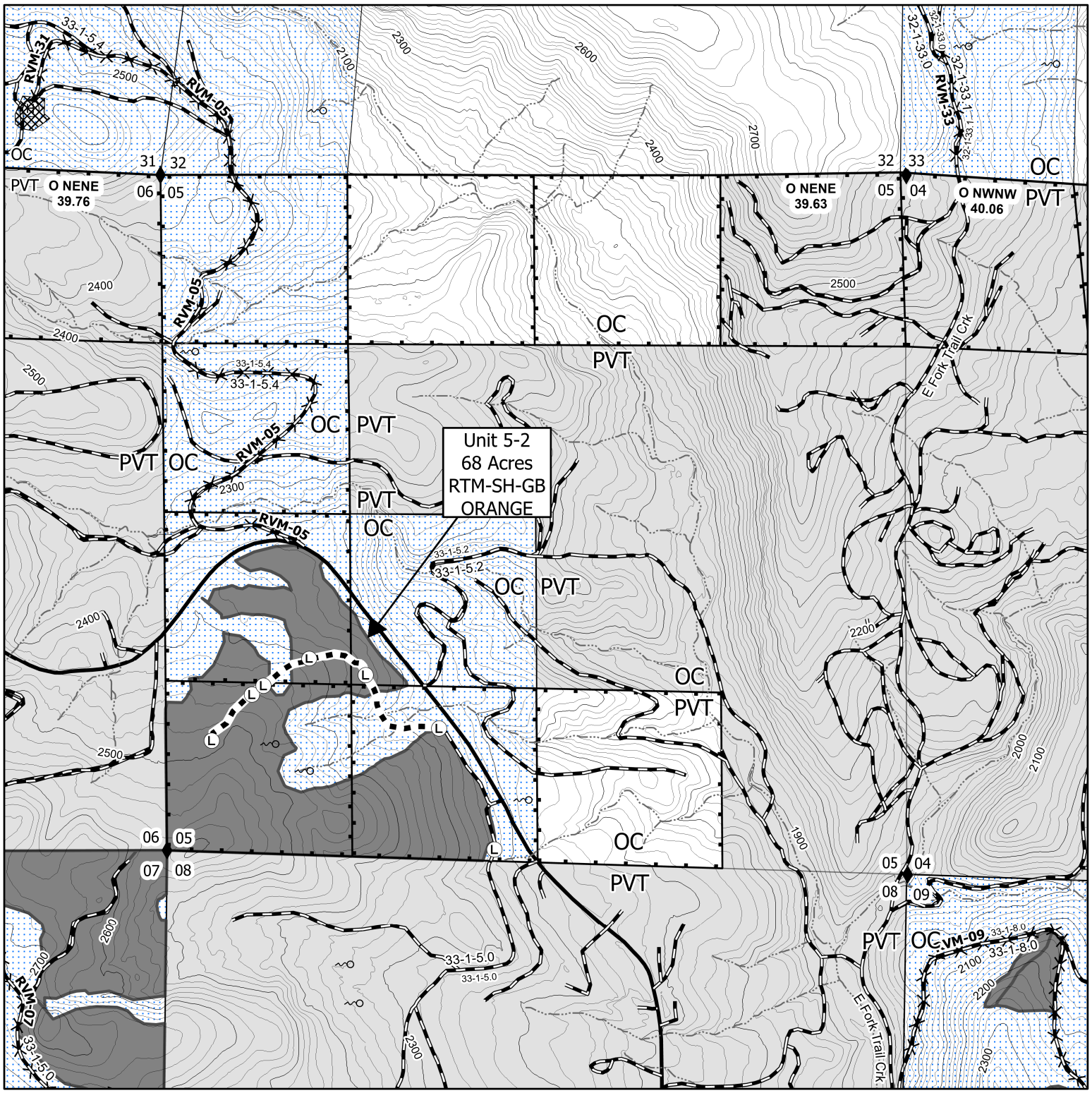
Contours = 20 feet

0 0.25 0.5 Miles

No warranty is made by the Bureau of Land Management as the 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.

U.S.D.I. BLM MEDFORD DISTRICT
DEAD WEST TIMBER SALE
T33S-01W SECTION 05, WILL. MER

EXHIBIT A MAP
CONTRACT NO. ORM05-TS-2023.0008



Medford District BLM
August 2023

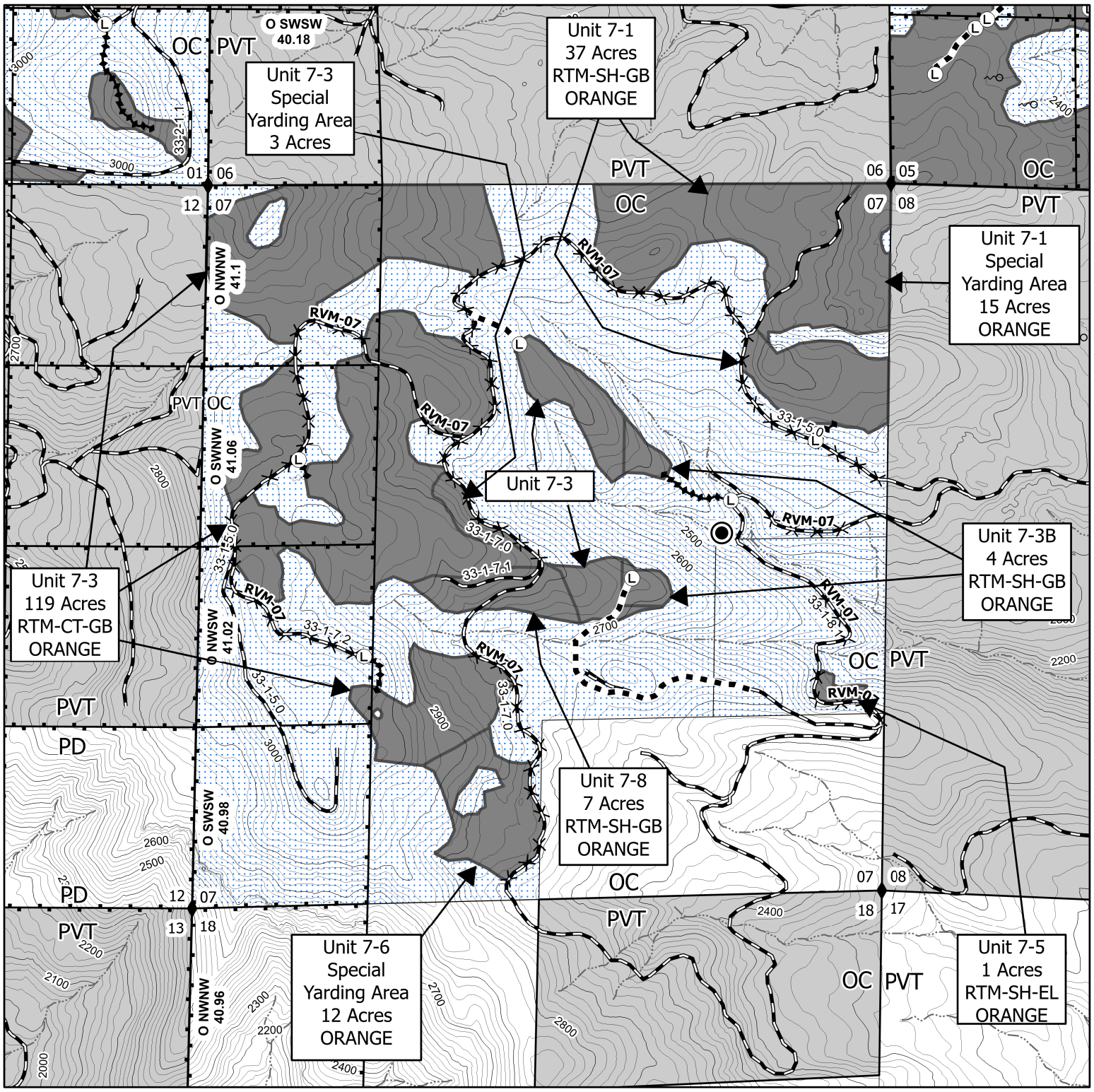
Contours = 20 feet

0 0.25 0.5 Miles

No warranty is made by the Bureau of Land Management as the 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.

U.S.D.I. BLM MEDFORD DISTRICT
DEAD WEST TIMBER SALE
T33S-01W SECTION 07, WILL. MER

EXHIBIT A MAP
CONTRACT NO. ORM05-TS-2023.0008



Medford District BLM
August 2023

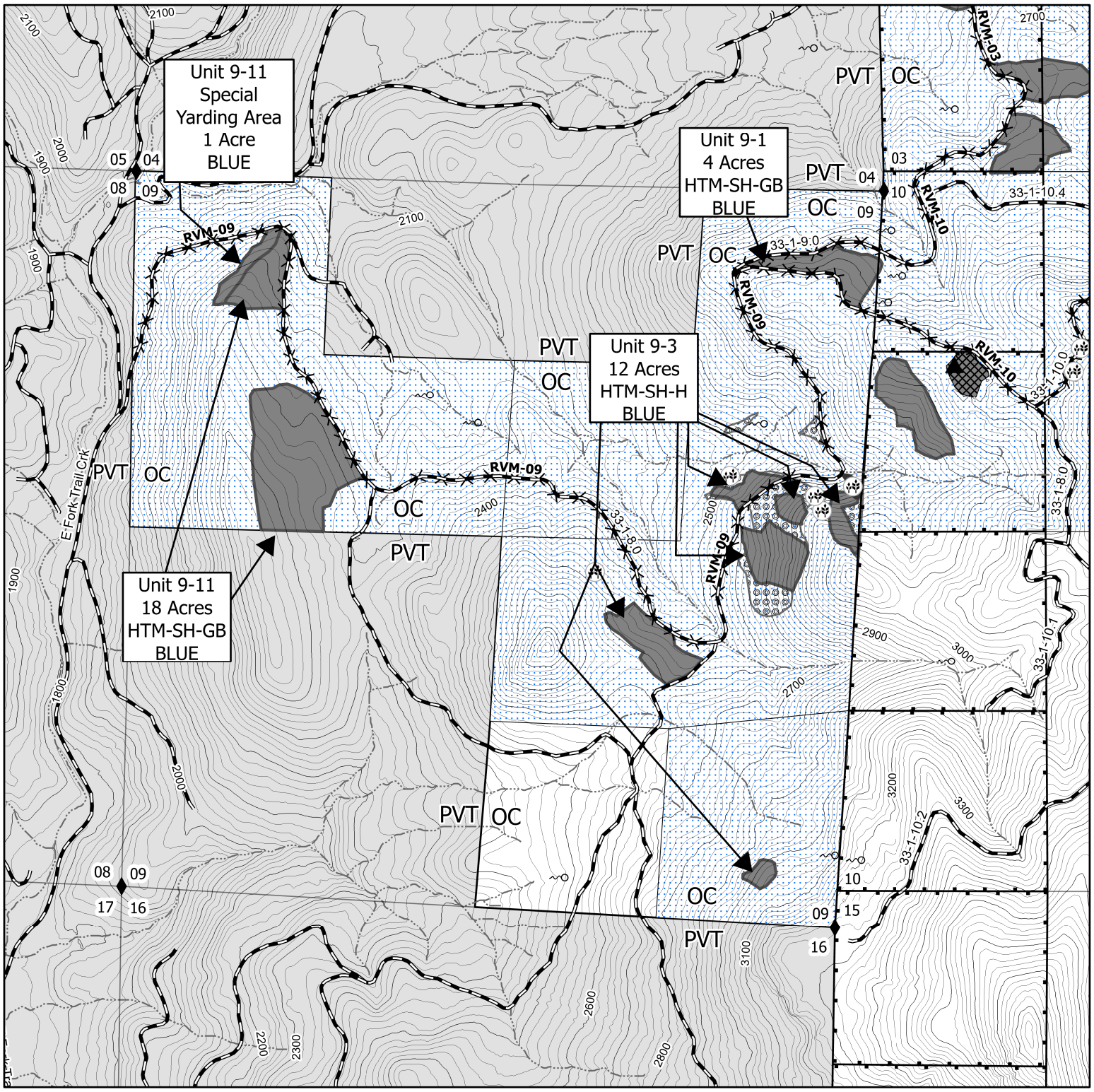
Contours = 20 feet

0 0.25 0.5 Miles

No warranty is made by the Bureau of Land Management as the 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.

U.S.D.I. BLM MEDFORD DISTRICT
DEAD WEST TIMBER SALE
T33S-01W SECTION 09, WILL. MER

EXHIBIT A MAP
CONTRACT NO. ORM05-TS-2023.0008



Medford District BLM
August 2023

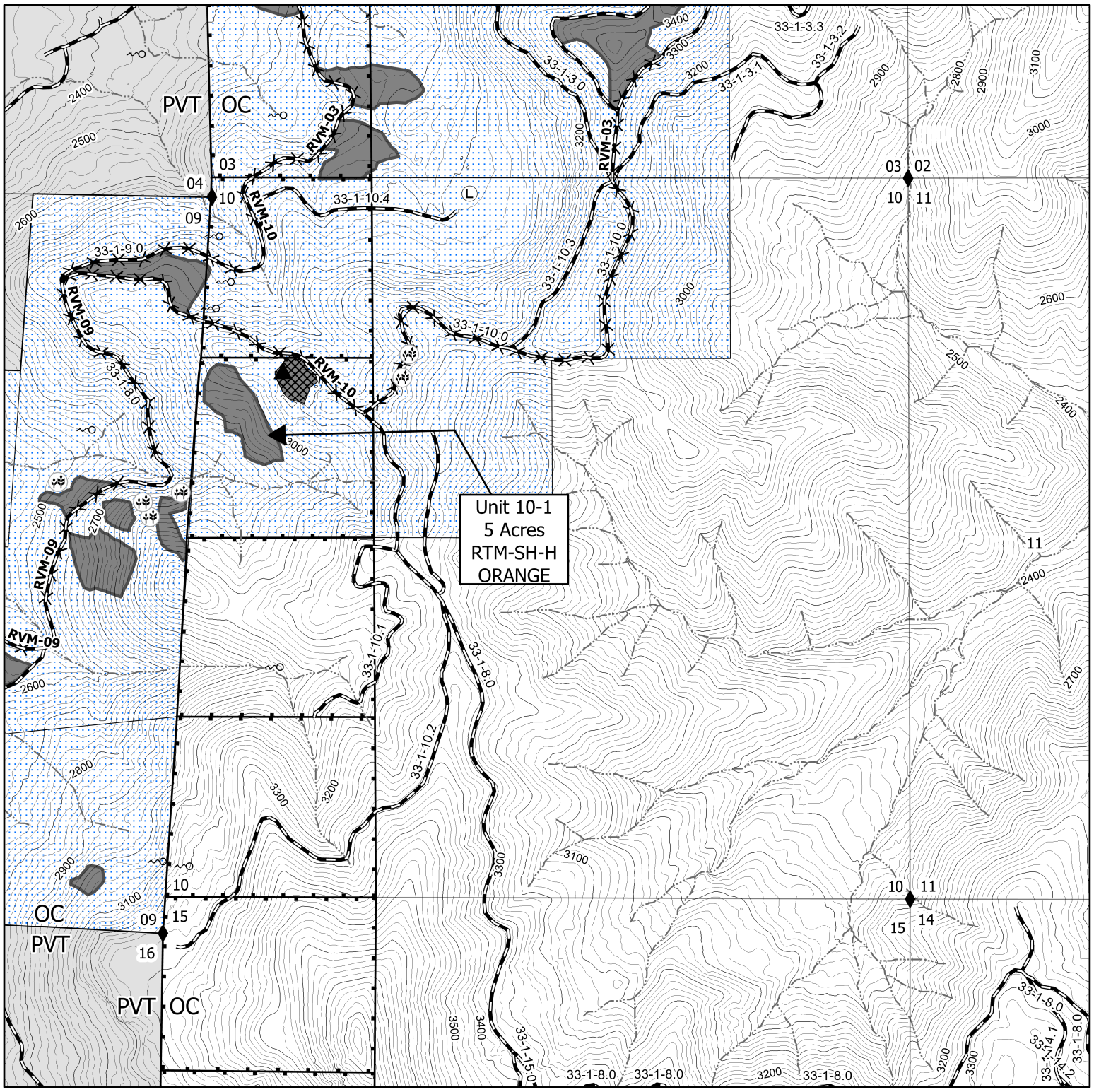
Contours = 20 feet

0 0.25 0.5 Miles

No warranty is made by the Bureau of Land Management as the 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.

U.S.D.I. BLM MEDFORD DISTRICT
DEAD WEST TIMBER SALE
T33S-01W SECTION 10, WILL. MER

EXHIBIT A MAP
CONTRACT NO. ORM05-TS-2023.0008



Medford District BLM
August 2023

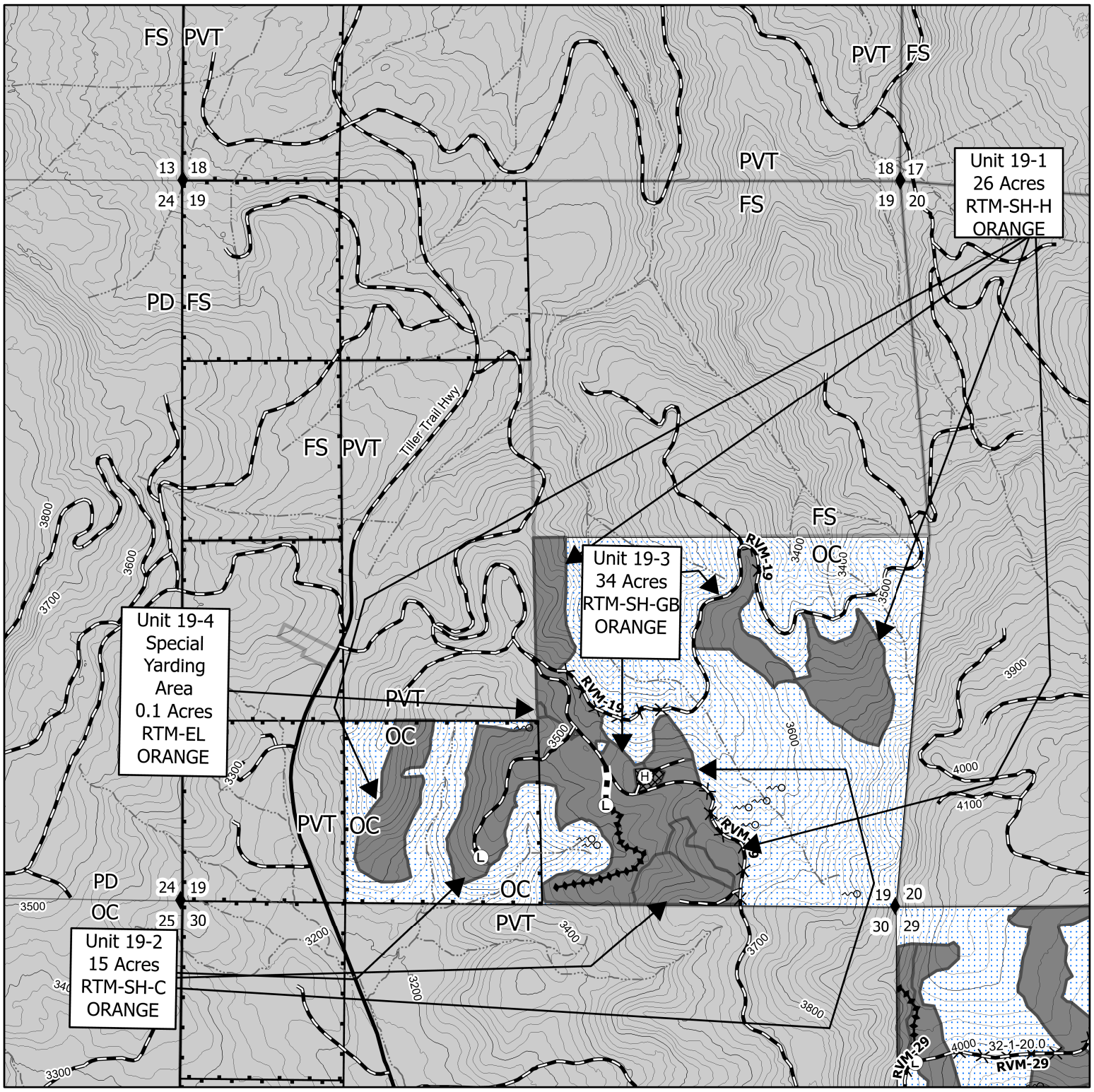
Contours = 20 feet

0 0.25 0.5 Miles

No warranty is made by the Bureau of Land Management as the 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.

U.S.D.I. BLM MEDFORD DISTRICT
DEAD WEST TIMBER SALE
T32S-01W SECTION 19, WILL. MER

EXHIBIT A MAP
CONTRACT NO. ORM05-TS-2023.0008

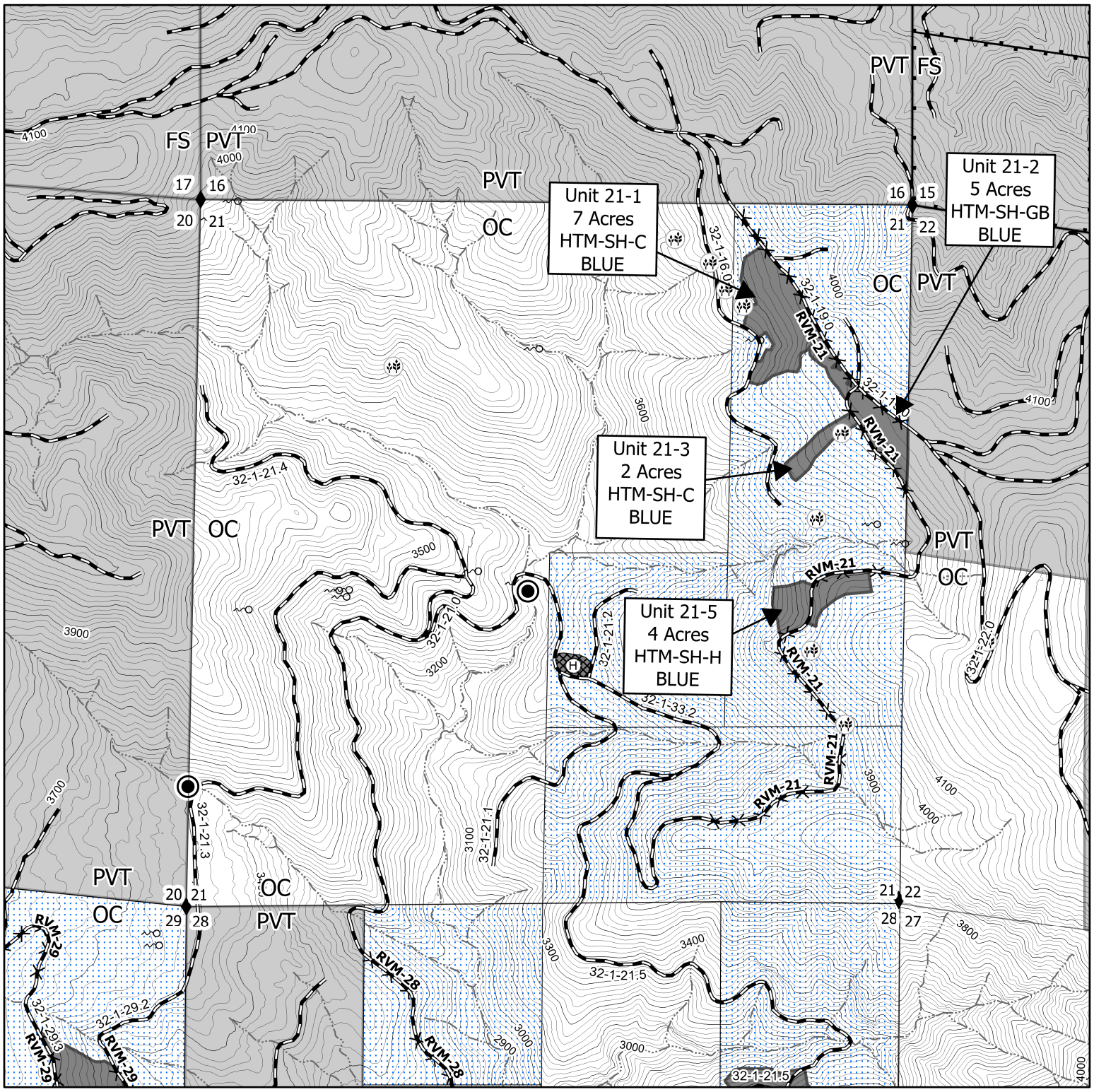


Medford District BLM
August 2023

Contours = 20 feet

0 0.25 0.5 Miles

No warranty is made by the Bureau of Land Management as the 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.



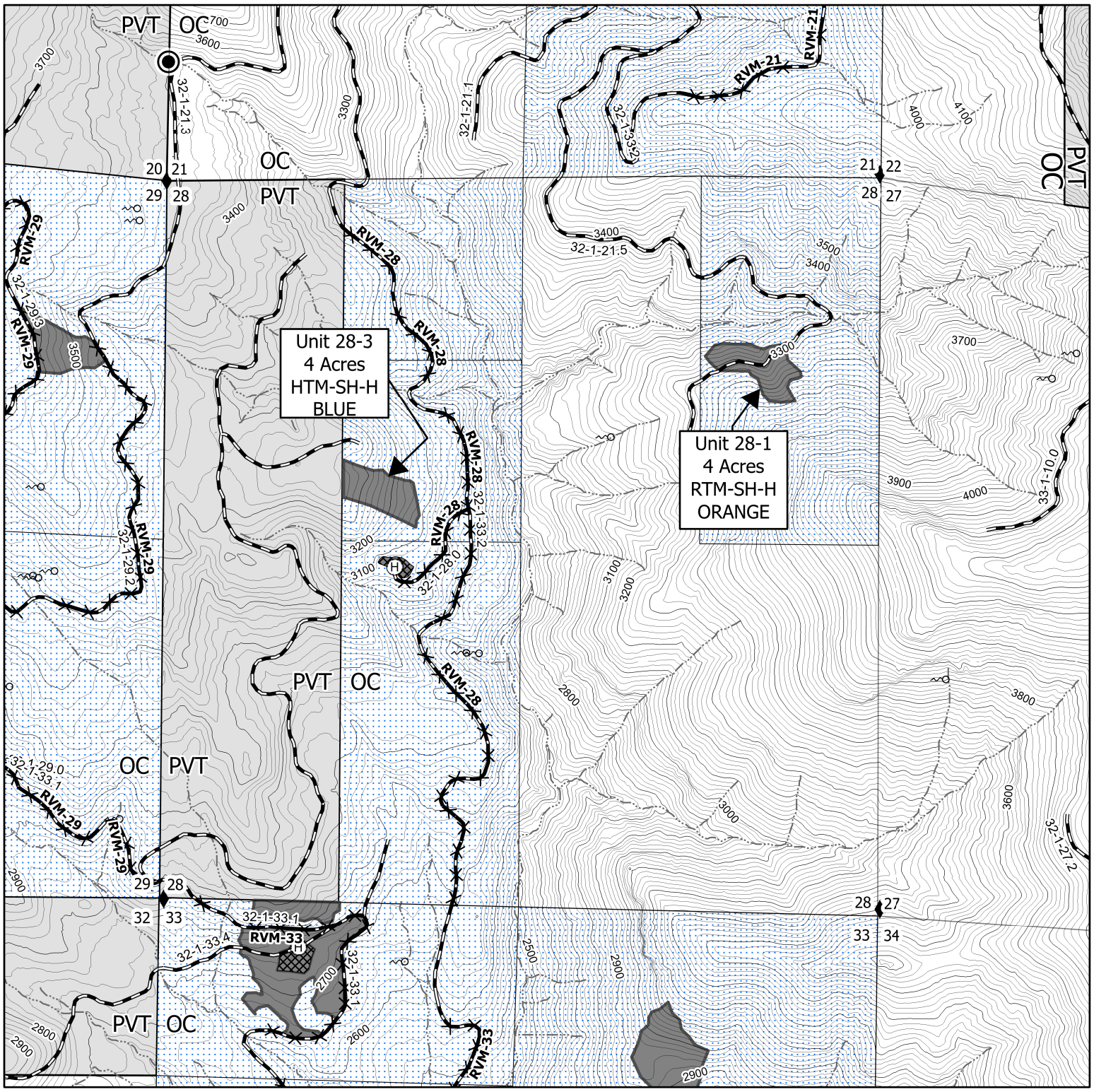
Medford District BLM
August 2023

Contours = 20 feet

0 0.25 0.5 Miles

U.S.D.I. BLM MEDFORD DISTRICT
DEAD WEST TIMBER SALE
T32S-01W SECTION 28, WILL. MER

EXHIBIT A MAP
CONTARACT NO. ORM05-TS-2023.0008

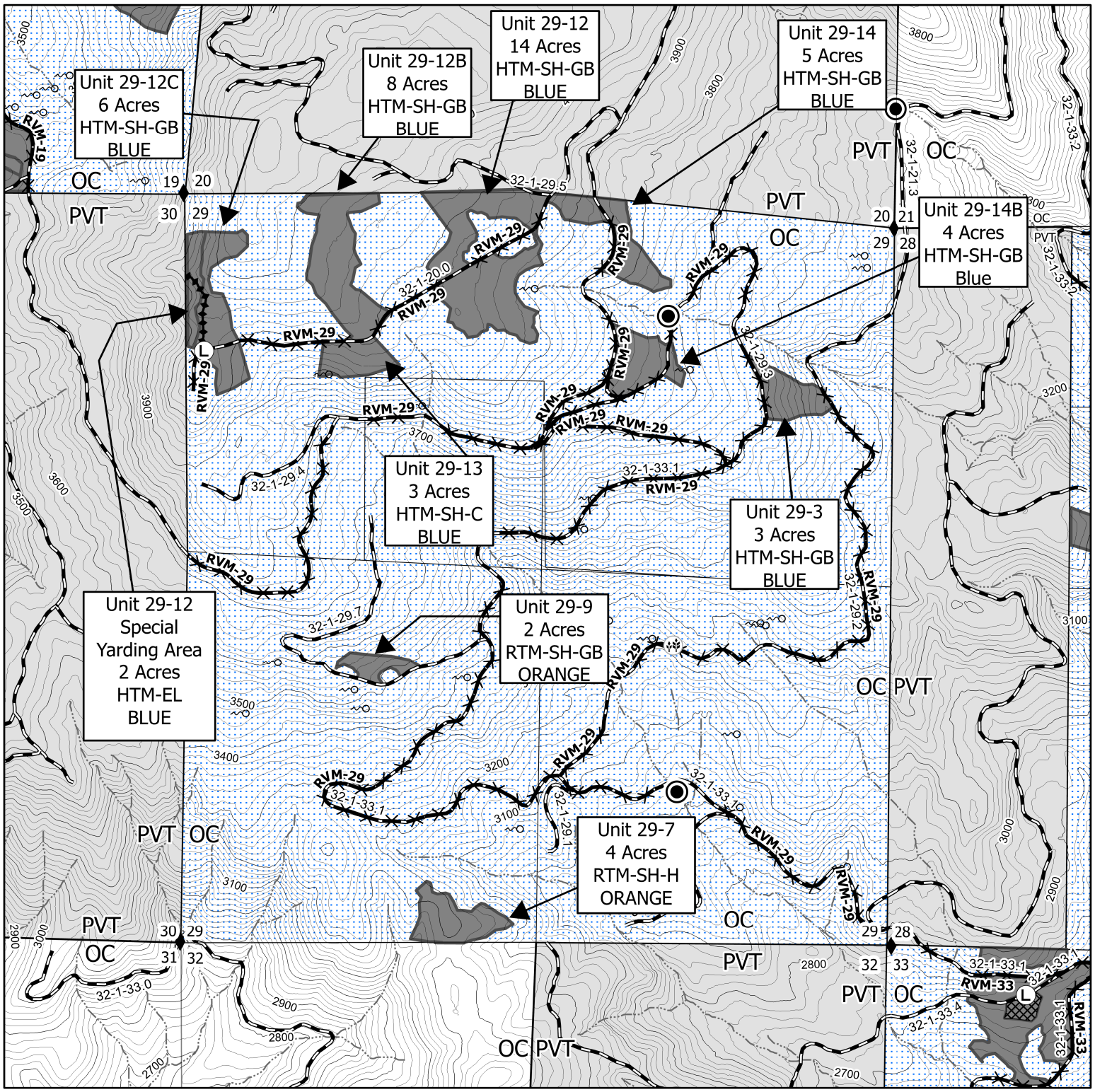


Medford District BLM
August 2023

Contours = 20 feet

0 0.25 0.5 Miles

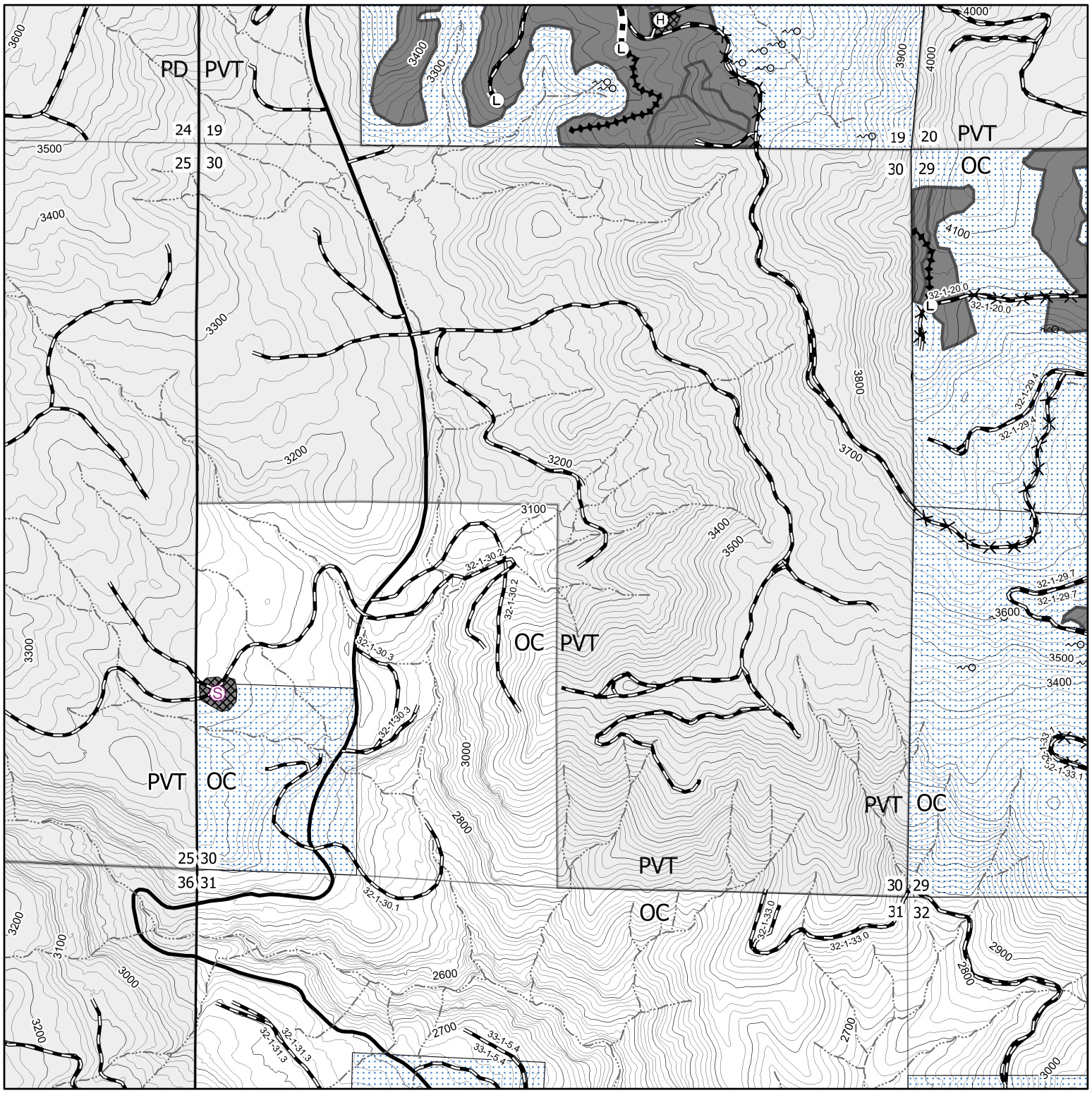
No warranty is made by the Bureau of Land Management as the the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.



Medford District BLM
August 2023

Contours = 20 feet

0 0.25 0.5 Miles



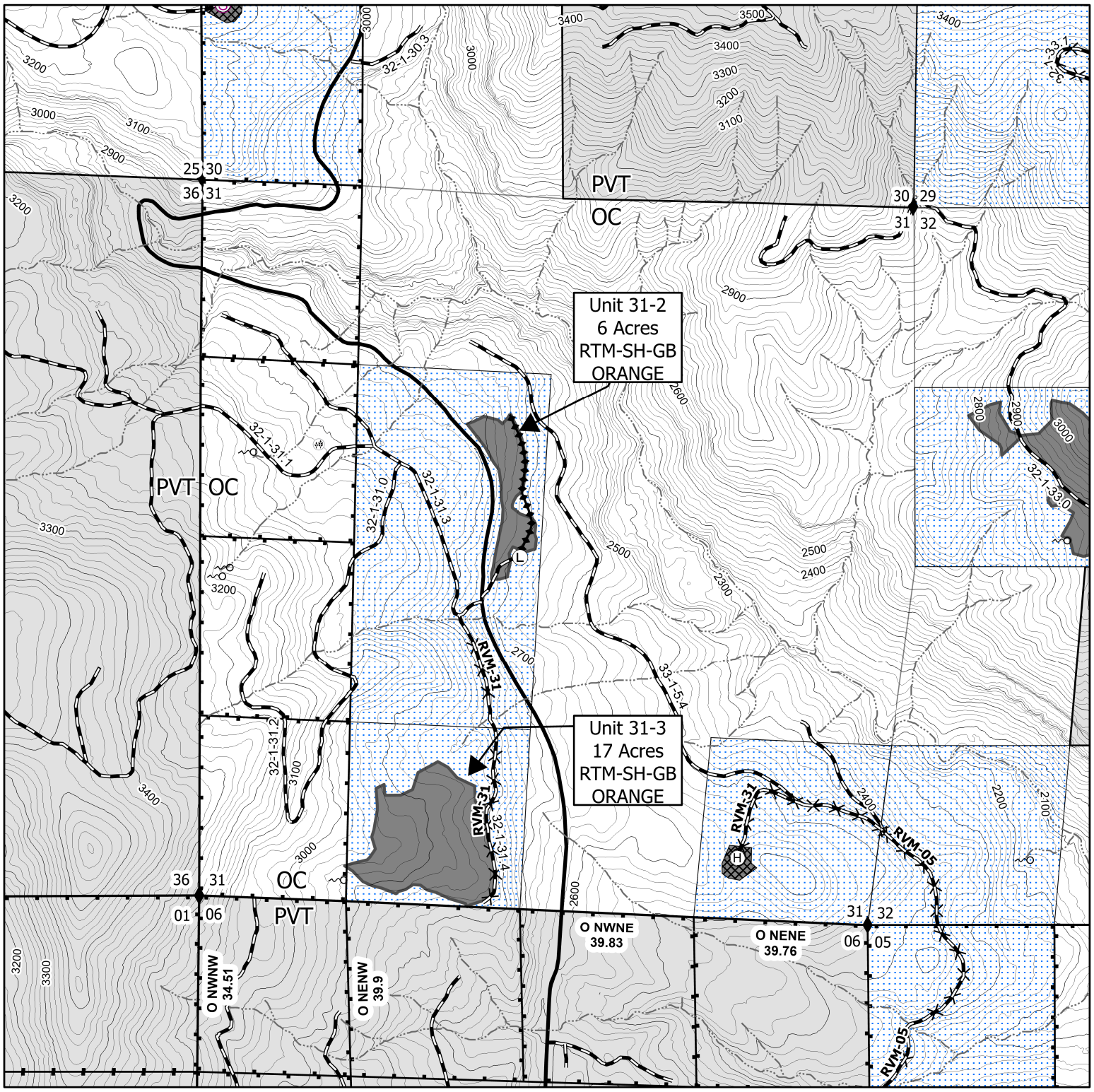
Medford District BLM
August 2023

Contours = 20 feet

0 0.25 0.5 Miles

U.S.D.I. BLM MEDFORD DISTRICT
DEAD WEST TIMBER SALE
T32S-01W SECTION 31, WILL. MER

EXHIBIT AMAP
CONTRACT NO. ORM05-TS-2023.0008



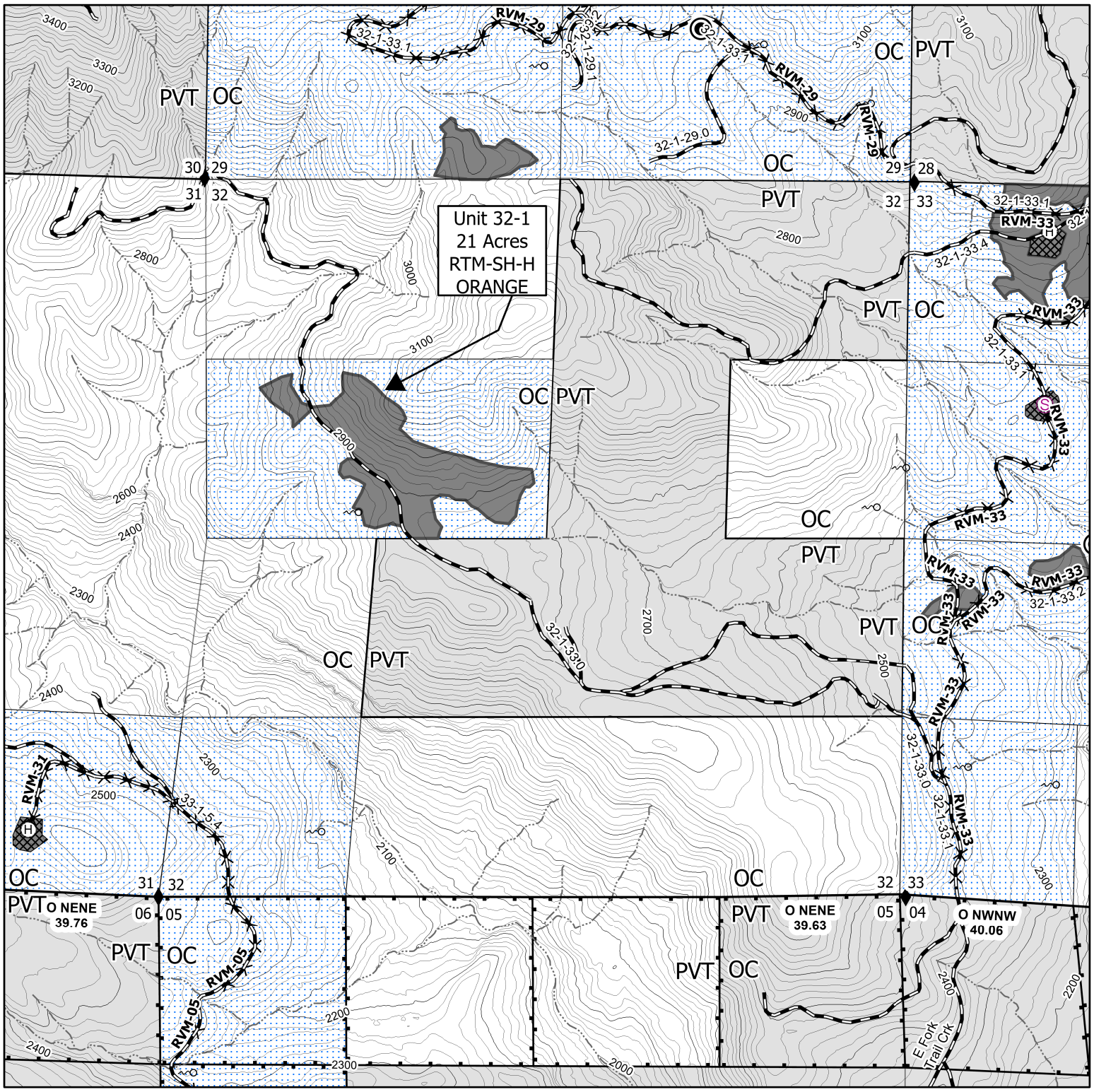
Medford District BLM
August 2023

Contours = 20 feet

0 0.25 0.5 Miles

U.S.D.I. BLM MEDFORD DISTRICT
DEAD WEST TIMBER SALE
T32S-01W SECTION 32, WILL. MER

EXHIBIT A MAP
CONTRACT NO. ORM05-TS-2023.0008



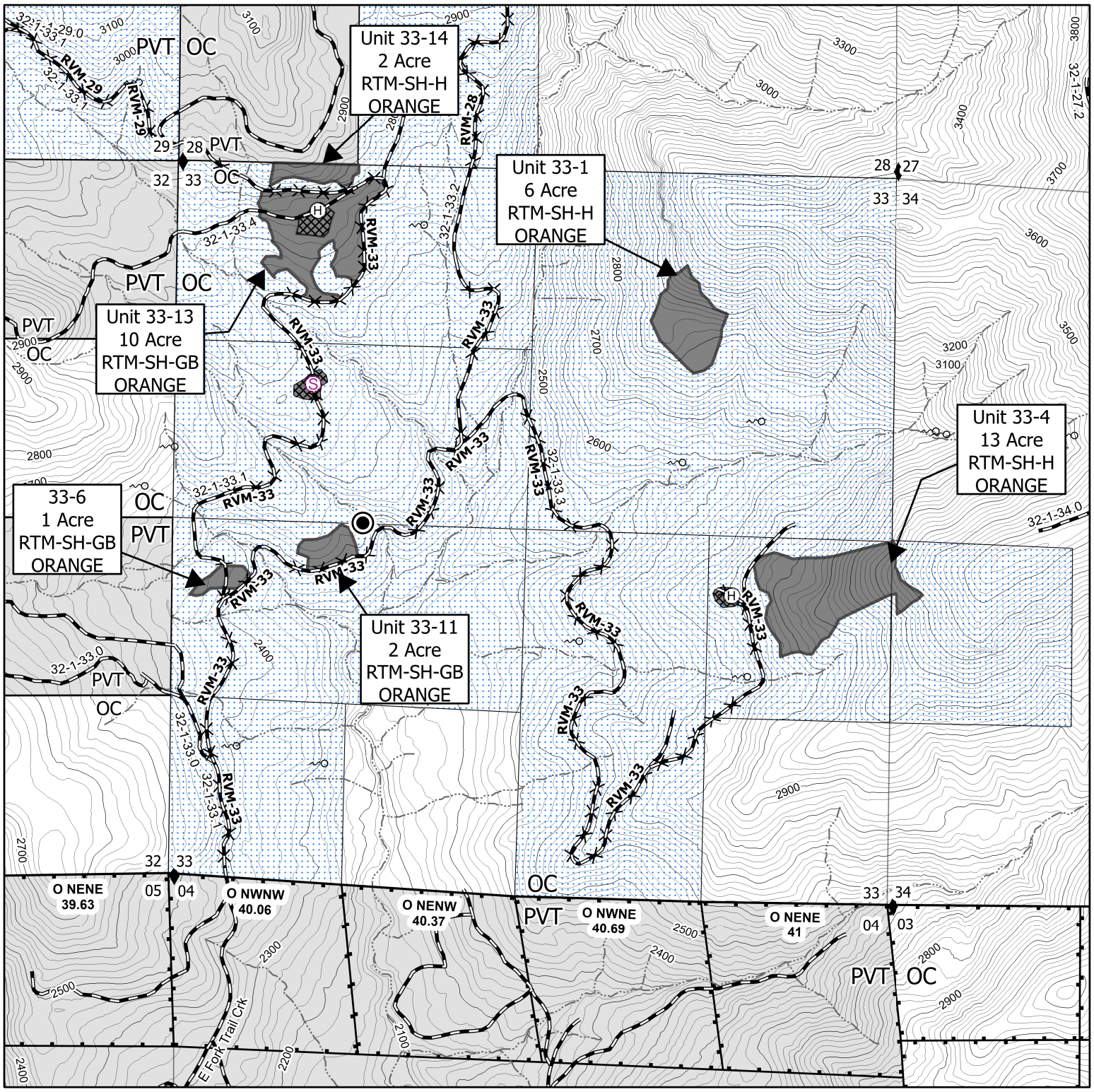
Medford District BLM
August 2023

Contours = 20 feet

0 0.25 0.5 Miles

U.S.D.I. BLM MEDFORD DISTRICT
DEAD WEST TIMBER SALE
T32S-01W SECTION 33, WILL. MER

EXHIBIT A MAP
CONTRACT NO. ORM05-TS-2023.0008



Medford District BLM
June 2022

Contours = 20 feet

0 0.25 0.5 Miles

U.S.D.I. BLM MEDFORD DISTRICT SALE
T. 32S. R. 01W. SEC 19, 21, 28, 29, 30, 31, 32, 33
T. 33S. R. 01W. SEC. 03, 05, 07, 09, 10
T. 32S. R. 02W. SEC. 01 WILL. MER.
DEAD WEST TIMBERSALE

EXHIBIT A MAP
CONTRACT NO. ORM05-TS-2023.0008

Legend

- Quarry
- Helicopter
- Heli/Service
- Log
- Service
- Plant Sites (reference sections 3, 9, 10, 21, 29)
- Found Corner
- Water Source
- Gate
- Barricade
- Government Lot (see map labels)
- Existing Road
- New-Temp
- Skid Trail
- Roadside Units
- Stream
- SpringSeep
- Special Operating Area
- Boundary Cutting Area
- Internal Skips
- BLM
- Non-BLM
- Contract Area (Timber Reserve)
- Helicopter Landing Right-of-Way

RTM-CT-GB PAINT COLOR: ORANGE	**RESERVE TREATMENT MARK COMMERCIAL THIN GROUND BASED UNIT 7-3**
RTM-SH-GB PAINT COLOR: ORANGE	**RESERVE TREATMENT MARK SELECTION HARVEST GROUND BASED UNIT 1-1, 3-2, 5-2, 7-1, 7-1SYA, 7-3B, 7-6 SYA, 7-8, 19-3, 29-9, 31-2, 31-3**
RTM-SH-H PAINT COLOR: ORANGE	**RESERVE TREATMENT MARK SELECTION HARVEST HELICOPTER UNIT 10-1, 19-1, 28-1, 29-7, 32-1**
RTM-SH-C PAINT COLOR: ORANGE	**RESERVE TREATMENT MARK SELECTION HARVEST CABLE UNIT 19-2**
RTM-SH-EL PAINT COLOR: ORANGE	**RESERVE TREATMENT MARK ENDLINE 7-3SYA, 7-5, 19-4 SYA**

HTM-SH-GB PAINT COLOR: BLUE	**HARVEST TREATMENT MARK SELECTION HARVEST GROUND BASED UNIT 3-5, 21-2, 29-12, 29-12B, 29-12C, 29-14, 29-14B, 3-1, 3-2, 33-11, 33-13, 9-1, 9-11, 9-11SYA**
HTM-SH-C PAINT COLOR: BLUE	**HARVEST TREATMENT MARK SELECTION HARVEST CABLE UNIT 21-1, 21-3, 29-13, 29-3**
HTM-SH-H PAINT COLOR: BLUE	**HARVEST TREATMENT MARK SELECTION HARVEST HELICOPTER UNIT 9-3, 21-5, 28-3, 33-1, 33-14, 33-4**
HTM-SH-EL PAINT COLOR: BLUE	**HARVEST TREATMENT MARK ENDLINE 29-12SYA**

Township Range	Section	Roadside Vegetation Present	Unit Number	Project Unit Acres	Reserve Acres	Contract Acres
32-2W	19	Yes	19-1, 19-2, 19-3, 19-4 SYA	75	141	216
	*21	Yes	21-1, 21-2, 21-3, 21-5, Helicopter Landing	19	97	116
	28	Yes	28-1, 28-3	8	114	122
	29	Yes	29-3, 29-7, 29-9, 29-12, 29-12B, 29-12C, 29-12 SYA, 29-13, 29-14, 29-14B	51	355	406
		Yes				
	*30	No	Service Landing	1	36	37
	31	Yes	31-2, 31-3	23	99	122
	32	Yes	32-1	21	56	77
	33	Yes	33-1, 33-4, 33-6, 33-11, 33-13, 33-14	33	331	364
	34	Yes	33-4	1	40	41
	3	No	3-1, 3-2, 3-5	21	170	191
33-1W	5	Yes	5-2	68	91	159
	7	Yes	7-1, 7-1 SYA, 7-3, 7-3B, 7-3 SYA 7-5, 7-6 SYA, 7-8	198	299	497
		Yes				
	9	Yes	9-1, 9-11, 9-11 SYA, 9-3	35	251	286
	10	Yes	10-1	5	72	77
33-2W	1	No	1-1	33	54	87
	Totals			**592**	**2206**	**2798**
				* landings add 1 acre to sections total project unit acreage		

United States
Department of the Interior
Bureau of Land Management

Timber Appraisal

Sale Name:	Dead West TS	**Sale Date:**	Thursday, August 24, 2023
BLM District:	Medford DO	**Unit of Measure:**	16' MBF
Contract #:	ORM05-TS-2023.0008	**Contract Term:**	36 months
Sale Type:	Advertised	**Contract Mechanism:**	5450-003 Lump Sum Sale of Timber and other Wood Products

Content

Prepared By: Parks, Corey J - 7/12/2023
Approved By: Caulfield, David J - 7/12/2023

Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
O&C	Jackson	32S	1W	19	Lot 8, SE1/4.	Willamette
O&C	Jackson	32S	1W	21	SW1/4SE1/4, SE1/4, E1/2NE1/4.	Willamette
O&C	Jackson	32S	1W	28	E1/2NW1/4, E1/2SW1/4, E1/2NE1/4.	Willamette
O&C	Jackson	32S	1W	29	Sec. 29 ALL	Willamette
O&C	Jackson	32S	1W	30	Lot 3, Lot 4.	Willamette
O&C	Jackson	32S	1W	31	SE1/4NW1/4, LOT 4, E1/2SW1/2, SE1/4SE1/4.	Willamette
O&C	Jackson	32S	1W	32	S1/2NW1/4, SW1/4SW1/4.	Willamette
O&C	Jackson	32S	1W	33	NW1/4, W1/2SW1/4, NE1/4SW1/4, SE1/4, NE1/4.	Willamette
O&C	Jackson	32S	1W	34	NW1/4SW1/4.	Willamette
O&C	Jackson	33S	2W	1	Lot 15, Lot 16.	Willamette
O&C	Jackson	33S	1W	3	Lot 6, Lot 7, SE1/4SW1/4, W1/2SE1/4, NE1/4SE1/4.	Willamette
O&C	Jackson	33S	1W	5	Lot 12, Lot 13, Lot 15, Lot 16, Lot 17, SW1/4NE1/4SW1/4, NE1/4SW1/4.	Willamette
O&C	Jackson	33S	1W	7	Sec. 7 ALL	Willamette
O&C	Jackson	33S	1W	9	W1/2NW1/4, SE1/4NW1/4, E1/2SE1/4, SE1/2NE1/4, NE1/4NE1/4.	Willamette
O&C	Jackson	33S	1W	10	Lot 1, Lot 2, E1/2NW1/4, W1/2NE1/4.	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
Douglas Fir	3,940.0	4,207.0	4,253.0	60,544	1,754	16,209
White Fir	1,062.0	1,144.0	1,163.0	18,174	355	4,345
Ponderosa Pine	276.0	293.0	293.0	5,582	0	1,486
Incense-cedar	205.0	223.0	223.0	7,322	0	2,809
Sugar Pine	6.0	6.0	6.0	135	0	45
Totals	**5,489.0**	**5,873.0**	**5,938.0**	**91,757**	**2,109**	**24,894**

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
0.0	590.1	18.0	608.1	9.0

Logging Costs

Stump to Truck	$1,463,031.19
Transportation	$293,356.35
Road Construction	$464,442.89
Maintenance/Rockwear	$70,832.33
Road Use	$0.00
Other Allowances	$127,644.00
Total:	**$2,419,306.76**
Total Logging Cost per MBF:	**$440.76**

Utilization Centers

Location	Distance	% of Net Volume
White City Oregon	25.0 miles	100 %

Profit & Risk

Profit	11 %
Risk	2 %
Total Profit & Risk	**13 %**

Tract Features

Quadratic Mean DBH	15.2 in
Average GM Log	64 bf
Average Volume per Acre	9.0 mbf
Recovery	92 %
Net MBF volume:	
Green	5,489.0 mbf
Salvage	0 mbf
Export	0 mbf
Ground Base Logging:	
Percent of Sale Volume	71 %
Average Yarding Slope	10 %
Average Yarding Distance	465 ft
Cable Logging:	
Percent of Sale Volume	6 %
Average Yarding Slope	45 %
Average Yarding Distance	230 ft
Aerial Logging:	
Percent of Sale Volume	23 %
Average Yarding Slope	45 %
Average Yarding Distance	2080 ft

Cruise

Cruise Completed March 2023

Cruised By Parks, Worman, Miller, Casillas.

Cruise Method

3P cruise. Form Class : DF=79, WF=81, PP & SP=78, IC=66, WH=74.

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Stumpage Adjustment	Appraised Price/MBF		Appraised Value ($)
Douglas Fir	16,209	3,940.0	$670.30	$87.14	$440.76	$0.00	($45.69)	$96.70		$380,998.00
White Fir	4,345	1,062.0	$451.40	$58.68	$440.76	$0.00	$0.00	$45.20	*	$48,002.40
Ponderosa Pine	1,486	276.0	$277.73	$36.10	$440.76	$0.00	$0.00	$27.80	*	$7,672.80
Incense-cedar	2,809	205.0	$465.36	$60.50	$440.76	$0.00	$0.00	$46.60	*	$9,553.00
Sugar Pine	45	6.0	$243.35	$31.64	$440.76	$0.00	$0.00	$24.40	*	$146.40
Totals	**24,894**	**5,489.0**								**$446,372.60**

* 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			2.0 %	64.0 %	30.0 %	4.0 %	

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
White Fir				62.0 %	32.0 %	6.0 %	

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

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

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

Unit: 1-1

Net Volume/Acre: 4.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	137.0	146.0	147.0	740
Ponderosa Pine	14.0	15.0	15.0	83
Incense-cedar	5.0	5.0	5.0	71
White Fir	3.0	3.0	3.0	10
Sugar Pine	0.7	0.7	0.7	6
Totals:	**159.7**	**169.7**	**170.7**	**910**

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

Unit: 3-1

Net Volume/Acre: 7.1 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	35.0	37.0	37.0	143
Ponderosa Pine	19.0	20.0	20.0	88
White Fir	17.0	18.0	19.0	45
Totals:	**71.0**	**75.0**	**76.0**	**276**

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

Unit: 3-2

Net Volume/Acre: 7.9 MBF

Species	Net	Gross Merch	Gross	# of Trees
White Fir	40.0	43.0	44.0	185
Ponderosa Pine	20.3	24.2	24.2	178
Douglas Fir	18.0	19.0	19.0	95
Incense-cedar	0.5	0.6	0.6	9
Totals:	**78.8**	**86.8**	**87.8**	**467**

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

Unit: 3-5

Net Volume/Acre: 10.2 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	9.0	10.0	10.0	34
White Fir	1.0	1.0	1.0	5
Incense-cedar	0.2	0.2	0.2	1
Totals:	**10.2**	**11.2**	**11.2**	**40**

Regeneration Harvest	0.0
Partial Cut	1.0
Right of Way	0.0
Total Acres:	**1.0**

Unit: 5-2

Net Volume/Acre: 4.6 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	214.0	229.0	231.0	1,265
White Fir	64.0	69.0	70.0	271
Incense-cedar	26.5	27.9	27.9	454
Ponderosa Pine	5.0	5.0	5.0	16
Sugar Pine	1.4	1.4	1.4	8
Totals:	**310.9**	**332.3**	**335.3**	**2,014**

Regeneration Harvest	0.0
Partial Cut	68.0
Right of Way	0.0
Total Acres:	**68.0**

Unit: 7-1

Net Volume/Acre: 5.9 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	148.0	158.0	160.0	684
White Fir	49.0	53.0	53.0	228
Incense-cedar	13.0	14.0	14.0	204
Ponderosa Pine	6.0	6.0	6.0	42
Sugar Pine	1.4	1.4	1.4	12
Totals:	**217.4**	**232.4**	**234.4**	**1,170**

Regeneration Harvest	0.0
Partial Cut	37.0
Right of Way	0.0
Total Acres:	**37.0**

Unit: 7-1 SYA

Net Volume/Acre: 5.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	60.0	65.0	65.0	280
White Fir	20.0	21.0	22.0	93
Incense-cedar	5.0	6.0	6.0	83
Ponderosa Pine	2.0	2.0	2.0	17
Sugar Pine	0.6	0.6	0.6	4
Totals:	**87.6**	**94.6**	**95.6**	**477**

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

Unit: 7-3

Net Volume/Acre: 6.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	459.0	491.0	496.0	2,212
White Fir	222.0	239.0	243.0	1,059
Incense-cedar	21.0	23.0	23.0	349
Ponderosa Pine	9.0	10.0	10.0	62
Sugar Pine	1.0	1.0	1.0	9
Totals:	**712.0**	**764.0**	**773.0**	**3,691**

Regeneration Harvest	0.0
Partial Cut	119.0
Right of Way	0.0
Total Acres:	**119.0**

Unit: 7-3B

Net Volume/Acre: 6.3 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	16.0	18.0	18.0	79
White Fir	8.0	9.0	9.0	38
Incense-cedar	0.7	0.8	0.8	12
Ponderosa Pine	0.4	0.4	0.4	2
Totals:	**25.1**	**28.2**	**28.2**	**131**

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

Unit: 7-3 SYA

Net Volume/Acre: 15.2 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	34.0	36.0	37.0	187
White Fir	10.0	11.0	11.0	53
Ponderosa Pine	1.0	1.0	1.0	7
Incense-cedar	0.5	0.5	0.5	6
Totals:	**45.5**	**48.5**	**49.5**	**253**

Regeneration Harvest	0.0
Partial Cut	3.0
Right of Way	0.0
Total Acres:	**3.0**

Unit: 7-5

Net Volume/Acre: 29.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	28.0	30.0	31.0	111
White Fir	1.0	1.0	1.0	3
Totals:	**29.0**	**31.0**	**32.0**	**114**

Regeneration Harvest	0.0
Partial Cut	1.0
Right of Way	0.0
Total Acres:	**1.0**

Unit: 7-6 SYA

Net Volume/Acre: 5.7 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	44.0	47.0	47.0	211
White Fir	21.0	23.0	23.0	101
Incense-cedar	2.0	2.0	2.0	33
Ponderosa Pine	1.0	1.0	1.0	6
Totals:	**68.0**	**73.0**	**73.0**	**351**

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

Unit: 7-8

Net Volume/Acre: 5.9 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	27.0	29.0	30.0	132
White Fir	13.0	14.0	14.0	63
Incense-cedar	1.0	1.0	1.0	21
Ponderosa Pine	0.6	0.6	0.6	4
Totals:	**41.6**	**44.6**	**45.6**	**220**

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

Unit: 9-1

Net Volume/Acre: 8.3 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	29.0	31.0	31.0	111
White Fir	3.0	3.0	3.0	12
Incense-cedar	0.9	1.0	1.0	11
Ponderosa Pine	0.3	0.3	0.3	2
Totals:	**33.2**	**35.3**	**35.3**	**136**

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

Unit: 9-3

Net Volume/Acre: 15.5 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	179.0	191.0	193.0	488
White Fir	6.0	6.0	6.0	21
Ponderosa Pine	1.0	1.0	1.0	3
Incense-cedar	0.1	0.1	0.1	1
Totals:	**186.1**	**198.1**	**200.1**	**513**

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

Unit: 9-11

Net Volume/Acre: 7.6 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	122.0	130.0	132.0	575
White Fir	9.0	9.0	9.0	35
Incense-cedar	6.0	6.0	6.0	81
Totals:	**137.0**	**145.0**	**147.0**	**691**

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

Unit: 9-11 SYA

Net Volume/Acre: 6.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	6.0	6.0	7.0	14
Totals:	**6.0**	**6.0**	**7.0**	**14**

Regeneration Harvest	0.0
Partial Cut	1.0
Right of Way	0.0
Total Acres:	**1.0**

Unit: 10-1

Net Volume/Acre: 17.6 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	82.0	87.0	88.0	222
Ponderosa Pine	6.0	7.0	7.0	22
Incense-cedar	0.1	0.1	0.1	1
Totals:	**88.1**	**94.1**	**95.1**	**245**

Regeneration Harvest	0.0
Partial Cut	5.0
Right of Way	0.0
Total Acres:	**5.0**

Unit: 19-1

Net Volume/Acre: 13.3 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	233.0	248.0	251.0	915
White Fir	100.0	107.0	109.0	335
Incense-cedar	12.0	13.0	13.0	139
Totals:	**345.0**	**368.0**	**373.0**	**1,389**

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

Unit: 19-2

Net Volume/Acre: 9.1 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	102.0	109.0	110.0	378
White Fir	32.0	35.0	35.0	87
Incense-cedar	3.0	3.0	3.0	34
Totals:	**137.0**	**147.0**	**148.0**	**499**

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

Unit: 19-3

Net Volume/Acre: 12.1 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	320.0	347.0	355.0	1,032
White Fir	73.4	82.2	86.2	320
Incense-cedar	19.0	21.0	21.0	198
Totals:	**412.4**	**450.2**	**462.2**	**1,550**

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

Unit: 19-4 SYA

Net Volume/Acre: 33.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	3.0	3.0	3.0	10
White Fir	0.2	0.2	0.2	1
Incense-cedar	0.1	0.1	0.1	1
Totals:	**3.3**	**3.3**	**3.3**	**12**

Regeneration Harvest	0.0
Partial Cut	0.1
Right of Way	0.0
Total Acres:	**0.1**

Unit: 21-1

Net Volume/Acre: 9.4 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	50.0	53.0	54.0	70
White Fir	16.0	18.0	18.0	37
Totals:	**66.0**	**71.0**	**72.0**	**107**

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

Unit: 21-2

Net Volume/Acre: 5.4 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	21.0	22.0	22.0	37
White Fir	6.0	6.0	6.0	9
Incense-cedar	0.2	0.2	0.2	1
Totals:	**27.2**	**28.2**	**28.2**	**47**

Regeneration Harvest	0.0
Partial Cut	5.0
Right of Way	0.0
Total Acres:	**5.0**

Unit: 21-3

Net Volume/Acre: 8.6 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	14.0	15.0	15.0	42
White Fir	3.0	3.0	3.0	5
Incense-cedar	0.1	0.1	0.1	1
Totals:	**17.1**	**18.1**	**18.1**	**48**

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

Unit: 21-5

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	27.0	29.0	29.0	65
White Fir	4.0	4.0	4.0	10
Totals:	**31.0**	**33.0**	**33.0**	**75**

Net Volume/Acre: 7.8 MBF

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

Unit: 28-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	73.0	78.0	79.0	176
White Fir	0.1	0.1	0.1	1
Totals:	**73.1**	**78.1**	**79.1**	**177**

Net Volume/Acre: 18.3 MBF

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

Unit: 28-3

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	59.0	63.0	64.0	165
White Fir	0.2	0.2	0.2	1
Totals:	**59.2**	**63.2**	**64.2**	**166**

Net Volume/Acre: 14.8 MBF

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

Unit: 29-3

Species	Net	Gross Merch	Gross	# of Trees
White Fir	14.0	15.0	15.0	54
Douglas Fir	5.0	5.0	5.0	21
Totals:	**19.0**	**20.0**	**20.0**	**75**

Net Volume/Acre: 6.3 MBF

Regeneration Harvest	0.0
Partial Cut	3.0
Right of Way	0.0
Total Acres:	**3.0**

Unit: 29-7

Net Volume/Acre: 27.3 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	85.0	90.0	91.0	201
White Fir	18.0	19.0	19.0	80
Incense-cedar	4.0	5.0	5.0	18
Ponderosa Pine	2.0	2.0	2.0	2
Totals:	**109.0**	**116.0**	**117.0**	**301**

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

Unit: 29-9

Net Volume/Acre: 20.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	36.0	38.0	38.0	107
White Fir	3.0	3.0	3.0	16
Incense-cedar	1.0	1.0	1.0	15
Totals:	**40.0**	**42.0**	**42.0**	**138**

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

Unit: 29-12

Net Volume/Acre: 7.6 MBF

Species	Net	Gross Merch	Gross	# of Trees
White Fir	88.0	95.0	97.0	361
Douglas Fir	16.0	17.0	17.0	63
Incense-cedar	3.0	3.0	3.0	30
Totals:	**107.0**	**115.0**	**117.0**	**454**

Regeneration Harvest	0.0
Partial Cut	14.0
Right of Way	0.0
Total Acres:	**14.0**

Unit: 29-12B

Net Volume/Acre: 10.9 MBF

Species	Net	Gross Merch	Gross	# of Trees
White Fir	73.0	79.0	80.0	284
Douglas Fir	12.0	12.0	13.0	46
Incense-cedar	2.0	2.0	2.0	23
Ponderosa Pine	0.2	0.2	0.2	1
Totals:	**87.2**	**93.2**	**95.2**	**354**

Regeneration Harvest	0.0
Partial Cut	8.0
Right of Way	0.0
Total Acres:	**8.0**

Unit: 29-12C

Species	Net	Gross Merch	Gross	# of Trees
White Fir	34.0	36.0	37.0	98
Douglas Fir	16.0	17.0	17.0	65
Incense-cedar	5.0	6.0	6.0	48
Ponderosa Pine	0.2	0.2	0.2	1
Totals:	**55.2**	**59.2**	**60.2**	**212**

Net Volume/Acre: 9.2 MBF

Regeneration Harvest	0.0
Partial Cut	6.0
Right of Way	0.0
Total Acres:	**6.0**

Unit: 29-12 SYA

Species	Net	Gross Merch	Gross	# of Trees
White Fir	19.0	20.0	20.0	77
Douglas Fir	8.0	8.0	8.0	27
Incense-cedar	4.0	4.0	4.0	39
Totals:	**31.0**	**32.0**	**32.0**	**143**

Net Volume/Acre: 15.5 MBF

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

Unit: 29-13

Species	Net	Gross Merch	Gross	# of Trees
White Fir	15.0	16.0	16.0	32
Douglas Fir	4.0	4.0	4.0	16
Incense-cedar	3.0	4.0	4.0	38
Totals:	**22.0**	**24.0**	**24.0**	**86**

Net Volume/Acre: 7.3 MBF

Regeneration Harvest	0.0
Partial Cut	3.0
Right of Way	0.0
Total Acres:	**3.0**

Unit: 29-14

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	13.0	13.0	13.0	56
White Fir	8.0	9.0	9.0	28
Incense-cedar	0.6	0.7	0.7	6
Totals:	**21.6**	**22.7**	**22.7**	**90**

Net Volume/Acre: 4.3 MBF

Regeneration Harvest	0.0
Partial Cut	5.0
Right of Way	0.0
Total Acres:	**5.0**

Unit: 29-14B

Net Volume/Acre: 8.2 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	16.0	17.0	17.0	34
White Fir	16.0	17.0	17.0	38
Ponderosa Pine	0.4	0.4	0.4	1
Incense-cedar	0.2	0.2	0.2	3
Totals:	**32.6**	**34.6**	**34.6**	**76**

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

Unit: 31-2

Net Volume/Acre: 13.7 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	60.0	64.0	64.0	211
White Fir	19.0	20.0	21.0	88
Incense-cedar	3.0	3.0	3.0	18
Totals:	**82.0**	**87.0**	**88.0**	**317**

Regeneration Harvest	0.0
Partial Cut	6.0
Right of Way	0.0
Total Acres:	**6.0**

Unit: 31-3

Net Volume/Acre: 6.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	105.0	112.0	113.0	653
Incense-cedar	6.0	6.0	6.0	98
White Fir	3.0	3.0	3.0	22
Ponderosa Pine	1.0	1.0	1.0	5
Totals:	**115.0**	**122.0**	**123.0**	**778**

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

Unit: 32-1

Net Volume/Acre: 7.6 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	147.0	157.0	159.0	481
Incense-cedar	8.0	9.0	9.0	83
White Fir	5.0	6.0	6.0	22
Totals:	**160.0**	**172.0**	**174.0**	**586**

Regeneration Harvest	0.0
Partial Cut	21.0
Right of Way	0.0
Total Acres:	**21.0**

Unit: 33-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	77.0	82.0	83.0	256
Totals:	**77.0**	**82.0**	**83.0**	**256**

Net Volume/Acre: 12.8 MBF

Regeneration Harvest	0.0
Partial Cut	6.0
Right of Way	0.0
Total Acres:	**6.0**

Unit: 33-4

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	95.0	101.0	102.0	267
White Fir	1.0	1.0	1.0	1
Incense-cedar	0.4	0.4	0.4	4
Totals:	**96.4**	**102.4**	**103.4**	**272**

Net Volume/Acre: 7.4 MBF

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

Unit: 33-6

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	24.0	26.0	26.0	128
Ponderosa Pine	3.0	3.0	3.0	26
Incense-cedar	1.0	1.0	1.0	9
White Fir	0.5	0.5	0.5	3
Sugar Pine	0.3	0.3	0.3	1
Totals:	**28.8**	**30.8**	**30.8**	**167**

Net Volume/Acre: 28.8 MBF

Regeneration Harvest	0.0
Partial Cut	1.0
Right of Way	0.0
Total Acres:	**1.0**

Unit: 33-11

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	10.0	11.0	11.0	39
Ponderosa Pine	0.9	0.9	0.9	6
Incense-cedar	0.1	0.1	0.1	1
Totals:	**11.0**	**12.0**	**12.0**	**46**

Net Volume/Acre: 5.5 MBF

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

Unit: 33-13

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	29.0	31.0	31.0	115
Ponderosa Pine	5.0	5.0	5.0	26
Incense-cedar	4.0	4.0	4.0	3
White Fir	0.1	0.1	0.1	1
Totals:	**38.1**	**40.1**	**40.1**	**145**

Net Volume/Acre: 3.8 MBF

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

Unit: 33-14

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	10.0	11.0	11.0	37
Incense-cedar	1.0	1.0	1.0	9
Totals:	**11.0**	**12.0**	**12.0**	**46**

Net Volume/Acre: 5.5 MBF

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

Unit: Row-3

Species	Net	Gross Merch	Gross	# of Trees
Ponderosa Pine	32.0	34.0	34.0	134
Douglas Fir	24.0	25.0	26.0	139
White Fir	0.5	0.5	0.5	2
Totals:	**56.5**	**59.5**	**60.5**	**275**

Net Volume/Acre: 56.5 MBF

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: ROW-5

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	40.0	42.0	42.0	205
Ponderosa Pine	3.0	3.0	3.0	14
Incense-cedar	2.0	3.0	3.0	36
White Fir	0.2	0.2	0.2	2
Totals:	**45.2**	**48.2**	**48.2**	**257**

Net Volume/Acre: 45.2 MBF

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: ROW-7

Net Volume/Acre: 63.6 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	51.0	55.0	55.0	216
Ponderosa Pine	6.0	7.0	7.0	42
White Fir	4.0	4.0	4.0	19
Incense-cedar	2.0	2.0	2.0	30
Sugar Pine	0.6	0.6	0.6	5
Totals:	**63.6**	**68.6**	**68.6**	**312**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: ROW-19

Net Volume/Acre: 24.2 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	21.0	23.0	23.0	55
White Fir	2.0	3.0	3.0	7
Ponderosa Pine	0.6	0.7	0.7	1
Incense-cedar	0.6	0.6	0.6	6
Totals:	**24.2**	**27.3**	**27.3**	**69**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: ROW-30

Net Volume/Acre: 21.5 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	18.0	19.0	19.0	52
Ponderosa Pine	2.0	2.0	2.0	13
Incense-cedar	1.0	1.0	1.0	14
White Fir	0.5	0.6	0.6	3
Totals:	**21.5**	**22.6**	**22.6**	**82**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: ROW-31

Net Volume/Acre: 16.1 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	12.0	13.0	13.0	34
White Fir	3.0	3.0	3.0	16
Ponderosa Pine	1.0	1.0	1.0	5
Incense-cedar	0.1	0.1	0.1	2
Totals:	**16.1**	**17.1**	**17.1**	**57**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: ROW-33

Net Volume/Acre: 30.2 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	23.0	24.0	25.0	79
Ponderosa Pine	6.0	7.0	7.0	14
Incense-cedar	1.0	2.0	2.0	14
White Fir	0.2	0.2	0.2	1
Totals:	**30.2**	**33.2**	**34.2**	**108**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: RVM-3

Net Volume/Acre: 30.2 MBF

Species	Net	Gross Merch	Gross	# of Trees
Ponderosa Pine	21.0	22.0	22.0	83
Douglas Fir	9.0	9.0	9.0	54
Incense-cedar	0.2	0.2	0.2	3
Totals:	**30.2**	**31.2**	**31.2**	**140**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: RVM-5

Net Volume/Acre: 45.2 MBF

Species	Net	Gross Merch	Gross	# of Trees
Ponderosa Pine	30.0	31.0	31.0	134
Douglas Fir	12.0	13.0	13.0	50
Incense-cedar	3.0	3.0	3.0	43
White Fir	0.2	0.2	0.2	1
Totals:	**45.2**	**47.2**	**47.2**	**228**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: RVM-7

Net Volume/Acre: 55.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	30.0	32.0	32.0	125
Ponderosa Pine	22.0	24.0	24.0	119
White Fir	2.0	2.0	2.0	6
Incense-cedar	1.0	2.0	2.0	25
Totals:	**55.0**	**60.0**	**60.0**	**275**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: RVM-9

Net Volume/Acre: 33.3 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	28.0	30.0	30.0	148
Ponderosa Pine	5.0	5.0	5.0	34
Incense-cedar	0.3	0.3	0.3	4
Totals:	**33.3**	**35.3**	**35.3**	**186**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: RVM-10

Net Volume/Acre: 25.3 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	21.0	22.0	22.0	122
Ponderosa Pine	4.0	4.0	4.0	29
Incense-cedar	0.3	0.4	0.4	6
Totals:	**25.3**	**26.4**	**26.4**	**157**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: RVM-19

Net Volume/Acre: 10.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	9.0	9.0	9.0	26
White Fir	1.0	1.0	1.0	5
Incense-cedar	0.8	0.9	0.9	6
Totals:	**10.8**	**10.9**	**10.9**	**37**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: RVM-21

Net Volume/Acre: 26.6 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	25.0	27.0	27.0	148
White Fir	1.0	1.0	1.0	9
Incense-cedar	0.5	0.5	0.5	9
Ponderosa Pine	0.1	0.1	0.1	1
Totals:	**26.6**	**28.6**	**28.6**	**167**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: RVM-28

Net Volume/Acre: 75.9 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	72.0	76.0	77.0	340
Ponderosa Pine	2.0	2.0	2.0	15
Incense-cedar	1.0	1.0	1.0	15
White Fir	0.9	1.0	1.0	7
Totals:	**75.9**	**80.0**	**81.0**	**377**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: RVM-29

Net Volume/Acre: 207.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	170.0	182.0	184.0	843
Incense-cedar	20.0	22.0	22.0	319
Ponderosa Pine	11.0	11.0	11.0	55
White Fir	6.0	7.0	7.0	25
Totals:	**207.0**	**222.0**	**224.0**	**1,242**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: RVM-31

Net Volume/Acre: 36.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	21.0	23.0	23.0	92
Ponderosa Pine	11.0	11.0	11.0	47
Incense-cedar	4.0	4.0	4.0	60
Totals:	**36.0**	**38.0**	**38.0**	**199**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Unit: RVM-33

Net Volume/Acre: 64.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	37.0	40.0	40.0	185
Ponderosa Pine	21.0	22.0	22.0	146
Incense-cedar	4.0	4.0	4.0	61
White Fir	2.0	2.0	2.0	9
Totals:	**64.0**	**68.0**	**68.0**	**401**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	**1.0**

Total Stump To Truck	Net Volume	$/MBF
$1,463,031.19	5,489.0	$266.54

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	1,319.0	$648.77	$855,727.63	
Yoder	GM MBF	280.0	$202.06	$56,576.80	
Feller Buncher	GM MBF	3,061.5	$140.81	$431,089.82	
SYA	GM MBF	288.4	$138.91	$40,061.64	SYA= special yarding area (7-1, 7-3,7-6,9-11,19-4,21-12,7-5)
Shovel	GM MBF	924.1	$63.83	$58,985.30	Shovel = ROW/RVM
Subtotal				**$1,442,441.19**	

Additional Costs

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

Additional Moves

Equipment	Unit of Measure	# of Units of Measure	$/Unit of Measure	Total Cost	Remarks
Ground based	Move	7.0	$1,670.00	$11,690.00	Loader, skidder, feller buncher , processor
Cable: Large Yarder	Move	2.0	$1,450.00	$2,900.00	Loader, yoder, processor
Helicopter	Move	6.0	$1,000.00	$6,000.00	Cat, loader
Subtotal				**$20,590.00**	

Total	Net Volume	$/MBF
$293,356.35	5,489.0	$53.44

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	$/Unit of Measure	Total Cost	% of Sale Volume
White City Oregon	25.0	All species	GM MBF	5,873.0	$49.95	$293,356.35	100 %

Engineering Allowances

Total	Net Volume	$/MBF
$535,275.22	5,489.0	$97.52

Cost Item	Total Cost
Road Construction:	$464,442.89
Road Maintenance/Rockwear:	$70,832.33
Road Use Fees:	$0.00

Total	Net Volume	$/MBF
$127,644.00	5,489.0	$23.25

Environmental Protection

Cost item	Total Cost
Log Barricades	$2,625.00
Waterbar Skids	$4,500.00
Equipment Washing #2	$750.00
Equipment Washing #4	$750.00
Equipment Washing #5	$900.00
Equipment Washing #1	$500.00
Equipment Washing #3	$1,500.00
Seed and Mulch	$403.00
Subtotal	**$11,928.00**

Logging

Cost item	Total Cost
Directional Falling	$1,080.00
Skid Road Loaction	$1,740.00
Cable corridor location	$696.00
Fell/ Buck/ CWD Oversized	$4,800.00
Woody Debris 100'	$6,600.00
Landing Clean up	$6,075.00
Skid Construction	$3,150.00
Landing Construction	$4,000.00
SEC 5 Fish logs	$550.00
Subtotal	**$28,691.00**

Slash Disposal & Site Prep

Cost item	Total Cost

Lop and Scatter	$14,400.00
Excavator Pile Burn	$4,875.00
Hand Pile Burn	$3,750.00
Excavator Pile / Cover	$36,750.00
Hand Pile / Cover	$27,250.00
Subtotal	**$87,025.00**

Comments:
Directional falling =L 10
skid road/ corridor location = L24
Fell/ Buck/ CWD Oversized = L32 in ROW 31
Log barricades/ woody debris 100' = E1
Equipment Washing #1 = yoder (1 season)
Equipment washing #2 = skidder (3 season)
Equipment washing #3 = loader (3 season)
Equipment washing # 4 = processor (3 season)
Equipment washing # 5 = feller buncher (3 season)
Seed and Mulch top 20' of corridors = E1

Sale: Dead West
Sale Date: 8-24-2023
Prep. By : McNeel
Tract No: ORM05-TS-2023.0008

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ROAD MAINTENANCE AND ROAD USE APPRAISAL WORK SHEET

Summary of Costs

1.1) Road Use - Amortization: $0.00/5489 MBF = $0/MBF

Road Maintenance Obligation:

(2.1) BLM Maintenance		$5,479.19
(2.2) BLM Rockwear	$5,437.45	
(5.1) Purchaser Maintenance Rockwear	$5,344.13	
Total Rockwear Payable to BLM		$10,781.58
(3.1) 3rd Party Maintenance		$0.00
(3.2) 3rd Party Rockwear		$0.00
(4.1) Other Maintenance Payments		$61.01
Total Maintenance Fee Obligation (2.1-5.1)		$16,321.78

Purchaser Maintenance Allowances:

(5.2A) Move In	$3,374.50
(5.2B) Culverts, Catch Basins, Downspouts	$2,508.15
(5.2C) Grading, Ditching	$15,532.47
(5.2D) Slide Removal and Slump Repair	$1,465.75
(5.2E) Dust Palliative (Water)	$0.00
(5.2F) Surface Repair (Aggregate)	$13,622.50
(5.2G) Other	$0.00
Total Purchaser Maintenance Allowances (5.2A-5.2G)	$36,503.37

(2.1-5.2G) Cost ($16,321.78 + $36,503.37) = $52,825.15
Cost/MBF 52825.15 / 5489 MBF = $9.62/MBF

(5.2H) Decommissioning	$18,265.99

(5.2H) Cost/MBF $18,265.99/5489 MBF = $3.33/MBF

(2.1-5.2H) Cost ($16,321.78 + $36,503.37 + $18,265.99) = $71,091.14

Total Cost/MBF (Excluding Road Use) $$71,091.14/5489 MBF = $12.95/MBF

1) Road Use Fees - Amortization

Details

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

Subtotal by agreement number

(1.1) Subtotal $0.00

2) BLM Maintenance - Timber Haul

		MAINTENANCE (2.1)				ROCKWEAR (2.2)			
Road Number and Segment	A N Surf Type	Mi	Maint x Fee x	Vol MBF	= Maint	Fee x	MBF =	Rkwear	
32-1-33.01B	A AGG	0.05	0.77	445	$17.14	0.85	445	$18.92	
32-1-33.01B	A AGG	0.13	0.77	447	$44.77	0.85	447	$49.42	
32-1-33.01B	A AGG	0.66	0.77	475	$241.37	0.85	475	$266.45	
32-1-33.01B	A AGG	0.06	0.77	456	$21.07	0.85	456	$23.26	
32-1-33.01A	A AGG	0.15	0.77	1039	$119.98	0.85	1039	$132.45	
32-1-33.01B	A AGG	0.06	0.77	455	$21.02	0.85	455	$23.21	
32-1-33.01A	A AGG	0.25	0.77	1037	$199.53	0.85	1037	$220.26	
32-1-33.01B	A AGG	0.05	0.77	491	$18.89	0.85	491	$20.85	
33-1-5.00C	N AGG	0.12	1.00	1211	$145.28	0.85	1211	$123.49	
33-1-5.00C	N AGG	0.22	1.00	875	$192.39	0.85	875	$163.53	
33-1-5.00C	N AGG	0.09	1.00	771	$69.39	0.85	771	$58.98	
33-1-5.00C	N AGG	0.15	1.00	719	$107.83	0.85	719	$91.66	
33-1-5.00C	N AGG	0.21	1.00	1135	$238.43	0.85	1135	$202.67	
33-1-5.00C	N AGG	0.19	1.00	255	$48.52	0.85	255	$41.24	
33-1-5.00C	N AGG	0.23	1.00	917	$210.93	0.85	917	$179.29	
33-1-5.00B	N AGG	0.20	1.00	1333	$266.58	0.85	1333	$226.59	
33-1-5.00B	N AGG	0.31	1.00	1336	$414.28	0.85	1336	$352.14	
33-1-5.00B	N AGG	0.13	1.00	1165	$151.48	0.85	1165	$128.75	
33-1-5.00A	N AGG	0.08	1.00	1339	$107.10	0.85	1339	$91.03	
33-1-5.00B	N AGG	0.21	1.00	1331	$279.43	0.85	1331	$237.51	
33-1-5.00A	N AGG	0.02	1.00	1706	$34.12	0.85	1706	$29.00	
33-1-8.0	A AGG	0.16	0.77	432	$53.20	0.85	432	$58.73	
33-1-8.0	A AGG	0.14	0.77	434	$46.84	0.85	434	$51.70	
33-1-8.0	A AGG	0.21	0.77	470	$76.01	0.85	470	$83.91	
33-1-8.0	A AGG	0.69	0.77	587	$311.88	0.85	587	$344.29	
33-1-8.0	A AGG	0.61	0.77	595	$279.26	0.85	595	$308.28	
33-1-8.0	A AGG	0.29	0.77	694	$155.00	0.85	694	$171.10	
33-1-8.0	A AGG	0.43	0.77	748	$247.60	0.85	748	$273.32	
33-1-8.0	A AGG	0.11	0.77	742	$62.89	0.85	742	$69.42	
32-1-33.02A	A AGG	0.32	0.77	514	$126.62	0.85	514	$139.78	
32-1-33.02A	A AGG	0.04	0.77	542	$16.70	0.85	542	$18.43	
32-1-33.02A	A AGG	0.18	0.77	528	$73.12	0.85	528	$80.72	
32-1-33.01B	A AGG	0.28	0.77	210	$45.32	0.85	210	$50.03	
32-1-33.01C	A AGG	0.03	0.77	183	$4.24	0.85	183	$4.68	
32-1-33.01C	A AGG	0.32	0.77	206	$50.72	0.85	206	$55.99	
32-1-33.01C	A AGG	0.55	0.77	59	$25.16	0.85	59	$27.77	
32-1-33.01C	A AGG	0.25	0.77	193	$37.09	0.85	193	$40.94	
32-1-33.01C	A AGG	0.30	0.77	20	$4.57	0.85	20	$5.05	
32-1-33.01C	A AGG	0.76	0.77	140	$82.08	0.85	140	$90.61	
32-1-33.02A	A AGG	0.29	0.77	327	$73.01	0.85	327	$80.60	
32-1-33.02A	A AGG	0.29	0.77	322	$71.99	0.85	322	$79.46	
32-1-33.02A	A AGG	0.50	0.77	221	$85.03	0.85	221	$93.87	
32-1-33.02A	A AGG	0.05	0.77	200	$7.68	0.85	200	$8.48	
32-1-33.02A	A AGG	0.52	0.77	310	$124.18	0.85	310	$137.08	
32-1-33.02A	A AGG	0.02	0.77	327	$5.04	0.85	327	$5.56	
32-1-33.02B	A AGG	0.98	0.77	127	$95.50	0.85	127	$105.42	
32-1-33.02B	A AGG	0.29	0.77	127	$28.26	0.85	127	$31.20	

32-1-33.02B	A	AGG	0.41	0.77	200	$63.00	0.85	200	$69.55
32-1-33.02B	A	AGG	0.58	0.77	200	$89.13	0.85	200	$98.39
32-1-33.02B	A	AGG	0.04	0.77	200	$6.15	0.85	200	$6.79
32-1-33.02B	A	AGG	0.04	0.77	222	$6.83	0.85	222	$7.54
32-1-33.02C	A	AGG	0.35	0.77	118	$31.78	0.85	118	$35.08
32-1-33.02C	A	AGG	0.04	0.77	98	$3.01	0.85	98	$3.33
33-1-5.00C	N	AGG	0.14	1.00	353	$49.41	0.85	353	$42.00
33-1-5.00C	N	AGG	0.07	1.00	689	$48.24	0.85	689	$41.01
33-1-5.00D	N	AGG	0.21	1.00	145	$30.50	0.85	145	$25.92
33-1-5.00D	N	AGG	0.16	1.00	79	$12.62	0.85	79	$10.72

(2.1) Subtotal $5,479.19 (2.2) Subtotal $5,437.45

3) Third Party Maintenance and Rockwear

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

Subtotal of maintenance fees by agreement number:
Subtotal of rockwear fees by agreement number:

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

4) Other Maintenance Payments - USFS or Others Perform Maintenance

Agency	Road Number	Miles (Log)	x	Vol (mbf)	x	Fee MBF/MI	=	Cost
USFS	112	0.76		80		1.00		$61.01

(4.1) Subtotal $61.01

5) Purchaser Maintenance - Rock Wear

TIMBER HAUL (5.1)

Road No and Segment	A N	Mi	x	RkWear Fee	x	Vol MBF	=	Total RkWear
32-1-19.00C	A	0.60	x	$0.85	x	493.57	=	$251.72
32-1-19.00E	A	0.13	x	$0.85	x	341.19	=	$37.70
32-1-19.00D	A	0.04	x	$0.85	x	426.71	=	$14.51
32-1-19.03	A	0.09	x	$0.00	x	51.76	=	$0.00
32-1-19.04	A	0.24	x	$0.00	x	144.58	=	$0.00
32-1-19.05	A	0.09	x	$0.00	x	30.74	=	$0.00
32-1-20.00	A	0.05	x	$0.85	x	328.10	=	$13.94
32-1-20.00	N	0.31	x	$0.85	x	99.03	=	$26.09
32-1-20.00	A	0.19	x	$0.85	x	335.88	=	$54.24
32-1-21.02	A	0.02	x	$0.85	x	1	=	$0.02
32-1-28.00	A	0.19	x	$0.85	x	67.21	=	$10.85
32-1-29.02	A	0.98	x	$0.85	x	40.70	=	$33.90
32-1-29.03	A	0.26	x	$0.85	x	10.75	=	$2.38
32-1-29.03	A	0.11	x	$0.85	x	4.47	=	$0.42
32-1-29.07	A	0.23	x	$0.85	x	49.53	=	$9.68
32-1-29.08	A	0.05	x	$0.00	x	9.41	=	$0.00
32-1-31.03	A	0.04	x	$0.00	x	123.97	=	$0.00
32-1-31.04	A	0.42	x	$0.85	x	141.31	=	$50.45
33-1-3.07	A	0.04	x	$0.00	x	11.10	=	$0.00
32-1-19.00B	N	0.02	x	$0.85	x	1344.57	=	$22.86
32-1-19.00B	N	0.14	x	$0.85	x	612.10	=	$72.84
32-1-19.00B	N	0.11	x	$0.85	x	1344.53	=	$125.71

32-1-19.00B	N	0.02	x $0.85	x 479.66	=	$8.15
32-1-19.00D	A	0.26	x $0.85	x 375.32	=	$82.95
32-1-19.00D	A	0.44	x $0.85	x 468.84	=	$175.35
32-1-19.00D	A	0.12	x $0.85	x 395.30	=	$40.32
32-1-19.00D	A	0.28	x $0.85	x 450.74	=	$107.28
32-1-19.00E	A	0.04	x $0.85	x 342.68	=	$11.65
32-1-19.00H	A	0.22	x $0.85	x 67.91	=	$12.70
32-1-19.00H	A	0.10	x $0.85	x 12.53	=	$1.07
32-1-19.00A	A	0.30	x $0.85	x 1419.36	=	$361.94
32-1-20.00	A	0.16	x $0.85	x 214.71	=	$29.20
32-1-20.00	A	0.10	x $0.85	x 325.90	=	$27.70
32-1-29.03	A	0.13	x $0.85	x 29.93	=	$3.31
32-1-29.03	A	0.10	x $0.85	x 24.76	=	$2.10
32-1-29.03	A	0.17	x $0.85	x 36.67	=	$5.30
32-1-31.05	A	0.17	x $0.85	x 183.85	=	$26.57
32-1-31.06	A	0.08	x $0.85	x 92.95	=	$6.32
32-1-33.03	A	0.18	x $0.85	x 182.14	=	$27.87
32-1-33.03	A	0.30	x $0.85	x 179.45	=	$45.76
32-1-33.03	A	0.97	x $0.85	x 196.79	=	$162.25
32-1-33.05	A	0.06	x $0.85	x 174.88	=	$8.92
32-1-33.02A	A	0.29	x $0.85	x 322.37	=	$79.46
32-1-33.02A	A	0.29	x $0.85	x 326.70	=	$80.53
32-1-33.02A	A	0.50	x $0.85	x 220.88	=	$93.87
32-1-33.02A	A	0.05	x $0.85	x 200.00	=	$8.50
32-1-33.02A	A	0.52	x $0.85	x 310.14	=	$137.08
32-1-33.02A	A	0.02	x $0.85	x 327.05	=	$5.56
32-1-33.02B	A	0.98	x $0.85	x 126.56	=	$105.42
32-1-33.02B	A	0.29	x $0.85	x 126.57	=	$31.20
32-1-33.02B	A	0.41	x $0.85	x 200.00	=	$69.70
32-1-33.02B	A	0.56	x $0.85	x 200.00	=	$95.20
32-1-33.04	A	0.16	x $0.85	x 234.46	=	$31.89
33-1-10.00A	A	0.10	x $0.85	x 32.83	=	$2.79
32-1-19.00A	A	0.02	x $0.85	x 1417.71	=	$24.10
32-1-19.00A	A	0.19	x $0.85	x 1420.36	=	$229.39
32-1-33.02A	A	0.32	x $0.85	x 513.89	=	$139.78
32-1-33.02A	A	0.04	x $0.85	x 542.20	=	$18.43
32-1-33.02	A	0.18	x $0.85	x 527.59	=	$80.72
32-1-33.02B	A	0.04	x $0.85	x 221.63	=	$7.54
32-1-33.02B	A	0.04	x $0.85	x 200.00	=	$6.80
32-1-33.02C	A	0.35	x $0.85	x 117.91	=	$35.08
32-1-33.02C	A	0.04	x $0.85	x 97.83	=	$3.33
33.1-10.00A	A	0.34	x $0.85	x 154.77	=	$44.73
33-1-10.00A	A	0.40	x $0.85	x 148.10	=	$50.35
33-1-10.00A	A	0.10	x $0.85	x 140.34	=	$11.93
33-1-3.06	A	0.25	x $0.00	x 110.51	=	$0.00
33-1-3.06	A	0.16	x $0.00	x 114.72	=	$0.00
33-1-5.05	A	0.13	x $0.00	x 370.20	=	$0.00
33-1-5.04A	N	0.16	x $0.00	x 220.17	=	$0.00
33-1-5.04A	N	0.14	x $0.00	x 215.87	=	$0.00
33-1-5.04A	N	0.12	x $0.00	x 189.23	=	$0.00
33-1-5.04A	N	0.67	x $0.00	x 212.03	=	$0.00
33-1-6.00	A	0.16	x $0.85	x 167.27	=	$22.75
33-1-6.00	N	0.14	x $0.85	x 167.27	=	$19.91
33-1-6.00	N	0.33	x $0.85	x 167.27	=	$46.92
33-1-6.00	N	0.40	x $0.85	x 167.27	=	$56.87
33-1-7.00	N	0.14	x $0.85	x 336.67	=	$40.06
33-1-7.00	N	0.27	x $0.85	x 134.80	=	$30.94
33-1-7.00	N	0.09	x $0.85	x 69.02	=	$5.28
33-1-7.00	N	0.23	x $0.85	x 71.67	=	$14.01
33-1-7.00	N	0.11	x $0.85	x 289.09	=	$27.03
33-1-7.04	N	0.13	x $0.00	x 224.69	=	$0.00
33-1-7.05	N	0.19	x $0.00	x 66.48	=	$0.00
33-1-7.01	N	0.16	x $0.00	x 162.09	=	$0.00

33-1-7.02	N 0.27 x $0.85 x 27.08 =	$6.21
33-1-8.01	N 0.43 x $0.85 x 92.04 =	$33.64
33-1-8.01	N 0.28 x $0.85 x 123.24 =	$29.33
33-1-8.01	N 0.09 x $0.85 x 124.30 =	$9.51
33-1-8.01	N 0.10 x $0.85 x 58.09 =	$4.94
33-1-9.00	A 0.17 x $0.85 x 103.16 =	$14.91
33-1-9.00	A 0.08 x $0.85 x 104.78 =	$7.13
33-1-9.00	A 0.19 x $0.85 x 108.41 =	$17.51
33-1-9.00	A 0.21 x $0.85 x 37.70 =	$6.73
33-1-9.00	A 0.12 x $0.85 x 68.79 =	$7.02
33-1-9.00	A 0.16 x $0.85 x 110.37 =	$15.01
33-2-1.02	N 0.02 x $0.85 x 22.27 =	$0.38
33-2-1.02	N 0.05 x $0.85 x 22.27 =	$0.95
33-2-1.03	N 0.04 x $0.85 x 22.27 =	$0.76
33-2-1.01B	N 0.33 x $0.85 x 123.27 =	$34.58
33-2-1.01A	N 0.25 x $0.85 x 152.27 =	$32.36
33-2-1.01A	N 0.02 x $0.85 x 152.27 =	$2.59
33-2-1.01B	N 0.32 x $0.85 x 144.27 =	$39.24
33-1-5.04A	N 0.16 x $0.00 x 193.71 =	$0.00
33-1-7.04	N 0.14 x $0.00 x 224.85 =	$0.00
33-1-8.00A	A 0.43 x $0.85 x 747.81 =	$273.32
33-1-8.00A	A 0.21 x $0.85 x 470.08 =	$83.91
33-1-8.00A	A 0.69 x $0.85 x 587.02 =	$344.29
33-1-8.00A	A 0.61 x $0.85 x 594.56 =	$308.28
33-1-8.00A	A 0.29 x $0.85 x 694.13 =	$171.10
33-1-8.00A	A 0.16 x $0.85 x 431.81 =	$58.73
33-1-8.00A	A 0.14 x $0.85 x 434.49 =	$51.70
33-1-8.00A	A 0.11 x $0.85 x 742.47 =	$69.42
32-1-19.00B	A 0.07 x $0.85 x 1207.81 =	$71.86
32-1-19.00B	A 0.06 x $0.85 x 980.43 =	$50.00
32-1-19.00B	A 0.13 x $0.85 x 611.34 =	$67.55

(5.1) Subtotal $5,344.13

Purchaser Operational Maintenance

Move In

Equipment	No Units	Move Cost/ x in x	Dist 50 Mi x	Sub-Factor =	total
Motor Grader:	1	2	536	0.85	$911.20
Back Hoe:	1	5	399	0.85	$1,695.75
Loader:			536	0.63	$0.00
Water Truck:	1	5	131	0.85	$556.75
Dump Truck:	1	2	124	0.85	$210.80
Excavator:			536	0.63	$0.00
Roller:			536	0.63	$0.00

(5.2A) Total $3,374.50

Culvert Maintenance - Including Catch basins and Downpipes

Miles	x Cost/Mi	= Subtotal
5	$501.63	$2,508.15

(5.2B) Total $2,508.15

Grading (Includes Ditches and Shoulders)

Miles	x Cost/Mi	x Freq	= Subtotal	
Blade w/ Ditch:	15.00	923.61	1	$13,854.15
Blade w/o Ditch:	3.00	559.44	1	$1,678.32

(5.2C) Total $15,532.47

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

Type Equipment	No Slides /Slumps	x	Hours Each	x	Equip Cost	= Subtotal
Grader:	5		1		$184.36	$921.80
Loader:	0		0		$114.30	$0.00
Backhoe:	5		1		$108.79	$543.95

(5.2D) Total $1,465.75

Dust Palliative (Water)

Spreading Hours

	No Miles	/	Freq MPH	=	Truck Hours	x	Days	x	/Day	=	Hours
	0.00		0				0		0		0
Load & Haul =					0.0		0		0		0
Total Hours =					0						

Truck Cost: $109.35/Hr. x 0.0 Hours = $0.00

(5.2E) Total $0.00

Surface Repair (Aggregate)

Quarry / Source Name: 1 1/2 minus

Production Cost:	500.0 CY x $14.72/CY		= $7,360.00
Haul to Stockpile:			
Grades > 15%	500.0 CY x (($2.43/CY x 0.00 Mi) + $0.81)	=	$0.00
Grades <= 15%	500.0 CY x (($1.21/CY x 3.30 Mi) + $0.81)	=	$2,401.50
State / Co Roads	500.0 CY x (($0.54/CY x 12.80 Mi) + $0.81)	=	$3,861.00
	SubTotal		$13,622.50

(5.2F) Total $13,622.50

Other

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

(5.2G) Total $0.00

Decommissioning

Ripping

Road Number	Ripping Cost	x	(NumSta or CuYds)	= Total
Temp Route 19-3	48.33	x	3.17	= $153.21
Temp Route 19-4	48.33	x	1	= $48.33
Temp Route 5-1	48.33	x	20	= $966.60
Temp Route 7-2	48.33	x	14	= $676.62
Temp Route 7-3	48.33	x	14	= $676.62
TR19-3	48.33	x	3	= $144.99
TR5-1	48.33	x	20	= $966.60
TR7-3	48.33	x	10	= $483.30
TR19-4	48.33	x	1	= $48.33

TR7-2 48.33 x 5 = $241.65

(Ripping) Total $4,406.25

Pipe Removal

Road Number	Qty Ditch Pipes	Cyd < 15' Fill	Cyd > 15' Fill	Qty Hauling	= Total
Temp Route 5-1	(0x134.14)	+ (10x3.73)	+ (20x5.92)	+ (2x92.17)	= $340.04
TR5-1	(1x134.14)	+ (30x3.73)	+ (0x5.92)	+ (0x92.17)	= $246.04

(Pipe Removal) Total $586.08

Other Costs

Road Number	Cubic Yds Pullback Material	Qty Waterbars	Qty Earthen Barriers	= Total
Temp Route 19-3	(0x2.19)	+ (3x86.27)	+ (1x258.81)	= $517.62
Temp Route 19-4	(0x2.19)	+ (1x86.27)	+ (1x258.81)	= $345.08
Temp Route 5-1	(0x2.19)	+ (20x86.27)	+ (1x258.81)	= $1,984.21
Temp Route 7-2	(0x2.19)	+ (14x86.27)	+ (1x258.81)	= $1,466.59
Temp Route 7-3	(0x2.19)	+ (14x86.27)	+ (1x258.81)	= $1,466.59
32-1-19.03	(0x2.19)	+ (2x86.27)	+ (0x258.81)	= $172.54
32-1-19.04	(0x2.19)	+ (6x86.27)	+ (0x258.81)	= $517.62
32-1-19.05	(0x2.19)	+ (2x86.27)	+ (1x258.81)	= $431.35
32-1-31.06	(0x2.19)	+ (4x86.27)	+ (1x258.81)	= $603.89
33-2-1.02	(0x2.19)	+ (2x86.27)	+ (0x258.81)	= $172.54
33-2-1.03	(0x2.19)	+ (1x86.27)	+ (0x258.81)	= $86.27
33-1-3.06	(0x2.19)	+ (11x86.27)	+ (0x258.81)	= $948.97
33-1-7.04	(0x2.19)	+ (7x86.27)	+ (0x258.81)	= $603.89
TR7-3	(0x2.19)	+ (6x86.27)	+ (0x258.81)	= $517.62
33-1-5.05	(0x2.19)	+ (3x86.27)	+ (0x258.81)	= $258.81
TR19-4	(0x2.19)	+ (1x86.27)	+ (0x258.81)	= $86.27
33-1-3.07	(0x2.19)	+ (1x86.27)	+ (0x258.81)	= $86.27
33-1-7.05	(0x2.19)	+ (12x86.27)	+ (1x258.81)	= $1,294.05

(Other Cost) Total $11,560.18

Time & Equipment

TR19-3 Camoflauge Entrance: 1 EA @ $142.79/EA =$142.79
TR19-4 Camoflauge Entrance: 1 EA @ $142.79/EA =$142.79

TR5-1 Camoflauge Entrance: 1 EA @ $142.79/EA	=$142.79
TR7-2 Camoflauge Entrance: 1 EA @ $142.79/EA	=$142.79
TR7-3 Camoflauge Entrance: 1 EA @ $142.79/EA	=$142.79
32-1-19.04 Camoflauge Entrance: 1 EA @ $142.79/EA	=$142.79
32-1-31.06 Camoflauge Entrance: 1 EA @ $142.79/EA	=$142.79
32-1-19.03 Camoflauge Entrance: 1 EA @ $142.79/EA	=$142.79
32-1-19.05 Camoflauge Entrance: 1 EA @ $142.79/EA	=$142.79
33-1-3.06 Camoflauge Entrance: 1 EA @ $142.79/EA	=$142.79
33-1-3.07 Camoflauge Entrance: 1 EA @ $142.79/EA	=$142.79
33-1-7.04 Camoflauge Entrance: 1 EA @ $142.79/EA	=$142.79
(5.2H) Decommissioning Total	$18,265.99

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-19.0 A -E Road Name: Ragsdale Butte DV
Road Renovation: 2.99 mi 17 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$3,521.32
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$3,646.02
Blading 2.99 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):2.72 acres	$931.71
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $115.61 Surf. $0.00	$115.61
Quarry Development:	$0.00
Total:	$8,214.65

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-19.0 H Road Name: Ragsdale Butte Div
Road Renovation: 0.39 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$1,188.95
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$218.18
Blading 0.39 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $20.09 Surf. $0.00	$20.09
Quarry Development:	$0.00
Total:	$1,427.22

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-19.03 Road Name:
Road Renovation: 0.09 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$940.43
Blading 0.09 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.18 acres	$194.82
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.13 acres	$36.78
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $16.73 Surf. $0.00	$16.73
Quarry Development:	$0.00
Total:	$1,188.75

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-19.04 Road Name:
Road Renovation: 0.24 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$885.02
Blading 0.24 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.50 acres	$541.16
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.35 acres	$165.03
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $22.71 Surf. $0.00	$22.71
Quarry Development:	$0.00
Total:	$1,613.91

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-19.05 Road Name:
Road Renovation: 0.09 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: 0.15 acres	$704.45
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$300.60
Blading 0.09 mi	
700-1200 Surfacing:	$5,363.22
Quarry Name: 4" minus 185.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.18 acres	$194.82
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.13 acres	$61.30
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $94.56 Surf. $66.19	$160.75
Quarry Development:	$0.00
Total:	$6,785.14

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-20.00 Road Name: PNWB Micro Site
Road Renovation: 0.85 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$1,274.13
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$1,211.45
Blading 0.85 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.54 acres	$254.62
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $39.11 Surf. $0.00	$39.11
Quarry Development:	$0.00
Total:	$2,779.31

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-21.02 Road Name: Shed Camp Swbk Sp
Road Renovation: 0.02 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$161.73
Blading 0.02 mi	
700-1200 Surfacing:	$5,989.72
Quarry Name: 4" minus 225.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.03 acres	$14.15
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $88.01 Surf. $80.50	$168.51
Quarry Development:	$0.00
Total:	$6,334.11

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-28.00 Road Name: Sec. 28 Quarry
Road Renovation: 0.19 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$585.02
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$106.29
Blading 0.19 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $9.87 Surf. $0.00	$9.87
Quarry Development:	$0.00
Total:	$701.18

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-29.02 Road Name: NE Shed Camp Sp
Road Renovation: 0.98 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$2,377.72
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$1,396.74
Blading 0.98 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.20 acres	$94.30
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $55.22 Surf. $0.00	$55.22
Quarry Development:	$0.00
Total:	$3,923.98

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-29.03 Road Name: Snowmobile Connect
Road Renovation: 0.77 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$1,627.96
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$1,097.43
Blading 0.77 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.25 acres	$117.88
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $40.58 Surf. $0.00	$40.58
Quarry Development:	$0.00
Total:	$2,883.85

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-29.07 Road Name: Upper Trail Spur 6
Road Renovation: 0.23 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$327.81
Blading 0.23 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.33 acres	$155.60
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $6.90 Surf. $0.00	$6.90
Quarry Development:	$0.00
Total:	$490.30

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-29.08 Road Name:
Road Renovation: 0.05 mi 16 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	$151.43
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$27.97
Blading 0.05 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $2.56 Surf. $0.00	$2.56
Quarry Development:	$0.00
Total:	$181.97

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-31.03 Road Name: Beaver Springs Sp
Road Renovation: 0.04 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$22.38
Blading 0.04 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.06 acres	$28.29
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $0.72 Surf. $0.00	$0.72
Quarry Development:	$0.00
Total:	$51.39

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-31.04 Road Name: Beaver Spgs
Road Renovation: 0.42 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$1,024.21
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$967.32
Blading 0.42 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.13 acres	$61.30
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $29.30 Surf. $0.00	$29.30
Quarry Development:	$0.00
Total:	$2,082.13

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-31.05 Road Name:
Road Renovation: 0.17 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	$518.76
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$595.60
Blading 0.17 mi	
700-1200 Surfacing:	$14,007.99
Quarry Name: 4" minus 532.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $215.86 Surf. $190.35	$406.21
Quarry Development:	$0.00
Total:	$15,528.55

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-31.06 Road Name: Alternate rd
Road Improvement: 0.08 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.29 acres	$1,014.51
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$878.48
Blading 0.08 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.23 acres	$248.93
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $30.57 Surf. $0.00	$30.57
Quarry Development:	$0.00
Total:	$2,172.49

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-33.01 Road Name: Upper Trail Ck ML
Road Renovation: 3.87 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$9,174.42
300 Excavation:	$0.00
400 Drainage:	$44,879.02
Culvert: 686.00 lf	
DownSpout: 50.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$5,515.68
Blading 3.87 mi	
700-1200 Surfacing:	$5,071.18
Quarry Name: 4" minus 185.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):1.22 acres	$575.24
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $930.89 Surf. $66.19	$997.08
Quarry Development:	$0.00
Total:	$66,212.63

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-33.02 Road Name: Shed Camp ML
Road Renovation: 4.92 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$6,654.59
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$7,012.18
Blading 4.92 mi	
700-1200 Surfacing:	$8,196.97
Quarry Name: 1 1/2 minus 70.00 LCY	
Quarry Name: 4" minus 185.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):3.97 acres	$1,494.69
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $333.42 Surf. $91.24	$424.66
Quarry Development:	$0.00
Total:	$23,783.10

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-33.03 Road Name: Lower Sp Rt
Road Renovation: 1.45 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$3,369.88
300 Excavation:	$0.00
400 Drainage:	$18,044.28
Culvert: 258.00 lf	
DownSpout: 20.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$2,334.78
Blading 1.45 mi	
700-1200 Surfacing:	$87,761.46
Quarry Name: 1 1/2 minus 2,873.00 LCY	
Quarry Name: 4" minus 40.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.49 acres	$231.04
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $1,595.00 Surf. $1,042.27	$2,637.26
Quarry Development:	$0.00
Total:	$114,378.70

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-33.04 Road Name: Up Trailhd Esmt
Road Renovation: 0.16 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$228.04
Blading 0.16 mi	
700-1200 Surfacing:	$13,401.10
Quarry Name: 1 1/2 minus 266.00 LCY	
Quarry Name: 4" minus 185.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.35 acres	$378.81
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.23 acres	$302.36
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $204.27 Surf. $161.37	$365.63
Quarry Development:	$0.00
Total:	$14,675.94

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 32-1-33.05 Road Name:
Road Renovation: 0.06 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$283.82
Blading 0.06 mi	
700-1200 Surfacing:	$8,899.34
Quarry Name: 4" minus 302.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.04 acres	$30.18
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $131.51 Surf. $108.06	$239.57
Quarry Development:	$0.00
Total:	$9,452.90

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-10.00 Road Name: Oliver Spgs
Road Renovation: 0.94 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$2,851.12
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$1,339.73
Blading 0.94 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $59.82 Surf. $0.00	$59.82
Quarry Development:	$0.00
Total:	$4,250.67

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-3.06 Road Name:
Road Improvement: 0.41 mi 16 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 1.49 acres	$5,123.22
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$584.35
Blading 0.41 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 1.20 acres	$1,298.77
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $100.01 Surf. $0.00	$100.01
Quarry Development:	$0.00
Total:	$7,106.35

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-3.07 Road Name: Fale # in unit
Road Renovation: 0.04 mi 12 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$22.38
Blading 0.04 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.06 acres	$64.94
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.06 acres	$77.48
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $2.35 Surf. $0.00	$2.35
Quarry Development:	$0.00
Total:	$167.14

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-5.0 Road Name: Dwinnel Rd
Road Renovation: 2.72 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$4,842.78
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$3,876.65
Blading 2.72 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):1.64 acres	$773.28
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $135.50 Surf. $0.00	$135.50
Quarry Development:	$0.00
Total:	$9,628.21

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-5.04 Road Name: Wall Crk
Road Improvement: 1.25 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$3,218.45
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$2,274.53
Blading 1.25 mi	
700-1200 Surfacing:	$61,096.20
Quarry Name: 4" minus 2,483.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.42 acres	$198.03
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $953.32 Surf. $888.41	$1,841.73
Quarry Development:	$0.00
Total:	$68,628.95

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-5.05 Road Name: Fake #
Road Renovation: 0.13 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.47 acres	$1,616.05
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$72.73
Blading 0.13 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.25 acres	$270.58
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $27.97 Surf. $0.00	$27.97
Quarry Development:	$0.00
Total:	$1,987.32

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-6.0 Road Name: Beaver Spgs Sp
Road Renovation: 1.03 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$576.22
Blading 1.03 mi	
700-1200 Surfacing:	$28.87
Quarry Name: 1 1/2 minus 1.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):1.50 acres	$1,961.07
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $36.63 Surf. $0.36	$36.99
Quarry Development:	$0.00
Total:	$2,603.15

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-7.0 Road Name: Old Ben Ts Spur
Road Renovation: 0.87 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$2,095.75
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$1,239.96
Blading 0.87 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.26 acres	$79.21
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $48.74 Surf. $0.00	$48.74
Quarry Development:	$0.00
Total:	$3,463.67

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-7.01 Road Name: Olds Ben Ts Spur
Road Improvement: 0.16 mi 16 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.58 acres	$2,098.50
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$923.23
Blading 0.16 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.23 acres	$108.45
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $44.68 Surf. $0.00	$44.68
Quarry Development:	$0.00
Total:	$3,174.86

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-7.02 Road Name: Old Ben Ex
Road Improvement: 0.27 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$821.63
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$384.81
Blading 0.27 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.99 acres	$1,071.49
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $32.52 Surf. $0.00	$32.52
Quarry Development:	$0.00
Total:	$2,310.44

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-7.04 Road Name:
Road Improvement: 0.26 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$645.95
Blading 0.26 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.63 acres	$681.86
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.38 acres	$496.05
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $26.03 Surf. $0.00	$26.03
Quarry Development:	$0.00
Total:	$1,849.90

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-7.05 Road Name:
Road Renovation: 0.45 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$1,725.97
Blading 0.45 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.88 acres	$952.43
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.65 acres	$212.18
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $41.26 Surf. $0.00	$41.26
Quarry Development:	$0.00
Total:	$2,931.84

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-8.00 Road Name: Buck Rock
Road Renovation: 2.62 mi 17 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$7,027.52
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$3,734.13
Blading 2.62 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.44 acres	$124.48
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $155.39 Surf. $0.00	$155.39
Quarry Development:	$0.00
Total:	$11,041.52

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-8.01 Road Name: Dwinnel Rd Esmt
Road Renovation: 0.90 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$1,188.95
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$1,282.72
Blading 0.90 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.74 acres	$250.85
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $38.86 Surf. $0.00	$38.86
Quarry Development:	$0.00
Total:	$2,761.37

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-1-9.00 Road Name: Toothacher
Road Renovation: 0.97 mi 17 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$2,680.77
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$2,604.72
Blading 0.97 mi	
700-1200 Surfacing:	$1,593.38
Quarry Name: BLM STOCKPILE 20.00 LCY	
Quarry Name: 4" minus 50.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.13 acres	$61.30
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $99.06 Surf. $25.05	$124.11
Quarry Development:	$0.00
Total:	$7,064.28

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-2-1.01 Road Name: North Trail W Spur
Road Renovation: 0.92 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$1,311.22
Blading 0.92 mi	
700-1200 Surfacing:	$895.57
Quarry Name: 1 1/2 minus 30.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):1.34 acres	$1,751.78
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $56.50 Surf. $10.73	$67.24
Quarry Development:	$0.00
Total:	$4,025.81

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-2-1.02 Road Name:
Road Renovation: 0.09 mi 16 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$50.35
Blading 0.09 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.07 acres	$33.01
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $1.19 Surf. $0.00	$1.19
Quarry Development:	$0.00
Total:	$84.55

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: 33-2-1.03 Road Name:
Road Renovation: 0.04 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$22.38
Blading 0.04 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.06 acres	$28.29
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $0.72 Surf. $0.00	$0.72
Quarry Development:	$0.00
Total:	$51.39

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: TR19-3 Road Name:
Temporary Road: 0.06 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: 0.22 acres	$1,033.20
300 Excavation:	$1,434.68
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.10 acres	$108.23
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $36.77 Surf. $0.00	$36.77
Quarry Development:	$0.00
Total:	$2,612.88

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: TR19-4 Road Name:
Temporary Road: 0.02 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: 0.07 acres	$264.17
300 Excavation:	$814.76
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.03 acres	$32.47
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $15.86 Surf. $0.00	$15.86
Quarry Development:	$0.00
Total:	$1,127.26

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: TR5-1 Road Name:
Temporary Road: 0.43 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: 1.35 acres	$5,094.71
300 Excavation:	$12,712.91
400 Drainage:	$1,001.40
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 20.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$1,014.07
Quarry Name: Washed rock 40.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.70 acres	$757.62
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $293.77 Surf. $14.31	$308.08
Quarry Development:	$0.00
Total:	$20,888.78

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: TR7-2 Road Name:
Temporary Road: 0.09 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: 0.28 acres	$1,023.13
300 Excavation:	$3,870.11
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.18 acres	$194.82
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $72.63 Surf. $0.00	$72.63
Quarry Development:	$0.00
Total:	$5,160.69

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: TR7-3 Road Name:
Temporary Road: 0.18 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: 0.91 acres	$3,325.19
300 Excavation:	$4,299.51
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$276.14
Quarry Name: Washed rock 10.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.35 acres	$378.81
Includes Small Quantity Factor of 1.19	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $118.18 Surf. $3.58	$121.76
Quarry Development:	$0.00
Total:	$8,401.41

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: USFS 112 Road Name: Trail Divide
Road Renovation: 0.64 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$939.03
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$912.15
Blading 0.64 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.48 acres	$226.32
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $29.65 Surf. $0.00	$29.65
Quarry Development:	$0.00
Total:	$2,107.16

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Dead West Sale Date: 8-24-2023
Road Number: USFS 32 Road Name:
Road Renovation: 0.02 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.24 acres	$635.45
300 Excavation: Standard cy	$266.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$5,097.79
Quarry Name: 4" minus 185.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $85.63 Surf. $66.19	$151.83
Quarry Development:	$0.00
Total:	$6,151.06

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

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT
Butte Falls Resource Area
DEAD WEST TIMBER SALE
TRACT NO. ORM05-TS-2023-0008

EXHIBIT C-1
SHEET 1 OF 1

PROJECT LOCATION

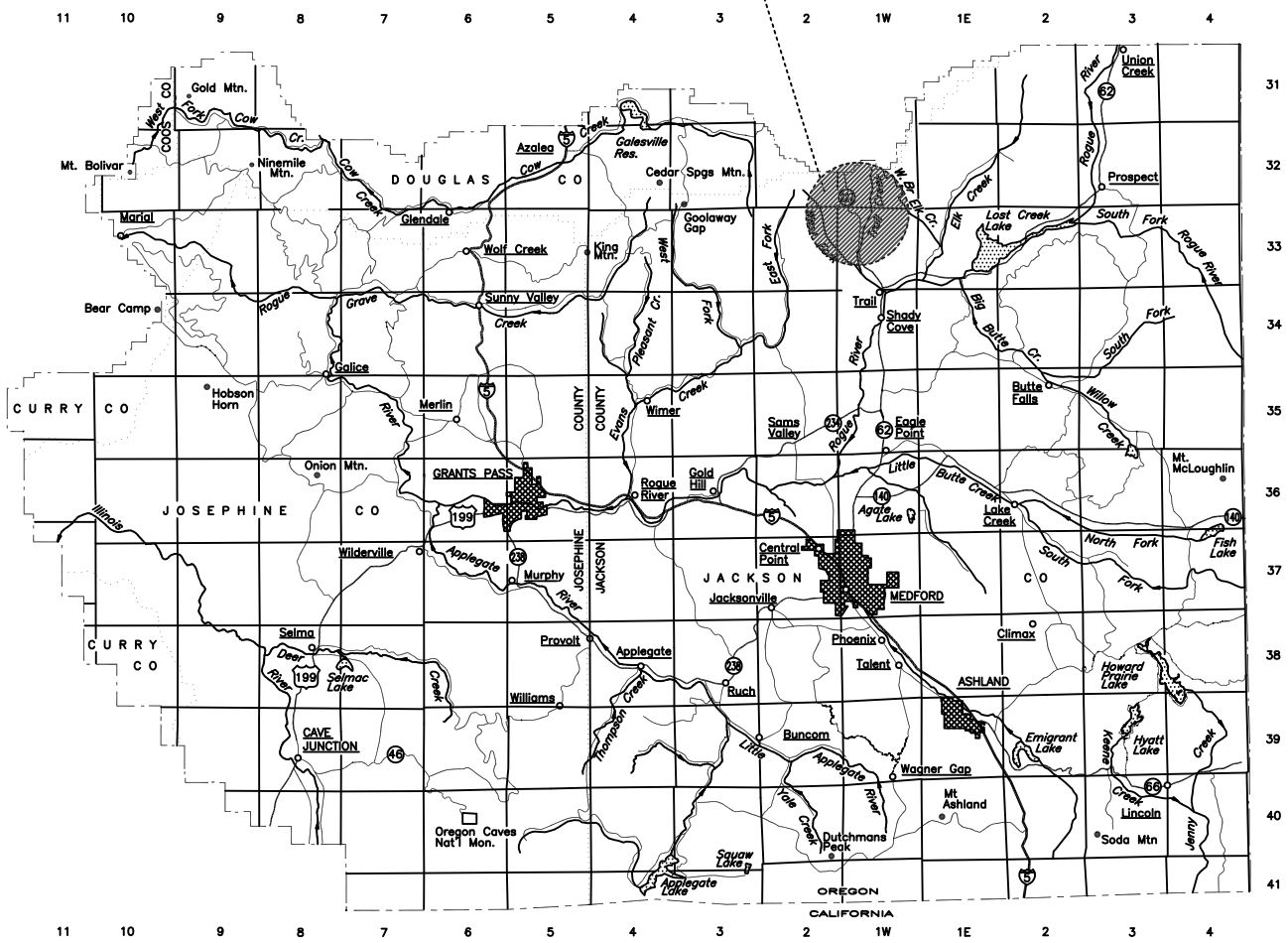


Exhibit No.	Description
C-1	TITLE SHEET
C-2	ROAD RENOVATION MAP
C-3	ESTIMATE OF QUANTITIES
C-4	SPECIFICATION SHEET
C-5	TYPICAL ROAD DATA
C-6	DRAINAGE AND EROSION CONTROL
C-7	TYPICAL ARMORED WATER DIP
C-8	ROADSIDE BRUSHING ROAD VEGETATION MANAGEMENT DETAILS
C-9	ROAD SURFACING and CURVE WIDENING SECTIONS
C-10	CULVERT LIST
C-11	CULVERT INSTALLATION DETAILS
C-12	CULVERT BAND DETAILS
C-13	DOWNSPOUT INSTALLATION DETAILS
C-14	SPECIAL PROVISIONS
C-15	ROAD RENOVATION WORKLIST

N

0 6 12
SCALE IN MILES

ALWAYS THINK SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.

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

TITLE SHEET

DESIGNED _____
REVIEWED _____
APPROVED _____

DRAWN BY DKL	SCALE AS SHOWN
DATE FEB 2023	SHEET 1 OF 1
DRAWING NO. ORM05-TS-2023-0008-C1	

This page intentionally left blank

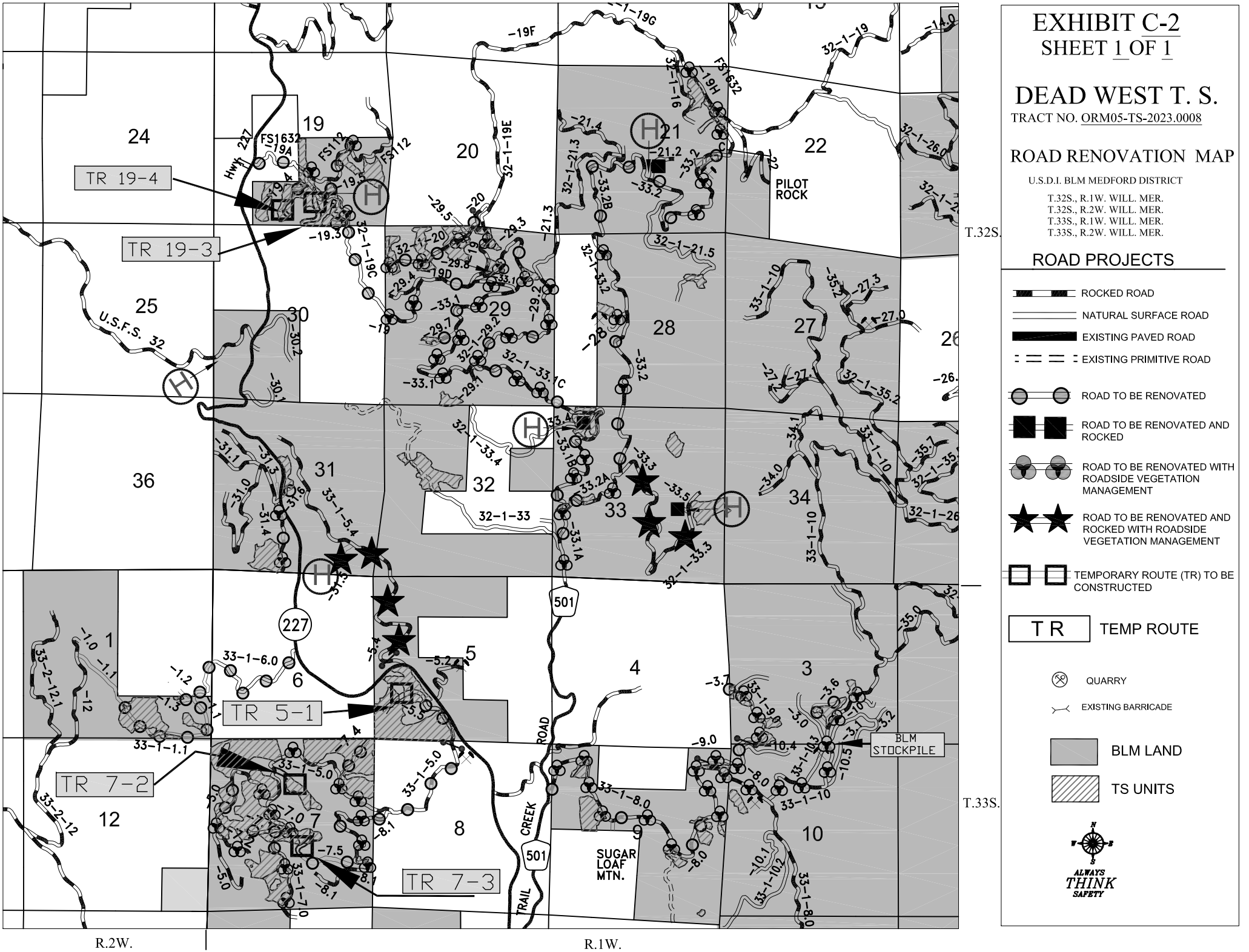


EXHIBIT C-2
SHEET 1 OF 1
DEAD WEST T. S.
TRACT NO. ORM05-TS-2023.0008
ROAD RENOVATION MAP
U.S.D.I. BLM MEDFORD DISTRICT
T.32S., R.1W. WILL. MER.
T.32S., R.2W. WILL. MER.
T.33S., R.1W. WILL. MER.
T.33S., R.2W. WILL. MER.
ROAD PROJECTS
ROCKED ROAD
NATURAL SURFACE ROAD
EXISTING PAVED ROAD
EXISTING PRIMITIVE ROAD
ROAD TO BE RENOVATED
ROAD TO BE RENOVATED AND ROCKED
ROAD TO BE RENOVATED WITH ROADSIDE VEGETATION MANAGEMENT
ROAD TO BE RENOVATED AND ROCKED WITH ROADSIDE VEGETATION MANAGEMENT
TEMPORARY ROUTE (TR) TO BE CONSTRUCTED
T R
TEMP ROUTE
QUARRY
EXISTING BARRICADE
BLM LAND
TS UNITS
ALWAYS THINK SAFETY
TR 19-4
TR 19-3
TR 5-1
TR 7-2
TR 7-3
PILOT ROCK
BLM STOCKPILE
SUGAR LOAF MTN.
CREEK ROAD
TRAIL
501
227
U.S.F.S. 32
T.32S.
T.33S.
R.2W.
R.1W.

This page intentionally left blank

EXHIBIT C-3
SHEET 1 OF 3
DEAD WEST TIMBER SALE

ROAD NUMBER	FROM	TO	LENGTH	CLEARING	GRUBBING	EXCAVATION (Includes slides)		CULVERT PIPE SEE WORK LIST FOR TYPE							ROAD RENOVATION	ROAD IMPROVEMENT	NEW CONSTRUCTION - PERMANENT	NEW CONSTRUCTION - TEMPORARY	CONSTRUCT ARMORED WATER DIPS****	AGGREGATE**			WASHED ROCK	ROADSIDE VEGETATION MANAGEMENT	ROADSIDE BRUSHING MECHANICAL	ROADSIDE BRUSHING - CHIP	REMOVE BARRICADE	CONSTRUCT BARRICADE	CONSTRUCT WATER BARS	SOIL STABILIZATION
								SIZE												4" MINUS SCREENED BASE GRADE A	1 1/2" MINUS SCREENED BASE GRADE C, C1	BLM STOCKPILE								
						ROCK	COMMON	18"	24"	30"	36"	42"	48"	18" FULL ROUND DOWNSPOUT																
SPECIFICATION NO.				200	200	300	300	400	400	400	400	400	400	400	500	500	300	300	500	900	1200	1200	1200	500	2100	2100	500	1700	1700	1800
ROAD NUMBER	MP/STA	MP/STA	MILE/STA	ACRE	ACRE	C.Y.	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	MILE	MILE	STA	STA	EA	C.Y.	C.Y.	EA	C.Y.	MILE	MILE	MILE	EA	EA	EA	ACRE
FS 112	0.00	0.64	0.64	0.28	0.14										0.64									0.31	0.33					
FS 1632 (-19.00 A-E)	0.00	2.99	2.99	1.06	0.52										2.99									1.12	1.87					
FS 1632 (-19.00 H)	6.08	6.47	0.39	0.35	0.18										0.39									0.39						
32-1W-19.03	0.00	0.09	0.09												0.09										0.09		1			0.18
32-1W-19.04	0.00	0.24	0.24												0.24										0.24		1			0.50
32-1W-19.05	0.00	0.09	0.09	0.15											0.09					185					0.09		1			0.18
32-1W-20.00	0.00	0.85	0.85	0.38	0.19										0.85									0.48	0.37					
32-1W-21.02	0.00	0.02	0.02												0.02					225					0.03					
32-1W-28.00	0.00	0.19	0.19	0.17	0.09										0.19									0.19						
32-1W-29.02	0.00	0.98	0.98	0.76	0.32										0.98									0.84	0.14					
32-1W-29.03	0.00	0.77	0.77	0.55	0.20										0.77									0.60	0.17					
32-1W-29.07	0.00	0.23	0.23												0.23										0.23					
32-1W-29.08	0.00	0.05	0.05	0.05	0.02										0.05									0.05						
32-1W-31.03	0.00	0.04	0.04												0.04										0.04					
32-1W-31.04	0.00	0.42	0.42	0.31	0.15										0.42									0.34	0.08					
32-1W-31.05	0.00	0.17	0.17	0.15	0.08										0.17					532				0.17						
32-1W-31.06	0.00	0.08	0.08													0.08														0.23
32-1W-33.01	0.00	3.87	3.87	2.75	1.36			420	220					50	3.87					185				3.03	0.84					
32-1W-33.02	0.00	4.92	4.92	1.99	0.99										4.92					185	70			2.19	2.73					
PAGE 1 TOTALS			17.03	8.95	4.24	##	###	420	220	##	##	##	##	50	16.95	0.08	####	#####	###	1312	70	###	#####	9.71	7.25	####	3	#	###	1.09

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

ALWAYS THINK SAFETY

**Indicate gradation.

ITEM 900

SIZE	GRADE
4 inch	(A)
3 inch	(B)
2 inch	(C)
1 1/2 inch	(D)

ITEM 1200

SIZE	GRADE
1 1/2inch	C,C-1
1 inch	D,F
3/4inch	E,E-1

			DATE
			APPROV.

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

ESTIMATE OF QUANTITIES*

DRAWN:	DKL	SCALE: NONE
DATE:	February 2023	SHEET: 1 OF 3
DRAWING NO.	ORM05-TS-2023.0008-C3	

ROAD NUMBER	FROM	TO	LENGTH***	CLEARING	GRUBBING	EXCAVATION		CULVERT PIPE SEE WORK LIST FOR TYPE							ROAD RENOVATION	ROAD IMPROVEMENT	NEW CONSTRUCTION - PERMANENT	NEW CONSTRUCTION - TEMPORARY	CONSTRUCT ARMORED WATER DIPS****	AGGREGATE**			WASHED ROCK	ROADSIDE VEGETATION MANAGEMENT	ROADSIDE BRUSHING MECHANICAL	ROADSIDE BRUSHING - CHIP	REMOVE BARRICADE	CONSTRUCT BARRICADE	CONSTRUCT WATER BARS	SOIL STABILIZATION
								SIZE						18" FULL ROUND DOWNSPOUT						4" MINUS SCREENED BASE GRADE A	1 1/2" MINUS SCREENED BASE GRADE C, C1	BLM STOCKPILE								
						ROCK	COMMON	18"	24"	30"	36"	42"	48"																	
SPECIFICATION NO.				200	200	300	300	400	400	400	400	400	400	400	500	500	300	300	500	900	1200	1400	1200	500	2100	2100	500	1700	1700	1800
ROAD NUMBER	MP/STA	MP/STA	MILE/STA	ACRE	ACRE	C.Y.	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	MILE	MILE	STA	STA	EA	C.Y.	C.Y.	EA	C.Y.	MILE	MILE	MILE	EA	EA	EA	ACRE
32-1W-33.03	0.00	1.45	1.45	1.01	0.50			78	180					20	1.45					40	2873			1.11	0.34					
32-1W-33.04	0.00	0.16	0.16												0.16					185	266					0.16				0.35
32-1W-33.05	0.00	0.06	0.06												0.06					302					0.06					
33-1W-3.06	0.00	0.41	0.41	1.49												0.41														1.20
33-1W-3.07	0.00	0.04	0.04												0.04											0.04				0.06
33-1W-5.00	0.00	2.72	2.72	1.45	0.72										2.72									1.59	1.13					
33-1W-5.04	0.00	1.25	1.25	0.48	1.06											1.25				2483				0.96	0.29					
33-1W-5.05	0.00	0.13	0.13	0.47											0.13															0.25
33-1W-6.00	0.00	1.03	1.03												1.03						1					1.03				
33-1W-7.00	0.00	0.87	0.87	0.63	0.31										0.87									0.69	0.18					
33-1W-7.01	0.00	0.16	0.16	0.58												0.16									0.16					0.27
33-1W-7.02	0.00	0.27	0.27	0.25	0.12											0.27								0.27						0.99
33-1W-7.04	0.00	0.26	0.26													0.26										0.26				0.63
33-1W-7.05	0.00	0.45	0.45												0.45										0.45		1	1		0.88
33-1W-8.00	0.00	2.62	2.62	2.11	1.04										2.62									2.32	0.30					
33-1W-8.01	0.00	0.90	0.90	0.35	0.18										0.90									0.39	0.51					
33-1W-9.00	0.00	0.97	0.97	0.80	0.40										0.97					50		20		0.88	0.09					
33-1W-10.00	0.00	0.94	0.94	0.86	0.42										0.94									0.94						
33-2W-1.01	0.00	0.92	0.92												0.92						30					0.92				
33-2W-1.02	0.00	0.09	0.09												0.09										0.09					
PAGE 1 TOTALS			17.03	8.95	4.24	##	###	420	220	##	##	##	##	50	16.95	0.08	####	#### #	###	1312	70	##	####	9.71	7.25	####	3	#	###	1.09
PAGE 2 TOTALS			15.70	10.48	4.75	##	##	78	180	##	##	##	##	20	13.35	2.35	##### #	#### ##	###	3060	3170	20	#### #	9.15	3.60	2.41	1	1	###	4.63
PROJECT TOTALS			32.73	19.43	8.99	##	###	498	400	##	##	##	##	70	30.30	2.43	####	#### #	###	4372	3240	20	#### #	18.86	10.85	2.41	4	1	###	5.72

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

**Indicate gradation.

ITEM 900

SIZE	GRADE
4 inch	(A)
3 inch	(B)
2 inch	(C)
1 1/2 inch	(D)

ITEM 1200

SIZE	GRADE
1 1/2inch	C,C-1
1 inch	D,F
3/4inch	E,E-1

*** Total length includes permanent and temporary roads to be constructed.

**** Armored water dip aggregate quantities calculated at 40 CY per AWD and are accounted for in aggregate column under 4" minus grade A and 20 CY per AWD are accounted under crushed surface grade C-1. AWDs on natural surface will not be surfaced with 20 CY of crushed surfacing.

***** Quantities costs covered for under splash pads under drainage.

ALWAYS THINK SAFETY

DATE APPROV.

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

ESTIMATE OF QUANTITIES*

DRAWN:	DKL	SCALE: NONE
DATE:	FEBRUARY 2023	SHEET: 2 OF 3
DRAWING NO.	ORM05-TS-2023.0008-C3	

EXHIBIT C-3
SHEET 3 OF 3
DEAD WEST TIMBER SALE

ROAD NUMBER	FROM	TO	LENGTH***	CLEARING	GRUBBING	EXCAVATION		CULVERT PIPE SEE WORK LIST FOR TYPE							ROAD RENOVATION	ROAD IMPROVEMENT	NEW CONSTRUCTION - PERMANENT	NEW CONSTRUCTION - TEMPORARY	CONSTRUCT ARMORED WATER DIPS****	AGGREGATE**			WASHED ROCK	ROADSIDE VEGETATION MANAGEMENT	ROADSIDE BRUSHING - MECHANICAL	ROADSIDE BRUSHING - CHIP	REMOVE BARRICADE	CONSTRUCT BARRICADE	CONSTRUCT WATER BARS	SOIL STABILIZATION
								SIZE												4" MINUS SCREENED BASE GRADE A	1 1/2" MINUS SCREENED BASE GRADE C, C1	BLM STOCKPILE								
						ROCK	COMMON	18"	24"	30"	36"	42"	48"	18" FULL ROUND DOWNSPOUT																
SPECIFICATION NO.				200	200	300	300	400	400	400	400	400	400	400	500	500	300	300	500	900	1200	1400	1200	500	2100	2100	500	1700	1700	1800
ROAD NUMBER	MP/STA	MP/STA	MILE/STA	ACRE	ACRE	C.Y.	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	MILE	MILE	STA	STA	EA	C.Y.	C.Y.	EA	C.Y.	MILE	MILE	MILE	MILE	EA	EA	EA	ACRE
33-2W-1.03	0.00	0.04	0.04												0.04										0.04					0.07
TR 5-1	0.00	0.43	0.43	1.35			2724	20										22.70					40							
TR 7-2	0.00	0.09	0.09	0.28			874											4.75												
TR 7-3	0.00	0.18	0.18	0.91			884											9.50					10							
TR 19-3	0.00	0.06	0.06	0.22			295											3.17												
TR 19-4	0.00	0.02	0.02	0.07			184											1.06												
PAGE 1 & 2 TOTALS			32.73	19.43	8.99	####	###	498	400		##	##	##	70	30.30	2.43	####	####	#	4372	3240	20	##	18.86	10.85	2.41	4	1	#	5.72
PAGE 3 TOTALS			0.82	2.83	#### ##	####	4961	20	##	##	### #	##	## ##	##	0.04	#### #	####	41.18	#	##	##	##	50.00	#### #	0.04	####	#	#	#	0.07
PROJECT TOTALS			33.55	22.26	8.99		4961	518	400	##	##	##	##	70	30.34	2.43	####	41.18	#	4372	3240	20	50.00	18.86	10.89	2.41	4	1	#	5.79

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

**Indicate gradation.

ITEM 900

SIZE	GRADE
4 inch	(A)
3 inch	(B)
2 inch	(C)
1 1/2 inch	(D)

ITEM 1200

SIZE	GRADE
1 1/2inch	C,C-1
1 inch	D,F
3/4inch	E,E-1

*** Total length includes permanent and temporary roads to be constructed.

**** Armored water dip aggregate quantities calculated at 40 CY per AWD and are accounted for in aggregate column under 4" minus grade A and 20 CY per AWD are accounted under crushed surface grade C-1. AWDs on natural surface will not be surfaced with 20 CY of crushed surfacing.

***** Quantities costs covered for under splash pads under drainage.

ALWAYS THINK SAFETY

DATE APPROV.

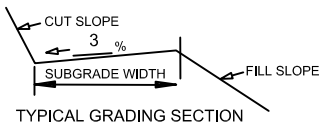
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT
MEDFORD, OREGON

ESTIMATE OF QUANTITIES*

DRAWING NO.	ORM05-TS-2023.0008-C3	
DRAWN:	DKL	SCALE: NONE
DATE:	FEBRUARY 2023	SHEET: 3 OF 3

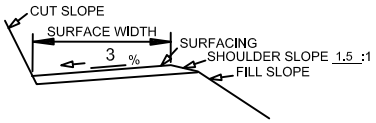
EXHIBIT C-4
SHEET 1 OF 3
DEAD WEST T.S.

MOVE	STATION OR MILE POST	TO STATION OR MILE POST	LENGTH MILE OR STATION	TYPICAL SECTION TYPE	ALLIGNMENT	ROAD WIDTH (1-3)		GRADIENT		CLEARING WIDTH				SURFACING (4)								REMARKS
					MAXIMUM DEGREE OF CURVE	SUBGRADE	DITCH	MAXIMUM FAVORABLE	MAXIMUM ADVERSE	BEYOND		EXISTING ROAD(S)		BASE COURSE				SURFACE COURSE				
										TOP CUT	TOE FILL	L	R	MINIMUM WIDTH	COMP. DEPTH	TYPE (2)	GRADING	MINIMUM WIDTH	COMP. DEPTH	TYPE (2)	GRADING	
FS ROAD 112	0.00	0.64	0.64	6		16	3					6	6									
32-1W-19.00 A-E	0.00	2.99	2.99	6		17	3					6	6									
FS 1632 (32-1W-19.00 H)	6.08	6.47	0.39	6		16	3					6	6									
32-1W-19.03	0.00	0.09	0.09	3		14	0					6	6									
32-1W-19.04	0.00	0.24	0.24	3		14	0					6	6									
32-1W-19.05	0.00	0.09	0.09	3		14	0					6	6									
32-1W-20.00	0.00	0.85	0.85	6		14	3					6	6									
32-1W-21.02	0.00	0.02	0.02	3		14	0					6	6									
32-1W-28.00	0.00	0.19	0.19	4		16	0					6	6									
32-1W-29.02	0.00	0.98	0.98	6		16	3					6	6									
32-1W-29.03	0.00	0.77	0.77	6		14	3					6	6									
32-1W-29.07	0.00	0.23	0.23	4		14	0					6	6									
32-1W-29.08	0.00	0.05	0.05	3		16	0					6	6									
32-1W-31.03	0.00	0.04	0.04	3		14	0					6	6									
32-1W-31.04	0.00	0.42	0.42	5		14	3					6	6									
32-1W-31.05	0.00	0.17	0.17	3		14	0					6	6									



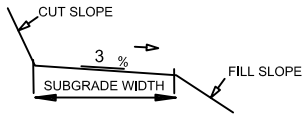
TYPICAL GRADING SECTION

TYPE 1



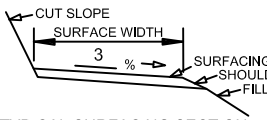
TYPICAL SURFACING SECTION

TYPE 2



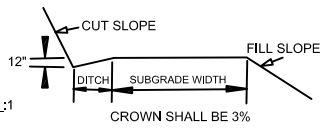
TYPICAL GRADING SECTION

TYPE 3



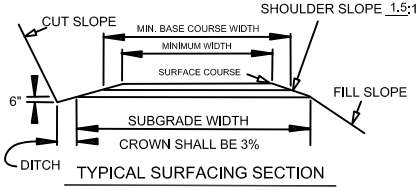
TYPICAL SURFACING SECTION

TYPE 4



TYPICAL GRADING SECTION

TYPE 5



TYPICAL SURFACING SECTION

TYPE 6

NOTES

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

MATERIALS	CUT SLOPES	FILL SLOPES
COMMON	1:1	1 1/2:1
SOFT ROCK & SHALE	1/2:1	1 1/2:1
SOLID ROCK	1/2:1	ANGLE OF REPOSE

   FULL BENCH CONSTRUCTION IS REQUIRED ON SIDE SLOPES EXCEEDING 60%.

2. SURFACING TYPE
   A. PIT RUN ROCK MATERIAL.
   B. GRID ROLLED ROCK MATERIAL
   C. SCREENED ROCK MATERIAL.
   D. CRUSHED ROCK MATERIAL.
   E. BITUMINOUS SURFACE TREATMENT (BST).
   F. NATURAL.

3. TURNOUTS
   A. WIDTH 10FT. IN ADDITION TO SUBGRADE WIDTH,OR AS SHOWN ON THE PLANS.
   B. LOCATED APPROXIMATELY AS SHOWN ON THE ROAD PLANS.

4. SURFACING
   TURNOUTS, CURVE WIDENING AND ROAD APPROACH APRONS SHALL BE SURFACED.

5. CLEARING WIDTH
   SEE SUBSECTION 200

ALWAYS THINK SAFETY

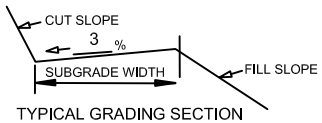
REV. NO.	DESCRIPTION	DATE	APPROV.

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

SPECIFICATION SHEET

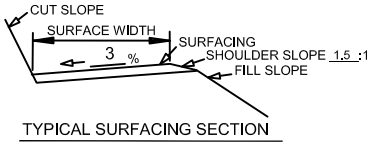
DRAWN: DKL	SCALE NONE
DATE: FEBRUARY 2023	SHEET 1 OF 3
DRAWING NO.	ORM05-TS-2023.0008-C4

MOVE	STATION OR MILE POST	TO STATION OR MILE POST	LENGTH MILE OR STATION	TYPICAL SECTION TYPE	ALLIGNMENT	ROAD WIDTH (1-3)		GRADIENT		CLEARING WIDTH				SURFACING (4)								REMARKS
					MAXIMUM DEGREE OF CURVE	SUBGRADE	DITCH	MAXIMUM FAVORABLE	MAXIMUM ADVERSE	BEYOND		EXISTING ROAD(S)		BASE COURSE				SURFACE COURSE				
										TOP CUT	TOE FILL	L	R	MINIMUM WIDTH	COMP. DEPTH	TYPE (2)	GRADING	MINIMUM WIDTH	COMP. DEPTH	TYPE (2)	GRADING	
32-1W-31.06	0.00	0.08	0.08	3		14	0					6	6									
32-1W-33.01	0.00	3.87	3.87	6		16	3					6	6									
32-1W-33.02	0.00	4.92	4.92	6		16	3					6	6									
32-1W-33.03	0.00	1.45	1.45	6		16	3					6	6									
32-1W-33.04	0.00	0.16	0.16	6		14	3					6	6									
32-1W-33.05	0.00	0.06	0.06	3		14	0					6	6									
33-1W-3.06	0.00	0.41	0.41	3		16	0					6	6									
33-1W-3.07	0.00	0.04	0.04	3		12	0					6	6									
33-1W-5.00	0.00	2.72	2.72	6		16	3					6	6									
33-1W-5.04	0.00	1.25	1.25	6		14	3					6	6									
33-1W-5.05	0.00	0.13	0.13	3		14	0					6	6									
33-1W-6.00	0.00	1.03	1.03	3		16	0					6	6									
33-1W-7.00	0.00	0.87	0.87	6		14	3					6	6									
33-1W-7.01	0.00	0.16	0.16	3		16	0					6	6									
33-1W-7.02	0.00	0.27	0.27	6		16	3					6	6									
33-1W-7.04	0.00	0.26	0.26	3		14	0					6	6									
33-1W-7.05	0.00	0.45	0.45	3		14	0					6	6									
33-1W-8.00	0.00	2.62	2.62	6		17	3					6	6									



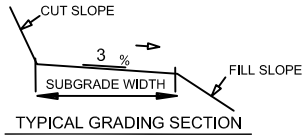
TYPICAL GRADING SECTION

TYPE 1



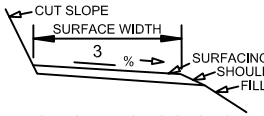
TYPICAL SURFACING SECTION

TYPE 2



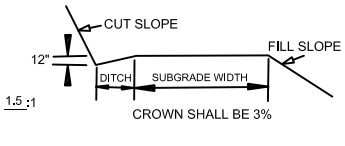
TYPICAL GRADING SECTION

TYPE 3



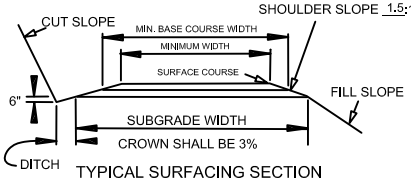
TYPICAL SURFACING SECTION

TYPE 4



TYPICAL GRADING SECTION

TYPE 5



TYPICAL SURFACING SECTION

TYPE 6

NOTES

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

MATERIALS	CUT SLOPES	FILL SLOPES
COMMON	1:1	1 1/2:1
SOFT ROCK & SHALE	1/2:1	1 1/2:1
SOLID ROCK	1/2:1	ANGLE OF REPOSE

   FULL BENCH CONSTRUCTION IS REQUIRED ON SIDE SLOPES EXCEEDING 60%.

2. SURFACING TYPE
   A. PIT RUN ROCK MATERIAL.
   B. GRID ROLLED ROCK MATERIAL
   C. SCREENED ROCK MATERIAL.
   D. CRUSHED ROCK MATERIAL.
   E. BITUMINOUS SURFACE TREATMENT (BST).
   F. NATURAL.

3. TURNOUTS
   A. WIDTH 10FT. IN ADDITION TO SUBGRADE WIDTH,OR AS SHOWN ON THE PLANS.
   B. LOCATED APPROXIMATELY AS SHOWN ON THE ROAD PLANS.

4. SURFACING
   TURNOUTS, CURVE WIDENING AND ROAD APPROACH APRONS SHALL BE SURFACED.

5. CLEARING WIDTH
   SEE SUBSECTION 200

ALWAYS
THINK
SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.

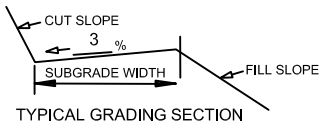
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT
MEDFORD, OREGON

SPECIFICATION SHEET

DRAWN: DKL	SCALE NONE
DATE: FEBRUARY 2023	SHEET 2 OF 3
DRAWING NO.	ORM05-TS-2023.0008-C4

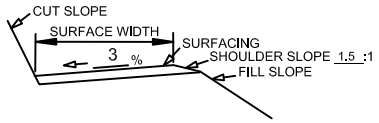
EXHIBIT C-4
SHEET 3 OF 3
DEAD WEST T.S.

MOVE	STATION OR MILE POST	TO STATION OR MILE POST	LENGTH MILE OR STATION	TYPICAL SECTION TYPE	ALLIGNMENT	ROAD WIDTH (1-3)		GRADIENT		CLEARING WIDTH				SURFACING (4)								REMARKS
					MAXIMUM DEGREE OF CURVE	SUBGRADE	DITCH	MAXIMUM FAVORABLE	MAXIMUM ADVERSE	BEYOND		EXISTING ROAD(S)		BASE COURSE				SURFACE COURSE				
										TOP CUT	TOE FILL	L	R	MINIMUM WIDTH	COMP. DEPTH	TYPE (2)	GRADING	MINIMUM WIDTH	COMP. DEPTH	TYPE (2)	GRADING	
33-1W-8.01	0.00	0.90	0.90	6		14	3					6	6									
33-1W-9.00	0.00	0.97	0.97	6		17	3					6	6									
33-1W-10.00	0.00	0.94	0.94	6		16	3					6	6									
33-2W-1.01	0.00	0.92	0.92	6		16	3					6	6									
33-2W-1.02	0.00	0.09	0.09	3		16	0					6	6									
33-2W-1.03	0.00	0.04	0.04	3		14	0					6	6									
Route 5-1	0.00	0.43	0.43																			
Route 7-2	0.00	0.09	0.09																			
Route 7-3	0.00	0.18	0.18																			
Route 19-3	0.00	0.06	0.06																			
Route 19-4	0.00	0.02	0.02																			



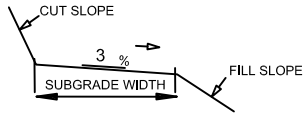
TYPICAL GRADING SECTION

TYPE 1



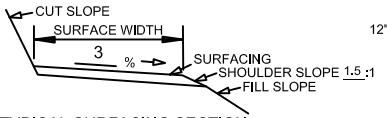
TYPICAL SURFACING SECTION

TYPE 2



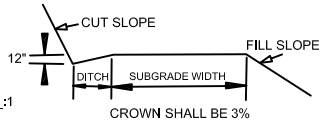
TYPICAL GRADING SECTION

TYPE 3



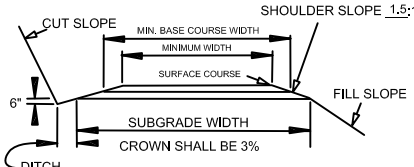
TYPICAL SURFACING SECTION

TYPE 4



TYPICAL GRADING SECTION

TYPE 5



TYPICAL SURFACING SECTION

TYPE 6

NOTES

1. EXTRA SUBGRADE WIDTHS
   ADD TO EACH FILL SHOULDER 1FT.FOR FILLS OF 1.5FT. & 2FT.FOR FILLS OVER 6FT. WIDEN THE INSIDE SHOLDER OF ALL CURVES AS FOLLOWS;
   WHEN THE DEGREE OF CURVE EQUALS
   7-21 ADD 1FT.
   22-35 ADD 2FT.
   36-48 ADD 3FT.
   49-64 ADD 4FT.
   65-96 ADD 5FT.

MATERIALS	CUT SLOPES	FILL SLOPES
COMMON	1:1	1 1/2:1
SOFT ROCK & SHALE	1/2:1	1 1/2:1
SOLID ROCK	1/2:1	ANGLE OF REPOSE

   FULL BENCH CONSTRUCTION IS REQUIRED ON SIDE SLOPES EXCEEDING 60%.

2. SURFACING TYPE
   A. PIT RUN ROCK MATERIAL.
   B. GRID ROLLED ROCK MATERIAL
   C. SCREENED ROCK MATERIAL.
   D. CRUSHED ROCK MATERIAL.
   E. BITUMINOUS SURFACE TREATMENT (BST).
   F. NATURAL.

3. TURNOUTS
   A. WIDTH 10FT. IN ADDITION TO SUBGRADE WIDTH,OR AS SHOWN ON THE PLANS.
   B. LOCATED APPROXIMATELY AS SHOWN ON THE ROAD PLANS.

4. SURFACING
   TURNOUTS, CURVE WIDENING AND ROAD APPROACH APRONS SHALL BE SURFACED.

5. CLEARING WIDTH
   SEE SUBSECTION 200

ALWAYS
THINK
SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.

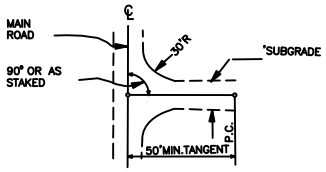
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT
MEDFORD, OREGON

SPECIFICATION SHEET

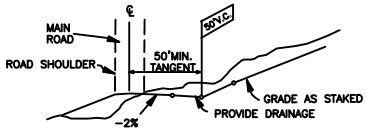
DRAWN: DKL	SCALE NONE
DATE: FEBRUARY 2023	SHEET 3 OF 3
DRAWING NO.	ORM05-TS-2023.0008-C4

EXHIBIT C-5
SHEET 1 OF 1
DEAD WEST T.S.

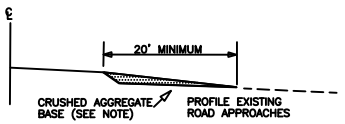
TYPICAL ROAD APPROACHES



PLAN

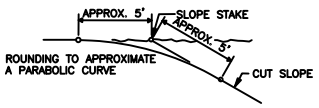


PROFILE

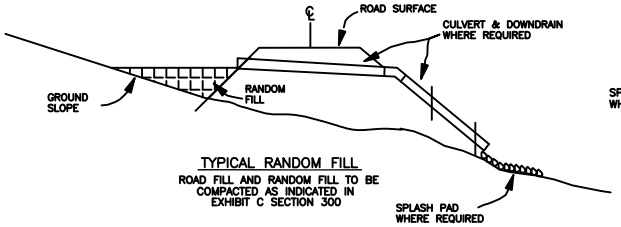


TYPICAL SURFACING SECTION

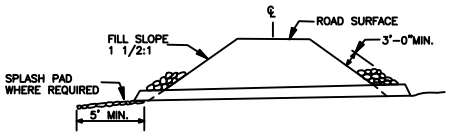
NOTES:
1. THE PROFILE OF EXISTING APPROACH ROADS SHALL BE TAPERED TO MEET THE SHOULDER LINE OF THE MAIN ROADWAY AND SHALL RECEIVE THE SAME WEARING SURFACE.
2. THE CRUSHED AGGREGATE BASE SHALL BE OF THE SAME GRADATION AS USED IN THE ADJACENT ROADBED.
3. APPROACHES SHALL BE FINISHED WITH THE SAME TREATMENT AS SHOWN FOR THE ADJACENT ROADBED.



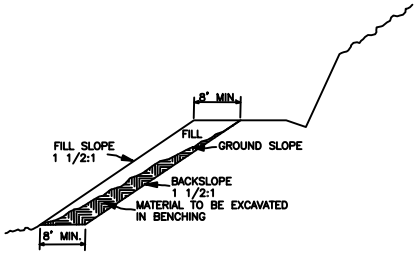
CUT SLOPE ROUNDING



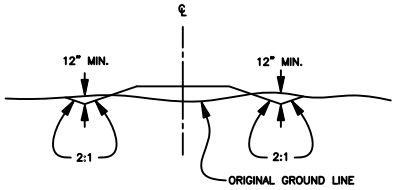
TYPICAL RANDOM FILL
ROAD FILL AND RANDOM FILL TO BE COMPACTED AS INDICATED IN EXHIBIT C SECTION 300



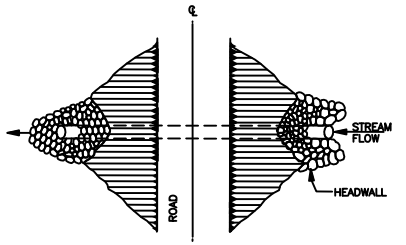
CROSS SECTION



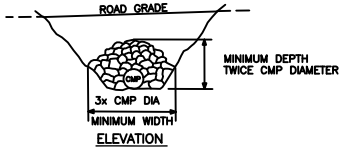
SPECIAL COMPACTION
TYPICAL BENCHING SECTION



TYPICAL ROAD SECTION
FOR TURNPIKE CONSTRUCTION



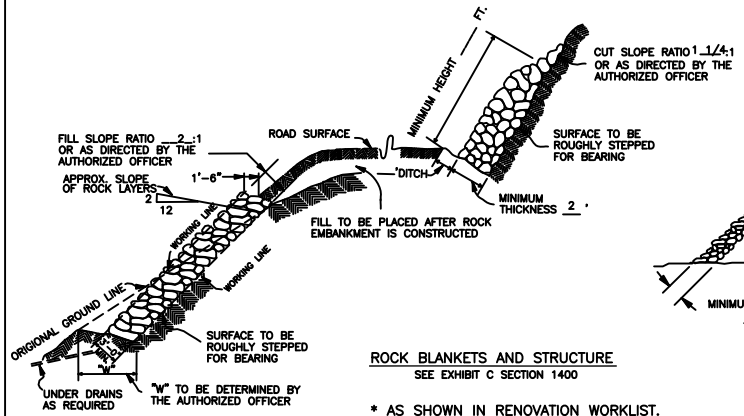
PLAN



ELEVATION

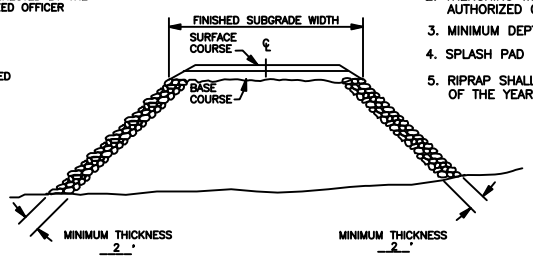
NOTES: RIPRAP AT CULVERTS

1. RIPRAP SHALL BE PLACED IN SUCH A MANNER THAT IT WILL NOT DAMAGE THE CULVERT.
2. TRENCHING WILL BE DONE AS REQUIRED BY THE AUTHORIZED OFFICER.
3. MINIMUM DEPTH OF SPLASH PADS SHALL BE ___1___ FT
4. SPLASH PAD MINIMUM QUANTITY DESIGNATED IN WORK LIST.
5. RIPRAP SHALL BE PLACED BEFORE OCTOBER 15TH OF THE YEAR THE CMP IS INSTALLED.



ROCK BLANKETS AND STRUCTURE
SEE EXHIBIT C SECTION 1400

* AS SHOWN IN RENOVATION WORKLIST.



SLOPE PROTECTION ROCK
SEE EXHIBIT C SECTION 1400

ALWAYS THINK SAFETY

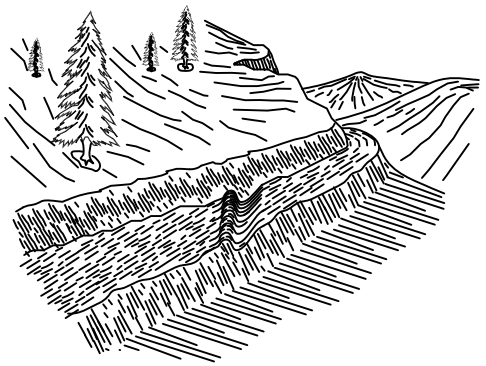
REV.NO.	DESCRIPTION	DATE	APPROVED

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

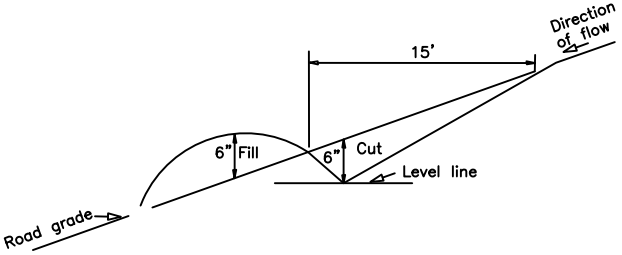
TYPICAL ROAD DATA

DRAWN JAB	SCALE NONE
DATE FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO. ORM05-TS-2023.0008-C5	

EXHIBIT C–06
SHEET 1 OF 1
DEAD WEST T.S.

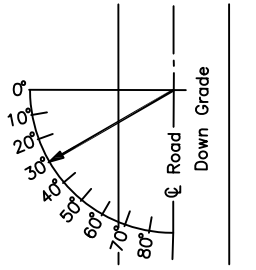


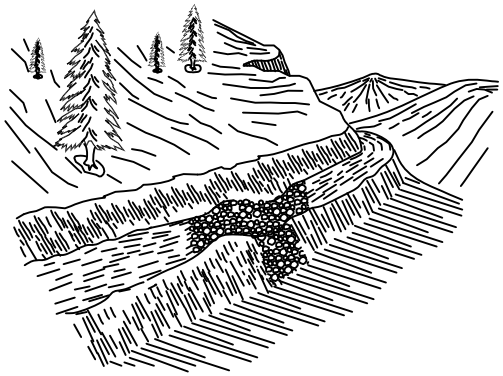
WATER BAR



1. CROSS–DRAINS SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL CROSS DRAINS SHALL BE SKEWED 30 DEGREES.
4. THE CROSS–DRAINS INVERT SHALL BE SMOOTH AND FREE DRAINING.

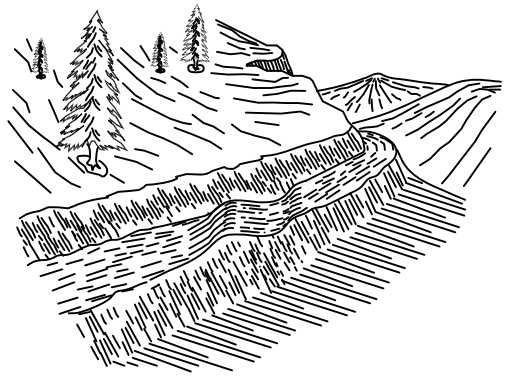
SKEW DIAGRAM



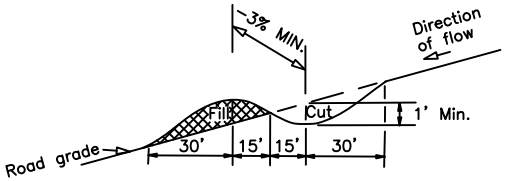


ARMORED WATER DIP

1. SEE EXHIBIT C–13: ARMORED WATER DIP CONSTRUCTION DETAILS



WATER DIP



1. WATER DIPS SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL WATER DIPS SHALL BE SKEWED 30 DEGREES.
4. THE LENGTH SHALL BE SUFFICIENT TO EXTEND FROM THE CUT BANK TO THE FILL SLOPE AND BE READILY CROSSED BY HIGH CLEARANCE TYPE VEHICLES.

REV. NO.	DESCRIPTION	DATE	APPROV.

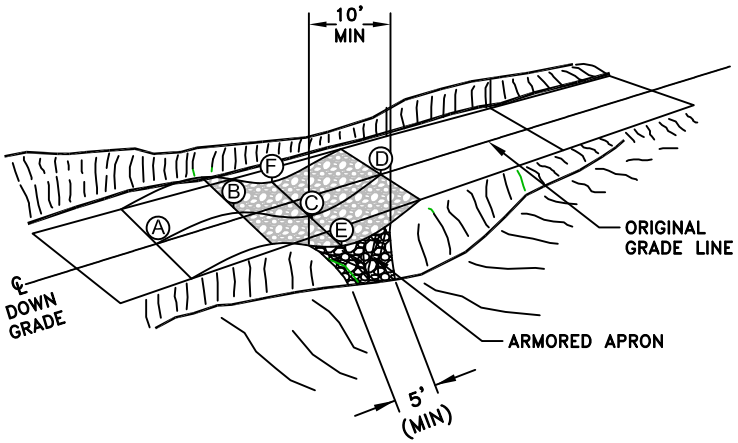
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT – MEDFORD, OREGON

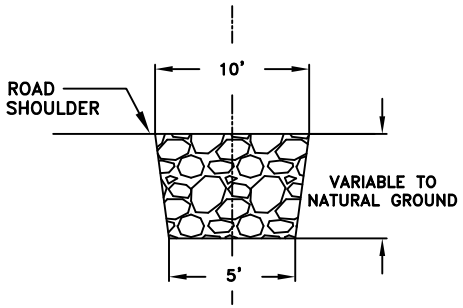
DRAINAGE & EROSION CONTROL DETAILS

DRAWN JAB	SCALE NONE
DATE FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO. ORM05–TS–2023.0008–C06	

EXHIBIT C–07

SHEET 1 OF 1



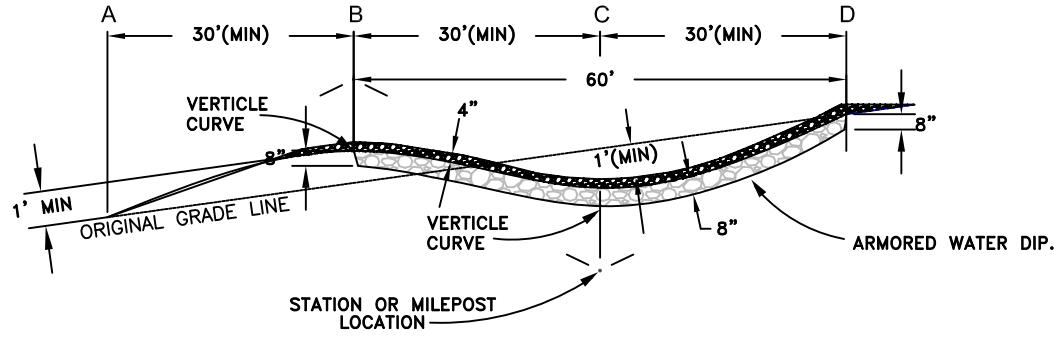


ARMORED APRON
DIMENSIONS

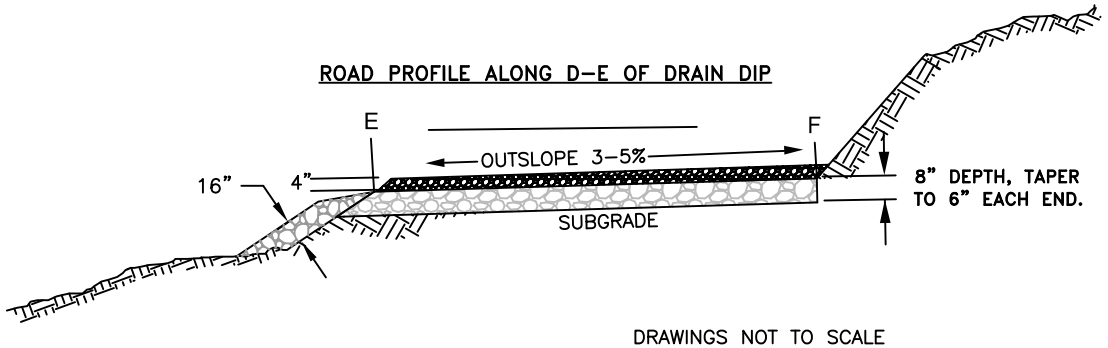
NOTES

1) THE WATER DIP INVERT SHALL BE SMOOTH AND FREE DRAINING.
2) THE MINIMUM DIFFERENCE IN ELEVATION BETWEEN THE SAG AND THE CREST OF THE WATER DIP ALONG THE CUTSLOPE HINGE POINT IS 1.0 FEET.
3) THE MINIMUM DIFFERENCE IN ELEVATION BETWEEN THE SAG AND THE CREST OF THE WATER DIP ALONG THE FILLSLOPE SHOULDER IS 1.5 FEET.
4) SKEW DIP MINIMUM 15–30 DEGREES FROM PERPENDICULAR TO CENTERLINE.
5) EXCAVATED SOIL SHALL BE UTILIZED IN CONSTRUCTION OF WATER DIP. SIDECASTING OF VEGETATIVE MATTER IS PERMITTED.
6) 4" MINUS ROCK MATERIAL SHALL BE PLACED ON FILL SLOPE OF ARMORED WATERDIP.
7) SEE ROAD RENOVATION WORKLIST FOR WATER DIPS TO BE ARMORED.
8) EACH DIP SHALL BE REINFORCED WITH 40 CUBIC YARDS OF 4" MINUS ROCK, ON ROADWAY AND 4" MINUS AT OUTFALL.
9) EACH DIP ON EXISTING ROCKED ROADS SHALL BE SURFACED WITH 20 CUBIC YARDS OF 1–1/2" MINUS ROCK, EXTENDING AND TAPERING IN DEPTH 20' ON EACH SIDE OF THE AWD, TO MEET THE EXISTING ROAD SURFACE. NATURAL SURFACE ROADS WILL ONLY USE THE 4" MINUS AGGREGATE.

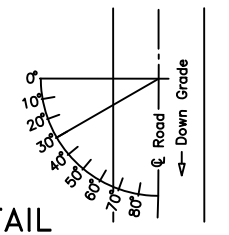
ROAD PROFILE ALONG A–B–C OF DRAIN DIP



ROAD PROFILE ALONG D–E OF DRAIN DIP



SKEW DIAGRAM



LEGEND

- CUT/FILL SLOPES
- SUBGRADE ARMOR MATERIAL (4 INCH MINUS)
- FILL SLOPE ARMOR MATERIAL PIT RUN OR OTHER APPROVED MATERIAL.
- SURFACE COURSE AGGREGATE (1–1/2" minus)

DRAWINGS NOT TO SCALE

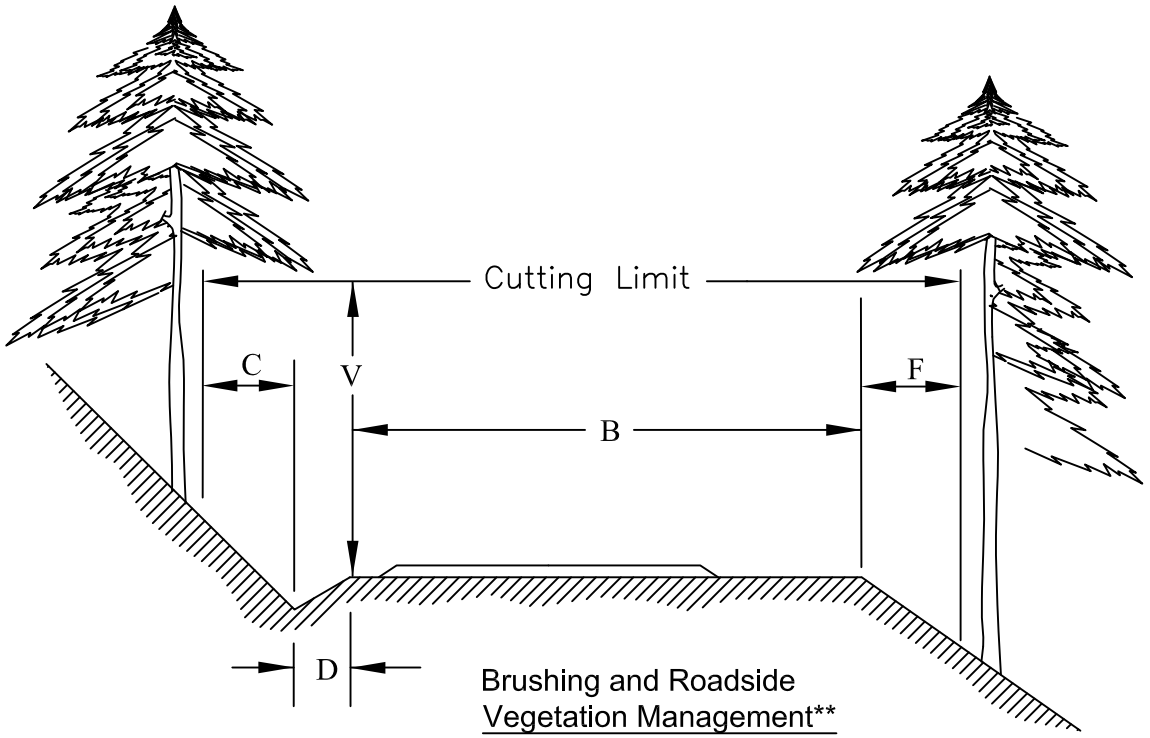
TYPICAL ARMORED WATER DIP CONSTRUCTION DETAIL

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

TYPICAL ARMORED WATER DIP CONSTRUCTION

DRAWN BY JAB	SCALE NONE
DATE FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO.	ORM05–TS–2023.0008–C 07

EXHIBIT C 8
SHEET 1 OF 1



Brushing and Roadside Vegetation Management**

Cutting Limit = C + D + B + F

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

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

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

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

V = 14 ft - Height of vertical cutting limit

All distances shown are horizontal except for V

NOTES:

Cutting and Removal of vegetation from ditches and roadway is incidental to brushing within cutting limits.

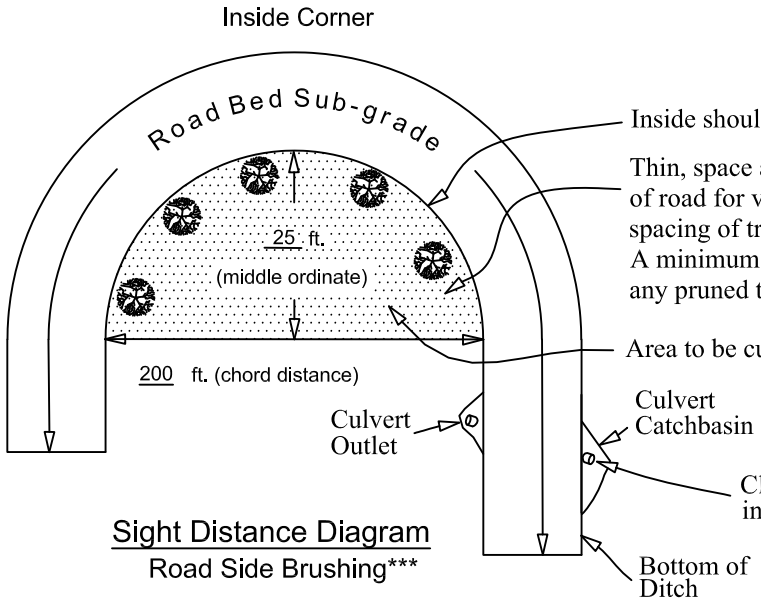
All merchantable roadside cut trees outside of timber sale units will be marked with blue paint. All merchantable roadside trees within timber sales units shall be cut unless painted orange or pink (reserve trees).

See Exhibit C-2 (Maps) and Exhibit C-16: Road Renovation Work List for Roadside Vegetation Management locations.

* = Roads identified for Roadside Vegetation Management shall have all brush, and non-merchantable/merchantable trees 8" DBH or greater, cut within the cutting limits.

** = All stumps that may impede road maintenance equipment from properly maintaining the road and ditch line shall be grubbed or ground 6" below subgrade. Stump holes shall be filled (if needed) with suitable material and compacted.

*** = Excludes work for roadside vegetation management.



Sight Distance Diagram
Road Side Brushing***

Typical Road Bed Subgrade widths

One lane low traffic volume . . . . . 12 to 16 ft
One lane medium traffic volume . . 16 to 20 ft
Two lane high volume traffic . . . . . 20 to 40 ft
Turnouts . . . . . 10 ft

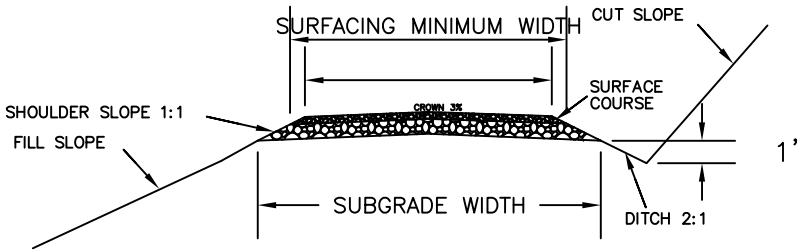
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT – MEDFORD, OREGON

ROADSIDE BRUSHING AND ROADSIDE VEGETATION MANAGEMENT DETAILS

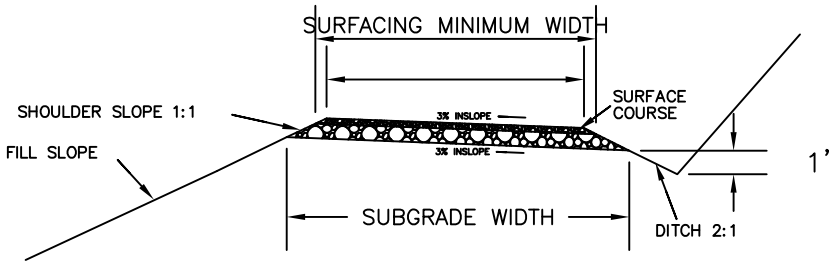
DRAWN JWR	SCALE NONE
DATE April 2022	SHEET 1 OF 1
DRAWING NO. ORM05.2023.0008.C8	

EXHIBIT C–9
SHEET 1 OF 1

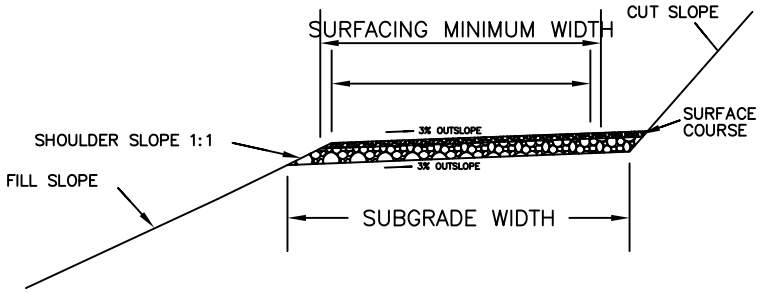
TYPICAL CROWNED SURFACE
EXISTING MIN. BASE COURSE WIDTH

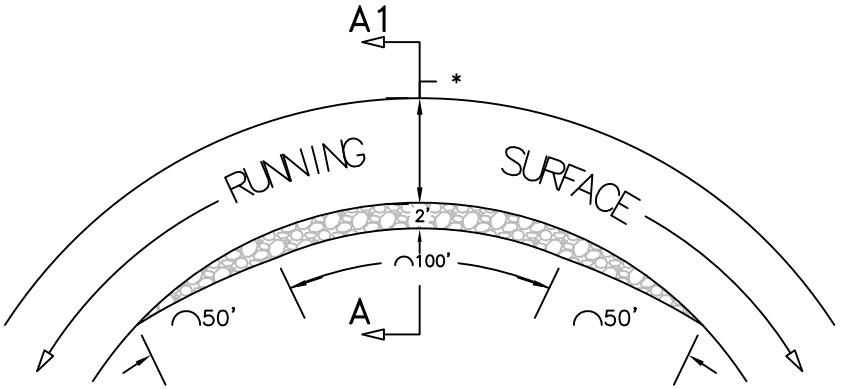


TYPICAL INSLOPED SURFACE
EXISTING MIN. BASE COURSE WIDTH

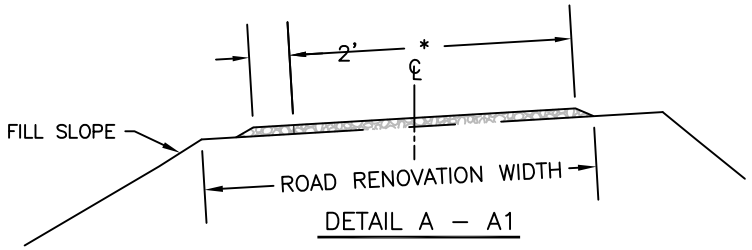


TYPICAL OUTSLOPED SURFACE
EXISTING MIN. BASE COURSE WIDTH





TYPICAL CURVE WIDENING DETAIL



DETAIL A – A1

NOTES:

SURFACING SHALL BE THE COMPACTED DEPTH AS SPECIFIED IN THE WORKLIST.

CURVE WIDENING SHALL BE SURFACED TO A LENGTH OF 100' WITH 50' TAPERS.

APPLY THE WIDENING ON THE INSIDE OF THE CURVES THROUGHOUT THE RADIUS OF THE CORNER TO MATCH THE EXISTING ROAD TEMPLATE.

MAINTAIN EXISTING CROSS SLOPE AT CURVES

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

ROAD SURFACING and CURVE WIDENING SECTIONS

DRAWN: JCM	**SCALE:** AS SHOWN
DATE: FEBRUARY 2023	**SHEET** 1 **OF** 1
DRAWING NO.	ORM05–TS–2023.0008–C9

EXHIBIT C-10
SHEET 1 OF 1
DEAD WEST TIMBER SALE

CULVERT LOCATIONS										DOWNSPOUTS						PADS	COMMENTS
DESIGNED						AS BUILT				1/2 ROUND		FULL ROUND		RECT. FLUME			
ROAD NO.	STATION OR M.P.	SIZE	GAGE	LENGTH	SKEW ANGLE	STATION OR M.P.	SIZE	GAGE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SPLASH NEEDED - YES/NO	
32-1W-33.01	0.27	24	14	38													
	0.32	24	14	60													
	0.57	18	16	36													
	1.57	18	16	44								18	10				Installation Type 2
	1.66											18	10				Installation Type 2
	1.69											18	10				Installation Type 2
	2.13	24	14	42													
	2.15	24	14	42													
	2.36	18	16	42													
	2.50	24	14	38													
	2.58	18	16	42													
	2.64	18	16	34													
	2.70	18	16	36													
	2.73	18	16	62													
	2.86	18	16	40													
	2.92	18	16	40													
	2.97	18	16	44								18	20				Installation Type 2
32-1W-33.03	0.03	24	14	36													
	0.43	18	16	40								18	10				Installation Type 2
	0.56	18	16	38								18	10				Installation Type 2
	0.63	24	14	36													
	0.67	24	14	34													
	0.82	24	14	38													
	1.23	24	14	36													
TR5-1	0.19	18		20													Temp. Poly Pipe

NOTES:

A. Designed culvert lengths and locations are approximate. Actual lengths and locations will be staked in the field.
B. Summary of quantities are shown on drawing Exhibit C-3 (Estimate of Quantities).
C. All culverts and bands shall be aluminized.
D. Downspouts shall be connected to culvert outlets via Turner Style connection.

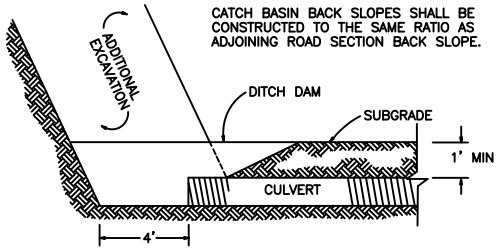
ALWAYS
THINK
SAFETY

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

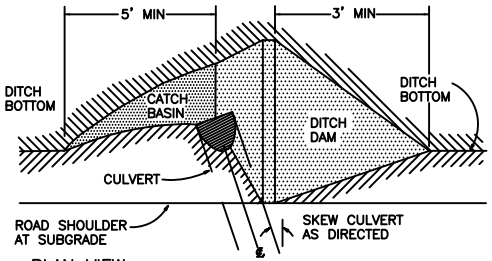
CULVERT LIST

DRAWN: DKL	SCALE: AS SHOWN
DATE: FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO. ORM05-TS-2023.0008-C10	

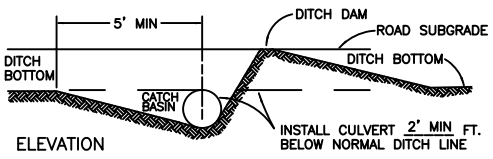
EXHIBIT C–11
SHEET 1 OF 1
DEAD WEST T.S.



CROSS SECTION AT CATCH BASIN

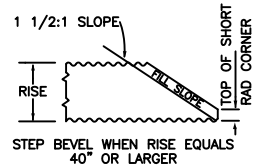


PLAN VIEW



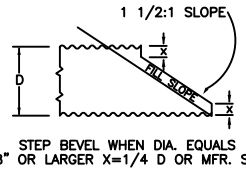
ELEVATION

CATCH BASIN



STEP BEVEL WHEN RISE EQUALS 40" OR LARGER

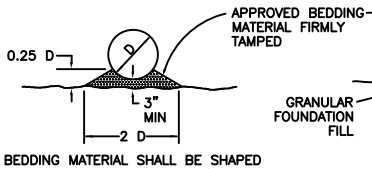
PIPE ARCH



STEP BEVEL WHEN DIA. EQUALS 48" OR LARGER X=1/4 D OR MFR. STD.

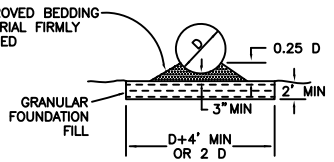
ROUND PIPE

BEVELED END DETAIL



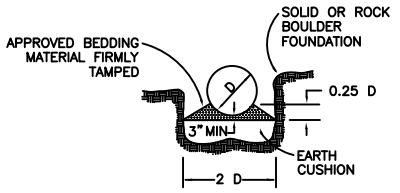
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT.

BEDDING OF CULVERTS ON STABLE NATURAL GROUND FOUNDATION OR COMPACTED EMBANKMENT



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

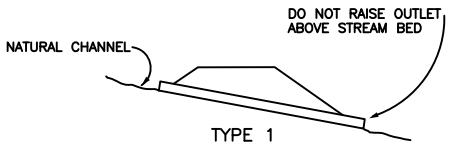
BEDDING OF CULVERTS ON SOFT SPONGY OR UNSTABLE SOIL FOUNDATION



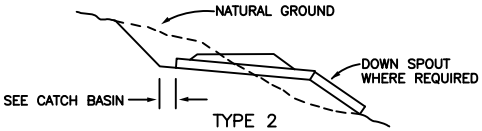
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT. EARTH CUSHIONING OF SILTY CLAY LOAM OR SAND MAY BE USED IF MATERIAL CAN BE PLACED IN THE DRY CONDITION. IF THE EXCAVATION IS WET, USE GRANULAR FOUNDATION FILL MATERIAL. MAINTAIN 8" MIN. DEPTH BETWEEN HIGH POINTS OF ROCKS AND/OR BOULDERS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

BEDDING OF CULVERT IN SOLID ROCK OR BOULDER FOUNDATION

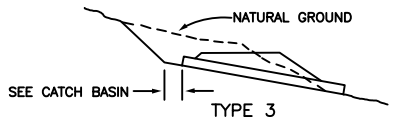
BEDDING OF CULVERTS



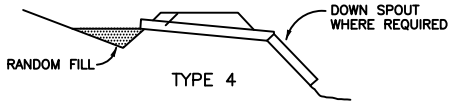
TYPE 1



TYPE 2



TYPE 3



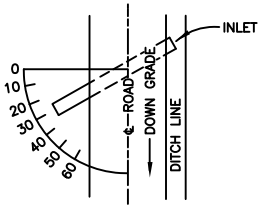
TYPE 4

CULVERT INSTALLATION TYPES

NOTES:

1) DOWNSPOUTS SHALL BE CONNECTED TO CULVERT OUTLETS VIA TURNER STYLE CONNECTION.

ALWAYS
THINK
SAFETY



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

SKEW DIAGRAM

REV. NO.	DESCRIPTION	DATE	APPROV.

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

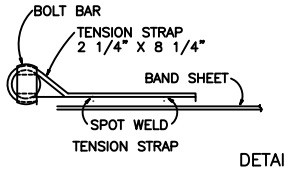
CULVERT INSTALLATION DETAILS

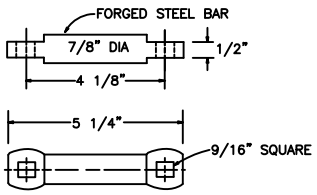
DRAWN JAB	SCALE NONE
DATE FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO. ORM05–TS–2023.0008–C11	

EXHIBIT C–12
SHEET 1 OF 1
DEAD WEST T.S.

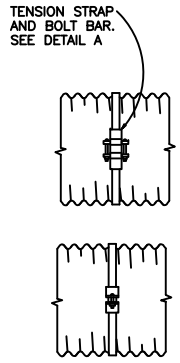
NOTE:

DESIGN VARIATIONS IN FASTENERS, (STRAPS, BARS & WELDS) WHICH PROVIDE A TENSILE STRENGTH OF 7500 LBS. ARE PERMISSIBLE.

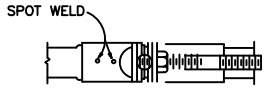


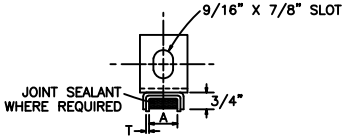


DETAIL A



CHANNEL BAND COUPLER

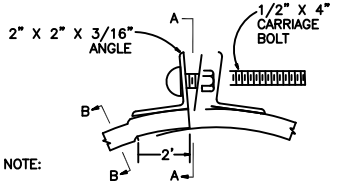




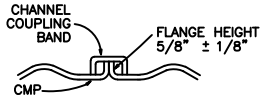
DIMENSIONS IN INCHES

T	A	PIPE WALL THICKNESS
.079	3/4	.109 OR LIGHTER
.109	1	.138 OR HEAVIER

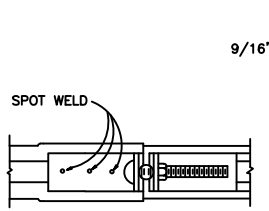
SECTION A–A

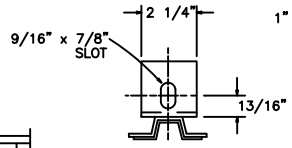


NOTE:
AS AN ALTERNATE TO SWEDGE, AN OVERSIZE BRIDGE CLIP MAY BE USED.

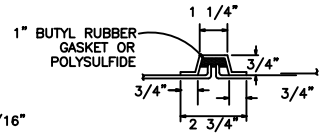


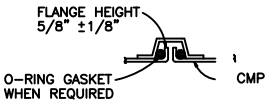
SECTION B–B





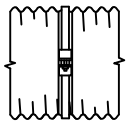
SECTION C–C

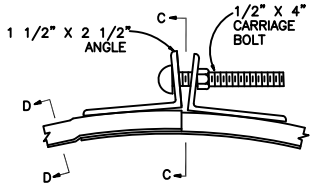




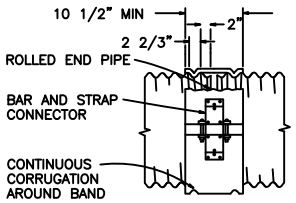
SECTION D–D

SHOWN WITH ALTERNATE TYPES OF JOINT SEALERS





FLANGED END COUPLER



STANDARD CONSTRUCTION IS 1 PIECE 12" THRU 48" AND 2 PIECE 54" 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 HAVE A MINIMUM WIDTH OF 10 1/2 INCHES AND MAY BE TWO NUMERICAL THICKNESSES LIGHTER THAN THE GAGE OR THICKNESS DESIGNATED FOR THE CONDUIT JOINED. THE BAND SHALL BE DESIGNED TO BE DRAWN TOGETHER WITH TWO 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.

"HUGGER" COUPLER BANDS

STANDARD COUPLER BANDS

CULVERT SIZE INCHES	CORRUGATED								FLAT–DIMPLED*			
	STD. ANNULAR		HELICAL		3" X 1"		6" X 1"		WIDTH	NO. OF ROWS OF DIMPLES	NO. OF BOLTS	
	WIDTH	NO. OF BOLTS	WIDTH	NO. OF BOLTS	WIDTH	NO. OF BOLTS	WIDTH	NO. OF BOLTS			Ⓐ	Ⓑ
UNDER 18	7	2	7	2					10 1/2	2	2	2
18 TO 54	12	3	12	3	14	3	18	3	10 1/2	2	3	2
OVER 54	24	5	24	5	24	5	24	4	16 1/2	4	5	4

*SHALL ONLY BE USED WITH APPROVAL OF AUTHORIZED OFFICER

DATA IN THIS BLOCK DOES NOT APPLY TO PERFORATED PIPE UNDERDRAIN. FOR BANDS WITH "PUNCH–OUT" TYPE CONNECTIONS, 2 BOLTS ARE PERMISSIBLE FOR EACH LAP. BANDS SHALL LAP 1/2 WIDTH ONTO EACH SECTION OF PIPE AND MUST FULLY ENCIRCLE THE JOINT FORMING A NEARLY WATERTIGHT CONNECTION. SEE SECTION 400.

Ⓐ BANDS WITH ANGLES

Ⓑ BANDS WITH TENSION TYPE CONNECTIONS

ALWAYS THINK SAFETY

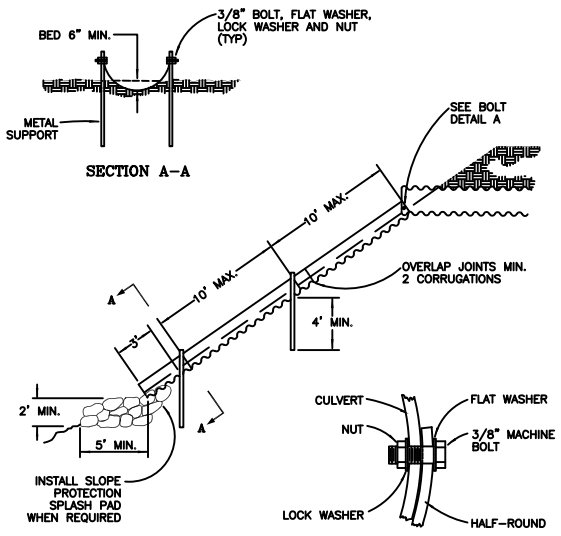
REV. NO.	DESCRIPTION	DATE	APPROV.

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

CULVERT BAND DETAIL

DRAWN: JAB	SCALE NONE
DATE FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO. ORM05–TS–2023.0008–C12	

EXHIBIT C 13
SHEET 1 OF 1

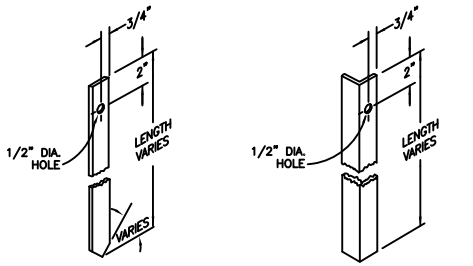


JOIN PIPE CULVERT TO STARTER SECTION AS SHOWN. FIELD DRILL 5/8" DIA. THRU STARTER SECTION AND CULVERT AND INSTALL 3/8" X 2" BOLTS, FLAT WASHERS, LOCK WASHERS AND NUTS.

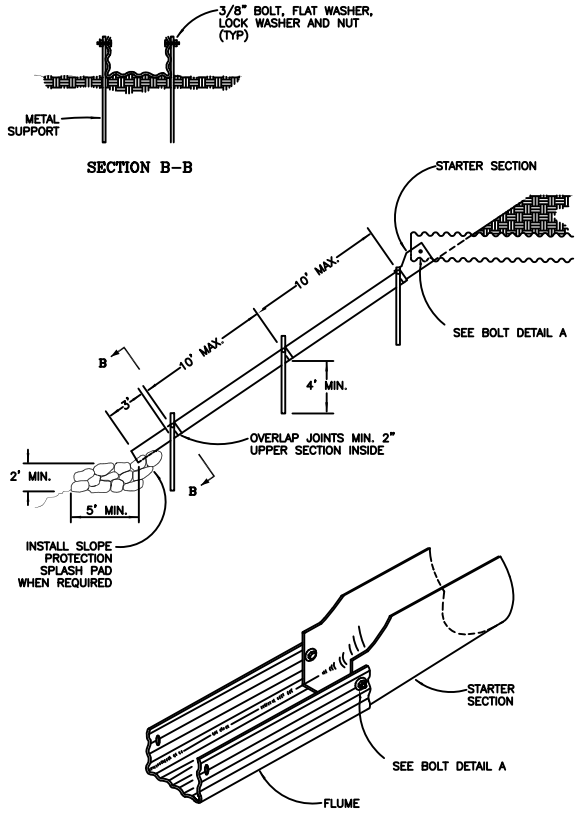
HALF ROUND DOWNSPOUT

NOTE:

1. THE HALF ROUND SHALL BE ONE DIAMETER SIZE LARGER AND OF THE SAME MATERIAL AND COATING AS THE CULVERT IT IS ATTACHED TO.
2. THE HALF ROUND SHALL BE FABRICATED FROM 16 GAUGE METAL WITH 2 2/3" X 1/2" CORRUGATIONS.
3. SUPPORTS MAY BE STEEL BAR, ANGLE IRON OR APPROVED EQUIVALENT METAL POSTS.



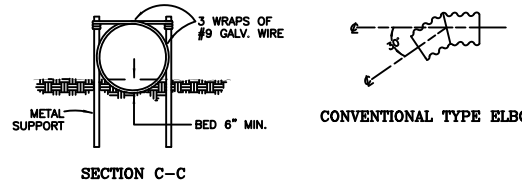
METAL SUPPORT DETAIL

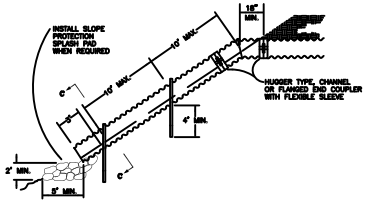


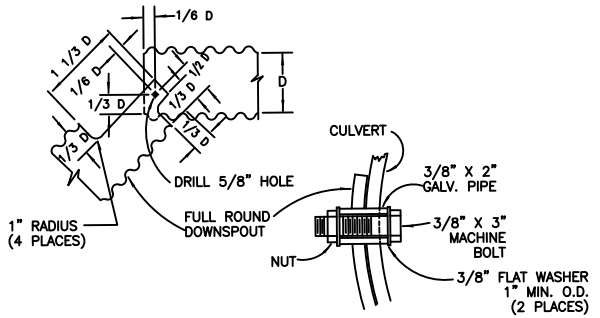
RECTANGULAR FLUME

NOTE:

1. THE FLUME SHALL BE FABRICATED FROM 16 GAUGE CULVERT STOCK WITH 2 2/3" X 1/2" CORRUGATIONS.
2. THE STARTER SECTION SHALL BE FABRICATED FROM 16 GAUGE NON–CORRUGATE CULVERT STOCK
3. ADJUSTABLE WIDTH FLUMES ARE AVAILABLE FOR APPLICATIONS OVER 24" WIDE. INSTALL ACCORDING TO MANUFACTURER.
4. SUPPORTS MAY BE STEEL BAR, ANGLE IRON OR APPROVED EQUIVALENT POSTS.







TURNER TYPE ELBOW
(ALTERNATE ELBOW)

FULL ROUND DOWNSPOUT

NOTE:

1. THE ELBOW AND SPILLWAY SECTION SHALL BE OF THE SAME DIAMETER, MATERIAL AND COATING AS THE CULVERT IT IS ATTACHED TO.
2. THE SPILLWAY SECTION SHALL BE FABRICATED FROM 16 GAUGE METAL WITH 2 2/3" X 1/2" CORRUGATIONS.
3. SUPPORTS MAY BE COMMERCIAL STEEL FENCE POSTS, STEEL BAR, ANGLE IRON OR EQUIVALENT METAL POSTS.
4. CONNECTION BETWEEN HELICALLY CORRUGATED AND ANNULAR PIPE SHALL REQUIRE A SPECIAL ADAPTER COUPLING BAND.

GENERAL NOTES

1. THE LENGTH OF THE DOWNSPOUT SHALL BE DETERMINED AT THE TIME OF INSTALLATION.
2. FABRICATION AND INSTALLATION OF ALL GALVANIZED STEEL DOWNSPOUTS SHALL CONFORM TO AASHTO M36, M218; ALUMINUM ALLOY TO AASHTO M196; ALUMINIZED TYPE II TO AASHTO 36, M196.
3. ALL STEEL NUTS, BOLTS AND WASHERS SHALL BE GALVANIZED. (ASTM A307, A153)
4. SLOPE PROTECTION SPLASH PADS, WHEN REQUIRED, SHALL BE A MIN. 2' WIDE X 5' LONG X 2' DEEP. INDIVIDUAL ROCKS SHALL BE 10" – 14" IN SIZE.
5. SLOPE PROTECTION SPLASH PADS SHALL EXTEND TO UNDISTURBED GROUND.

ALWAYS THINK SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.

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

DOWNSPOUT INSTALLATION DETAILS

DRAWN DKL	SCALE NONE
DATE April 2022	SHEET 1 OF 1
DRAWING NO. ORM05–2023.0008.C13	

DEAD WEST TIMBER SALE
Road Renovation & Construction Work List

Renovation/Improvement/Construction: This consists of road work to be performed on the road prior to its use. This work includes, but not limited to; clearing and grubbing, excavation for roads and landings, compacting, watering, blading and/or rolling the road surface, cleaning/constructing ditches where needed, cleaning or enlarging catch basins and outlets, replacing/installing new culverts, cleaning the entire barrel of all culverts, maintaining water dips (WDs), maintaining/constructing armored water dips (AWDs), spot rocking, road surfacing, seeding and mulching, constructing water bars, and constructing barricades. Remove all down trees from road surface, ditch lines, culvert catch basins, and within brushing limits. All culvert replacements shall be capped with 20 cubic yards (unless otherwise noted in the worklist) from Exhibit C-17, Section 1200 (Gradation C-1). All aggregate conforming to Exhibit C-17, Section 900 (Gradation A) and 1200 (Gradation C-1) shall be from commercial quarries. All turnout and truck turnaround widths are in addition to 16' subgrade widths.

Roadside Brushing: This consists of road work to be performed on the road prior to its use. The work includes, but is not limited to: brushing 6 horizontal feet from the centerline of the ditch and 6 horizontal feet from the outside shoulder of the road prism, removing brush within 4' of the inlet and outlet of CMPs, removing brush, limbs, and trees along the roadway to improve sight distance. Disposal from roadside brushing shall be lop and scatter or by chipping. Debris shall not be allowed to accumulate in concentrations but shall be further reduced or removed. Concentrations will be defined as any debris, limbs or branches touching each other or piled on top of each other or any material sticking up over 2 feet in elevation above the ground. Cut trees or debris shall not be allowed to stand or lean against other standing uncut trees or brush. Such "hang ups" shall be removed and scattered down slope. Debris shall be cut so that the length of limbs, downed pole, hardwoods, or brush does not exceed eight feet. Brush shall be cut to meet regular specifications in Exhibit C-17, Section 2100. While roadside brushing, there shall be no scarring or any other damage of the tree trunk or bole allowed. Use of excavators for brush removal will be at the discretion of the Authorized Officer.

Roadside Vegetation Maintenance: This work includes removing merchantable/non-merchantable trees and brush 6 horizontal feet from the centerline of the ditch and 6 horizontal feet from the outside shoulder of the road prism as designated in the work list. Vegetation to be cut and disposed of will be from 8 inches diameter at breast height and up. All roadside vegetation maintenance sections shall be posted and/or staked with beginning and ending mileposts. Merchantable trees in sections outside of timber sale units are marked with blue paint. All merchantable roadside trees within timber sale units shall be cut unless painted orange or pink (reserve trees). All stumps that may hinder road maintenance operations including road blading operations and snow plowing shall be removed. Any damage that occurs to the road shall be repaired and re-compacted. Any loose soil that remains on site shall be re-compacted or disposed of at areas designated by the Authorized Officer. All disturbed areas shall be seeded and mulched. All remaining brush and limbs from tree removal operations shall be either chipped or piled in locations designated by the Authorized Officer below the road in accordance with clearing and grubbing methods and/or roadside brushing disposal methods in Exhibit C-17, Sections 200 and 2100.

RENO – Renovation
PRR – Pit Run Rock Surface
ASC – Aggregate Surface Course
AWD – Armored water dip
CMP – Corrugated metal pipe (Aluminized)
FS – Forest Service
RVM – Roadside Vegetation Maintenance
CHPN – Chipping
IMPR – Improvement
DBH– Diameter at Breast Height
NAT – Natural Surface
WB – Water bar
CY – Cubic yards
Jct. – Junction
BRSH – Brushing

FS Road 112 (Trail Divide) ASC

MP	Remarks
0.0	Jct. with road 32-1W-19.00. BEGIN RENO and BRSH.
0.04	BEGIN RVM.
0.27	END RVM.
0.55	Jct. with FS rd. 118 (left). Existing landing (left).
0.56	BEGIN RVM.
0.64	END RENO, RVM and BRSH.

FS Road 1632 (32-1W-19.00 A-E) Ragsdale Butte Divide ASC

MP	Remarks
0.00	Jct. State Hwy 227. BEGIN Segment A. BEGIN RENO and BRSH.
0.18	Jct. with road 32-1W-19.01 (left).
0.50	Jct. with road 32-1W-19.02 (right), Y intersection.
0.54	Jct. with FS road 112 (left).
0.55	Property line.
0.65	Jct. with road 32-1W-19.04 (right).
0.73	Jct. with Temp Route 19-3(right).
0.78	Jct. with road 32-1W-19.05 (left).
0.88	BEGIN RVM
1.07	Jct. with road 32-1W-19.03 (right).
1.08	END RVM
1.08	Property line. BEGIN segment B.
1.43	Jct. unnumbered spur road (left).
1.66	Property line. BEGIN segment C.
1.66	BEGIN RVM
2.06	END RVM
2.12	Jct. with road 32-1W-29.04 (left).
2.13	BEGIN RVM
2.19	END RVM
2.24	BEGIN RVM
2.42	Jct. with road 32-1W-33.01 (right).
2.45	Jct. with road 32-1W-29.03 (right, Y intersection).
2.55	Jct. with road 32-1W-29.08 (right).
2.61	END RVM
2.69	BEGIN RVM
2.82	END RVM
2.99	Jct. with road 32-1W-20.00 (left). END RENO and BRSH.

FS ROAD 1632 (32-1W-19.00 H) Ragsdale Butte Divide) ASC

MP	Remarks
6.08	BEGIN RENO and RVM.
6.47	Property line. END RENO and RVM.

Road 32-1W-19.03 NAT

MP	Remarks
0.00	Jct. with road 32-1W-19.00. Remove trench barricade. BEGIN RENO and BRSH.
0.09	END RENO and BRSH.

Road 32-1W-19.04 NAT

MP	Remarks
0.00	Jct. with road 32-1W-19.00. BEGIN RENO and BRSH. Remove barricade.
0.24	Jct. with Temp Route 19-4. END RENO and BRSH. BEGIN construction of temp spur TR 19-4

Road 32-1W-19.05 NAT

MP	Remarks
0.00	Jct. with road 32-1W-19.00. BEGIN RENO and BRSH. Remove barricade. Helicopter landing. Place 185 cu. yds of 4" minus rock where directed.
0.09	END RENO and BRSH.

Road 32-1W-20.00 ASC

MP	Remarks
0.00	Jct. with road 32-1W-19.00. BEGIN RENO and BRSH.
0.07	Existing gate.
0.20	Jct. with road 32-1W-29.05 (right).
0.20	BEGIN RVM.
0.34	END RVM.
0.39	BEGIN RVM.
0.52	END RVM.
0.56	BEGIN RVM.
0.71	END RVM.
0.79	BEGIN RVM.
0.85	END RENO, BRSH, and RVM.

Road 32-1W-21.02 ASC

MP	Remarks
0.00	Jct. with road 32-1W-33.02. BEGIN RENO and SURFACING road with 6" of compacted 4" minus rock. Place 185 cu.yd of compacted 4" minus rock on Helicopter landing.
0.02	End RENO and SURFACING.

Road 32-1W-28.00 (Sec 28. Quarry Spur) PRR

MP	Remarks
0.00	Jct. with road 32-1W-33.02. BEGIN RENO and RVM
0.19	END RENO and RVM

Road 32-1W-29.02 (Shed Camp Connect 29.02) ASC

MP	Remarks
0.00	Jct. with road 32-1W-33.01. BEGIN RENO, BRSH and RVM.
0.11	END RVM.
0.19	BEGIN RVM.
0.27	**Sensitive plant, look for buffer. Avoid impacts from BRSH and RVM.**
0.38	END RVM.
0.44	BEGIN RVM.
0.98	END RENO, BRSH and RVM

Road 32-1W-29.03 (Snowmobile Connect) ASC

MP	Remarks
0.0	Jct. with road 32-1W-19.00. BEGIN RENO, BRSH and RVM.
0.12	Jct. with road 32-1W-29.08.
0.18	END RVM.
0.23	BEGIN RVM.
0.25	END RVM.
0.28	Existing pump chance left.
0.31	BEGIN RVM.
0.34	Jct. with non-inventory road left.
0.51	END RVM.
0.57	BEGIN RVM.
0.77	Jct. with road 32-1W-33.01. END RENO, BRSH and RVM.

Road 32-1W-29.07 (Upper Trail Spur 7) ASC

MP	Remarks
0.00	Jct. with road 32-1W-33.01. BEGIN RENO and BRSH.
0.23	END RENO and BRSH.

Road 32-1W-29.08 ASC

MP	Remarks
0.00	Jct. with road 32-1W-29.03. BEGIN RENO and RVM.
0.05	Jct. with road 32-1W-19. END RENO and RVM.

Road 32-1W-31.03 (Beaver Springs Sp) ASC

MP	Remarks
0.0	Jct. with State Highway 227. BEGIN RENO and BRSH.
0.03	BLM yellow mega gate.
0.04	Jct. with road 32-1W-31.04. END RENO and BRSH.

Road 32-1W-31.04 (Beaver Spgs) ASC

MP	Remarks
0.0	Junction with 32-1W-31.03. BEGIN RENO and BRSH. Re-establish ditch.
0.03	BEGIN RVM.
0.13	END RVM.
0.18	BEGIN RVM.
0.42	END RENO, BRSH and RVM.

Road 32-1W-31.05 NAT

MP	Remarks
0.00	Jct. with road 33-1W-5.04. BEGIN RENO, RVM and SURFACING with 6" of compacted 4" minus rock.
0.17	END RENO, RVM and SURFACING. Place 185 cu. yds. of 4" minus rock on helicopter landing.

Road 32-1W-31.06 NAT

MP	Remarks
0.00	Jct. with Hwy 227. BEGIN IMPR (WIDENING).
0.08	END IMPR.

Road 32-1W-33.01 (Upper Trail Creek ML) ASC

Note: Buried utility line along road.

MP	Remarks
0.00	Jct. with County Road # 501. BEGIN RENO, BRSH and RVM.
0.15	Jct. with road 32-1W-33.00 (left).
0.21	END RVM.
0.27	BEGIN RVM. Install 24" x 38' CMP.
0.32	Install 24" x 60' CMP.
0.33	END RVM.
0.40	Jct. with road 32-1W-33.02 (right).
0.40	BEGIN RVM.
0.45	END RVM.
0.57	BEGIN RVM. Install 18" x 36" CMP.
0.67	END RVM.
0.76	BEGIN RVM.
0.90	Place 185 CY, 6" compacted of 4" minus on service landing, (right and left).
0.93	END RVM.
1.06	BEGIN RVM.

(continued on next page)

1.21 Jct. with unnumbered spur road (right).
1.42 Jct. with unnumbered spur road (right).
1.47 Jct. with road 32-1W-33.04 (left).
1.51 END RVM.
1.56 BEGIN RVM.
1.57 Install 18" x 44' CMP. Install 18" x 10' full round downspout.
1.58 END RVM.
1.62 BEGIN re-establishing ditch.
1.64 BEGIN RVM.
1.66 END re-establishing ditch. Install 18" x 10' full round downspout.
1.69 Install 18" x 10' full round downspout.
1.73 END RVM.
1.74 Jct. with road 32-1W-29.06 (right).
1.80 BEGIN RVM.
2.01 END RVM.
2.07 Jct. unnumbered spur road (left).
2.10 BEGIN RVM.
2.13 Install 24" x 42' CMP.
2.15 Existing pump chance. Install 24' x 42' CMP.
2.31 Jct. with road 32-1W-29.01 (left).
2.34 Jct. with road 32-1W-29.02 (right).
2.36 Install 18' x 42' CMP.
2.50 Install 24' x 38' CMP.
2.58 Install 18' x 42' CMP.
2.64 Install 18' x 34' CMP.
2.70 Install 18' x 36' CMP.
2.73 Jct. unnumbered spur road(left). Install 18' x 62' CMP.
2.81 Jct. unnumbered spur road (left).
2.86 Install 18' x 40' CMP.
2.92 Install 18' x 40' CMP.
2.97 Install 18' x 44' CMP. Install 18" x 20' full round downspout.
3.05 Jct. with road 32-1W-29.07 (left).
3.10 END RVM.
3.20 BEGIN RVM.
3.66 Jct. with road 32-1W-29.03 (right).
3.87 Jct. with road 32-1W-19.00 (left, right). END RENO, BRSH and RVM.

Road 32-1W-33.02 (Shed Camp ML) ASC

MP	Remarks
0.0	Jct. with road 32-1W-33.01. BEGIN RENO, BRSH and RVM. Place 70 cu. yds of compacted 1½" minus rock where directed. Place 185 cu. yds. of compacted 4" minus rock on helicopter landing.
0.05	END RVM.
0.16	BEGIN RVM.
0.28	END RVM.
0.31	Existing pump chance (left).
0.34	BEGIN RVM.
0.44	END RVM.
0.52	BEGIN RVM.

(continued on next page)

0.54 Jct. with road 32-1W-33.03 (right).
0.55 END RVM.
0.56 Jct. with unnumbered spur road (left).
0.65 BEGIN RVM.
0.81 END RVM.
0.97 BEGIN RVM.
1.03 Existing ditchout (right).
1.06 Existing ditchout (left).
1.42 END RVM.
1.47 BEGIN RVM.
1.65 Jct. with road 32-1W-28.00 to Sec. 28 quarry (left).
1.80 END RVM.
1.88 BEGIN RVM.
2.01 END RVM.
2.05 BEGIN RVM.
2.15 END RVM.
2.90 Jct. with road 32-1W-21.00.
3.15 Jct. with road 32-1W-Sec.21. Existing pump chance (right).
3.31 Jct. with road 32-1W-21.01 (right).
3.35 Jct. with road 32-1W-21.02 (left). Helicopter landing (left). Place 185 cu. yds. of 4" minus rock where directed.
3.63 Jct. with road 32-1W-21.05 (right). Existing cross drain culvert.
3.92 BEGIN RVM.
4.08 END RVM.
4.14 BEGIN RVM.
4.17 END RVM.
4.21 **Sensitive plant, look for buffer. Avoid impacts from BRSH**.
4.22 BEGIN RVM.
4.45 Existing quarry (right).
4.56 END RVM.
4.73 BEGIN RVM.
4.92 Jct. with road 32-1W-19.00 (left, right). END RENO, BRSH and RVM.

Road 32-1W-33.03 (Lower Spur) ASC

MP **Remarks**

0.0 Jct. 32-1W-33.02. BEGIN RENO, BRSH, RVM and SURFACING with 6" of compacted 1 ½" minus rock.
0.01 END RVM.
0.03 Install 24" x 36' CMP.
0.09 Existing Pump chance (left).
0.13 BEGIN RVM.
0.24 Jct. unnumbered spur road (left).
0.33 END RVM.
0.38 BEGIN RVM.
0.43 Replace existing 18"x 36' CMP. with 18"x 40' CMP. Add 10' full round downspout. Repair road shoulder by placing 30 cu. yds. of 4" minus rock.
0.56 Install 18" x 38' CMP. Install 18" x 10' full round down spout.
0.60 END RVM.
0.63 Install 24" x 36' CMP.

(continued on next page)

0.67 Install 24" x 34' CMP.
0.69 BEGIN RVM.
0.79 END RVM.
0.82 Install 24" x 38' CMP.
0.84 BEGIN RVM.
0.96 Existing landing (right).
1.00 Existing guard rail barricade. Remove and dispose of posts & guardrail.
1.12 Existing cross drain culvert. Place 10 cu. yds. of 4" minus rock at outlet.
1.23 Install 24" x 36' CMP.
1.32 END RVM.
1.35 BEGIN RVM.
1.45 Jct. with landing and spur road 32-1W-33.05 (left). END RENO, BRSH, RVM and SURFACING.

Spur 32-1W-33.04 (Up Trailhd Esmt) ASC

MP	Remarks
0.00	Jct. with road 32-1W-33.1. BEGIN RENO, BRSH , and SURFACING with 6" of compacted 1 1/2" minus rock. Rock helicopter landing with 185 cu. yds. of compacted 4" minus rock.
0.09	Existing 18" concrete culvert. Reduce SURFACING depth to 4" of compacted 1 1/2" minus rock.
0.16	Existing 18" concrete culvert. END RENO, BRSH, and SURFACING.

Road 32-1W-33.05 NAT

MP	Remarks
0.00	Jct. with road 32-1W-33.1 BEGIN RENO, BRSH and SURFACING with 6" of compacted 4" minus rock. Place 185 cu. yds. of 4" minus rock on Helicopter landing.
0.06	END RENO and BRSH and SURFACING.

Road 33-1W-3.06 NAT

MP	Remarks
0.00	Jct. with road 33-1W-10.0. BEGIN IMPR (WIDENING).
0.41	END IMPR.

Road 33-1W-3.07 NAT

MP	Remarks
0.00	Jct. with the 33-1W-9.00 BEGIN RENO and BRSH.
0.04	Jct. private property. END RENO and BRSH.

Road 33-1W-5.00 (Dwinnel) ASC

MP	Remarks
0.0	Jct. with State Hwy 227 (Tiller-Trail Hwy). BEGIN RENO and BRSH.
0.08	Existing pipe gate.
0.10	Property Boundary.
0.26	Existing private quarry.
0.31	Jct. with unnumbered spur road (right).
0.40	Jct. with unnumbered spur road (left).
0.63	Jct. with unnumbered spur road (left).

(continued on next page)

0.83 Jct. with road 33-1W-8.01 (left).
0.90 Property Boundary.
0.95 BEGIN RVM.
1.28 Jct. with unnumbered spur road (right).
1.80 Jct. with Temp Route 7.2 (left).
2.04 Jct. with road 33-1W-7.00 (left).
2.10 END RVM.
2.25 BEGIN RVM.
2.62 END RVM.
2.67 BEGIN RVM.
2.72 Jct. with road 33-1W-7.02 (left). END RENO, BRSH and RVM.

Road 33-1W-5.04 (Wall Creek) NAT

MP	Remarks
0.00	Jct. with State Hwy. 227. BEGIN RENO, BRSH, RVM and SURFACING with 6" of compacted 4" minus rock.
0.02	Existing pipe gate.
0.11	END RVM.
0.15	Jct. with private spur road (left).
0.18	BEGIN RVM.
0.60	Begin re-establishing ditch line.
0.63	END RVM.
0.70	BEGIN RVM. End re-establishing ditch line.
0.74	END RVM.
0.70	Begin re-establishing ditch line.
0.76	Begin re-establishing ditch line.
0.79	BEGIN RVM
0.82	End re-establishing ditch line**.**
0.87	Existing landing area.
1.25	Jct. with 32-1W-31.05 (left). END RENO, BRSH, RVM and SURFACING.

Road 33-1W-5.05 NAT

MP	Remarks
0.00	Jct. with road 33-1W-5.00. BEGIN RENO
0.13	Jct. with Temp Route 5-1. END RENO.

Road 33-1W-6.00 NAT

MP	Remarks
0.00	Jct. with State Hwy. 227. BEGIN RENO and BRSH.
0.04	Existing gate.
0.17	Jct. with private road (right).
0.40	Jct. with private. road (left).
0.55	Jct. with private. road (right).
0.70	Jct. with private. road (right).
0.76	Jct. with private. road (right).
0.89	Repair hole in road by scarifying and placing 1 cy. yd. of compacted 1 ½" minus rock.
1.03	Jct. with road 33-2W-1.01 (left). Jct. with road 33-2W-1.02 (right). END RENO, and BRSH.

Road 33-1W-7.00 (Old Ben Spur) ASC

MP	Remarks
0.00	Jct. with road 33-1W-5.00. BEGIN RENO, BRSH and RVM.
0.25	Jct. with road 33-1W-7.01 (right).
0.26	END RVM.
0.44	BEGIN RVM.
0.87	END RENO, BRSH and RVM.

Road 33-1W-7.01 (Old Ben TS Spur) NAT

MP	Remarks
0.00	Jct. with road 33-1W-7.00. BEGIN IMPR (widening) .
0.16	END IMPR (widening) .

Road 33-1W-7.02 (Old Ben Ex) ASC

MP	Remarks
0.00	Jct. with road 33-1W-5.00. BEGIN RENO and RVM.
0.27	END RENO and RVM.

Road 33-1W-7.04 NAT

MP	Remarks
0.00	Jct. with road 33-1W-5.0 BEGIN IMPR (widening).
0.26	END RENO and IMPR(widening).

Road 33-1W-7.05 NAT

Renovate. Brush

MP	Remarks
0.00	Jct. with road 33-1W-8.01. BEGIN IMPR (widening). Remove Barricade.
0.45	Jct. with TR7-3. END IMPR (widening). Begin construction of TR 7-3.

Road 33-1W-8.00 (Buck Rock) ASC

MP	Remarks
0.00	Jct. with County Road # 501 (East Fork Trail Creek). BEGIN RENO and BRSH.
0.08	BEGIN RVM.
0.43	Jct. with private driveway (left).
0.82	END RVM.
0.83	Jct. with private driveway. (right).
0.87	BEGIN RVM.
1.41	END RVM.
1.44	Jct. with road 33-1W-9.01(right).
1.48	BEGIN RVM.
1.72	END RVM.
1.82	BEGIN RVM.
2.15	Jct. with road 33-1W-9.00 (left).
2.57	Jct. with Section 10 quarry service landing (right).
2.62	Jct. with road 33-1W-10.00. (left). END RENO, BRSH, and RVM.

Road 33-1W-8.01 (Dwinnel Road Easement) ASC

MP	Remarks
0.00	Jct. with road 33-1W-5.00. BEGIN RENO and BRSH.
0.14	BEGIN RVM.
0.15	END RVM.
0.19	BEGIN RVM.
0.33	END RVM.
0.43	Existing pump chance
0.59	BEGIN RVM.
0.67	END RVM.
0.74	BEGIN RVM.
0.90	Junction with 33-1-7.05 right. END RENO, BRSH, and RVM.

Road 33-1W-9.00 (Toothacher Creek) ASC

MP	Remarks
0.00	Jct. with the 33-1-8.00 road (Buck Rock). BEGIN RENO, BRSH, and RVM.
0.05	Existing pipe gate. Repair gate by resetting the post on the cut bank side.
0.27	END RVM.
0.35	Jct. with 33-1W-10.04 road (right).
0.36	BEGIN RVM.
0.47	Existing guardrail gate.
0.56	Repair slump in the road by digging out fill slope and placing and compacting 50 cu. yds of 4" minus rock. Place 20 cu. yds. of 1 ½" minus surface rock from BLM stockpile on 33-1-10.0 once repairs are complete.
0.97	Jct. with road 33-1W-3.07 (left). END RENO, BRSH and RVM.

Road 33-1W-10.00 (Oliver Springs ML) ASC

MP	Remarks
0.00	Jct. with Buck Rock Road 33-1W-8.00. BEGIN RENO and RVM.
0.08	**Sensitive plant, look for buffer. Avoid impacts from RVM.**
0.11	**Sensitive plant, look for buffer. Avoid impacts from RVM.**
0.33	Jct. with spur road (right).
0.34	Jct. with road 33-1W-10.03 (left).
0.74	Jct. with road 33-1W-10.03 (left). BLM rock stockpile (left)
0.75	Jct. with road 33-1-3.0 (left).
0.83	Jct. with road 33-1-3.06 (left).
0.94	END RENO and RVM.

Road 33-2W-1.01 (North Trail West Spur) PRR

MP	Remarks
0.00	Jct. with road 33-1W-6.00. BEGIN RENO and BRSH .
0.12	Existing drain dip. Place 10 cu. yds. of compacted 1 ½" minus rock. Remove berm from outlet of drain dip.
0.17	Existing rolling water dip. Place 10 cu. yds. compacted 1 ½" minus rock. Remove berm from outlet of drain dip.
0.87	Large landing.
0.92	END RENO and BRSH .

Road 33-2W-1.02 NAT

MP	Remarks
0.0	Jct. with road 33-1W-6.00. BEGIN RENO and BRSH.
0.06	Jct. with road 33-1W-1.03 (left).
0.09	END RENO and BRSH.

Road 33-2W-1.03 NAT

MP	Remarks
0.0	Jct. with road 33-2W-1.02. BEGIN RENO and BRSH.
0.01	Designated skid road (left).
0.04	END RENO and BRSH.

TR 5-1

New construction of temporary road.

MP	Remarks
0.0	Jct. with road 33-1W-5.05. BEGIN temp road construction.
0.06	Place 10cu. yds. of 4-2" crushed clean rock.
0.10	Install temporary 20' Poly culvert pipe. Place 30 cu. yds. of 4-2" crushed clean rock around installation.
0.43	END temp road construction.

TR 7-2

New construction of temporary road.

MP	Remarks
0.00	Jct. with road 33-1W-5.0. BEGIN temp road construction.
0.09	END temp road construction.

TR 7-3

New construction of temporary road.

MP	Remarks
0.0	Jct. with road 33-1W-7.05. BEGIN temp road construction.
0.05	Stream ford. Place 10 cu. yds. of 4-2" crushed clean rock.
0.18	END temp road construction.

TR 19-3

New construction of temporary road.

MP	Remarks
0.00	Jct. with FS road 32-1W-19.0. BEGIN temp road construction.
0.06	END temp road construction. BEGIN designated skid trail.

TR 19-4

New construction of temporary road.

MP	Remarks
0.00	Jct. with road 32-1W-19.04. BEGIN temporary road construction.
0.02	END temp road construction.

TIMBER SALE ROAD SPECIFICATIONS

TABLE OF CONTENTS

TIMBER SALE ROAD SPECIFICATIONS

GENERAL – 100

101 - Prework Conference(s):

A prework conference will be held prior to the start of new construction, improvement, renovation, surfacing, and seeding/mulching operations. 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 his representative(s), subcontractor(s) and/or his or their representative(s) and the Authorized Officer and/or his representative(s).

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

102 - Definitions:

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

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

ACI - American Concrete Institute

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

ASTM - American Society for Testing and Materials.

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

BLM - Bureau of Land Management

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

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

TIMBER SALE ROAD SPECIFICATIONS

expressed as the amount of pressure causing failure. Rupture or burst results from tensile failure of the geotextile material.

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

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

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

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

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

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

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

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

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

Penetration Resistance - The geotextile material property determined by the force required to penetrate a geotextile material with a sharp pointed object. Initial penetration is by separating the fibers. Further penetration is essentially a tearing process.

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

Permeability - The geotextile material property which permits water to be transmitted in

TIMBER SALE ROAD SPECIFICATIONS

the longitudinal or transverse planes of the geotextile material.

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

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

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

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

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

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

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

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

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

Road Centerline - The longitudinal center of a roadbed.

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

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

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

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

Scarification - The process of loosening or breaking up of the surface layer of soil or

TIMBER SALE ROAD SPECIFICATIONS

road, usually to a specified depth.

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

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

Spalls - Flakes or chips of stone.

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

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

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

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

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

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

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

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

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

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

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

TIMBER SALE ROAD SPECIFICATIONS

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.
AASHTO T 119	Slump of hydraulic cement concrete.

TIMBER SALE ROAD SPECIFICATIONS

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 cohensionless 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

TIMBER SALE ROAD SPECIFICATIONS

mile to 1.8 miles per hour, as directed by the Authorized Officer.

The towing vehicle and roller or self-propelled unit meeting the above requirements shall be considered a vibratory roller unit.

103g - Vibratory compactor. Vibratory compactors shall consist of multiple or gang-type compacting units or pads with a minimum variable width of 2 feet. It shall be self-contained and capable of compacting material as required.

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

TIMBER SALE ROAD SPECIFICATIONS

CLEARING AND GRUBBING - 200

201 - This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions within the clearing limits in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans and as staked on the ground.

202 - Where clearing limits have not been marked on the ground, established by these specifications or shown on the plans, the limits shall extend 10 feet back of the top of the cut slope and 5 feet out from the toe of the fill slope.

203 - Clearing shall consist of the removal and disposal of trees, logs, rotten material, brush, and other vegetative materials and surface objects in accordance with these specifications and within the limits established for clearing as specified under Subsections 202 and 202b, as shown on the plans, as staked on the ground, and as posted.

203b - Standing trees and snags to be cleared shall be felled within the limits established for clearing unless otherwise authorized.

204 - Grubbing shall consist of the removal and disposal of stumps, roots, and other wood material embedded in the ground and protruding obstacles remaining as a result of the clearing operation in accordance with Subsections 204a, and 204b, and 204c, and 204d, and 204e 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.

204b - Stumps and other protruding objects shall be completely removed within the limits of required embankments having heights of less than 4 feet.

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.

204e - Roots and embedded wood material shall be removed to a depth not less than 1 foot below embankment subgrades or slope surfaces.

205 - Clearing and grubbing debris shall not be placed or permitted to remain in or under road embankment sections.

TIMBER SALE ROAD SPECIFICATIONS

206 Clearing and grubbing debris shall be disposed of by chipping in accordance with Subsection 209 and/or piling in accordance with Subsection 211 and at the following road locations:

Road No.	From M.P./Sta	To M.P./Sta	Activity Type	Disposal Method
FS Road 112	0.04	0.27	Rdside Veg. Mgt.	Pile
FS Road 112	0.56	0.64	Rdside Veg. Mgt.	Pile
32-1-19.00	0.88	1.08	Rdside Veg. Mgt.	Pile
32-1-19.00	1.66	2.06	Rdside Veg. Mgt.	Pile
32-1-19.00	2.13	2.19	Rdside Veg. Mgt.	Pile
32-1-19.00	2.24	2.61	Rdside Veg. Mgt.	Pile
32-1-19.00	2.69	2.82	Rdside Veg. Mgt.	Pile
32-1-19.0 Seg H	6.08	6.47	Rdside Veg. Mgt.	Pile
32-1-20.00	0.20	0.34	Rdside Veg. Mgt.	Pile
32-1-20.00	0.39	0.52	Rdside Veg. Mgt.	Pile
32-1-20.00	0.56	0.71	Rdside Veg. Mgt.	Pile
32-1-20.00	0.76	0.82	Rdside Veg. Mgt.	Pile
32-1-28.00	0.00	0.19	Rdside Veg. Mgt.	Pile
32-1-29.02	0.00	0.11	Rdside Veg. Mgt.	Pile
32-1-29.02	0.19	0.38	Rdside Veg. Mgt.	Pile
32-1-29.02	0.44	0.98	Rdside Veg. Mgt.	Pile
32-1-29.03	0.00	0.18	Rdside Veg. Mgt.	Pile
32-1-29.03	0.23	0.25	Rdside Veg. Mgt.	Pile
32-1-29.03	0.31	0.51	Rdside Veg. Mgt.	Pile
32-1-29.03	0.57	0.77	Rdside Veg. Mgt.	Pile
32-1-29.08	0.00	0.05	Rdside Veg. Mgt.	Pile
32-1-31.04	0.03	0.13	Rdside Veg. Mgt.	Pile
32-1-31.04	0.18	0.42	Rdside Veg. Mgt.	Pile
32-1-33.01	0.00	0.21	Rdside Veg. Mgt.	Pile
32-1-33.01	0.27	0.33	Rdside Veg. Mgt.	Pile
32-1-33.01	0.40	0.45	Rdside Veg. Mgt.	Pile
32-1-33.01	0.57	0.67	Rdside Veg. Mgt.	Pile
32-1-33.01	0.76	0.93	Rdside Veg. Mgt.	Pile
32-1-33.01	1.06	1.51	Rdside Veg. Mgt.	Pile
32-1-33.01	1.56	1.58	Rdside Veg. Mgt.	Pile
32-1-33.01	1.64	1.73	Rdside Veg. Mgt.	Pile
32-1-33.01	1.80	2.01	Rdside Veg. Mgt.	Pile
32-1-33.01	2.10	3.10	Rdside Veg. Mgt.	Pile
32-1-33.01	3.20	3.87	Rdside Veg. Mgt.	Pile
32-1-33.02	0.00	0.05	Rdside Veg. Mgt.	Pile
32-1-33.02	0.16	0.28	Rdside Veg. Mgt.	Pile
32-1-33.02	0.34	0.44	Rdside Veg. Mgt.	Pile

TIMBER SALE ROAD SPECIFICATIONS

32-1-33.02	0.52	0.55	Rdside Veg. Mgt.	Pile
32-1-33.02	0.65	0.81	Rdside Veg. Mgt.	Pile
32-1-33.02	0.97	1.42	Rdside Veg. Mgt.	Pile
32-1-33.02	1.47	1.80	Rdside Veg. Mgt.	Pile
32-1-33.02	1.88	2.01	Rdside Veg. Mgt.	Pile
32-1-33.02	2.05	2.15	Rdside Veg. Mgt.	Pile
32-1-33.02	3.92	4.08	Rdside Veg. Mgt.	Pile
32-1-33.02	4.14	4.17	Rdside Veg. Mgt.	Pile
32-1-33.02	4.22	4.56	Rdside Veg. Mgt.	Pile
32-1-33.02	4.73	4.92	Rdside Veg. Mgt.	Pile
32-1-33.03	0.00	0.01	Rdside Veg. Mgt.	Pile
32-1-33.03	0.13	0.33	Rdside Veg. Mgt.	Pile
32-1-33.03	0.38	0.60	Rdside Veg. Mgt.	Pile
32-1-33.03	0.69	0.79	Rdside Veg. Mgt.	Pile
32-1-33.03	0.84	1.32	Rdside Veg. Mgt.	Pile
32-1-33.03	1.35	1.45	Rdside Veg. Mgt.	Pile
32-1-33.04	0.00	0.16	Rdside Veg. Mgt.	Pile
33-1-3.06	0.00	0.41	Rdside Veg. Mgt.	Pile
33-1-5.00	0.00	0.08	Rdside Veg. Mgt.	Pile
33-1-5.00	0.95	2.10	Rdside Veg. Mgt.	Pile
33-1-5.00	2.25	2.62	Rdside Veg. Mgt.	Pile
33-1-5.00	2.67	2.72	Rdside Veg. Mgt.	Pile
33-1-5.04	0.00	0.11	Rdside Veg. Mgt.	Pile
33-1-5.04	0.18	0.63	Rdside Veg. Mgt.	Pile
33-1-5.04	0.70	0.74	Rdside Veg. Mgt.	Pile
33-1-5.04	0.79	1.25	Rdside Veg. Mgt.	Pile
33-1-7.00	0.00	0.26	Rdside Veg. Mgt.	Pile
33-1-7.00	0.44	0.87	Rdside Veg. Mgt.	Pile
33-1-7.02	0.00	0.27	Rdside Veg. Mgt.	Pile
33-1-8.00	0.08	0.82	Rdside Veg. Mgt.	Pile
33-1-8.00	0.87	1.41	Rdside Veg. Mgt.	Pile
33-1-8.00	1.48	1.72	Rdside Veg. Mgt.	Pile
33-1-8.00	1.82	2.62	Rdside Veg. Mgt.	Pile
33-1-8.01	0.14	0.15	Rdside Veg. Mgt.	Pile
33-1-8.01	0.19	0.33	Rdside Veg. Mgt.	Pile
33-1-8.01	0.59	0.67	Rdside Veg. Mgt.	Pile
33-1-8.01	0.74	0.90	Rdside Veg. Mgt.	Pile
33-1-9.00	0.00	0.27	Rdside Veg. Mgt.	Pile
33-1-9.00	0.36	0.97	Rdside Veg. Mgt.	Pile
33-1-10.00	0.00	0.94	Rdside Veg. Mgt.	Pile

TIMBER SALE ROAD SPECIFICATIONS

207 - The Purchaser shall prepare a burning plan for the disposal of clearing and grubbing debris in accordance with local and state laws, rules, and regulations. The plan shall be approved in writing by the Authorized Officer prior to burning.

207a - Burning shall utilize methods which produce intense heat with no visible smoke emissions except that minimal emissions of smoke associated with starting and stopping the operations will be tolerated. Prior to beginning burning the Purchaser shall obtain a burning permit from the regulating authority enforcing the air pollution control standards for the area and shall furnish a copy of the permit to the Authorized Officer. At the conclusion of each burning session, the fire shall be completely extinguished so that no smoldering debris remains. Debris to be burned shall be dirt free. Final placement of debris into the actual burning area shall be done with a crane, loader, or other suitable lifting equipment. The use of dozers will not be permitted, unless they are equipped with a brush blade. Stumps larger than 3 feet in diameter shall be split prior to burning.

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.

208c - Clearing debris shall be placed outside the roadway in a neat, compacted windrow laid approximately parallel and along the toe-line of embankment slopes. The top of the windrow shall not extend above the subgrade. Material in the windrow shall be matted down with construction equipment to form a compact and uniform pile. Windrows shall have 16-foot minimum breaks at least every 200 feet. Windrows shall not be placed against trees. A pioneer road may be constructed to provide an area for placement of windrows provided the excavated material is kept within the clearing limits and does not adversely affect the road construction.

211 - Disposal of clearing and grubbing debris 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.

TIMBER SALE ROAD SPECIFICATIONS

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 or metal tags.

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 or metal tags.

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.

TIMBER SALE ROAD SPECIFICATIONS

305c - Embankments formed of material containing less than 25 percent rock not larger than 8 inches in the greatest dimension shall be placed in 12-inch layers. Material containing more than 25 percent rock not larger than 12 inches in the greatest dimension shall be placed in successive layers not exceeding 2 feet in thickness.

306 - Layers of embankment, selected borrow or selected roadway excavation material as specified under Subsections 305a, 305b and 305c 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 and 103i and in accordance with the following tables.

Road No.	From Sta./M/P.	To Sta./M.P.	Subsection 306
TR5-1	0+00	22+70	306 f
TR7-2	0+00	5+00	306 f
TR7-3	0+00	9+50	306 f
TR19-3	0+00	3+17	306 f
TR19-4	0+00	1+06	306 f

Landing No.	Road No.	Subsection 306	Landing Type
D1	32-1-19.0	306 a	Log
D2	32-1-33.2	306 a	Log
D3	32-1-33.4	306 a	Log
D4	FS32	306 a	Service
D5	32-1-33.1	306 a	Service
D6	32-1-33.03	306 a	Log
D7	32-1-31.05	306 a	Log

The helicopter landings compaction will only be needed for the area to be rocked.:

306a - Minimum compaction for each layer of embankment, selected borrow, and selected roadway excavation material placed at optimum moisture shall be 1 hour of continuous compacting for each 150 cubic yards in place or fraction thereof.

306e - The final subgrade except landings and temporary roads shall be compacted to full width with compacting equipment conforming to the requirements of Subsections 103b, 103f, 103g, 103h, and 103i. Minimum compaction shall be 1

TIMBER SALE ROAD SPECIFICATIONS

hour of continuous compacting for each 8 stations of road or a fraction of as measured along the center line of the constructed road. Landings and temporary roads shall be compacted by routing construction equipment over full width.

306f - Compaction of embankment layers placed as specified under Subsection 305b above shall be accomplished by routing construction equipment over full width of embankment structures except as specified in Subsection 306.

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.

309 - The top of cut slopes shall be rounded by blending into the adjacent terrain for a distance not less than (1) foot and not more than (3) feet beyond the top of the cut. Rounding shall be performed in soils that can be shaped without ripping or blasting.

312 - When material, except solid rock, encountered in cuts at subgrade, is suitable for use in forming the finished roadbed, the top 6-inch layer of the subgrade shall be thoroughly scarified for the full width of the roadbed. Roots, sod, and other deleterious material or stones that will not pass a 6-inch square opening shall be removed. The scarified material shall be processed to the optimum moisture content suitable for maximum density and compacted in accordance with these specifications.

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

TIMBER SALE ROAD SPECIFICATIONS

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 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.

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.

324 - Excavated material shall not be allowed to cover boles of standing trees to a depth in excess of 1 foot on the uphill side.

327 - The finished grading shall be approved in writing by the Authorized Officer in segments. The Purchaser shall give the Authorized Officer 3 days notice prior to final inspection of the grading operations, and start of surfacing operations.

TIMBER SALE ROAD SPECIFICATIONS

PIPE CULVERTS - 400

401 - This work shall consist of furnishing and installing pipe culverts, splash pads, and full round downspouts 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 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. See Exhibit C-10, Culvert List, for locations.

403 - Grade culverts shall have a gradient of from 2 percent to 4 percent greater than the adjacent road grade. Grade culverts shall be skewed down grade 30 degrees as measured from the perpendicular to the centerline unless otherwise specified on the plans.

404 - Damage to the spelter, or burn back in excess of 3/8 inch, shall be wire brushed and painted with two coats of zinc-rich paint on zinc-coated, steel pipe and aluminum-rich paint on aluminum or aluminum-coated pipe.

405a - Corrugated-aluminized steel-welded pipe culverts and pipe-arch culverts and special sections shall conform to the requirements of AASHTO M 36 and AASHTO M 218, AASHTO M 274, or AASHTO M 289 as specified on the plans.

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.

407b - Full round culvert downspouts conforming to the material and construction requirements shall be constructed for culverts as shown on the plans and at the following locations:

TIMBER SALE ROAD SPECIFICATIONS

Road No.	Sta./M.P.
32-1W-33.01	MP 1.57
32-1W-33.01	MP 1.66
32-1W-33.01	MP 1.69
32-1W-33.01	MP 2.97
32-1W-33.03	MP 0.43
32-1W-33.03	MP 0.56

408 - Pipe culverts and pipe-arch culverts shall be placed on the bed starting at the downstream end with the inside circumferential laps pointing downstream and with the longitudinal laps at the side or quarter points. Coupling bands of the type required under these specifications shall be installed so as to provide the circumferential and longitudinal strength necessary to preserve the pipe alignment, prevent separation of the pipe sections, and minimize infiltration of fill material.

410 - Pipe shall be unloaded and handled with reasonable care. If the Authorized Officer determines any structure is damaged to the extent that it is unsuitable for use in the road construction, it shall be replaced at the Purchaser's expense.

411 - Trenches necessary for the installation of pipe culverts shall conform to the lines grades, dimensions, and typical diagram included in the plans and Exhibit C-8 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 crushed rock material in accordance with Section 1200 gradation C.

413 - Pipe culverts and pipe-arch culverts shall be bedded on a selected granular, crushed rock material in accordance with Section 1200 gradation C, 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.

TIMBER SALE ROAD SPECIFICATIONS

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, crushed rock material in accordance with Section 1200 gradation C, 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 8 inches in depth and 1 pipe diameter/span, or a minimum of 1 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.

418 - Side fills beyond the compaction limits specified under Subsection 417 shall be compacted as specified under Section 300.

419 - The pipe culverts after being bedded and backfilled as required by these specifications shall be protected by a 1.5-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 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 identified in the work list.

425 - Where pervious materials are used for backfill and bedding, collars consisting of selected impervious material shall be placed at the inlet and at various intervals along the pipe barrel as shown on the plans and as directed by the Authorized Officer.

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.

TIMBER SALE ROAD SPECIFICATIONS

428 - Remove and dispose of old culverts in a legal manner, and for any fees required. The Purchaser shall remove the old culverts from the work site prior to road acceptance.

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. Provide for downstream waterflow 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, shown on the plans and as marked on the ground with stakes.

501a - This work shall include the removal and disposal of slides in accordance with these specifications (and as marked on the ground with stakes or metal tags).

502 - The existing road surface shall be scarified (where needed) to its full width and to a depth of 6 inches to eliminate surface irregularities and bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans and as marked on the ground with stakes.

502a - Rocks larger than 4 inches in maximum dimension shall be removed from the scarified layers of the roadbed. Material so removed will not be permitted to remain on road shoulders or in ditches.

502b - Drainage ditches shall be bladed and shaped in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans.

504 - Scarified material and 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, and 103i and in accordance with Subsection 504a.

504a - Minimum compaction required shall be 1 hour of continuous rolling for each 5 stations of road or fraction thereof, as measured along the centerline per layer of material.

506 - The inlet end of designated 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 rock and vegetative obstructions which will impede the structure's designed outflow configuration. Catch basins shall conform to the lines, grade, dimensions, and typical diagram shown on the plans.

TIMBER SALE ROAD SPECIFICATIONS

507 - New drainage structures at the following locations shall be 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 Subsection 2100 of these 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 3 days notice prior to final inspection of the grading operations.

TIMBER SALE ROAD SPECIFICATIONS

WATERING - 600

601 - This work shall consist of furnishing and applying water required for the compaction of 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 (where the road crosses private property).

603 - Water trucks used in this work shall be equipped with a distributing device of ample capacity and of such design as to ensure uniform application of water on the road bed.

604 - Use of water sources are subject to applicable State water regulations.

605 - The Purchaser shall secure the necessary water permits and pay all required water fees for use of the water source(s) 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 and landings 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 source 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 Gradation	Gradation			
	A	**B**	**C**	**D**
4”	100			
3”	95-100	100		
2”		95-100	100	
1-1/2”			95-100	100
1”				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 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

TIMBER SALE ROAD SPECIFICATIONS

placement of screened rock materials. Notification for final inspection, prior to rocking, shall be 72 hours prior to that inspection and shall be 10 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 subgrades shall not be construed as surfacing under this specification.

907 - Filler or binder material obtained from sources shown on the plans and 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 103f, 103g 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 the 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. If necessary to meet the above requirements or to eliminate an excess of filler, the gravel shall be screened before crushing.

TIMBER SALE ROAD SPECIFICATIONS

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 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
No. 40	5-25	-	5-30	-	5-35	-
No. 200	2-15	3-15	3-15	3-15	2-15	3-15

1205 - Crushed rock material retained on the No. 4 sieve shall have a percentage of loss of not more than 35 at 500 revolutions, as determined by AASHTO T 96.

1206 - Crushed rock material shall show a durability value of not less than 35 as determined by AASHTO T210.

1207 - That portion of crushed rock material passing the No. 40 sieve, including blending filler, shall have a liquid limit of not more than 35 and a plasticity index of not less than 4 and not more than 12 as determined by AASHTO T 89 and AASHTO T 90.

1207a - That portion of crushed rock material passing No. 4 sieve, including blending filler, shall have a sand equivalent of not less than 35, as determined by AASHTO

TIMBER SALE ROAD SPECIFICATIONS

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 Subsections 300 and 500 for placing on the roadbed and landings and Subsections 900 for placing on the base course. Notification for final inspection prior to rocking shall be 72 hours prior to the inspection and shall be 10 days prior to start of surfacing operations.

1210 - Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed and landings and base course in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and staked on the

TIMBER SALE ROAD SPECIFICATIONS

ground. Compacted layers shall not exceed 4 inches in depth. When more than one layer is required, each 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 Subsections 103f, 103g and 103i . Minimum compaction shall be 1 hour of continuous compacting for each 5 stations, or fractions thereof.

TIMBER SALE ROAD SPECIFICATIONS

SLOPE PROTECTION - 1400

1401 - This work shall consist of furnishing, hauling, and placing stone materials for splash pads 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 blasted rock and coarse stone from roadway excavation of such quality that it will not disintegrate on exposure to water or weathering, and shall be graded in accordance with these specifications.

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

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 1405[1]

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

[1]Gradation includes spalls and rock fragments to provide a stable, dense mass.
[2]The 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.
[3]Rock 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.

TIMBER SALE ROAD SPECIFICATIONS

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.

1706a - The Purchaser shall perform, during the same construction season, erosion control measures specified on all exposed excavation, borrow, and embankment areas

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

Road No.	From Sta./M.P.	To Sta./M.P.
TR5-1	0.00	0.43
TR7-2	0.00	0.09
TR7-3	0.00	0.18
TR19-3	0.00	0.06
TR19-4	0.00	0.02

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

TIMBER SALE ROAD SPECIFICATIONS

1708 - Newly constructed roads to be carried over the winter period, shall be water barred and blocked to vehicular.

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 dissipators for pipe culverts (splash pads) conforming to the requirements and details shown on the respective exhibits.

1713 - Where newly constructed logging spur roads join with existing surfaced roads, the Purchaser shall construct a sag in the spur road profile and install a culvert in accordance with the requirements and details as shown 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 not 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) at the following locations:

Road No.	From Sta./M.P.	To Sta./M.P.
32-1W-19.03	0.00	0.09
32-1W-19.04	0.00	0.24
32-1W-19.05	0.00	0.56
33-1W-3.06	0.00	0.41
33-1W-3.07	0.00	0.04
33-1W-7.04	0.00	0.26
33-1W-7.05	0.00	0.45
33-1W-31.06	0.00	0.08
TR5-1	0.00	0.43
TR7-2	0.00	0.09
TR7-3	0.00	0.18
TR19-3	0.00	0.06
TR19-4	0.00	0.02

1802a - Soil stabilization work consisting of seeding and mulching shall be performed on new road construction, landings, disturbed areas and waste 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: September 1	To: October 15 of the same year

If soil stabilization of disturbed areas is not completed by the specified fall date,

TIMBER SALE ROAD SPECIFICATIONS

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 Sec. 12 of the contract, a reduction in the total purchased price shall be made to offset the cost of furnishing and applying such additional stabilization material. Cost shall be based upon the unit price set forth in the current BLM Timber Appraisal Production Cost Schedule.

1808 - Mulch materials conforming to the requirements of Subsection 1808a shall be furnished by the Purchaser in the amounts specified under Subsection 1811 and applied in accordance with Subsection 1812.

1808a - Straw mulch shall be certified weed free from commercial grain fields and native grass fields. Straw mulch shall be from oats, wheat, rye, or other approved grain crops and shall be free from, mold, or other objectionable material. Straw mulch shall be in an air-dry condition and suitable for placement.

1809 - Mulch material shall be delivered to the work area in a dry state. Material found to be wet will not be accepted. Material to be used in the mulching operation may be stockpiled along the road designated for treatment provided that it is maintained in a dry state and has the approval of the Authorized Officer.

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 10.58 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:

TIMBER SALE ROAD SPECIFICATIONS

a. Two Stage:

Grass Seed	20 lbs./acre
Mulch	2,000 lbs./acre

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

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, fertilizer spreaders, or other approved mechanical seeding equipment may be used when seed and fertilizer are to be applied in dry form.

1819 - The Purchaser shall notify the Authorized Officer at least 3 days in advance of date he intends to commence the specified soil stabilization work.

1820 - When sprayed, the mix or slurry must overlap on the ground uniformly so that there will be no voids in the treated areas.

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.

1823 - Mix or slurry will not be applied above the upper edge of cut banks unless otherwise specified.

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 and Roadside Vegetation Management Detail Sheet of exhibit C-8, 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 8 inches in diameter when measured at diameter breast height (DBH) shall be cut to a maximum height of 6 inches above the ground surface or above obstructions such as rocks or stumps on cut and fill slopes and all limbs below the 6 inch area will be severed from the trunk.

2103a - Vegetation shall be cut and removed from the road bed between the outside shoulder 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 eight (8) inches in diameter at diameter breast height (DBH) shall be limbed, so that no limbs extend into the treated area or over the roadbed to a height of 14 feet above the subgrade running surface of the roadway on cut and fill slopes, within the road prism-variable distance. Limbs shall be cut to within 6 inches of the trunk to produce a smooth vertical face. Removal of trees larger than eight (8) 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 as close to the trunk as possible without gouging the tree or going beyond the brushing limits.

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.

TIMBER SALE ROAD SPECIFICATIONS

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 or chipped downslope from the roadway (unless otherwise noted in the work list) as indicated on Exhibit C-3 (Estimate of Quantities) and Exhibit C-14 (Road Renovation Worklist). Debris shall not be allowed to accumulate in concentrations. Debris in excess of 1 foot in length and 2 inches in diameter shall not be allowed to remain on cut slopes, ditches, roadways or water courses, or as directed by the Authorized Officer.

Road No.	From M.P.	To M.P.	Total Miles	Type
FS Road 112	0.00	0.04	0.04	Scatter
FS Road 112	0.27	0.56	0.29	Scatter
32-1W-19.00	0.00	0.88	0.88	Scatter
32-1W-19.00	1.08	1.66	0.58	Scatter
32-1W-19.00	2.06	2.13	0.07	Scatter
32-1W-19.00	2.19	2.24	0.05	Scatter
32-1W-19.00	2.61	2.69	0.08	Scatter
32-1W-19.00	2.82	2.99	0.17	Scatter
32-1W-19.00	6.08	6.47	0.39	Scatter
32-1W-19.03	0.00	0.09	0.09	Scatter
32-1W-19.04	0.00	0.24	0.24	Scatter
32-1W-19.05	0.00	0.09	0.09	Scatter
32-1W-20.00	0.00	0.20	0.20	Scatter
32-1W-20.00	0.34	0.39	0.05	Scatter
32-1W-20.00	0.52	0.56	0.04	Scatter
32-1W-20.00	0.71	0.75	0.04	Scatter
32-1W-29.02	0.11	0.19	0.08	Scatter
32-1W-29.02	0.38	0.44	0.06	Scatter
32-1W-29.03	0.18	0.23	0.05	Scatter
32-1W-29.03	0.25	0.31	0.06	Scatter
32-1W-29.03	0.51	0.57	0.06	Scatter
32-1W-29.07	0.00	0.23	0.23	Scatter
32-1W-31.03	0.00	0.04	0.04	Scatter
32-1W-31.04	0.00	0.03	0.03	Scatter
32-1W-31.04	0.13	0.18	0.05	Scatter
32-1W-33.01	0.21	0.27	0.06	Scatter

TIMBER SALE ROAD SPECIFICATIONS

32-1W-33.01	0.33	0.40	0.07	Scatter
32-1W-33.01	0.45	0.57	0.12	Scatter
32-1W-33.01	0.67	0.76	0.09	Scatter
32-1W-33.01	0.93	1.06	0.13	Scatter
32-1W-33.01	1.51	1.56	0.05	Scatter
32-1W-33.01	1.58	1.64	0.06	Scatter
32-1W-33.01	1.73	1.80	0.07	Scatter
32-1W-33.01	2.01	2.10	0.09	Scatter
32-1W-33.01	3.10	3.20	0.10	Scatter
32-1W-33.02	0.05	0.16	0.11	Scatter
32-1W-33.02	0.28	0.34	0.06	Scatter
32-1W-33.02	0.44	0.52	0.08	Scatter
32-1W-33.02	0.55	0.65	0.10	Scatter
32-1W-33.02	0.81	0.97	0.16	Scatter
32-1W-33.02	1.42	1.47	0.05	Scatter
32-1W-33.02	1.80	1.88	0.08	Scatter
32-1W-33.02	2.01	2.05	0.04	Scatter
32-1W-33.02	2.15	3.92	1.77	Scatter
32-1W-33.02	4.08	4.14	0.06	Scatter
32-1W-33.02	4.17	4.22	0.05	Scatter
32-1W-33.02	4.56	4.73	0.17	Scatter
32-1W-33.03	0.01	0.13	0.12	Scatter
32-1W-33.03	0.33	0.38	0.05	Scatter
32-1W-33.03	0.60	0.69	0.09	Scatter
32-1W-33.03	0.79	0.84	0.05	Scatter
32-1W-33.03	1.32	1.35	0.03	Scatter
32-1W-33.04	0.00	0.16	0.16	Scatter
32-1W-33.05	0.00	0.06	0.06	Scatter
33-1W-3.07	0.00	0.04	0.04	Scatter
33-1W-5.00	0.00	0.95	0.95	Scatter
33-1W-5.00	2.10	2.25	0.15	Scatter
33-1W-5.00	2.62	2.67	0.05	Scatter
33-1W-5.04	0.11	0.18	0.07	Scatter
33-1W-5.04	0.63	0.70	0.07	Scatter
33-1W-5.04	0.74	0.79	0.05	Scatter
33-1W-6.00	0.00	1.03	1.03	Scatter
33-1W-7.00	0.26	0.44	0.18	Scatter
33-1W-7.00	0.00	0.87	0.87	Scatter
33-1W-8.00	0.00	0.08	0.08	Scatter
33-1W-8.00	0.82	0.87	0.05	Scatter
33-1W-8.00	1.41	1.48	0.07	Scatter
33-1W-8.00	1.72	1.82	0.10	Scatter
33-1W-8.01	0.00	0.14	0.14	Scatter

TIMBER SALE ROAD SPECIFICATIONS

33-1W-8.01	0.15	0.19	0.04	Scatter
33-1W-8.01	0.33	0.59	0.26	Scatter
33-1W-8.01	0.67	0.74	0.07	Scatter
33-1W-9.00	0.27	0.36	0.09	Scatter
33-2W-1.01	0.00	0.92	0.92	Scatter
33-2W-1.02	0.00	0.09	0.09	Scatter
33-2W-1.03	0.00	0.04	0.04	Scatter

2110 - Sections of roadway to have vegetation removed will be marked at start and stop points.

2111 - Mechanical brush cutters shall not be operated when there are people and occupied vehicles within 400 feet of the immediate operating area.

2112 - Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the Manual on Uniform Traffic Devices.

SPECIAL PROVISIONS

1. 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 by CO prior to entering BLM lands. Provide 48 hours' notice of inspection to BLM prior to mobilization.

2. SOIL STABILIZATION:
   - All disturbed soil shall be seeded and mulched. Purchaser shall apply native grass seed and certified weed free straw mulch for soil stabilization operations. The Purchaser shall supply native seed and certified weed free straw. Native seed and certified weed free straw may be purchased from the BLM, if available.

3. DAMAGE:
   - The Purchaser shall protect and is responsible for any damage to existing telephone lines, transmission lines, fiber optic lines, fences, ditches, and other existing improvements as required in Section 14. Damage to utilities and existing improvements shall be promptly paid for or repaired to a condition which is, in the opinion of the Authorized Officer and the governing utility company, at least as good as the condition just prior to such damage.

4. DUST ABATEMENT:
   - The application of dust abatement materials such as Lignin, Mag-chloride, or approved petroleum based dust abatement products shall be restricted from application just after severely wet weather, at stream crossings to be designated by the Authorized Officer, or other locations that could result in direct delivery to a water body.
   - All dust abatement applications shall be approved by the Authorized Officer prior to application.

5. WATER SOURCES:
   - The Purchaser is responsible for obtaining water and associated rights and permits.

6. PERMITS:
   - All permits required are the responsibility of the Purchaser.

7. CULVERT REMOVAL:
   - When removing culverts unless constructing armored water dips, pull slopes back to the natural slope, or at least 1.5:1, to minimize sloughing, erosion, and the potential for the stream to undercut stream banks during periods of high stream flows. Remove excess sediment from stream channels during culvert removal, replacement, and installation activities. Apply seed and mulch to all disturbed or exposed soils at each stream culvert removal site.

8. COMMERCIAL AGGREGATE
   - If aggregate furnished for this work comes from a commercial source, then the aggregate 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.

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 sidecast or placed where it can enter wetlands, riparian reserves, floodplains, and waters of the State.

10. STREAMS:
   - All in-stream work shall be done from June 15 thru September 15 both days included.
   - 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 stream side of a culvert to the downstream side of the culvert.

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 C-15, Section 200.
   - Construction of temporary spur routes shall be to a subgrade width of 14’.

12. ROADSIDE BRUSHING
   - While roadside brushing, there shall be no scarring or any other damage of the tree trunk or bole allowed.
   - Use of Excavators and/or flailers 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’.
   - All bridges shall be brushed 8 horizontal feet from the outer most portion of the structure.

13. WET SEASON HAUL

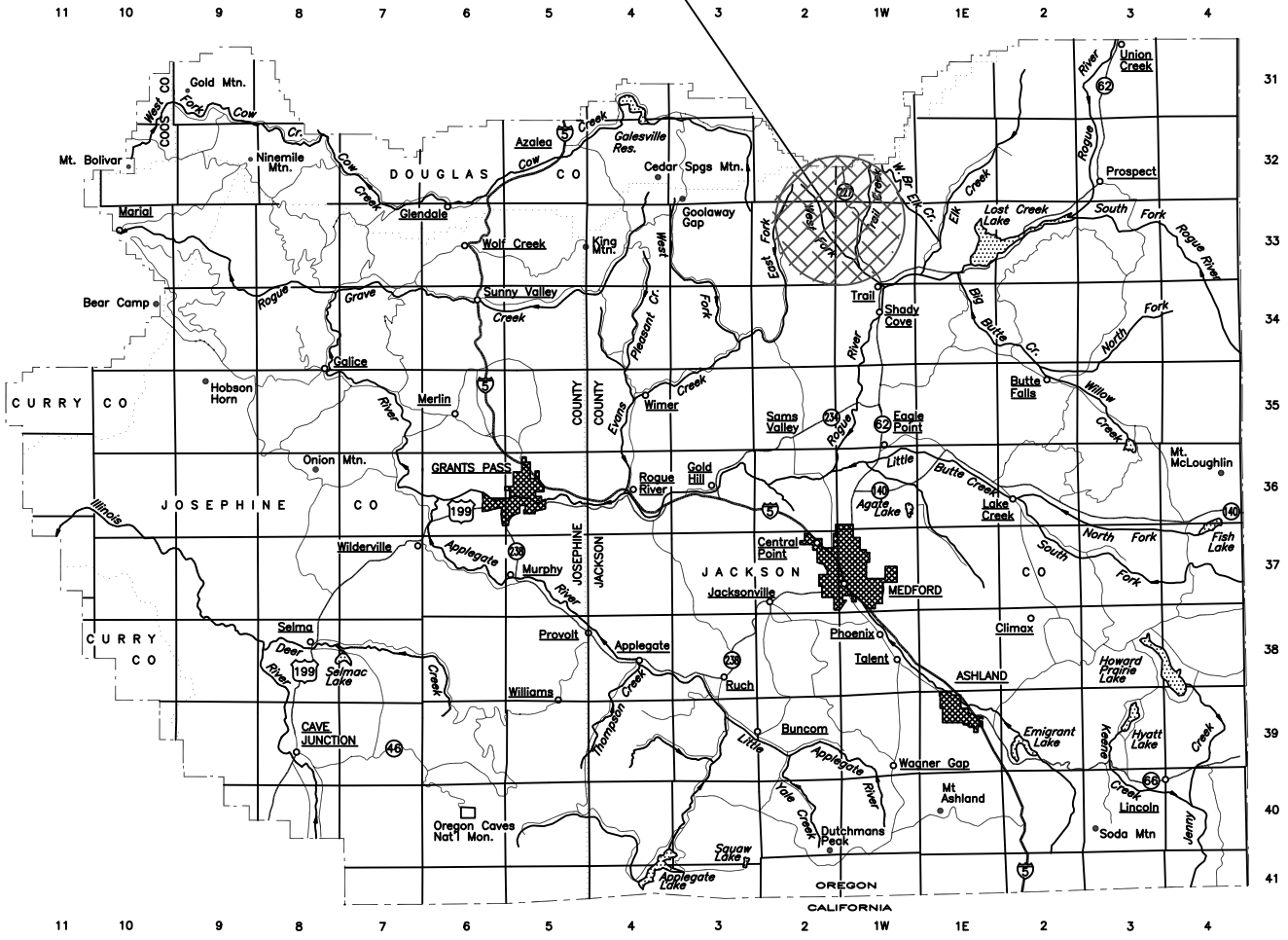
- The Purchaser may wet season haul, with the Authorized Officer's approval on the following roads: 32-1W-19.0 A-B, D-E, and H; 33-1W-20.00; 32-1W-28.00; 32-1W-29.02; 32-1W-29.03; 32-1W-29.08; 32-1W-33.01 A-C; 32-1W-33.02 A-C; and 33-1W-8.00. If the use of these roads during the wet season causes or 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.
- The Purchaser may wet season haul on these roads that will be rocked under Exhibit C work, with the Authorized Officer's approval on the following roads: 32-1W-21.02; 32-1W-31.05; 32-1W-33.03; 32-1W-33.04; 33-1W-33.05; and 33-1W-5.04. If the use of these roads 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.
- The Purchaser shall have the option to rock road numbers 32-1W-19.0 C; 32-1-19.03; 32-1-19.04; and 32-1-19.05 for wet weather haul. Purchaser option rocking depths will be determined and approved by the Authorized Officer. 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 show in Exhibit C of this contract.

EXHIBIT D–1
SHEET 1 OF 1

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT
DEAD WEST TIMBER SALE
TRACT NO. ORM05–TS–2023.0008

Exhibit No.	Description
D-1	TITLE SHEET
D-2	ROAD MAINTENANCE MAP
D-3	ESTIMATE OF QUANTITIES
D-4	TYPICAL ROAD CAMOUFLAGE
D-5	DRAINAGE & EROSION CONTROL DETAILS
D-6	TYPICAL FULL DECOMMISSION
D-7	BARRICADE DETAILS
D-8	ROAD MAINTENANCE SPECIFICATIONS
D-9	ROAD DECOMMISSIONING WORKLIST

PROJECT LOCATION



ALWAYS THINK SAFETY

N

0 6 12
SCALE IN MILES

REV.	NO.	DESCRIPTION	DATE	APPROV.

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

DEAD WEST
TITLE SHEET

DRAWN DKL	SCALE AS SHOWN
DATE FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO.	ORM05–TS–2023.0008–D1

This page intentionally left blank

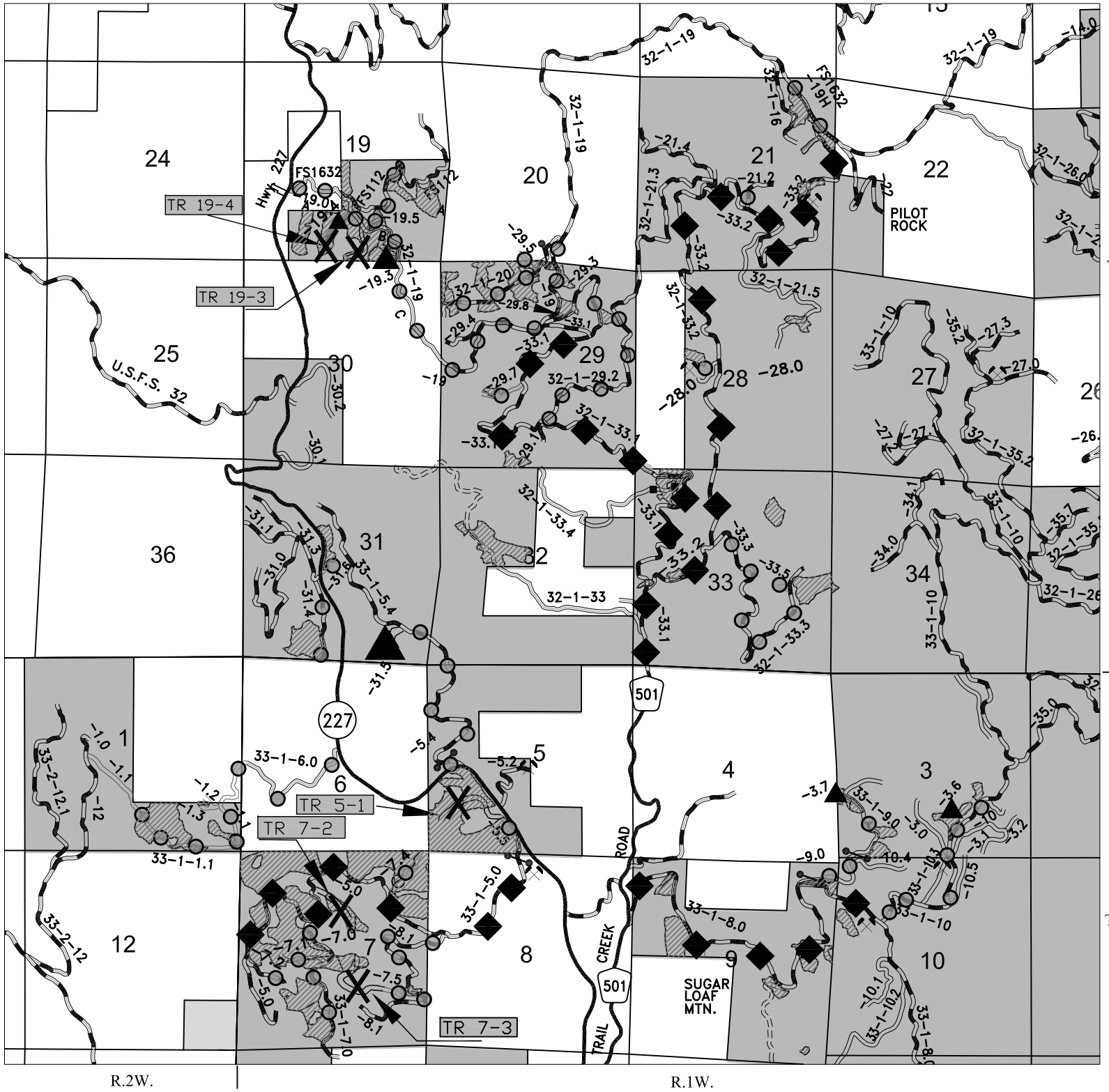


EXHIBIT D-2
SHEET 1 OF 1

DEAD WEST T. S.
TRACT NO. ORM05-TS-2023.0008

ROAD MAINTENANCE MAP

U.S.D.I. BLM MEDFORD DISTRICT
T.32S., R.1W. WILL. MER.
T.32S., R.2W. WILL. MER.
T.33S., R.1W. WILL. MER.
T.33S., R.2W. WILL. MER.

ROCKED ROAD
NATURAL SURFACE ROAD
EXISTING PAVED ROAD
EXISTING PRIMITIVE ROAD
OPERATOR MAINTENANCE
OPERATOR MAINTENANCE ROAD TO BE FULLY DECOMMISSIONED
OPERATOR MAINTENANCE ROAD TO BE CLOSED LONG TERM
BLM MAINTENANCE
T R TEMP ROUTE
QUARRY
W WATER SOURCE
EXISTING BARRICADE
BLM LAND
TS UNITS

ALWAYS THINK SAFETY

This page intentionally left blank

ROAD NUMBER	FROM	TO	LENGTH	MAINTENANCE RESPONSIBILITY			WATERING (PURCHASER)	SPOT ROCKING**	ROAD CLOSURE AND DECOMMISSIONING					
				BLM MAINTENANCE	PURCHASER MAINTENANCE	THIRD PARTY MAINTENANCE			INSTALL EARTH, BOULDER OR STUMP BARRICADE, OR MEGA GATE	CAMOU-FLAGE ROAD	INSTALL WATER BARS	REMOVE CULVERTS	RIPPING	SOIL STABILIZATION (SEED & MULCH)
ROAD NUMBER	MP/STA	MP/STA	MILE/STA	MILE	MILE	MILE	MILE	C.Y.	EACH	FEET	EACH	EACH	STATION	ACRE
FS 112	0.00	0.64	0.64		0.64									
FS 1632 (-19.00 A-E)	0.00	2.97	2.97		2.97									
FS 1632 (-19.00 H)	6.08	6.47	0.39		0.39									
32-1W-19.03	0.00	0.09	0.09		0.09					1	2			
32-1W-19.04	0.00	0.24	0.24		0.24					1	6			
32-1W-19.05	0.00	0.09	0.09		0.09				1	1	2			
32-1W-20.00	0.00	0.82	0.82		0.82									
32-1W-21.02	0.00	0.02	0.02		0.02									
32-1W-28.00	0.00	0.19	0.19		0.19									
32-1W-29.02	0.00	0.98	0.98		0.98									
32-1W-29.03	0.00	0.77	0.77		0.77									
32-1W-29.07	0.00	0.23	0.23		0.23									
32-1W-29.08	0.00	0.05	0.05		0.05									
32-1W-31.03	0.00	0.04	0.04		0.04									
32-1W-31.04	0.00	0.42	0.42		0.42									
32-1W-31.05	0.00	0.17	0.17		0.17									
32-1W-31.06	0.00	0.08	0.08		0.08				1	1	4			
32-1W-33.01	0.00	3.87	3.87	3.87										
32-1W-33.02	0.00	4.92	4.92	4.92										
PAGE 1 TOTALS			16.98	8.79	8.19		#####	#	2	4	14	#	####	#####

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

ALWAYS THINK SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.

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

ESTIMATE OF QUANTITIES*

DRAWN: DKL	SCALE: NONE
DATE: FEBRUARY 2023	SHEET: 1 OF 3
DRAWING NO. ORM05-TS-2023.0008-D3	

ROAD NUMBER	FROM	TO	LENGTH	MAINTENANCE RESPONSIBILITY			WATERING	SPOT ROCKING**	ROAD CLOSURE AND DECOMMISSIONING					
				BLM MAINTENANCE	PURCHASER MAINTENANCE	THIRD PARTY MAINTENANCE			INSTALL EARTH, BOULDER OR STUMP BARRICADE, OR MEGA GATE	CAMOU-FLAGE ROAD	INSTALL WATER BARS	REMOVE CULVERTS	RIPPING	SOIL STABILIZATION (SEED & MULCH)
ROAD NUMBER	MP/STA	MP/STA	MILE/STA	MILE	MILE	MILE	MILE	C.Y.	EACH	FEET	EACH	EACH	STATION	ACRE
32-1W-33.03	0.00	1.45	1.45		1.45									
32-1W-33.04	0.00	0.16	0.16		0.16									
32-1W-33.05	0.00	0.06	0.06		0.06									
33-1W-3.06	0.00	0.41	0.41		0.41					1	11			
33-1W-3.07	0.00	0.04	0.04		0.04					1	1			
33-1W-5.00	0.00	2.72	2.72	2.72										
33-1W-5.04	0.00	1.25	1.25		1.25									
33-1W-5.05	0.00	0.13	0.13		0.13						3			
33-1W-6.00	0.00	1.03	1.03		1.03									
33-1W-7.00	0.00	0.87	0.87		0.87									
33-1W-7.01	0.00	0.16	0.16		0.16									
33-1W-7.02	0.00	0.27	0.27		0.27									
33-1W-7.04	0.00	0.26	0.26		0.26					1	7			
33-1W-7.05	0.00	0.45	0.45		0.45				1		12			
33-1W-8.00	0.00	2.62	2.62	2.62										
33-1W-8.01	0.00	0.90	0.90		0.90									
33-1W-9.00	0.00	0.97	0.97		0.97									
33-1W-10.00	0.00	0.94	0.94		0.94									
33-2W-1.01	0.00	0.92	0.92		0.92									
33-2W-1.02	0.00	0.09	0.09		0.09						2			
PAGE 1 TOTALS			16.98	8.79	8.19		#####	#	2	4	14	##	#####	#####
PAGE 2 TOTALS			15.70	5.34	10.36		####	##	1	3	36	##	####	####
PROJECT TOTALS			32.68	14.13	18.55		#####	##	3	7	50	##	####	####

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

ALWAYS THINK SAFETY

REV. NO.	DESCRIPTION		DATE	APPROV.

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

ESTIMATE OF QUANTITIES*

DRAWN: DKL	SCALE: NONE
DATE: FEBRUARY 2023	SHEET: 2 OF 3
DRAWING NO. ORM05-TS-2023.0008-D3	

EXHIBIT D-3
SHEET 3 OF 3
DEAD WEST T.S.

ROAD NUMBER	FROM	TO	LENGTH	MAINTENANCE RESPONSIBILITY			WATERING	SPOT ROCKING**	ROAD CLOSURE AND DECOMMISSIONING					
				BLM MAINTENANCE	PURCHASER MAINTENANCE	THIRD PARTY MAINTENANCE			INSTALL EARTH, BOULDER OR STUMP BARRICADE, OR MEGA GATE	CAMOU-FLAGE ROAD	INSTALL WATER BARS	REMOVE CULVERTS	RIPPING	SOIL STABILIZATION (SEED & MULCH)
ROAD NUMBER	MP/STA	MP/STA	MILE/STA	MILE	MILE	MILE	MILE	C.Y.	EACH	FEET	EACH	EACH	STATION	ACRE
33-2W-1.03	0.00	0.04	0.04		0.04						1			
Route 5-1	0.00	0.43	0.43		0.43					1		1	20	0.70
Route 7-2	0.00	0.09	0.09		0.09					1			14	0.18
Route 7-3	0.00	0.18	0.18		0.18					1			13	0.35
Route 19-3	0.00	0.06	0.06		0.06					1			3	0.10
Route 19-4	0.00	0.02	0.02		0.02					1			1	0.03
PAGE 1 & 2 TOTALS			32.68	14.13	18.55		#####	##	3	7	50	##	#########	#####
PAGE 3 TOTALS			0.82	####	0.82		####	##	#	5	1	1	51.00	1.36
PROJECT TOTALS			33.50	14.13	19.37		#####	##	3	12	51	1	51.00	1.36

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

ALWAYS THINK SAFETY

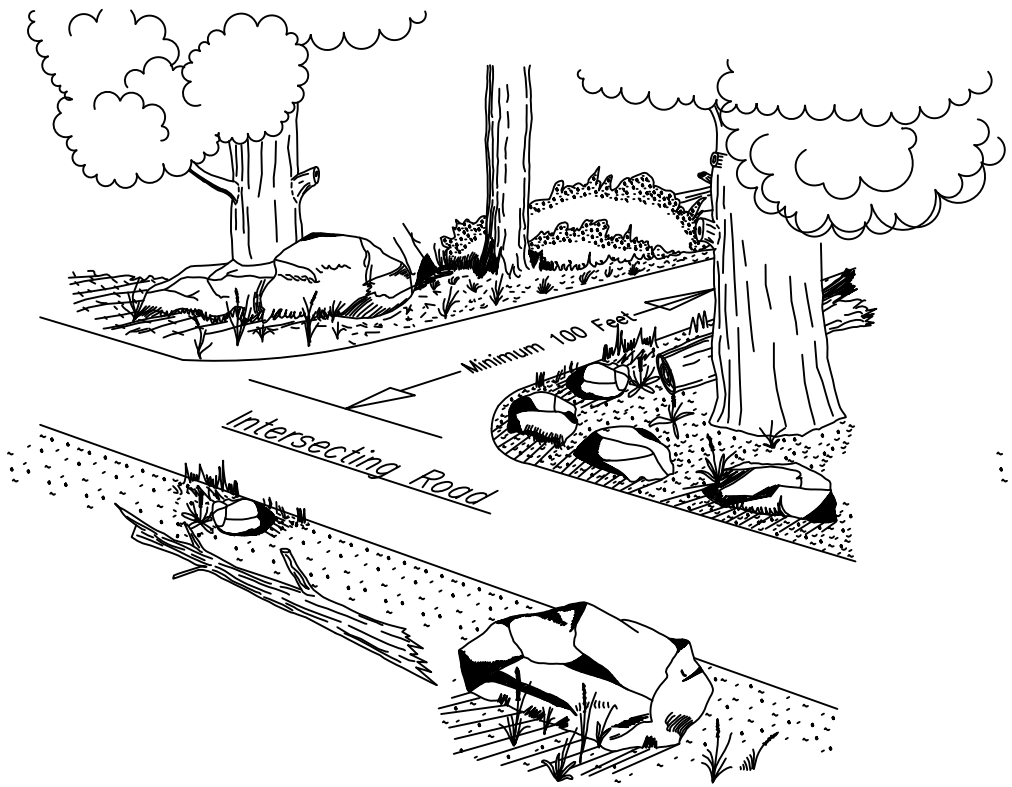
REV. NO.	DESCRIPTION		DATE	APPROV.

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

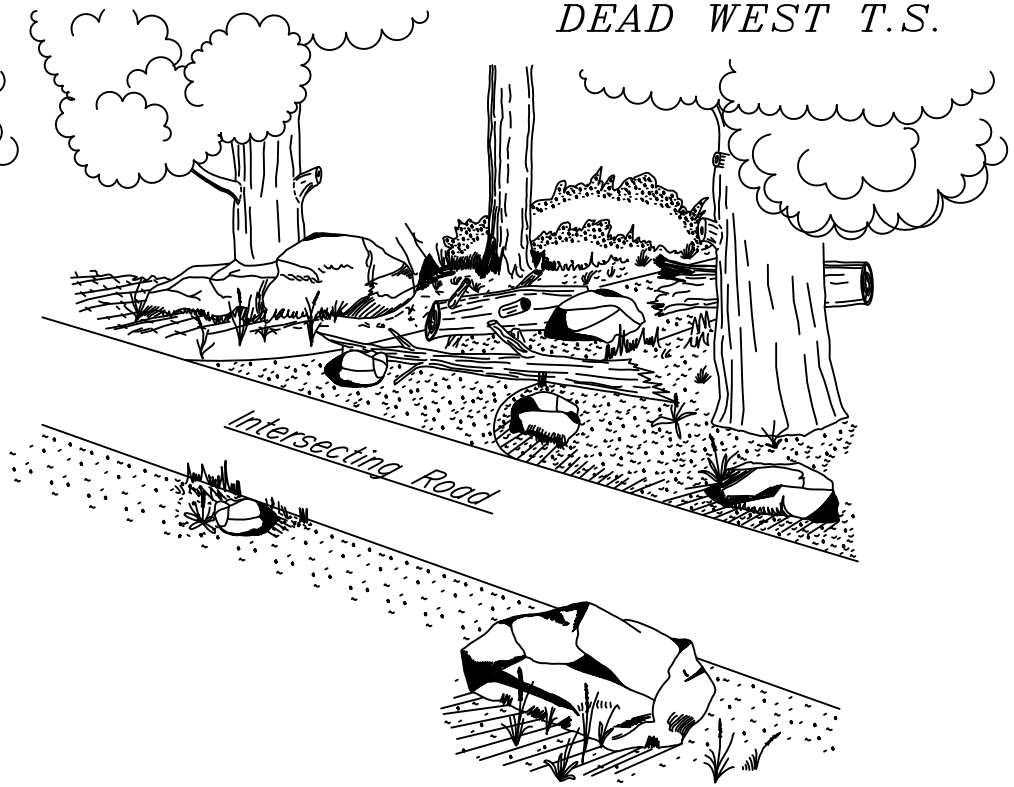
ESTIMATE OF QUANTITIES*

DRAWN: JAB	SCALE: NONE
DATE: FEBRUARY 2023	SHEET: 3 OF 3
DRAWING NO. ORM05-TS-2023.0008-D3	

EXHIBIT D–4
SHEET 1 OF 1
DEAD WEST T.S.



Typical Entrance – Before



Typical Entrance – After

Notes:

1. The Purchaser shall 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 may be required to be constructed at road entrance as approved by the Authorized Officer.

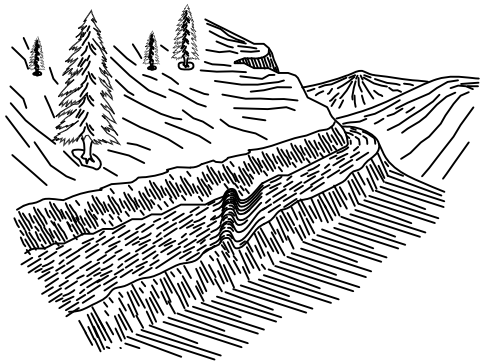
2. Where multiple entrances exist, the work shall include obscuring all road entrances. Ditchlines at intersecting roads will be restored as indicated on plan view. The Purchaser shall use soil, boulders, brush, dead material, stumps, and other debris to disguise the road prism to the extent possible. No live trees should be used without approval of the Authorized Officer.

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

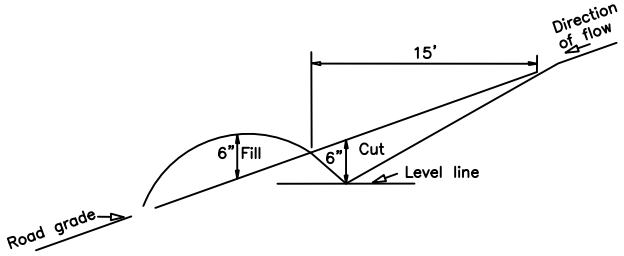
Typical Road Camouflage

DRAWN DKL	SCALE NONE
DATE FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO. ORM05–TS–2023.0008–D4	

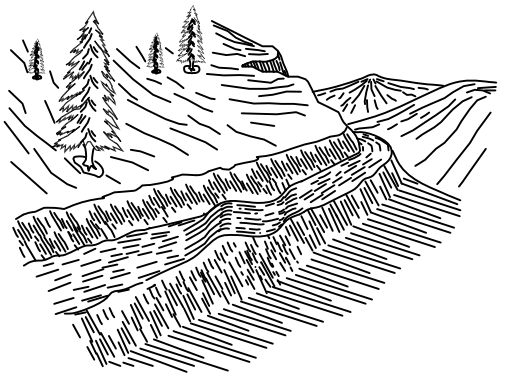
EXHIBIT D–5
SHEET 1 OF 1
DEAD WEST T.S.



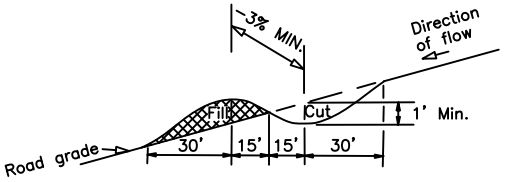
WATER BAR



1. CROSS–DRAINS SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL CROSS DRAINS SHALL BE SKEWED 30 DEGREES.
4. THE CROSS–DRAINS INVERT SHALL BE SMOOTH AND FREE DRAINING.

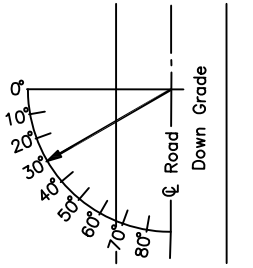


WATER DIP



1. WATER DIPS SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL WATER DIPS SHALL BE SKEWED 30 DEGREES.
4. THE LENGTH SHALL BE SUFFICIENT TO EXTEND FROM THE CUT BANK TO THE FILL SLOPE AND BE READILY CROSSED BY HIGH CLEARANCE TYPE VEHICLES.

SKEW DIAGRAM



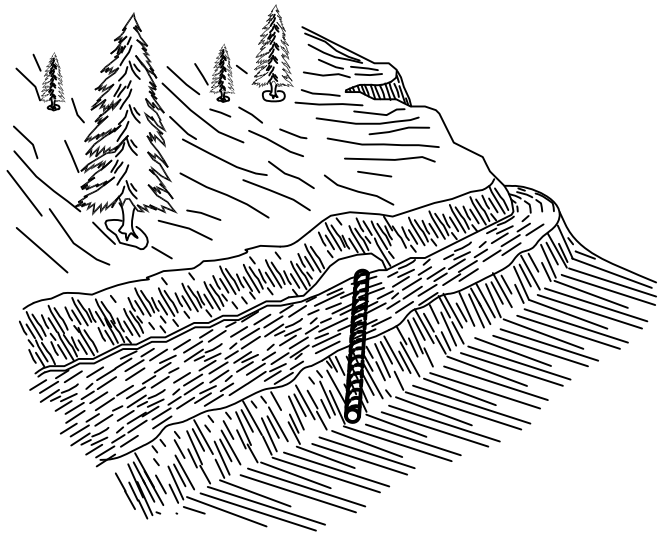
REV. NO.	DESCRIPTION	DATE	APPROV.

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

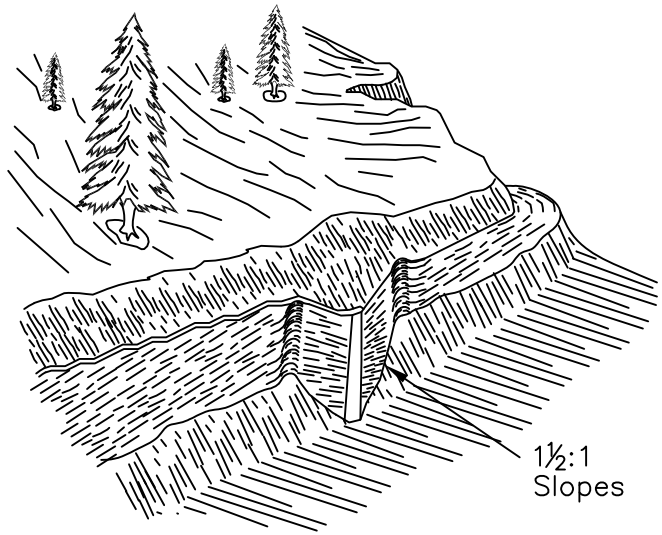
DRAINAGE & EROSION CONTROL DETAILS

DRAWN JAB	SCALE NONE
DATE FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO. ORM05–TS–2023.0008–D5	

EXHIBIT D–6
SHEET 1 OF 1
DEAD WEST T.S.



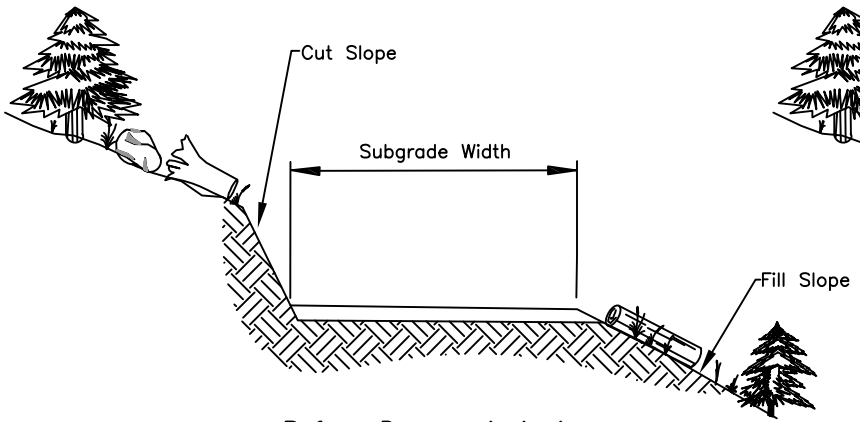
Typical Culvert Removal – Before



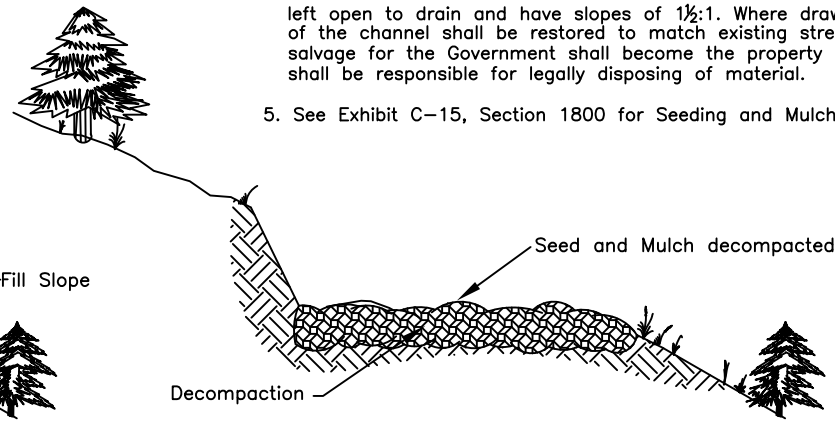
Typical Culvert Removal – After

Notes:

1. The Purchaser shall barricade, and decompact the road prism. Barricades shall be constructed as shown for each road.
2. Ditchlines at intersecting roads will be restored as indicated on plan view.
3. Road surface shall be decompacted for its entire length using mechanical equipment. Decompact road surface to a depth of 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. Decopacted areas shall be seed and mulched after completion.
4. All culverts shall be removed from road for its entire length. 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 Exhibit C–15, Section 1800 for Seeding and Mulching Specifications.



Before Decommissioning



After Decommissioning

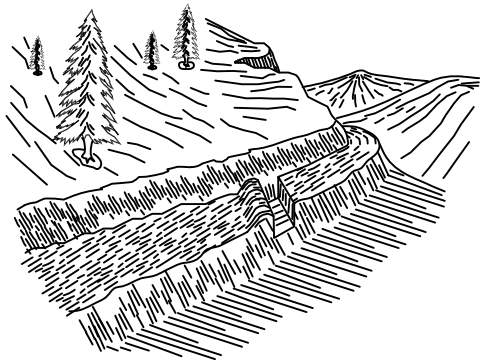
Typical Full Decommission

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

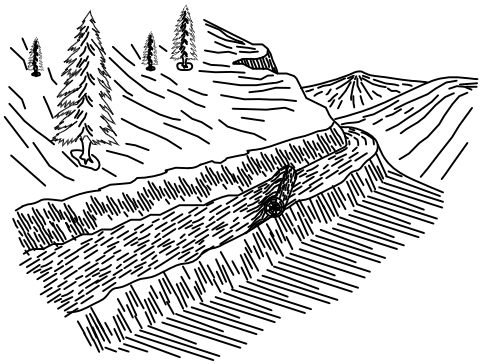
Typical Full Decommission Detail

DRAWN DKL	SCALE NONE
DATE FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO. ORM05–TS–2023.0008–D6	

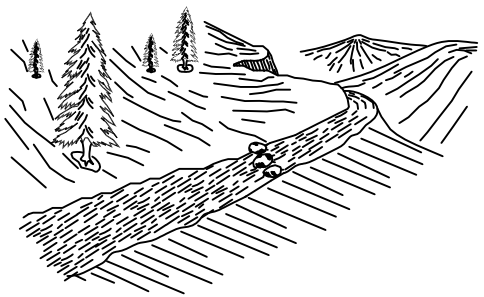
EXHIBIT D–7
SHEET 1 OF 1
DEAD WEST T.S.



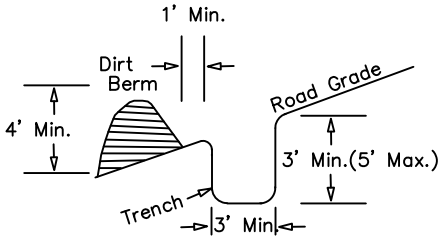
TRENCH BARRICADE



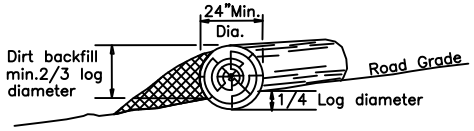
LOG BARRICADE



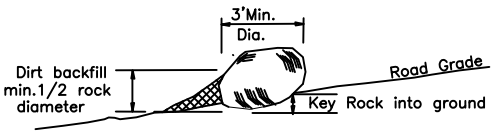
ROCK BARRICADE



1. BARRICADE LENGTH SHALL EXTEND ACROSS THE ENTIRE ROAD SURFACE TO A POINT SUFFICIENT TO PROHIBIT MOTOR VEHICLE TRAFFIC.
2. THE EXACT LOCATION SHALL BE AS STAKED IN THE FIELD.
3. THE BARRICADE SHALL BE SKEWED AS NEEDED TO DRAIN OR AS DIRECTED BY THE AUTHORIZED OFFICERS REPRESENTATIVE.
4. A MINIMUM OF 1' IS OF LEVEL GROUND IS NEEDED BETWEEN TO TOE OF THE DIRT BERM AND THE EDGE OF THE TRENCH.

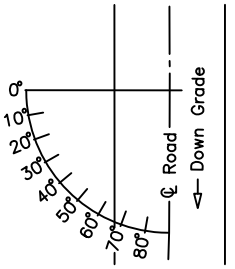


1. LOG BARRICADE SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL BARRICADES SHALL BE SKEWED 30 DEGREES.
4. THE LENGTH SHALL BE SUFFICIENT TO EXTEND FROM THE CUT BANK TO THE FILL SLOPE.
5. THE MINIMUM SMALL END DIAMETER OF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



1. ROCK BARRICADE SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. THE LENGTH SHALL BE SUFFICIENT TO BLOCK ROAD FROM VEHICLE USE.
4. THE MINIMUM DIAMETER OF ROCK SHALL BE 3 FEET.
5. THE MAXIMUM SPACE BETWEEN ROCKS SHALL BE 36" OR AS APPROVED BY THE AUTHORIZED OFFICER.

SKEW DIAGRAM



REV. NO.	DESCRIPTION	DATE	APPROV.

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

BARRICDADE DETAILS

DRAWN JAB	SCALE NONE
DATE FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO. ORM05–TS–2023.0008–D7	

ROAD MAINTENANCE SPECIFICATIONS
TABLE OF CONTENTS

ROAD MAINTENANCE SPECIFICATIONS

GENERAL - 3000

3001 The Purchaser shall be required to maintain all roads listed and/or as shown on the Exhibit D2 map of this contract in accordance with Sections 3000, 3100, 3200, 3300, and 3400 of this exhibit.

Road No. and Segment	Length Miles Used	Ownership	Road Surface Type	Maintenance Responsibility
USFS 112	0.64	USFS	Aggregate	Purchaser
32-1W-19.00A	0.52	Private	Aggregate	Purchaser
32-1W-19.00B	0.57	USFS	Aggregate	Purchaser
32-1W-19.00C	0.58	Private	Aggregate	Purchaser
32-1W-19.00D	1.14	USFS	Aggregate	Purchaser
32-1W-19.00E	0.16	Private	Aggregate	Purchaser
32-1W-19.00H	0.39	BLM	Aggregate	Purchaser
32-1W-19.03	0.09	BLM	Aggregate	Purchaser
32-1W-19.04	0.24	BLM	Natural	Purchaser
32-1W-19.05	0.09	BLM	Natural	Purchaser
32-1W-20.00	0.82	BLM	Aggregate	Purchaser
32-1W-21.02	0.02	BLM	Aggregate	Purchaser
32-1W-28.00	0.19	BLM	Aggregate	Purchaser
32-1W-29.02	0.98	BLM	Aggregate	Purchaser
32-1W-29.03	0.77	BLM	Aggregate	Purchaser
32-1W-29.07	0.23	BLM	Aggregate	Purchaser
32-1W-29.08	0.05	BLM	Aggregate	Purchaser
32-1W-31.03	0.04	BLM	Aggregate	Purchaser
32-1W-31.04	0.42	BLM	Aggregate	Purchaser
32-1W-31.05	0.17	BLM	Aggregate	Purchaser
32-1W-31.06	0.08	BLM	Natural	Purchaser
32-1W-33.01A	0.39	BLM	Aggregate	BLM
32-1W-33.01B	1.27	BLM	Aggregate	BLM

ROAD MAINTENANCE SPECIFICATIONS

Road No. and Segment	Length Miles Used	Ownership	Road Surface Type	Maintenance Responsibility
32-1W-33.01C	2.21	BLM	Aggregate	BLM
32-1W-33.02A	2.20	BLM	Aggregate	BLM
32-1W-33.02B	2.33	BLM	Aggregate	BLM
32-1W-33.02C	0.39	BLM	Aggregate	BLM
32-1W-33.03	1.45	BLM	Aggregate	Purchaser
32-1W-33.04	0.16	BLM	Aggregate	Purchaser
32-1W-33.05	0.06	BLM	Aggregate	Purchaser
33-1W-3.06	0.41	BLM	Natural	Purchaser
33-1W-3.07	0.04	BLM	Natural	Purchaser
33-1W-5.00A	0.10	BLM	Aggregate	BLM
33-1W-5.00B	0.85	BLM	Aggregate	BLM
33-1W-5.00C	1.46	BLM	Aggregate	BLM
33-1W-5.00D	0.31	BLM	Aggregate	BLM
33-1W-5.04	1.25	BLM	Aggregate	Purchaser
33-1W-5.05	0.13	BLM	Natural	Purchaser
33-1W-6.00	1.03	Private	Aggregate	Purchaser
33-1W-7.00	0.87	Private	Aggregate	Purchaser
33-1W-7.01	0.16	BLM	Natural	Purchaser
33-1W-7.02	0.27	BLM	Aggregate	Purchaser
33-1W-7.04	0.26	BLM	Natural	Purchaser
33-1W-7.05	0.45	BLM	Natural	Purchaser
33-1W-8.00A	2.62	BLM	Aggregate	BLM
33-1W-8.01	0.90	BLM	Aggregate	Purchaser
33-1W-9.00	0.97	BLM	Aggregate	Purchaser
33-1W-10.00	0.94	BLM	Aggregate	Purchaser
33-2W-1.01A	0.26	BLM	Aggregate	Purchaser
33-2W-1.01B	0.66	BLM	Aggregate	Purchaser
33-2W-1.02	0.09	Private	Natural	Purchaser

ROAD MAINTENANCE SPECIFICATIONS

Road No. and Segment	Length Miles Used	Ownership	Road Surface Type	Maintenance Responsibility
33-2W-1.03	0.04	Private	Natural	Purchaser
TR 5-1	0.43	BLM	Natural	Purchaser
TR 7-2	0.09	BLM	Natural	Purchaser
TR 7-3	0.18	BLM	Natural	Purchaser
TR 19-3	0.06	BLM	Natural	Purchaser
TR 19-4	0.02	BLM	Natural	Purchaser

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.

ROAD MAINTENANCE SPECIFICATIONS

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 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

ROAD MAINTENANCE SPECIFICATIONS

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 by scattering below the road in accordance with Section 2100 of Exhibit C.

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

3108a The Purchaser shall perform logging operations on gravel and/or bituminous roadways only where the locations have been marked on the ground and/or approved by the Authorized Officer. (Repair of the roads is not considered maintenance and shall be repaired at the Purchaser's expense.

ROAD MAINTENANCE SPECIFICATIONS

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 1 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.

ROAD MAINTENANCE SPECIFICATIONS

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 Sec. 16(b) of this contract. This work shall include any maintenance and/or damage repairs specified in Sections 3000, 3100, and 3200 necessary to meet the conditions specified in Subsection 3002 and shall be executed in accordance with Subsection 3302 of this section.

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

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

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

ROAD MAINTENANCE SPECIFICATIONS

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.

ROAD MAINTENANCE SPECIFICATIONS

DECOMMISSIONING – 3500

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 Camouflaging and Full Decommission.

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 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 with camouflaging and soil stabilization 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 D7.

3513 Water bars shall be installed across full width of roadway at spacing shown in the specifications. Water bars shall be constructed conforming to the lines, grades, dimensions and typical details as shown on Exhibit D7. No water bar will be installed closer than 50 feet to a draw crossing.

3514 Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Exhibit C15, Section 1800, and placement of slash described in Subsection 3506 on designated roadways, disturbed areas, landings, and other areas disturbed by the purchaser's operations in accordance with these specifications and as shown in the plans.

3520 Long Term Closure of roads shall consist of all or part of the following treatments:

a. Construct water bars along entire length of road at 200' spacing, or as staked or directed by the Authorized Officer's Representative.

b. The Purchaser shall Camouflage 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. Debris placed on roadways for camouflaging shall also serve to barricade the road from vehicle use. Adequate materials such as using boulders, brush, dead material, stumps, and other debris shall be placed to a degree to stop traffic vehicle traffic from entering onto the roadway. No live trees should be used without approval by the Authorized Officer.

c. An earth berm or equivalent barricade shall be constructed near the beginning of road as listed in Exhibit D-9, Road Decommissioning Work List. or as directed by the Authorized Officer's Representative.

ROAD MAINTENANCE SPECIFICATIONS

3521 Long Term Closure shall be performed on existing roads in accordance with these specifications, and as shown on the plans at the following locations:

Road No or Site	Treatment
32-1W-19.03	Waterbar, Seed and Mulch, Camouflage
32-1W-19.04	Waterbar, Seed and Mulch, Camouflage
32-1W-19.05	Waterbar, Seed and Mulch, Camouflage
32-1W-31.06	Waterbar, Seed and Mulch, Camouflage, Barricade
33-1W-3.06	Waterbar, Seed and Mulch, Camouflage
33-1W-3.07	Waterbar, Seed and Mulch, Camouflage
33-1-7.04	Waterbar, Seed and Mulch, Camouflage
33-1-7.05	Waterbar, Seed and Mulch, Barricade

3522 Long Term Closure work shall be completed at the end of timber hauling. All work shall be performed during the dry season before October 15th.

3523 Protect areas mulched and treated with slash placement from damage by Purchaser traffic or construction equipment. Damaged areas shall be repaired by the Purchaser.

3524 Access shall be blocked with barricades as listed in Exhibit D9.

Existing barricades removed during timber operations shall be replaced immediately after use unless otherwise specified in Exhibit D9. For activities that are not finished in one dry season, barricades shall be re-installed before the wet season, October 15th.

3525 Full Decommissioning of roads shall consist of all or part of the following treatments:

a. Subsoiling shall be done using mechanical treatment to de-compact 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.

b. All culverts shall be removed from road for its entire length. Excavated culverts shall be left

ROAD MAINTENANCE SPECIFICATIONS

open to drain and have slopes of 1 1/2:1. 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.

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 Camouflage 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 as listed in Exhibit D-9, Road Decommissioning Work List or as directed by the Authorized Officer's Representative.

3526 Full Decommission shall be performed on existing roads in accordance with these specifications, and as described in Exhibit D9 at the following locations:

Road No or Site	Treatment
TR5-1	Remove Temp Culvert, Subsoil, Waterbar, Seed and Mulch, Camouflage
TR7-2	Subsoil, Waterbar, Seed and Mulch, Camouflage
TR7-3	Subsoil, Waterbar, Seed and Mulch, Camouflage
TR19-3	Subsoil, Waterbar, Seed and Mulch, Camouflage
TR19-4	Subsoil, Waterbar, Seed and Mulch, Camouflage

Road Decommissioning Work List

GENERAL DEFINITIONS:
Decommission (Full) = Full Decommissioning shall include decompacting the surface to a depth of 12 to 18 inches, camouflaging the road entrance. Seeding with approved native seed species and mulching with weed-free straw or approved native materials on all disturbed areas. Camouflage road entrance with debris for 100' as per Exhibit D-4.

Long Term Closure = Work shall include installing waterbars every 200', and camouflaging the road entrance as per Exhibit D-9. Seeding with approved native seed species and mulching with weed-free straw or approved native materials on all disturbed areas.

Road 32-1W-19.03
(BLM) NAT

M.P.	**Remarks**
0.00	Jct. w/ 32-1W-19.00. Begin long term closure. Install water bars. Seed and mulch. Camouflage road entrance.
0.09	End Long Term Closure.

Road 32-1W-19.04
(BLM) NAT

M.P.	**Remarks**
0.00	Jct. w/ 32-1W-19.00. Begin long term closure. Install water bars. Seed and mulch. Camouflage road entrance.
0.24	End Long Term Closure.

Road 32-1W-19.05
(BLM) ASC

M.P.	**Remarks**
0.00	Jct. w/ 32-1W-19.00.
0.05	Beyond landing as staked construct an earth barricade. Install water bars. Seed and mulch. Camouflage road entrance.
0.09	End Long Term Closure.

Road 33-1W-31.06
(BLM) NAT

M.P.	**Remarks**
0.00	Jct. w/ Highway 227. Begin long term closure. Install water bars. Seed and mulch. Construct earth barricade and Camouflage road entrance.
0.08	End Long Term Closure.

Road 33-1W-03.06
(BLM) NAT

M.P.	**Remarks**
0.0	Jct. w/ 33-1W-10.00. Begin long term closure. Install water bars. Seed and mulch. Camouflage road entrance.
0.41	End Long Term Closure.

Road 33-1W-03.07
(BLM) NAT

M.P.	**Remarks**
0.00	Jct. w/ 33-1W-09.00. Begin long term closure. Install water bars. Seed and mulch. Camouflage road entrance.
0.04	End long term closure.

Road 33-1W-07.04
(BLM) NAT

M.P.	**Remarks**
0.00	Jct. w/ 33-1W-05.00. Begin long term closure. Install water bars. Seed and mulch. Camouflage road entrance.
0.26	End Long Term Closure.

Road 33-1W-07.05
(BLM) ASC

M.P.	**Remarks**
0.00	Jct. w/ 33-1W-08.01. Begin long term closure. Install water bars. Seed and mulch Construct earth barricade.
0.45	End Long Term Closure.

Temp Road 5-1 NAT

M.P.	**Remarks**
0.00	Jct. w/ 33-1W-05.05. Begin full decommission. Mechanically de-compact road surface for the entire length of the temporary road. Ripping shall be discontinuous to prevent channeling water. Camouflage road entrance.
0.06	Remove washed rock from draw crossing. Restore gradient to match both up and downslope from the road crossing.
0.10	Remove temporary culvert. Pull back washed rock and restore channel to match both up and downstream of crossing.
0.43	End full decommission.

Temp Road 7-2 NAT

M.P.	**Remarks**
0.00	Jct. w/ 33-1W-5.00. Begin full decommission. Mechanically de-compact road surface for the entire length of the temporary road. Ripping shall be discontinuous to prevent channeling water. Camouflage road entrance.
0.09	End full decommission.

Temp Road 7-3 NAT

M.P.	**Remarks**
0.00	Jct. w/ 33-1W-7.05. Begin full decommission. Mechanically de-compact road surface for the entire length of the temporary road. Ripping shall be discontinuous to prevent channeling water. Camouflage road entrance.
0.05	Remove rock from stream ford. Restore channel to match both up and downstream of crossing.
0.18	End full decommission.

Temp Road 19-3 NAT

M.P.	**Remarks**
0.00	Jct. w/ 33-1W-19.00. Begin full decommission. Mechanically de-compact road surface for the entire length of the temporary road. Ripping shall be discontinuous to prevent channeling water. Camouflage road entrance.
0.06	End full decommission.

Temp Road 19-4 NAT

M.P.	**Remarks**
0.00	Jct. w/ 32-1W-19.04. Begin full decommission. Mechanically de-compact road surface for the entire length of the temporary road. Ripping shall be discontinuous to prevent channeling water. Camouflage road entrance.
0.02	End full decommission.