

PROSPECTUS

Sale Date: November 18, 2014

(1) Roseburg Sale No.: 2015.0001
Douglas County, Oregon: O&C: Oral Auction

Sale Name: Rolling Thunder
Bid Deposit Required: \$80,000.00

All timber designated for cutting on:

Lots 9 & 10, SW¼, W½SE¼	Sec. 21,	T. 26 S.,	R. 2 W.,	Willamette Meridian
Lots 10, 11, 12, 13, 14, 15 and 16	Sec. 23,	T. 26 S.,	R. 2 W.,	Willamette Meridian
Lots 3 and 4	Sec. 25,	T. 26 S.,	R. 2 W.,	Willamette Meridian
NE¼	Sec. 29,	T. 26 S.,	R. 2 W.,	Willamette Meridian

Approx. Number Merch. Trees	Est. Vol. MBF 32' Log	Species	Est. Vol. MBF 16' Log	Appraised Price Per MBF	Est. Volume Times Appraised Price
19,907	3,332	Douglas-fir	4,014	\$183.20	\$735,364.80
1,660	292	Grand Fir	357	\$95.50	\$34,093.50
1,345	124	Western Hemlock	156	\$73.20	\$11,419.20
1,123	65	Western Redcedar	85	\$205.10	\$17,433.50
119	10	Incense-cedar	11	\$108.40	\$1,192.40
12	5	Sugar Pine	7	\$28.50 *	\$199.50
24,166	3,828		4,630		\$799,702.90

* BLM appraised price per MBF is a minimum stumpage value.

THE VOLUMES LISTED herein are estimates only, based on 16-foot taper breaks, which must be taken into consideration if comparisons are made with volume predictions based on other standards. The volumes based on 32-foot taper breaks are shown for comparison purposes. No sale shall be made for less than the total purchase price, without regard to the amount bid per unit, even though quantity of timber actually cut or removed or designated for taking is more or less than the estimated volume or quantity so listed.

APPRAISED PRICES are determined by analytical appraisal methods unless otherwise noted on individual timber sale notices.

LOG EXPORT AND SUBSTITUTION RESTRICTIONS:

All timber sales, including timber from Federal rights-of-ways, shall be subject to the restrictions relating to the export and substitution of unprocessed timber from the United States in accordance with P.L. 94-165 and 43 CFR 5400 and 5424 as amended.

Excepting Port-Orford-cedar, all timber offered for sale hereunder is restricted from export from the United States in the form of unprocessed timber and is prohibited from being used as a substitute for exported private timber.

CRUISE INFORMATION:

For all Harvest Areas: the timber volumes for all tree species are based on a variable plot cruise, containing a total of 212 plots and 274 randomly selected sample trees. Plots were measured using a 20 basal area factor (BAF). The volume of the randomly selected sample trees has been expanded to a total sale volume. A map showing the location of the plots and sample trees is available at the Roseburg District Office.

For all right-of-ways: The timber volumes for all tree species have been determined by individual tree measurements using a 100% cruise.

With respect to merchantable trees of all species: the average tree is 13.7 inches D.B.H.O.B., the average log contains 47 bd. ft., the total gross volume is approximately 4871 MBF and 95% recovery is expected.

CUTTING AREA: An area of approximately 223 acres in 7 units will be partially cut and rights-of-ways totaling approximately 3 acres will be clearcut.

<u>TIMBER ACREAGE:</u>	Area 1:	39 acres	Area 5:	16 acres
	Area 2:	15 acres	Area 6:	70 acres
	Area 3:	37 acres	Area 7:	16 acres
	Area 4:	30 acres	R/W:	3 acres

ACCESS: Access to the sale area is provided by Government, County, and privately controlled roads. A road use fee of \$2,578.56 will be required to be paid to FIA Timber Growth Master, LLC, and a road use fee of \$13,206.66 will be required to be paid to Seneca Jones Timber Company.

DIRECTIONS TO SALE AREA: From Roseburg, proceed east on OR 138 (North Umpqua Highway) approximately 16.2 miles to the junction with County Road 17A (Little River Road). Then:

1. To reach Harvest Areas 4, 5, 6 and 7, turn right onto County Road 17A (Little River Road) and proceed approximately 5.6 miles to the intersection with Road 26-3-34.2 (Thunder Mountain Road). Turn left onto Thunder Mountain Road and follow the Exhibit D map northeast approximately 10.5 miles to the sale area.
2. To reach Harvest Areas 1, 2, and 3, proceed east on OR 138 (North Umpqua Highway) approximately 6.2 miles to the junction with Road 26-3-1.1 (Swiftwater Road). Turn right onto Swiftwater Road and follow the Exhibit D map southeast approximately 9 miles to the sale area.

ROAD MAINTENANCE: Rockwear and maintenance fees of \$33,928.17 will be required to be paid to the BLM; and rockwear and maintenance fees of \$33,202.45 will be required to be paid to Seneca Jones Timber Company.

ROAD CONSTRUCTION: Estimates include the following: construct 45+35 stations, renovate 395+70 stations, and decommission 166+85 stations of road. Additional information is available in Exhibit C and Exhibit D of the Timber Sale Contract.

DURATION OF CONTRACT will be 36 months for cutting and removal of timber. The contract will contain SPECIAL PROVISIONS regarding: logging; environmental protection; road construction, renovation, maintenance, and use; fire prevention; slash disposal; and log exports. Log scaling may be required under the terms of this contract.

ADDITIONAL INFORMATION: This prospectus includes maps and tables that cannot be made Section 508 compliant. For help with its data or information, please contact the Roseburg District Office at 541-440-4930.

NOTES:

1. A revised Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and /or to modify or terminate the contract when necessary to: (1) Comply with the Endangered Species Act, or; (2) Comply with a court order, or; (3) Protect species which were identified for protection through survey and manage and/or protection buffer standards and guidelines 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.
2. Seasonal restrictions on operations apply to this sale regarding road work, falling, bucking, yarding, loading, and hauling. Refer to Section 42(A)(7)(b), 42(A)(11-13), 42(D)(2), and Exhibit E for details. A "seasonal restriction matrix" is included with this prospectus to serve as a guide in planning and scheduling operations for each harvest unit.
3. License agreements with FIA Timber Growth Master, LLC, and Seneca Jones Timber Company are required. The terms and conditions of each license agreement are available for inspection at the Roseburg District Office.
4. This contract contains provisions for the sale and removal of additional timber necessary to facilitate safe and efficient Purchaser operations. It is estimated that approximately 232 MBF of such additional timber would be removed under the contract, but is not included in the advertised sale volume.
5. Slash disposal requirements consist of the following: machine piling, covering and burning slash and debris within a fifty (50) foot radius of landings (approximately 62 landings), and within fifty (50) feet along designated roads in Harvest Areas 1, 2, 3 and 4. The purchaser will have the option to assist in burning or to make a contribution to the Bureau of Land Management in lieu thereof. Refer to Section 42(F), Section 42(G), and Exhibit F for details.
6. Optional Spur A may be constructed as shown on Exhibit A at the Purchaser's expense to facilitate logging operations. This spur may only be constructed between May 15 and October 15 of any given calendar year. Aggregate surfacing may be applied at the Purchaser's expense to provide wet season access for cable yarding. If constructed, the Purchaser would be responsible for decommissioning, as directed by the Authorized Officer. In order to construct optional Spur A, a logging plan and rock source must be approved, and the contract modified by the Authorized Officer.
7. As appraised, approximately 55% of the sale area is available for wet season operations, including portions of Harvest Areas 1 (35 acres), 2 (8 acres), 3 (32 acres), 4 (23 acres), 5 (7 acres) and 6 (17 acres). Wet season operations may be maximized at the Purchaser's expense by:
 - Cable yarding portions of Harvest Areas 1, 2, 3, 4, 5 and 6 to the existing rocked roads approved for wet season operations, instead of ground-based yarding (approximately 51 additional acres);
 - Adding rock to Road 26-2-22.0 Segments J – L, Road 26-2-26.0 Segment A and Spur 1 as necessary for wet season haul of the cable yarding portion of Harvest Area 6 and all of Harvest Area 7 (approximately 45 additional acres) and to cable yard a portion of Harvest Area 6 instead of ground-based yarding (approximately 5 additional acres).

In order to maximize wet season operations, the Authorized Officer must approve the logging plan and rock source, and a contract modification may be required.

THIS IS A SALE PROSPECTUS ONLY. ATTACHMENTS MAY NOT INCLUDE ALL EXHIBITS REFERRED TO IN THE CONTRACT PROVISIONS. THE COMPLETE CONTRACT, INCLUDING ALL EXHIBITS, IS AVAILABLE FOR INSPECTION AT THE ROSEBURG DISTRICT OFFICE.

Section 41. TIMBER RESERVED FROM CUTTING -The following timber in the Contract Area is hereby reserved from cutting and removal under the terms of this contract and is retained as the property of the Government.

- (a) All timber on the Reserve Areas as shown on Exhibit A.
- (b) All retention trees marked with orange paint above and below stump height within the cutting areas and all orange painted and posted trees which are on or mark the boundaries of the Reserve Areas.
- (c) All existing downed trees at the time of the timber cruise in the Harvest Areas shown on Exhibit A. Reserved existing downed trees may be bucked to facilitate yarding.
- (d) All snags in the Harvest Areas as shown on Exhibit A. Snags which pose a hazard to operations may be felled with the approval of the Authorized Officer.

Section 42. The Purchaser shall comply with the special provisions which are attached hereto and made apart hereof, unless otherwise authorized in writing by the Authorized Officer.

Section 42 (A) Logging:

- (1) Before beginning operations on the Contract Area for the first time or after a shutdown of ten (10) or more days, the Purchaser shall notify the Authorized Officer in writing of the day 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 ten (10) or more days.
- (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 must be held at a location designated by the Authorized Officer before the logging plan will be approved. All logging shall be done in accordance with the plan developed by this provision.
- (3) Before beginning operations in the portion of Harvest Area 2 adjacent to the Pacific Power 115,000 volt transmission line right-of-way as shown on Exhibit "A", the Purchaser shall notify the Authorized Officer, who shall inform Pacific Power which reserves the right to assign a line patrolman to the area of operations. Operations adjacent to the transmission line right-of-way shall be conducted in a manner approved by the Authorized Officer at the pre-work conference and documented in the logging plan.
- (4) In the Harvest Areas shown on Exhibit A, all trees designated for cutting which are within one hundred (100) feet of the Reserve Areas shall be felled and yarded away from these areas.
- (5) No cable yarding, ground based yarding or log loading is permitted in or through the Reserve Areas as shown on Exhibit A, unless otherwise approved by the Authorized Officer.
- (6) In the Harvest Areas shown on Exhibit A, all trees designated for cutting shall be manually felled, limbed and cut into log lengths not to exceed forty-two (42) feet before being yarded, unless otherwise approved by the Authorized Officer. Portions of Harvest Areas may be felled mechanically using a feller-processor or feller-buncher with the approval of the Authorized Officer and in accordance with the following specifications:
 - (a) Mechanized felling operations shall generally be limited to slopes of thirty-five (35) percent or less.
 - (b) Mechanized felling operations are subject to seasonal operating restrictions as described in Section 42(A)(7)(b) of this contract.
 - (c) The feller-processor or feller-buncher shall be approved by the Authorized Officer prior to the start of mechanized felling operations. Only purpose-built carriers with boom-mounted felling heads may be approved. The purpose-built carrier may be of the articulated, rubber-tired design or the zero tail swing, leveling, track-mounted design.

- (d) In Harvest Areas where mechanical felling is permitted with the approval of the Authorized Officer, all trees designated for cutting may be felled and whole tree yarded except when excessive stand damage occurs as determined by the Authorized Officer. If excessive stand damage occurs, all trees shall be completely limbed and bucked into log lengths not to exceed forty-two (42) feet prior to being yarded.
- (7) In the portions of Harvest Areas 1, 2, 3, 4, 5 & 6 designated for ground-based yarding as shown on Exhibit A (approximately 56 acres):
- (a) Ground-based yarding operations shall generally be limited to slopes of thirty-five (35) percent or less, and existing skid trails shall be utilized to the greatest extent possible.
 - (b) No ground-based yarding shall be permitted between September 30 of one calendar year and July 15 of the following calendar year, both days inclusive, or other periods of unseasonably wet weather and soil moisture conditions, unless otherwise approved by the Authorized Officer.
 - (c) A rubber-tired or track-mounted skidder may be used in accordance with the following specifications:
 - (1) The skidder shall be approved by the Authorized Officer prior to ground-based yarding operations.
 - (2) Yarding shall be done with one end of the log suspended.
 - (3) The skidder shall be restricted to designated skid trails. Skid trails shall be clearly identified on the ground, twelve (12) feet or less in width and spaced at least one hundred fifty (150) feet apart. Designated skid trails, whether existing or newly proposed, shall be approved by the Authorized Officer prior to the felling of timber.
 - (d) A track-mounted log loader, or shovel yarding system, may be used in accordance with the following specifications:
 - (1) The track-mounted log loader shall be approved by the Authorized Officer prior to ground-based yarding operations.
 - (2) The track-mounted log loader shall be restricted to designated skid trails and shall utilize the swing yarding method to the greatest extent practicable. The designated skid trail network shall minimize both the amount of ground covered by the tractor treads and the number of passes over any single spot on the ground. Designated skid trails, whether existing or newly proposed, shall be approved by the Authorized Officer prior to the felling of timber.
 - (3) The track-mounted log loader shall be required to place logging slash in front of the machine's tracks prior to traveling designated skid trails in order to reduce soil compaction.

- (e) A cut-to-length system may be used in accordance with the following specifications:
 - (1) The harvester shall be required to cut off limbs and tops in front of the machine's tracks in order to reduce the potential for soil compaction. The harvester must have a lateral reach of twenty (20) feet or more, and the machine's lateral reach must be utilized as much as possible.
 - (2) The forwarder shall operate only on designated skid trails approved by the Authorized Officer. Forwarder trails shall be located on existing skid trails and/or the slash-covered areas traversed by the harvester. Forwarder trails shall be perpendicular to hill-slope contour lines as much as possible. Forwarder trails shall be located such that there are two harvester trails between forwarder trails, resulting in a spacing of at least one hundred (100) feet between forwarder trails.
 - (3) Logs that are too large for the harvester/forwarder operation may be yarded with a rubber-tired or track-mounted skidder, or a track-mounted log loader approved by the Authorized Officer, and as directed by the Authorized Officer. The skidder shall operate on designated skid trails approved by the Authorized Officer.
- (8) In the portions of Harvest Areas 1, 2, 3, 4, 5, 6, & 7 designated for cable yarding as shown on Exhibit A:
 - (a) Yarding shall be done with a cable skyline system utilizing a mechanical slack-pulling carriage capable of maintaining a fixed position on the skyline while lateral yarding and having a lateral capability of seventy five (75) feet. The carriage must not move during in-haul. The cable yarder shall have a maximum tower height of fifty (50) feet and a maximum of two hundred fifty (250) horsepower. The system shall have the capability to yard in multi-span configuration.
 - (b) Wherever possible, cable yarding corridors shall be perpendicular to hill-slope contour lines, parallel to each other and spaced at least one hundred fifty (150) feet apart to minimize damage to reserve trees.
 - (c) Cable yarding of logs shall be done under the canopy and with one end suspended. Lift trees and/or intermediate support trees shall be employed where necessary to meet this requirement. All logs shall be yarded away from or parallel to streams as shown on Exhibit A, except in Harvest Areas 1 and 3 where full suspension over the stream will be required.
 - (d) Prior to attaching any logging equipment to a reserve tree, the Purchaser shall obtain written approval from the Authorized Officer and shall take precautions to protect the tree from damage as directed in writing by the Authorized Officer.
- (9) Before cutting and removing any trees necessary to facilitate logging in the Harvest Areas shown on Exhibit A, the Purchaser shall identify the location of the skid trails, cable yarding

corridors, and tailhold, tieback, guyline, lift, intermediate support, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the logging plan. Said Purchaser identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding with cutting the following conditions must be met:

- (a) All skid trails and/or cable yarding corridors upon which timber is identified by the Purchaser to be cut and removed in accordance with this special provision must be necessary for the safe and expeditious removal of timber sold under this contract and shall be limited to the minimum width necessary for yarding of logs with a minimum of damage to reserve trees, however, unless otherwise approved in writing by the Authorized Officer, the width of skid trails shall be limited to twelve (12) feet and cable yarding corridors shall be limited to fifteen (15) feet.
- (b) The Purchaser may immediately cut and remove additional timber to clear skid trails and cable yarding corridors; and provide tailhold, tieback, guyline, lift and intermediate support trees; and to clear danger trees when the trees have been marked with blue paint above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Section 3(b) of the contract or sufficient bonding has been provided in accordance with Section 3(f) of the contract.
- (c) The Purchaser agrees that sale of this additional timber shall be accomplished by a unilateral modification of the contract executed by the Contracting Officer and that such timber shall be sold at the unit prices shown in Exhibit B of this contract unless: the value of the timber must be reappraised subject to the terms for contract extension set forth in Section 9 of the contract; or the Authorized Officer determines that trees otherwise reserved in Section 41 of the contract or any tree that exceeds thirty-six (36) inches diameter at breast height shall be appraised and sold by bilateral modification of the contract at current fair market value in accordance with Section 8 of the contract.
- (d) This authorization for the Purchaser to cut and remove additional timber prior to the execution of a modification may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser has cut and removed any tree not previously marked and approved for cutting by the Authorized Officer, which under Section 10 of the contract constitutes a violation of the contract and under Section 13 of the contract may constitute a trespass rendering the Purchaser liable for damages under applicable law.
- (e) If authorization is withdrawn, the Contracting Officer shall issue a written notice to the Purchaser that the sale of additional timber under this special provision is no longer approved. In this case, the Purchaser shall inform the Authorized Officer at least one (1) working day prior to the need for cutting and removing any additional timber, and execute a bilateral modification prior to cutting for such additional approved timber at

the unit prices shown in Exhibit B of the contract or in accordance with Section 8 or Section 9 of the contract as determined by the Authorized Officer in accordance with this provision. The Contracting Officer may issue a written order to the Purchaser to suspend, delay, or interrupt any or all contract work for the period of time deemed necessary and appropriate for the Government to safely measure and mark additional timber.

- (f) The Government may reserve trees previously designated for cutting and removal by applying orange paint as replacements for additional trees cut and removed for skid trails and/or cable yarding corridors when the Authorized Officer determines such reservation is necessary to maintain stand densities consistent with objectives set forth in the management prescription(s). This may include the replacement of trees damaged by storm events, or insects or disease. The volume of this timber to be reserved will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and the value shall be based on the unit prices shown in Exhibit B of the contract. The Purchaser agrees that the Total Purchase Price shall be reduced accordingly through a unilateral modification to the contract executed by the Contracting Officer.
- (10) In accordance with the requirements of Section 8 of the contract it has been determined that it is in the best interest of the Government and within the provisions of 43 CFR 5402.0-6 to sell additional timber located in the Contract Area which is obstructing needed cable yarding corridors, hazardous to workers, needed for guyline, tail hold or tieback trees, and/or severely damaged from the normal conduct of felling or yarding operations to meet all applicable safety laws, codes or regulations. This timber must be cut or removed so that the Purchaser can continue active falling and yarding operations. The Purchaser is, therefore, authorized to cut and remove such additional timber in accordance with the provisions of Section 8 of the contract: provided, however, that:
- (a) Trees reserved for the tree improvement program and trees reserved for the wildlife habitat objectives under Section 41 of the contract are not included in the authorization.
 - (b) The Purchaser shall identify each tree sold and cut in accordance with the provision by marking the cut surface of the stump and the bottom log immediately after falling with high visibility red paint. The stump shall be marked by flagging the location of the stump with plastic fluorescent pink ribbon hung within five (5) feet of the stump at eye level so that the stump can be visually located from a distance of not less than one hundred (100) feet.
 - (c) The volume and price for such timber shall be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and paid for by the Purchaser in accordance with Section 3(b) or 3(f) of the contract as required by Section 8 of the contract.
 - (d) No timber may be cut or removed under the terms of this provision if all contract payments required by Section 3(b) or 3(f) of the contract have been made.

- (e) The permission to cut and remove additional timber contained in this provision may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser:
- (1) Failed to properly mark any stump with high visibility paint.
 - (2) Failed to identify the location of any stump.
 - (3) Cut any tree that was reserved for tree improvement and/or wildlife habitat.
 - (4) Cut any tree in or adjacent to cable yarding corridors that was not necessary to facilitate cable yarding.
 - (5) Cut any reserve tree in or adjacent to skid trails that was not necessary to facilitate ground based yarding.
 - (6) Failed to properly segregate any pulled-over tree that was yarded to the landing.
 - (7) Cut any reserve tree that was not severely damaged (as defined during the pre-work conference) from felling and yarding operations.
 - (8) Cut more than the minimum number of trees necessary to properly serve as guyline anchor stumps.
 - (9) Cut or topped more than the minimum number of trees necessary to properly serve as tail hold trees.
 - (10) Cut more than the minimum number of trees necessary to properly serve as tie-backs for topped tail hold trees.
 - (11) Failed to maintain accurate and current (no more than twenty-four [24] hours old) documentation of additional timber cut and removed.

If the permission to cut and remove additional timber provision is withdrawn, the Authorized Officer shall deliver to the Purchaser a written notice that additional sale of timber under this special provision is no longer approved.

If the permission to cut and remove additional timber provision is withdrawn, the Purchaser shall inform the Authorized Officer at least two (2) working days prior to the need for cutting and yarding any guyline tree, tailhold tree, tie-back tree, danger tree, corridor tree, pulled over tree, and severely damaged tree. All sales of additional timber shall comply with Section 8 of the contract. The Contracting Officer may order the Purchaser, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the Government to safely measure and mark additional timber.

All cable yarding corridors and/or ground based equipment skid trails upon which timber may be cut and removed in accordance with this special provision must be needed for the removal of timber sold under this contract and shall be limited to the narrowest width necessary for the yarding of logs with minimum damage to reserved trees.

The Purchaser shall be liable for damages in accordance with Section 13 of the contract for any reserved timber cut or removed in violation of the terms of this special provision.

- (11) Except for right-of-way logging, no falling or yarding shall be conducted between April 15 and July 15 (bark slip period), both days inclusive, unless otherwise approved by the Authorized Officer.

- (12) No logging activity or log hauling shall be conducted on unsurfaced roads, and no log hauling shall be conducted on Road 26-2-22.0 Segments J - L, Road 26-2-26.0 Segment A, or Spur 1, between October 15 of one calendar year and May 15 of the following calendar year (wet season), both days inclusive, unless otherwise approved by the Authorized Officer.
- (13) For portions of Harvest Areas 1, 2, 3, 4, 5 and 6, as shown on Exhibit E, which is attached hereto and made a part hereof, no operations, except hauling, may be conducted from March 1 to July 15, both days inclusive, of each calendar year due to the potential disruption of northern spotted owls.

The Government will conduct surveys to determine whether northern spotted owls are present within 0.25 miles of the Harvest Area. If it is determined that northern spotted owls are not present, the Authorized Officer may lift the seasonal restriction in any given year on such operations in writing.

- (14) For a distance of fifty (50) feet from the perimeter of each landing designated by the Authorized Officer, all logs more than eight (8) inches in diameter at the large end and longer than eight (8) feet in length shall be decked or windrowed at the location designated by the Authorized Officer, except logs sold and removed from the Contract Area. If a log or piece of log meeting or exceeding the above specifications is bucked and left in place, all portions of that log shall be yarded and decked at the above described location.

Section 42 (B) Miscellaneous:

- (1) The Government, at its option, may administratively check scale any portion of the timber removed from the Contract Area, and if necessary, conduct check scaling of independent scalers contracted to BLM for administrative check scaling purposes. The Purchaser hereby agrees to make such contract timber available for such scaling at a location or locations to be approved in writing by the Authorized Officer. At the approved location or locations, the Purchaser shall provide an area for logs to be safely rolled out for scaling, to unload logs from trucks, place logs in a manner so that both ends and three faces of each log are visible for scaling, and to reload or remove logs after scaling has been completed. In the event that BLM elects to administratively check scale, and if such check scaling causes a delay in log transportation time, an adjustment will be made to the purchase price as follows: if the entire sale is check scaled, the purchase price of this contract shall be reduced by Three Thousand Four Hundred Seventy-two and 50/100 dollars (\$3,472.50); in the event only a portion of the contract timber is scaled, the purchase price shall be reduced by that portion of Three Thousand Four Hundred Seventy-two and 50/100 dollars (\$3,472.50) which is equal to the percentage of timber sold which was actually scaled by the Government. For purposes of computing this price reduction, the percentage of timber sold which has been scaled shall be determined by the Government. Any reduction in purchase price under the terms of this provision shall be full compensation to the Purchaser for any expense or loss incurred as a result of such scaling. Scaling shall be conducted in accordance with the Eastside (Scribner Decimal C) Rules by BLM scalers, and/or independent scalers contracted to BLM. A copy of the scale report will be made available to Purchaser upon request.

Section 42 (C) Environmental Protection:

- (1) In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall clean road surfaces, cut banks, landings, ditch lines and culverts of all debris created by logging operations.
- (2) In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall steam clean or pressure wash all logging and road building equipment, except logging trucks, prior to initial move-in, to minimize the likelihood of spreading noxious weeds and non-native plant species to the Contract Area. Equipment washing shall occur at a location approved by the Authorized Officer. Equipment will be visually inspected by the Authorized Officer prior to use. Any logging or road building equipment removed from the Contract Area during the duration of the contract must be steam cleaned or pressure washed before it is returned to the Contract Area. Cleaning shall be defined as removal of all dirt, grease, plant parts and material that may carry noxious weed seeds.
- (3) In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall winterize all native surfaced roads used under Section 42(D)(1) or any portion thereof, in accordance with the plans and specifications shown on Exhibit D, which is attached hereto and made a part hereof, and in accordance with the following stipulations:
 - (a) The Purchaser intends to use the native surfaced roads or portions thereof for more than a single operating season; or, circumstances require that the roads or portions thereof overwinter before decommissioning.
 - (b) Winterizing shall consist of water-barring, blocking and mulching to the satisfaction of the Authorized Officer.
 - (c) Winterizing shall take place prior to the end of the operating season as described in Section 42(A)(12) of this contract, or as directed by the Authorized Officer.
- (4) The Purchaser shall immediately discontinue specified construction or timber harvesting operations upon written notice from the Contracting Officer that:
 - (a) Threatened or endangered plants or animals protected under the Endangered Species Act of 1973, as amended, may be affected by the operation, and a determination is made that consultation or reinitiation of consultation is required concerning the species prior to continuing operation, or;
 - (b) When, in order to comply with the Endangered Species Act, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
 - (c) Federal proposed, federal candidate, Bureau sensitive or State listed species protected under BLM Manual 6840 - Special Status Species Management - have been identified, and a determination is made that continued operations would affect the species or its habitat, or;

- (d) Other active raptor nests have been discovered, and a determination is made that continued operations under this contract would adversely affect the present use of the discovered nesting area by the raptor, or;
- (e) When, in order to comply with a court order which enjoins operations on the sale or otherwise requires the Bureau of Land Management to suspend operations, or;
- (f) When, in order to comply with a court order, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
- (g) Species have been discovered which were identified for protection through Survey and Manage and/or protection buffer standards and guidelines established in the ROD and RMP, and the Contracting Officer determines that continued operations would affect the species or its habitat, or;
- (h) When, in order to protect species which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, the Contracting Officer determines it may be necessary to modify or terminate the contract.

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

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

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

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

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

The Contracting Officer may determine that it is necessary to terminate the cutting and removal rights under the contract in order to comply with the Endangered Species Act, protect species that have been discovered which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, or comply with a court order. Following the issuance of a written notice that cutting and removal rights will be terminated, the Purchaser will be permitted to remove timber cut under the contract, if allowed by the Endangered Species Act, survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, or court order requirements necessitating the modification or termination.

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

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

Section 42 (D) Road Construction, Maintenance & Use:

- (1) Purchaser shall construct: Spurs 1 and 2; Road 26-2-28.1 Segments A and B; and Road 26-2-21.3 Segment C. Purchaser shall renovate: Road 26-2-21.0 Segments A, B and C; Road 26-2-21.3 Segments A and B; Road 26-2-22.0 Segments C, C1, F, G, H, J, K and L; Road 26-2-23.1 Segments A and B (portion); Road 26-2-23.2 Segment A (portion); and Road 26-2-26.0 Segment A. Any required construction or renovation shall be completed in strict accordance with the plans and specifications shown on Exhibit C, which is attached hereto and made a part hereof. Any required construction, renovation, or improvement of structures and roads shall be completed prior to the removal of any timber, except right-of-way timber, over that road.
- (2) No road construction or renovation shall be conducted between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive, or other periods of unseasonably wet weather and soil moisture conditions, unless otherwise approved by the Authorized Officer.
- (3) Upon completion of logging operations, the following roads and spurs shall be decommissioned in strict accordance with the plans and specifications shown on Exhibit D: Road 26-2-21.3 Segments A, B and C; Road 26-2-22.0 Segments J, K and L; Road 26-2-26.0 Segment A; Road 26-2-28.1 Segments A and B; and Spurs 1 and 2.
- (4) The Purchaser is authorized to use the roads listed and shown on Exhibit D which are under the jurisdiction of the Bureau of Land Management for the removal of Government timber sold under the terms of this contract provided that the Purchaser pay the required maintenance and rockwear obligations described in Section 42(D)(5). Any road listed on Exhibit D and requiring improvement or renovation in Exhibit C of this contract shall be maintained by the Purchaser until receiving written acceptance of the construction or renovation from the Authorized Officer. The Purchaser shall pay current Bureau of Land Management maintenance and rockwear fees for the sale of additional timber under modification to the contract.
- (5) The Purchaser shall pay the Government a maintenance and rockwear obligation in the amount of Thirty-three Thousand Nine Hundred Twenty-eight and 17/100 dollars (\$33,928.17) for the transportation of timber included in the contract price over roads listed on the Exhibit D. The above road rockwear and maintenance amount is for use of fifteen and one-half (15.5) miles of road or less. Unless the total maintenance amount is paid prior to commencement of operations on the Contract Area, payments shall be made in installments of not less than Five Hundred and 00/100 dollars (\$500.00) payable in the same manner as and together with payments required in Section 3 of this contract.
- (6) The Purchaser shall perform any required road repair and maintenance work on roads used by them, under the terms of Exhibit D of this contract.
- (7) The Purchaser also agrees that if they elect to use any other private road which is the subject of a right-of-way agreement with the Government for the removal of Government timber sold under the terms of this contract, the Purchaser shall request and agree to the modification of

this contract to provide for such use and for allowances for amortization of the Government's share of the capital investment of any such road.

IF OTHER THAN FIA TIMBER GROWTH MASTER, LLC PURCHASES:

- (8) In the use of Road 26-3-1.1 Segment D (base), Road 26-3-13.0 Segment A (base), Road 26-3-13.0 Segment B (base), Road 26-3-13.0 Segment C (base), Road 26-3-13.0 Segment D (base), and Road 26-3-13.0 Segment E (base), the Purchaser shall comply with the conditions, including but not limited to those set out below, of the Right-of-Way and Road Use Agreement No. R-698, dated February 17, 1966, between the United States of America and FIA Timber Growth Master, LLC, available for inspection at the Bureau of Land Management, Roseburg District Office, 777 N.W. Garden Valley Blvd., Roseburg, Oregon 97471. These conditions include:
- (a) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed license agreement.
 - (b) Payment of a road use obligation in the amount of Two Thousand Five Hundred Seventy-eight and 56/100 dollars (\$2,578.56).
 - (c) Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees or road maintenance 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.

IF FIA TIMBER GROWTH MASTER, LLC PURCHASES:

- (9) In accordance with 43 CFR 2812.6-2(a)(5), the following allowances have been made for amortization on capital investment of the road covered by Right-of-Way and Road Use Agreement No. R-698, dated February 17, 1966, with the Purchaser: Two Thousand Five Hundred Seventy-eight and 56/100 dollars (\$2,578.56) for Road 26-3-1.1 Segment D (base), Road 26-3-13.0 Segment B (base), Road 26-3-13.0 Segment C (base), Road 26-3-13.0 Segment D (base), and Road 26-3-13.0 Segment E (base).

It is understood that the purchase price stated in Sec. 2 of this contract is the net price and no deductions will be made from the purchase price because of such allowances.

IF OTHER THAN SENECA JONES TIMBER COMPANY PURCHASES:

- (10) In the use of Road 26-2-21.0 Segment B, Road 26-2-21.3 Segment A (base), Road 26-2-21.3 Segment B (base), Road 26-2-22.0 Segment D, Road 26-2-22.0 Segment E, Road 26-2-22.0 Segment F, Road 26-2-22.0 Segment G, Road 26-2-22.0 Segment H, Road 26-2-22.0 Segment J (base), Road 26-2-22.0 Segment K (base), Road 26-2-22.0 Segment L (base), Road 26-2-23.1 Segment B (portion), Road 26-2-26.0 Segment A (base), Road 26-2-32.1 Segment A (base), Road 26-2-32.1 Segment B (imp), Road 26-2-32.1 Segment C, Road 26-3-34.2 Segment A, Road 26-3-34.2 Segment C1, and Road 26-3-34.2 Segment D (portion), the

Purchaser shall comply with the conditions, including but not limited to those set out below, of the Right-of-Way and Road Use Agreement No. R-913, dated August 17, 1977, between the United States of America and Seneca Jones Timber Company, available for inspection at the Bureau of Land Management, Roseburg District Office, 777 N.W. Garden Valley Blvd., Roseburg, Oregon 97471. These conditions include:

- (a) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed license agreement.
- (b) Payment of a road use obligation in the amount of Thirteen Thousand Two Hundred Six and 66/100 dollars (\$13,206.66).
- (c) Payment of a rockwear and maintenance obligation in the amount of Thirty-three Thousand Two Hundred Two and 45/100 dollars (\$33,202.45).
- (d) Payment for right-of-way timber from the construction of Road 26-2-21.3 Segment C (approximately 1.4 MBF) located in NW¼NW¼ Section 28, T. 26 S., R. 2 W., W.M., payment for right-of-way timber from the construction of Road 26-2-28.1 Segment A (approximately 0.9 MBF) located in NW¼NW¼ Section 28, T. 26 S., R. 2 W., W.M., and payment for right-of-way timber from the renovation of Road 26-2-26.0 Segment A (approximately 13.0 MBF) located in NE¼NE¼ Section 26, T. 26 S., R. 2 W., W.M., prior to cutting as follows:

Number of Trees	Species	Estimated Volume (MBF)	Appraised Price per MBF	Value
77	Douglas-fir	15.0	\$616.50	\$9,247.50
1	Grand Fir	0.1	\$185.40	\$18.54
1	Incense-cedar	0.2	\$220.20	\$44.04
79	Totals	15.3		\$9,310.08

- (e) 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 or road maintenance 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.

IF SENECA JONES TIMBER COMPANY PURCHASES:

- (11) In accordance with 43 CFR 2812.6-2(a)(5), the following allowances have been made for amortization on capital investment of the road covered by Right-of-Way and Road Use Agreement No. R-913 with the Purchaser: Thirteen Thousand Two Hundred Six and Sixty-six/100 dollars (\$13,206.66) for Road 26-2-21.3 Segment A (base), Road 26-2-21.3 Segment B (base), Road 26-2-22.0 Segment G (Imp), Road 26-2-22.0 Segment H (Imp), Road 26-2-22.0 Segment L (base), and Road 26-2-26.0 Segment A (base).

Section 42 (E) Fire Prevention and Control:

- (1) Primarily for purposes of fire prevention and control, the Purchaser shall, prior to the operation of power driven equipment in construction or logging operations under this contract during the closed fire season or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the Authorized Officer.

Section 42 (F) Slash Disposal and Site Preparation:

- (1) Fire Hazard Reduction. In addition to the requirements of Section 15 of this contract, and notwithstanding the Purchaser's satisfactory compliance with state laws and regulations regarding offsetting or abating the additional fire hazard created by this operation and the State's willingness to release the Purchaser from liability for such hazard, the Purchaser shall remain responsible to the Government for performance of the following hazard reduction measures required by this contract:
 - (a) 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 the Purchaser's operations under the terms of this contract.
 - (b) Landings shall be piled and covered within thirty (30) days of the completion of yarding from each landing.
 - (c) Covering of slash piles shall be done concurrently with piling operations. The covers shall be firmly fixed to each pile.
 - (d) Finished piles shall be tight and free of earth.
 - (e) Machine pile and cover all slash within fifty (50) feet of all landings or other locations as directed by the Authorized Officer in accordance with the following specifications:
 - (1) Landing slash piles shall be capped with a ten (10) foot by ten (10) foot cover of four (4) mil black plastic to maintain a dry ignition point.
 - (2) Slash piles shall be located away from unit boundaries, retention trees, snags, downed logs and stumps.
 - (f) Hand pile and cover all slash approximately three (3) to six (6) inches in diameter within 50 feet each side of designated roads in Harvest Areas 1, 2, 3 and 4 as shown on Exhibit F, which is attached hereto and made a part hereof, and as directed by the Authorized Officer in accordance with the following specifications:
 - (1) All slash more than two (2) feet long and between three (3) and six (6) inches in diameter at the large end shall be hand piled and covered.
 - (2) Piles shall be located away from unit boundaries, retention trees, snags, downed logs and stumps.

- (3) Maximum pile size shall be eight (8) feet in diameter by six (6) feet in height. Minimum pile size shall be four (4) feet in diameter by four (4) feet in height. Piles shall be stacked in a manner directed by the Authorized Officer.
 - (4) Covering shall be done concurrently with piling. A minimum of fifty (50) percent of each pile shall be covered using four (4) mil black plastic to maintain a dry ignition point. The covers shall be firmly fixed to each pile as determined by the Authorized Officer.
 - (5) Hand piling and covering shall begin within thirty (30) days and shall be completed no later than ninety (90) days following the completion of logging operations in each harvest area.
- (2) Notwithstanding the provisions of Section 15 of this contract, the Government shall assume all obligations for disposal or reduction of fire hazards created by the Purchaser's operations on Government lands, except for burning and mop-up assistance as required herein. In accordance with written instructions to be issued by the Authorized Officer at least ten (10) days in advance of the earliest date of required performance, the Purchaser shall, under supervision of the Authorized Officer or designated representative, assist in preparing units for burning, mop-up and patrol by furnishing, at the Purchaser's own expense, the services of personnel and equipment on each unit as shown below:

For igniting and burning landing piles and hand piles in all Harvest Areas, the Purchaser shall provide one (1) eight (8) person hand crew including a designated crew foreman. The crew shall be equipped with fuel, ten (10) drip torches or propane burners, four (4) fire shovels, four (4) pulaskis, one (1) power saw and enough radios to facilitate inter-crew communications. All crew members must have a current qualification card for FFT2 or higher. All qualifications are defined according to National Wildfire Coordinating Group (NWCG) Wildland Fire Qualifications System guide, PMS 310-1. Qualifications and equipment levels are the minimum and may exceed those stated above.

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

All listed personnel shall be physically fit, experienced and fully capable of functioning as required. All personnel shall arrive at the project area with the following personal safety equipment: lug-soled leather boots with minimum eight (8) inch uppers that provide ankle support; an approved hardhat; leather gloves; long pants and a long sleeve shirt made of approved aramid fabric (Nomex or equivalent); and an approved fire shelter.

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. In addition, all listed personnel directly involved in burning operations shall be certified Fire Fighters qualified according to National Wildfire Coordinating Group (NWCG)

Wildland Fire Qualification System guide, PMS 310-1 and provide documentation. The work leaders must be fluent in English and be able to effectively speak to all crew members under their direction. Personnel who do not meet these requirements or who do not have proper clothing and personal protective equipment (PPE) will not be allowed to participate.

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 a 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 shall also be responsible for such additional costs.

Section 42 (G) Optional Contributions:

- (1) The Purchaser shall assist in burning as described in Section 42(F)(2). The Purchaser shall have the option of completing this work, or in lieu thereof, may make a contribution to the Bureau of Land Management in the amount of Two Thousand Five Hundred Thirty-one and Seventy-four/100 dollars (\$2,531.74) and upon making such contribution, the Purchaser shall be relieved of the obligations set out in these subsections. The amount of the contribution shown above shall be paid prior to cutting. The Purchaser shall notify the Authorized Officer of his intention to make this contribution upon execution of this contract.

Section 42 (H) Log Exports:

- (1) All timber sold to the Purchaser under the terms of this contract, except exempted species, is restricted from export from the United States in the form of unprocessed timber, and is prohibited from being used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as: (1) any logs except those of utility grade or below, such as sawlogs, peeler logs and pulp logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three-quarters (8¾) inches in thickness; (3) split or round bolts or other roundwood not processed to standards and specifications suitable for end-product uses; or (4) western red cedar lumber which does not meet lumber of American Lumber Standards Grades of Number 3 dimension or better, or Pacific Lumber Inspection Bureau R-List Grades of Number 3 Common or better. Thus, timber manufactured into the following will be considered processed: (1) lumber and construction timber, regardless of size, manufactured to standards and specifications suitable for end-product uses; (2) chips, pulp and pulp products; (3) green or dry veneer and plywood; (4) poles and piling cut or treated for use as such; (5) cants, squares and lumber cut for remanufacturing of eight and three-quarters (8¾) inches in thickness or less; (6) shakes and shingles.

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

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

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

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

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

Prior to the termination of this contract, the Purchaser shall submit to the Authorized Officer Form 5460-15 (Log Scale and Disposition of Timber Removed Report) which shall be executed by the Purchaser. In addition, the Purchaser is required under the terms of this contract to retain for a three-year period from the date of termination of the contract the records of all sales or transfer of logs involving timber from the sale for inspection and use of the Bureau of Land Management.

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

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

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

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

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

Note: This matrix is intended to serve prospective purchasers as a guide only;
Refer to the contract Special Provisions for a full statement of the seasonal operating restrictions.

Seasonal restrictions are cross-hatched.



Harvest Area	Activity	Jan		Feb		Mar		Apr		May		June		July		Aug			Sept		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	16	1	15	1	16	1	5	16	1	15	1	15	1	15	1	15
1 Cable/ Ground	Right-of-way logging and clearing, road construction, renovation ^{1,4}																									
	Falling and bucking ^{2, 4}																									
	Ground-based yarding ^{2, 3}																									
	Cable yarding on rocked roads ^{2, 4}																									
	Loading or hauling on rocked roads																									
2 Cable/ Ground	Right-of-way logging and clearing, road construction, renovation ^{1, 4}																									
	Falling and bucking ^{2, 4}																									
	Ground-based yarding ^{2, 3, 4}																									
	Cable yarding on rocked roads ^{2, 4}																									
	Loading ⁴																									
	Hauling on rocked roads																									
3 Cable/ Ground	Right-of-way logging and clearing, road construction, renovation ^{1, 4}																									
	Falling and bucking ^{2, 4}																									
	Ground-based yarding ^{2, 3, 4}																									
	Cable yarding on rocked roads ^{2, 4}																									
	Loading ⁴																									
	Hauling on rocked roads																									

¹ Wet season restriction: unsurfaced, or limited strength roads and all road construction (October 15 –May 15) may be shortened or extended depending on weather conditions.

² Bark slip seasonal restriction (April 15 – July 15) may be conditionally waived.

³ Wet season restriction: ground-based yarding (October 1 – July 15) may be shortened or extended depending on soil moisture and weather conditions.

⁴ Spotted owl seasonal restriction (March 1 - July 15) may be conditionally waived.

Note: This matrix is intended to serve prospective purchasers as a guide only;

Seasonal restrictions are cross-hatched.



Refer to the contract Special Provisions for a full statement of the seasonal operating restrictions.

Harvest Area	Activity	Jan		Feb		Mar		Apr		May		June		July		Aug			Sept		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	16	1	15	1	16	1	5	16	1	15	1	15	1	15	1	15
4 Cable/ Ground	Right-of-way logging and clearing, road construction, renovation ¹																									
	Falling and bucking ^{2, 4}																									
	Ground-based yarding ^{2, 3}																									
	Cable yarding on rocked roads ^{2, 4}																									
	Loading or hauling on rocked roads																									
5 Cable/ Ground	Right-of-way logging and clearing, road construction, renovation ¹																									
	Falling and bucking ^{2, 4}																									
	Ground-based yarding ^{2, 3}																									
	Cable yarding on rocked roads ^{2, 4}																									
	Loading or hauling on rocked roads																									
6 Cable/ Ground	Right-of-way logging and clearing, road construction, renovation ^{1, 4}																									
	Falling and bucking ^{2, 4}																									
	Ground-based yarding ^{2, 3, 4}																									
	Cable yarding on rocked roads ^{2, 4}																									
	Loading or hauling on rocked roads ^{1, 4}																									

¹ Wet season restriction: unsurfaced, or limited strength roads and all road construction (October 15 –May 15) may be shortened or extended depending on weather conditions.

² Bark slip seasonal restriction (April 15 – July 15) may be conditionally waived.

³ Wet season restriction: ground-based yarding (October 1 – July 15) may be shortened or extended depending on soil moisture and weather conditions.

⁴ Spotted owl seasonal restriction (March 1 - July 15) may be conditionally waived.

Note: This matrix is intended to serve prospective purchasers as a guide only; Seasonal restrictions are cross-hatched. 

Refer to the contract Special Provisions for a full statement of the seasonal operating restrictions.

Harvest Area	Activity	Jan		Feb		Mar		Apr		May		June		July		Aug			Sept		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	16	1	15	1	16	1	5	16	1	15	1	15	1	15	1	15
7 Cable	Right-of-way logging and clearing, road construction, renovation ¹																									
	Falling and bucking ²																									
	Cable yarding on rocked roads ²																									
	Loading or hauling on rocked roads ¹																									

¹ Wet season restriction: unsurfaced, or limited strength roads and all road construction (October 15 –May 15) may be shortened or extended depending on weather conditions.

² Bark slip seasonal restriction (April 15 – July 15) may be conditionally waived.

³ Wet season restriction: ground-based yarding (October 1 – July 15) may be shortened or extended depending on soil moisture and weather conditions.

⁴ Spotted owl seasonal restriction (March 1 - July 15) may be conditionally waived.

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

LUMP SUM SALE

Tract Number (1) 2015.0001
Sale Name Rolling Thunder
Sale Notice (<i>dated</i>) October 21, 2014 (sale date 11/18/14)
BLM District Roseburg

☐ Sealed Bid for Sealed Bid Sale

☒ Written Bid for Oral Auction Sale

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

Required bid deposited is \$ **80,000.00** and is enclosed in for form of ☐ cash ☐ money order ☐ bank draft

☐ cashier's check ☐ certified check ☐ bid bond of corporate surety on approved list of the United States Treasury

☐ guaranteed remittance approved by the authorized officer.

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

BID SCHEDULE - LUMP SUM SALE

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

		BID SUBMITTED		(Est. Volume MBF 16' Log)		ORAL BID MADE					
PRODUCT SPECIES	UNIT	ESTIMATED VOLUME OR QUANTITY		UNIT PRICE		TOTAL VALUE		UNIT PRICE		TOTAL VALUE	
Douglas-Fir	MBF	4,014	x		=			x		=	
Grand Fir	MBF	357	x		=			x		=	
Western Hemlock	MBF	156	x		=			x		=	
Western Redcedar	MBF	85	x		=			x		=	
Incense-cedar	MBF	11	x		=			x		=	
Sugar Pine	MBF	7	x		=			x		=	
	MBF		x		=			x		=	
	MBF		x		=			x		=	
	MBF		x		=			x		=	
	MBF		x		=			x		=	
	MBF		x		=			x		=	
	MBF		x		=			x		=	
	MBF		x		=			x		=	
	MBF		x		=			x		=	
	MBF		x		=			x		=	
	MBF		x		=			x		=	
	MBF	4,630	x		=			x		=	
TOTAL PURCHASE PRICE											

(Continued on reverse)

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

Bid submitted on *(date)*

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

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

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et. seq.) requires us to inform you that:

This information is being collected to obtain data relevant to the operation of this timber sale contract.

This information will be used to administer our timber sale program.

Response to this request is required to obtain a benefit.

NOTICE

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

AUTHORITY: 38 FR 6280 and 43 CFR 5442.1

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

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

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

BURDEN HOURS STATEMENT

Public reporting burden for this form is estimated to average 1 hr. 15 min. per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S Department of the Interior, Bureau of Land Management, (Alternate) Bureau Clearance Officer, (WO-771), 18 and C Streets, N.W. Washington, D.C. 20240, and the Office of Management and Budget, Paperwork Reduction Project (1004-0113), Washington, D.C. 20503.

INSTRUCTIONS TO BIDDERS

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

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

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

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

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

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

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

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

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

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

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

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

*Applies to Timber Only

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

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

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

10. PERFORMANCE BOND —

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

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

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

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

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

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

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

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

17. **LOG EXPORT** — All timber offered for sale except as noted in the *Timber Sale Notice* is restricted from export from the United States in the form of unprocessed timber and cannot be used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as: (1) any logs except those of utility grade or below, such as sawlogs, peeler logs, and pulp logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three quarters (8-3/4) inches in thickness; (3) split or round bolts or other roundwood not processed to standards and specifications suitable for end product use; or (4) western red cedar lumber which does not meet lumber of American Lumber Standards Grades of Number 3 dimension or better, or Pacific Lumber Inspection Bureau R-List Grades of Num-

ber 3 common or better. Timber manufactured into the following will be considered processed: (1) lumber and construction timbers, regardless of size, manufactured to standards and specifications suitable for end product uses; (2) chips, pulp and pulp products; (3) green or dry veneer and plywood; (4) poles and piling cut or treated for use as such; (5) cants, squares, and lumber cut for remanufacture of eight and three quarters (8-3/4) inches in thickness or less; or (6) shakes and shingles. In event purchaser wishes to sell any or all of timber restricted from export in the form of unprocessed timber, the buyer, exchanges, or recipient shall be required to comply with contractual provisions relating to "unprocessed timber." Special reporting, branding and painting of logs may be included in contract provisions.*

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

Township 26 South, Range 2 West, Sections 21, 23, 25, 29, Willamette Meridian

HARVEST AREA	HARVEST ACRES	HARVEST METHOD
<div>1</div>	39	CABLE/GROUND
<div>2</div>	15	CABLE/GROUND
<div>3</div>	37	CABLE/GROUND
<div>4</div>	30	CABLE/GROUND
<div>5</div>	16	CABLE/GROUND
<div>6</div>	70	CABLE/GROUND
<div>7</div>	16	CABLE
Total	223	

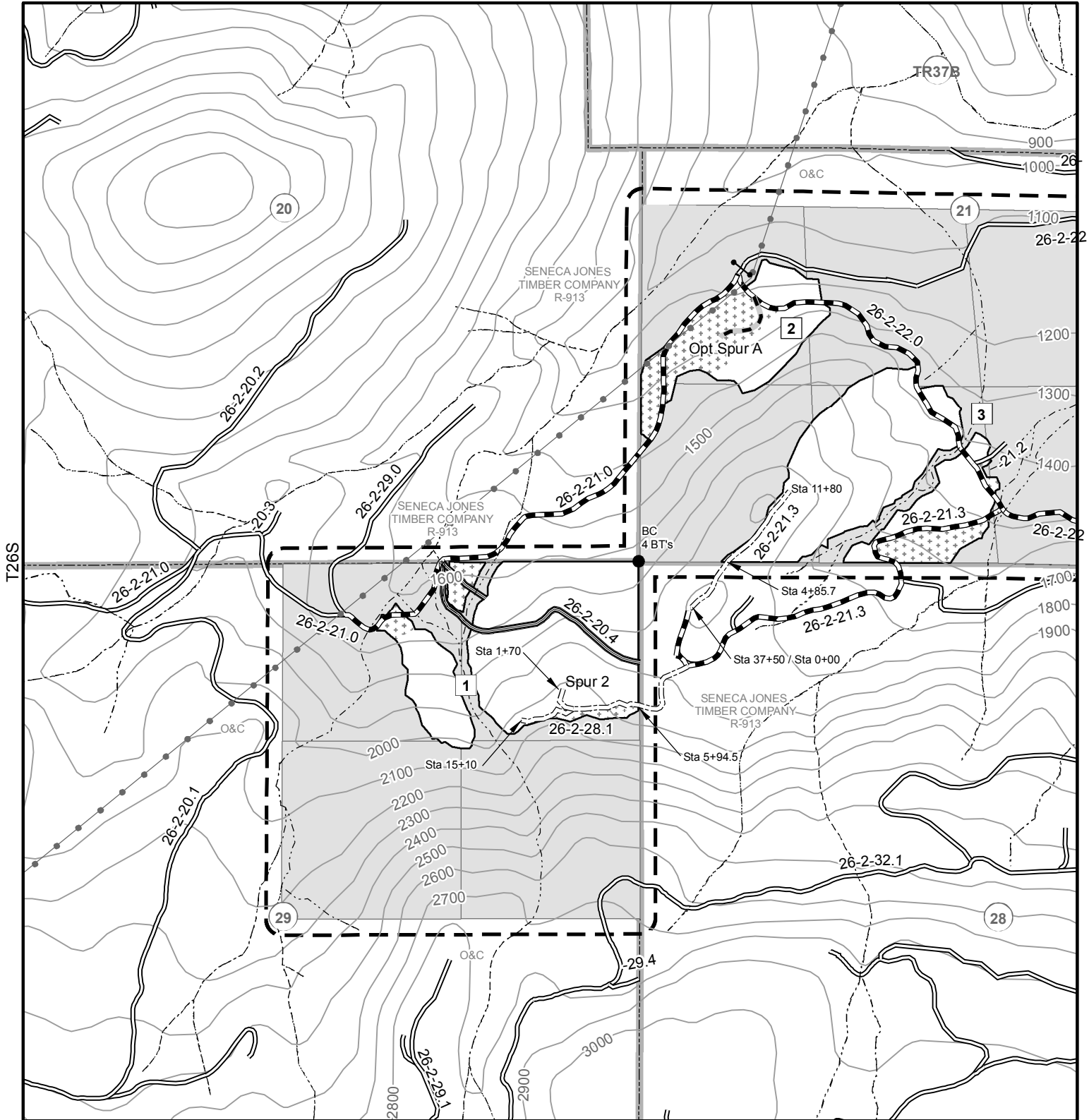
THINNING AREA-----	223	Acres
RIGHT-OF-WAY (CLEARING)-----	3	Acres
TOTAL HARVEST AREA-----	226	Acres
RESERVE AREA-----	792.28	Acres
TOTAL CONTRACT AREA-----	1018.28	Acres

1. Boundaries are posted with tags that read "Boundary of Timber Reserve" and trees are painted orange.
2. Property lines are posted with orange and white tags that read "Timber Cutting Boundary".
3. Clearing limits on road rights-of-ways are posted with tags that read "Right-of-Way".
4. Trees marked with orange paint in all Harvest Areas and on all harvest area boundaries are reserved by the government.
5. Ground-based yarding is limited to dry season operations and slopes 35% or less within the ground-based area shown on Exhibit A, approximately 56 acres.

Note: Acres shown on Exhibit A have been computed using a Trimble Geo XT Global Positioning System receiver and ESRI ArcMap 10.1 GIS software. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.



R02W



Legend

- Survey Corner Found
- Gate
- Transmission Line
- Stream
- === Undrivable Road - Do Not Use
- == Existing Road
- Road Construction
- Optional Road Construction
- Road Renovation
- Harvest Area - Cable Yarding
- Harvest Area - Ground Based
- Contract Area

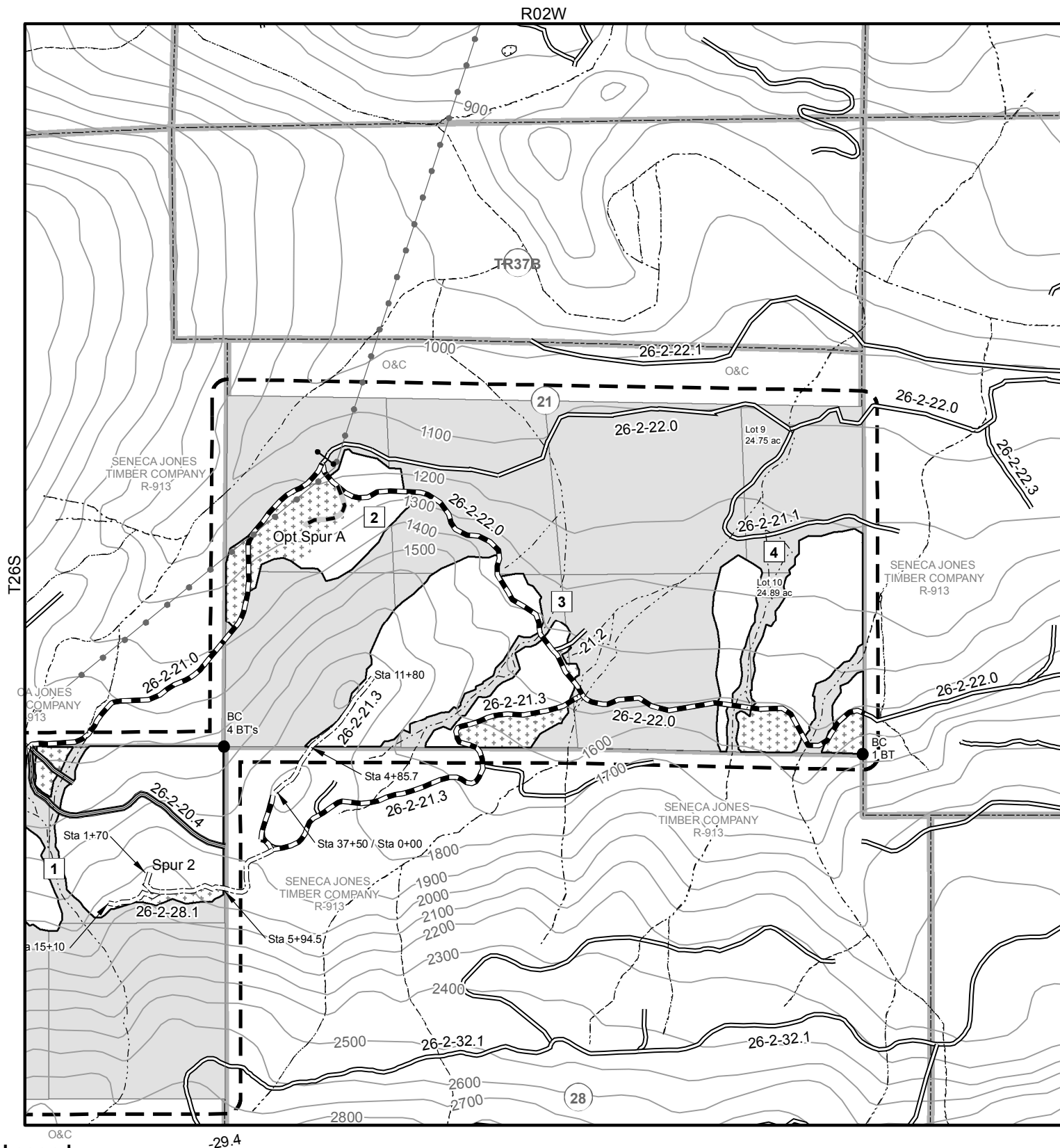
0 500 1,000 1,500 2,000
Feet



Date: 8/25/2014

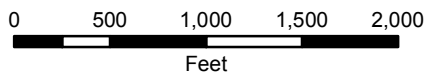
Roseburg District
Bureau of Land Management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471

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



Legend

- Survey Corner Found
- Gate
- Transmission Line
- Stream
- Undrivable Road - Do Not Use
- Existing Road
- Road Construction
- Optional Road Construction
- Road Renovation
- Harvest Area - Cable Yarding
- Harvest Area - Ground Based
- Contract Area



Date: 8/25/2014

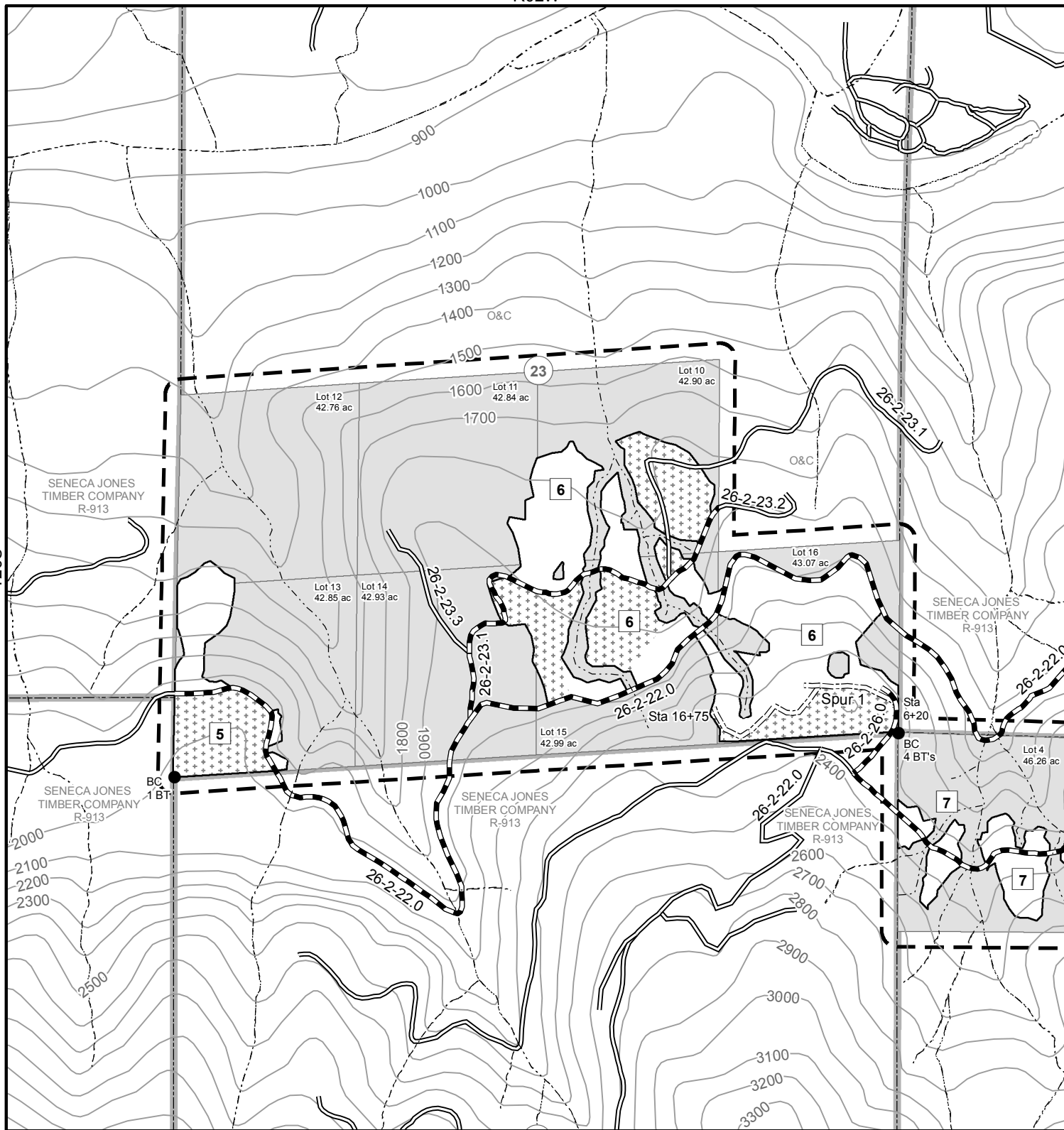
Roseburg District
Bureau of Land Management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471

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



R02W

T26S



Legend

- Survey Corner Found
- Stream
- Existing Road
- Road Construction
- Road Renovation
- Harvest Area - Cable Yarding
- Harvest Area - Ground Based
- Contract Area

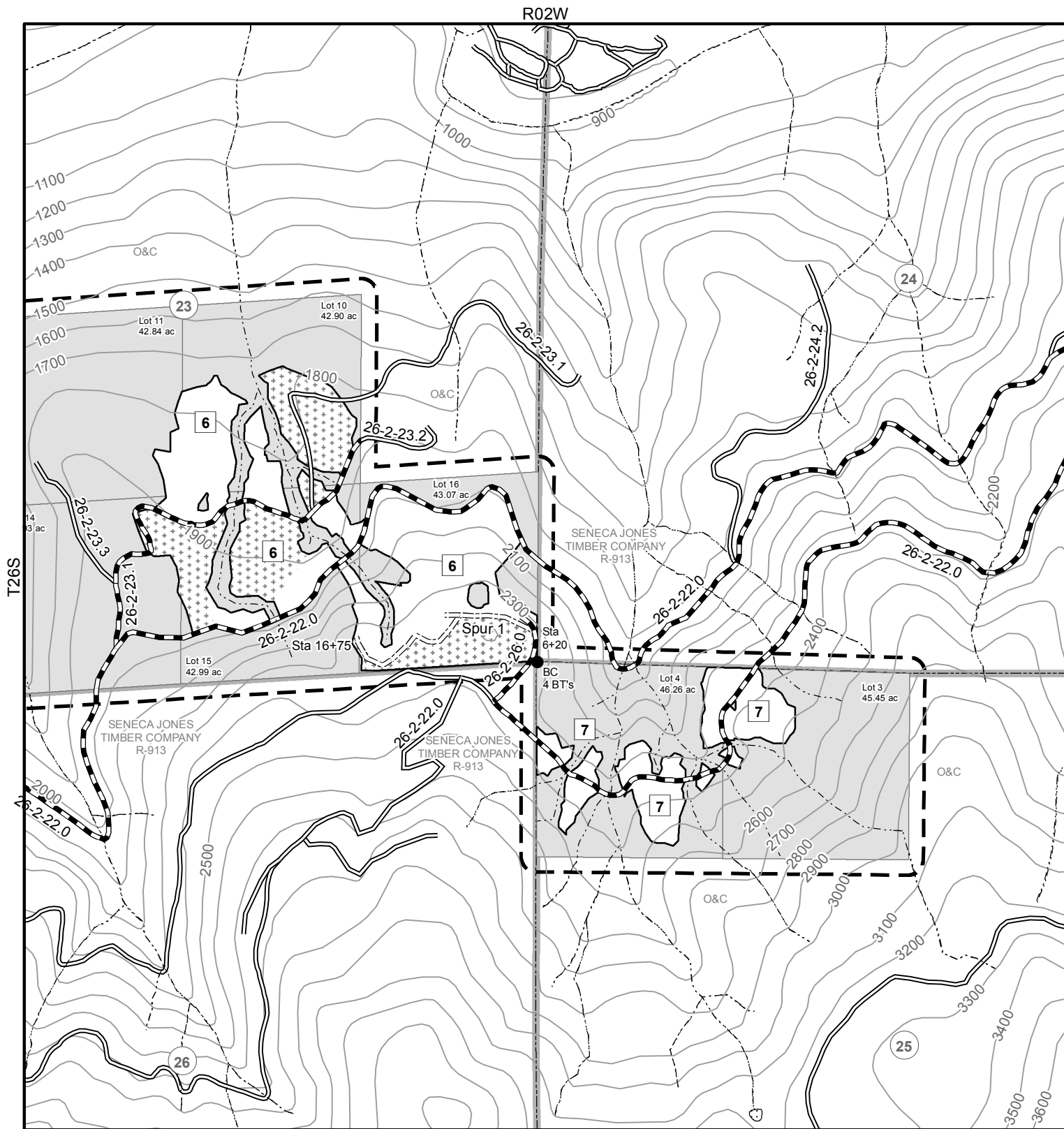
0 500 1,000 1,500 2,000
Feet



Date: 9/8/2014

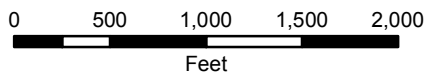
Roseburg District
Bureau of Land Management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471

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



Legend

- Survey Corner Found
- Stream
- ==== Existing Road
- ==== Road Construction
- ==== Road Renovation
- Harvest Area - Cable Yarding
- Harvest Area - Ground Based
- Contract Area



Date: 9/8/2014

Roseburg District
Bureau of Land Management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

EXHIBIT B / PRE-SALE

5450-3

Contract No.

ORR04-TS-2015.0001

Rolling Thunder

The following estimates and calculations of value of timber sold are made solely as an administrative aid for determining: (1) adjustments made or credits given in accordance with Secs. 6, 9, or 11; (2) when payments are due; and (3) value of timber subject to any special bonding provisions. The value of timber will be determined by multiplying the value per acre as shown below, times the amount of acreage as determined by the Authorized Officer, which has been cut or removed or designated for taking. Except as provided in Sec. 2, Purchaser shall be liable for total purchase price even though quantity of timber actually cut or removed or designated for taking is less than the estimated volume or quantity shown. Cutting areas are shown on **Exhibit A**.

SPECIES	ESTIMATED VOLUME OR QUANTITY (Units Specified)		PRICE PER UNIT	ESTIMATED VOLUME OR QUANTITY X UNIT PRICE
Sugar Pine	7.0	MBF	\$28.50	\$199.50
Douglas Fir	4,014.0	MBF	\$183.20	\$735,364.80
Grandfir	357.0	MBF	\$95.50	\$34,093.50
Western Hemlock	156.0	MBF	\$73.20	\$11,419.20
Western Redcedar	85.0	MBF	\$205.10	\$17,433.50
Incense-cedar	11.0	MBF	\$108.40	\$1,192.40
TOTALS	4,630.0	MBF		\$799,702.90

The apportionment of the total purchase price is as follows:

Unit 1

Douglas Fir	677.0 MBF	X	\$183.20	=	\$124,026.40
Grandfir	61.0 MBF	X	\$95.50	=	\$5,825.50
Western Hemlock	27.0 MBF	X	\$73.20	=	\$1,976.40
Western Redcedar	14.0 MBF	X	\$205.10	=	\$2,871.40
Incense-cedar	2.0 MBF	X	\$108.40	=	\$216.80
Total	781.0 Mbf				\$134,916.50 ÷ 39.0 acres = \$3,459.40/Acre

Unit 2

Douglas Fir	260.0 MBF	X	\$183.20	=	\$47,632.00
Grandfir	23.0 MBF	X	\$95.50	=	\$2,196.50
Western Hemlock	10.0 MBF	X	\$73.20	=	\$732.00
Western Redcedar	6.0 MBF	X	\$205.10	=	\$1,230.60
Incense-cedar	1.0 MBF	X	\$108.40	=	\$108.40
Total	300.0 Mbf				\$51,899.50 ÷ 15.0 acres = \$3,459.97/Acre

Unit 3

Douglas Fir	642.0 MBF	X	\$183.20	=	\$117,614.40
Grandfir	58.0 MBF	X	\$95.50	=	\$5,539.00
Western Hemlock	26.0 MBF	X	\$73.20	=	\$1,903.20
Western Redcedar	14.0 MBF	X	\$205.10	=	\$2,871.40
Incense-cedar	1.0 MBF	X	\$108.40	=	\$108.40
Total	741.0 Mbf				\$128,036.40 ÷ 37.0 acres = \$3,460.44/Acre

Unit 4

Douglas Fir	520.0 MBF	X	\$183.20	=	\$95,264.00
-------------	-----------	---	----------	---	-------------

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

EXHIBIT B / PRE-SALE

5450-3

Contract No.

ORR04-TS-2015.0001

Rolling Thunder

The following estimates and calculations of value of timber sold are made solely as an administrative aid for determining: (1) adjustments made or credits given in accordance with Secs. 6, 9, or 11; (2) when payments are due; and (3) value of timber subject to any special bonding provisions. The value of timber will be determined by multiplying the value per acre as shown below, times the amount of acreage as determined by the Authorized Officer, which has been cut or removed or designated for taking. Except as provided in Sec. 2, Purchaser shall be liable for total purchase price even though quantity of timber actually cut or removed or designated for taking is less than the estimated volume or quantity shown. Cutting areas are shown on **Exhibit A**.

Unit 4

Grandfir	47.0 MBF	X	\$95.50	=	\$4,488.50
Western Hemlock	21.0 MBF	X	\$73.20	=	\$1,537.20
Western Redcedar	11.0 MBF	X	\$205.10	=	\$2,256.10
Incense-cedar	1.0 MBF	X	\$108.40	=	\$108.40
Total	600.0 Mbf				\$103,654.20 ÷ 30.0 acres = \$3,455.14/Acre

Unit 5

Douglas Fir	278.0 MBF	X	\$183.20	=	\$50,929.60
Grandfir	25.0 MBF	X	\$95.50	=	\$2,387.50
Western Hemlock	11.0 MBF	X	\$73.20	=	\$805.20
Western Redcedar	6.0 MBF	X	\$205.10	=	\$1,230.60
Incense-cedar	1.0 MBF	X	\$108.40	=	\$108.40
Total	321.0 Mbf				\$55,461.30 ÷ 16.0 acres = \$3,466.33/Acre

Unit 6

Douglas Fir	1,214.0 MBF	X	\$183.20	=	\$222,404.80
Grandfir	109.0 MBF	X	\$95.50	=	\$10,409.50
Western Hemlock	48.0 MBF	X	\$73.20	=	\$3,513.60
Western Redcedar	26.0 MBF	X	\$205.10	=	\$5,332.60
Incense-cedar	2.0 MBF	X	\$108.40	=	\$216.80
Total	1399.0 Mbf				\$241,877.30 ÷ 70.0 acres = \$3,455.39/Acre

Unit 7

Douglas Fir	278.0 MBF	X	\$183.20	=	\$50,929.60
Grandfir	25.0 MBF	X	\$95.50	=	\$2,387.50
Western Hemlock	11.0 MBF	X	\$73.20	=	\$805.20
Western Redcedar	6.0 MBF	X	\$205.10	=	\$1,230.60
Incense-cedar	1.0 MBF	X	\$108.40	=	\$108.40
Total	321.0 Mbf				\$55,461.30 ÷ 16.0 acres = \$3,466.33/Acre

Unit RW

Sugar Pine	7.0 MBF	X	\$28.50	=	\$199.50
Douglas Fir	145.0 MBF	X	\$183.20	=	\$26,564.00
Grandfir	9.0 MBF	X	\$95.50	=	\$859.50

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

EXHIBIT B / PRE-SALE

5450-3

Contract No.

ORR04-TS-2015.0001

Rolling Thunder

The following estimates and calculations of value of timber sold are made solely as an administrative aid for determining: (1) adjustments made or credits given in accordance with Secs. 6, 9, or 11; (2) when payments are due; and (3) value of timber subject to any special bonding provisions. The value of timber will be determined by multiplying the value per acre as shown below, times the amount of acreage as determined by the Authorized Officer, which has been cut or removed or designated for taking. Except as provided in Sec. 2, Purchaser shall be liable for total purchase price even though quantity of timber actually cut or removed or designated for taking is less than the estimated volume or quantity shown. Cutting areas are shown on **Exhibit A**.

Unit RW

Western Hemlock	2.0 MBF	X	\$73.20	=	\$146.40
Western Redcedar	2.0 MBF	X	\$205.10	=	\$410.20
Incense-cedar	2.0 MBF	X	\$108.40	=	\$216.80
Total	167.0 Mbf		\$28,396.40	÷ 3.0 acres =	\$9,465.47/Acre



Bureau of Land Management

R03W

EXHIBIT D

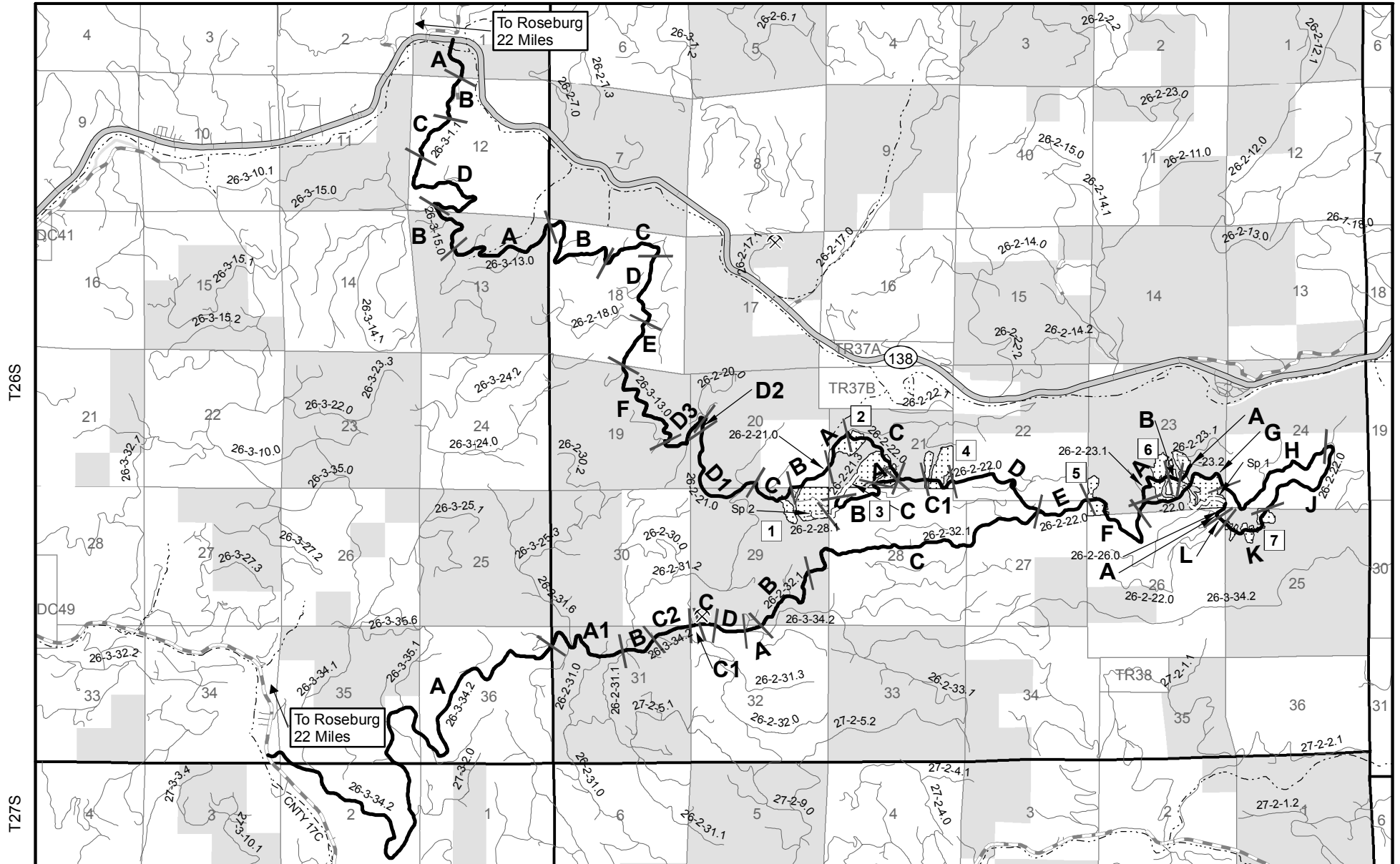
Sheet 1 of 2

Rolling Thunder

Contract # ORR04-TS-2015.0001

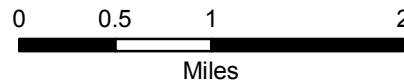
R02W

R01W



Legend

- Rock Quarry
- Construction
- Other Roads
- Segment_Break
- Haul Route
- Harvest Area
- County Road
- BLM Lands
- Major Stream



8/27/2014
Roseburg District
Bureau of Land Management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471

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



Bureau of Land Management

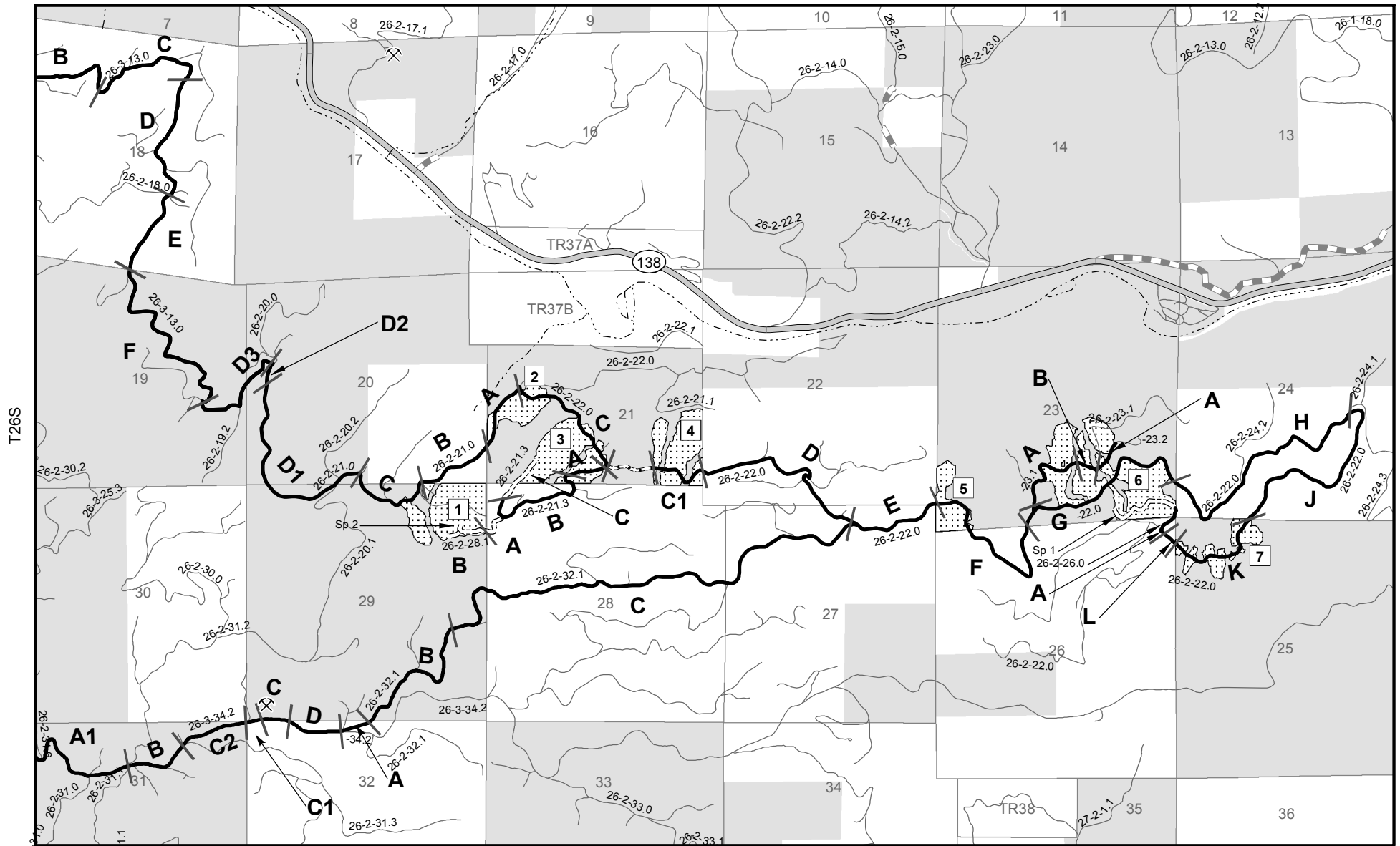
EXHIBIT D

Sheet 2 of 2

R02W

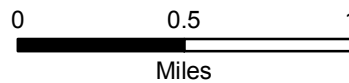
Rolling Thunder

Contract # ORR04-TS-2015.0001



Legend

- | | | | | | |
|--|-------------------|--|----------------|--|--------------|
| | Rock Quarry | | Haul Route | | Other Roads |
| | Segment Break | | Rock Haul Only | | Harvest Area |
| | Road Construction | | BLM Lands | | |
| | Major Stream | | County Road | | |



8/27/2014
Roseburg District
Bureau of Land Management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471

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

**ACCESS & MAINTENANCE LIST
EXHIBIT D**

Road Number	Road Seg.	Segment Length	Segment Owner	Road Use Fees	Surface Type	Timber Haul Fees	Maintained By
26-2-21.0	D1	0.81	BLM		Rock	\$1.46	BLM
26-2-21.0	D2	0.15	BLM		Rock	\$1.46	BLM
26-2-21.0	D3	0.45	BLM		Rock	\$1.46	BLM
26-2-21.0 *	C	0.40	BLM		Rock	\$0.49	Purchaser
26-2-21.0*	A	0.30	BLM		Rock	\$0.49	Purchaser
26-2-21.0*	B	0.30	SENECA	Paid Off	Rock	\$0.49	Purchaser
26-2-21.3	A(Base)	0.23	SENECA	\$2.28	Native		Purchaser
26-2-21.3	B(Base)	0.48	SENECA	\$5.02	Native		Purchaser
26-2-21.3 *	A(Imp)	0.23	BLM		Rock	\$0.49	Purchaser
26-2-21.3 *	B(Imp)	0.48	BLM		Rock	\$0.49	Purchaser
26-2-21.3 *	C	0.22	BLM		Rock	\$0.49	Purchaser
26-2-22.0	D	0.60	SENECA	Paid Off	Rock	\$1.46	BLM
26-2-22.0	E	0.60	SENECA	Paid Off	Rock	\$1.46	BLM
26-2-22.0	F	0.80	SENECA	Paid Off	Rock	\$0.49	Purchaser
26-2-22.0	G(Base)	0.80	SENECA	Paid Off	Native		Purchaser
26-2-22.0	H(Base)	1.10	SENECA	Paid Off	Native		Purchaser
26-2-22.0	J(Base)	0.90	SENECA	Paid Off	Native		Purchaser
26-2-22.0	J(Imp)	0.90	BLM		Rock		Purchaser
26-2-22.0	K(Base)	0.44	SENECA	Paid Off	Native		Purchaser
26-2-22.0	K(Imp)	0.44	BLM		Rock		Purchaser
26-2-22.0	L(Base)	0.08	SENECA	\$0.61	Native		Purchaser
26-2-22.0	L(Imp)	0.08	BLM		Rock		Purchaser
26-2-22.0*	C	0.50	BLM		Rock	\$0.49	Purchaser
26-2-22.0*	C1	0.25	BLM		Rock	\$0.49	Purchaser
26-2-22.0*	G(Imp)	0.80	SENECA	\$0.66	Rock	\$0.49	Purchaser
26-2-22.0*	H(Imp)	1.10	SENECA	\$1.00	Rock	\$0.49	Purchaser
26-2-23.1	B(Por)	0.15	SENECA	Paid Off	Rock	\$0.49	Purchaser
26-2-23.1*	A	0.40	BLM		Rock	\$0.49	Purchaser
26-2-23.2*	A(Por)	0.11	BLM		Rock	\$0.49	Purchaser
26-2-26.0	A(Base)	0.12	SENECA	\$1.16	Native		Purchaser
26-2-26.0	A(Imp)	0.12	BLM		Rock		Purchaser
26-2-28.1 *	A	0.11	BLM		Rock	\$0.49	Purchaser
26-2-28.1 *	B	0.17	BLM		Rock	\$0.49	Purchaser
26-2-32.1	A(Base)	0.14	SENECA	Paid Off	Native	\$0.97	SENECA
26-2-32.1	A(Imp)	0.14	BLM		Rock	\$0.49	SENECA
26-2-32.1	B(Base)	0.67	BLM		Rock	\$0.97	BLM
26-2-32.1	B(Imp)	0.67	SENECA	Paid Off	Rock	\$0.49	BLM
26-2-32.1	C	2.11	SENECA	Paid Off	Rock	\$1.46	SENECA

* Rockwear fees payable to the segment owner.

** Deficit share will be paid off with parent sale.

10/8/2014

**ACCESS & MAINTENANCE LIST
EXHIBIT D**

Road Number	Road Seg.	Segment Length	Segment Owner	Road Use Fees	Surface Type	Timber Haul Fees	Maintained By
26-3-1.1	A	0.30	BLM		BST	\$0.71	BLM
26-3-1.1	B	0.46	Douglas County	Free Use	Rock	\$1.25	BLM
26-3-1.1	C	0.32	BLM		Rock	\$1.25	BLM
26-3-1.1	D(Base)	1.15	FIATGM	\$0.42	Rock	\$0.97	BLM
26-3-1.1	D(Imp)	1.15	BLM		Rock	\$0.49	BLM
26-3-13.0	A(Base)	1.00	FIATGM	Paid Off	Rock	\$0.97	BLM
26-3-13.0	A(Imp)	1.00	BLM		Rock	\$0.49	BLM
26-3-13.0	B(Base)	0.90	FIATGM	\$0.41	Rock	\$0.97	BLM
26-3-13.0	B(Imp)	0.90	BLM		Rock	\$0.49	BLM
26-3-13.0	C(Base)	0.32	FIATGM	\$0.13	Rock	\$0.97	BLM
26-3-13.0	C(Imp)	0.32	BLM		Rock	\$0.49	BLM
26-3-13.0	D(Base)	0.63	FIATGM	\$0.31	Rock	\$0.97	BLM
26-3-13.0	D(Imp)	0.63	BLM		Rock	\$0.49	BLM
26-3-13.0	E(Base)	0.33	FIATGM	\$0.09	Rock	\$0.97	BLM
26-3-13.0	E(Imp)	0.33	BLM		Rock	\$0.49	BLM
26-3-13.0	F	1.02	BLM		Rock	\$1.46	BLM
26-3-15.0	B	0.47	BLM		Rock	\$1.46	BLM
26-3-34.2	A	4.91	SENECA	Paid Off	Rock	\$1.46	SENECA
26-3-34.2	A1	0.79	BLM		Rock	\$1.46	BLM
26-3-34.2	B	0.27	BLM		Rock	\$1.46	BLM
26-3-34.2	C	0.20	BLM		Rock	\$1.46	BLM
26-3-34.2	C1	0.03	SENECA	Paid Off	Rock	\$1.46	SENECA
26-3-34.2	C2	0.30	BLM		Rock	\$1.46	BLM
26-3-34.2	D(Por)	0.25	SENECA	Paid Off	Rock	\$1.46	SENECA
Spur 1	A	0.32	BLM		Rock		Purchaser
Spur 2	A	0.03	BLM		Rock		Purchaser

* Rockwear fees payable to the segment owner.

** Deficit share will be paid off with parent sale.

10/8/2014

ROAD MAINTENANCE SPECIFICATIONS

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

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

ROAD MAINTENANCE SPECIFICATIONS

GENERAL - 3000

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

OPERATIONAL MAINTENANCE - 3100

- 3101 The Purchaser shall blade and shape the road surface and shoulders with a motor grader. Banks shall not be undercut. Back blading with tractors or similar equipment will be allowed only around landings and other areas when approved by the Authorized Officer.
- 3104 The purchaser shall perform other road cleanup including removal of debris, fallen timber, bank slough, and slides which can practicably be accomplished by a motor grader, rubber tired front end bucket loader, rubber tired backhoe or comparable equipment, and by the use of hand tools.
- 3104a Removal of bank slough and slide material includes placement of material at the nearest designated, suitable disposal site where material cannot erode into streams, lakes, or reservoirs or cause undue damage to road fill slopes which have been planted or mulched to control soil erosion as directed by the Authorized Officer.
- 3104b The Purchaser shall be responsible for removal of all slides or slough, up to fifteen station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the purchaser.

ROAD MAINTENANCE SPECIFICATIONS

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 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.

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.

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 the Purchaser, 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.

FINAL MAINTENANCE - 3300

- 3301 The Purchaser shall complete final maintenance and/or damage repairs on all roads used under the terms of their contract within thirty (30) calendar days following the completion of hauling or the expiration of the Purchaser's right to cut and remove timber 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.

ROAD MAINTENANCE SPECIFICATIONS

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

OTHER MAINTENANCE - 3400

- 3401 The Purchaser shall repair any damage to road surfaces that was specified under Subsection 3108. This repair includes restoring the roadway to the designed standard and replacement of surfacing with approved surface material. This repair is not limited to use of equipment specified in Subsection 3104.
- 3402 The Purchaser shall be permitted to remove ice and snow from roads authorized for use under this contract only when prior written approval has been secured from the Authorized Officer. The Purchaser shall submit a written request for permission to remove ice and snow in advance of the date operations are to begin.

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

DECOMMISSIONING – 3500

- 3501 Decommissioning shall consist of installing water bars, placement of slash, blocking road from access by vehicles. This work is required for road acceptance under Section 18 of this contract.
- 3503 Decommissioning shall be performed on existing roads in accordance with these specifications, and as shown on the plans at the following locations:

Road No	From Sta	To Sta	Method of Decommissioning
26-2-21.3	0+00	49+30	Blade, water bar, and block
26-2-22.0	265+70	343+50	Blade, water bar, and block
26-2-26.0	0+00	6+20	Blade, water bar, and block
26-2-28.1	0+00	15+10	Blade, water bar, remove culverts and block
Spur 1	0+00	16+75	Blade, water bar, remove culverts and block
Spur 2	0+00	1+70	Blade and water bar

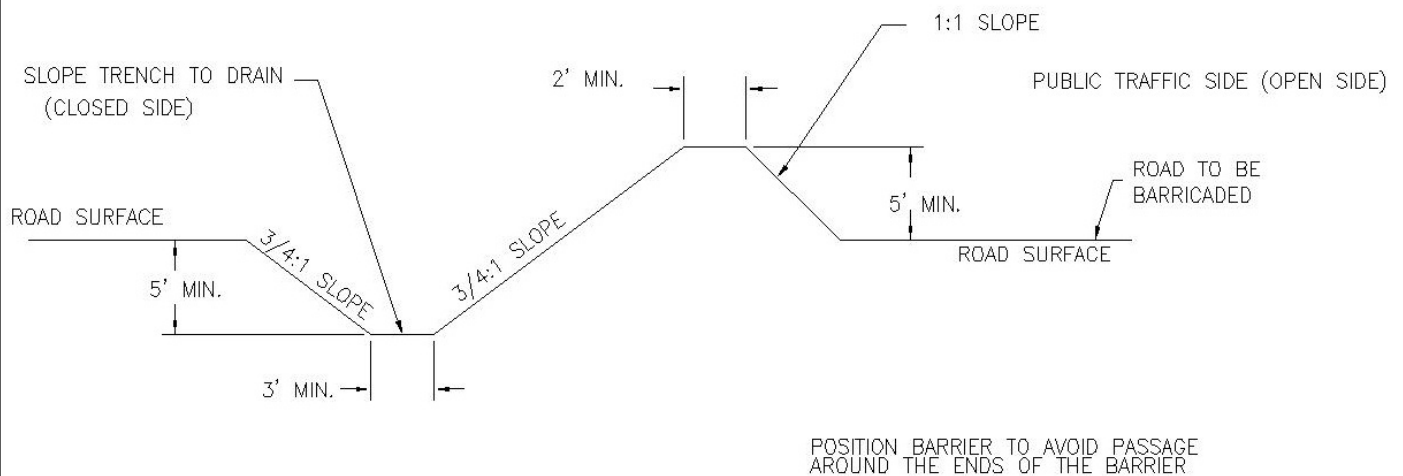
- 3504 Decommissioning work shall be completed at the end of timber hauling activities.

ROAD MAINTENANCE SPECIFICATIONS

- 3506 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. Where slash is not available exposed soil areas shall be stabilized with weed free straw.
- 3509 Access shall be blocked with barricades as shown on the typical detail sheet at locations listed in Section 3503.
- 3511 Water barring shall be done on designated roadways, turnouts, disturbed areas, and landings.
- 3513 Water bars shall be installed across full width of roadway at the spacing shown on the drawings. Water bars shall be constructed as shown on water bar detail sheet. No water bars shall be installed closer than 50 feet to a draw crossing.
- 3514 Protection of exposed surfaces shall be accomplished by placement of slash described in Subsection 3506, on designated roadways, and landings, disturbed by the purchaser in accordance with these specifications.

ROAD MAINTENANCE SPECIFICATIONS

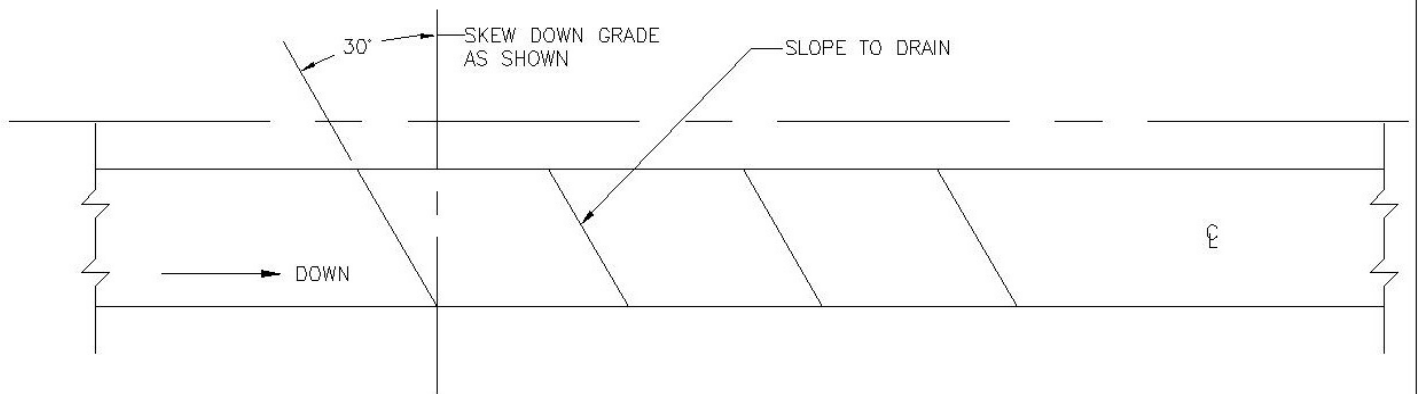
EXHIBIT D
TRENCH BARRIER DETAIL



TRENCH BARRIER
SCALE: NONE

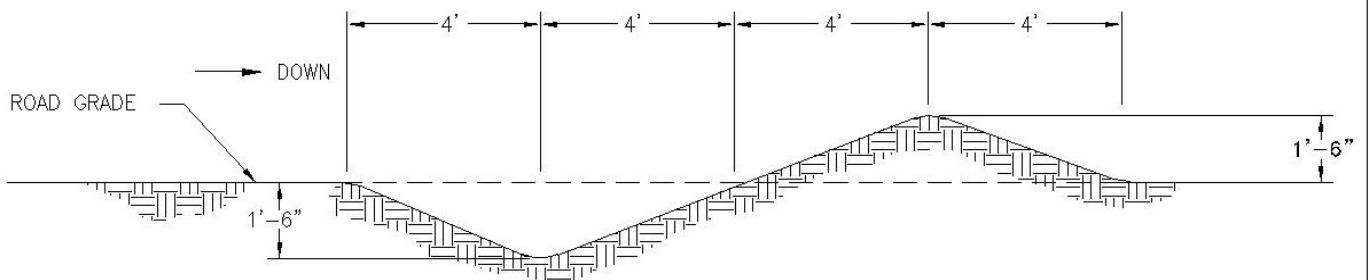
ROAD MAINTENANCE SPECIFICATIONS

EXHIBIT D WATERBAR DETAIL



ROAD PLAN

SCALE: NONE



WATERBAR SPACING IN FEET	
ROAD GRADIENT IN %	SPACING
3 TO 5	300
6 TO 10	200
11 TO 15	150
16 TO 20	75
21 TO 35	50

ROAD PROFILE

SCALE: NONE



Bureau of Land Management

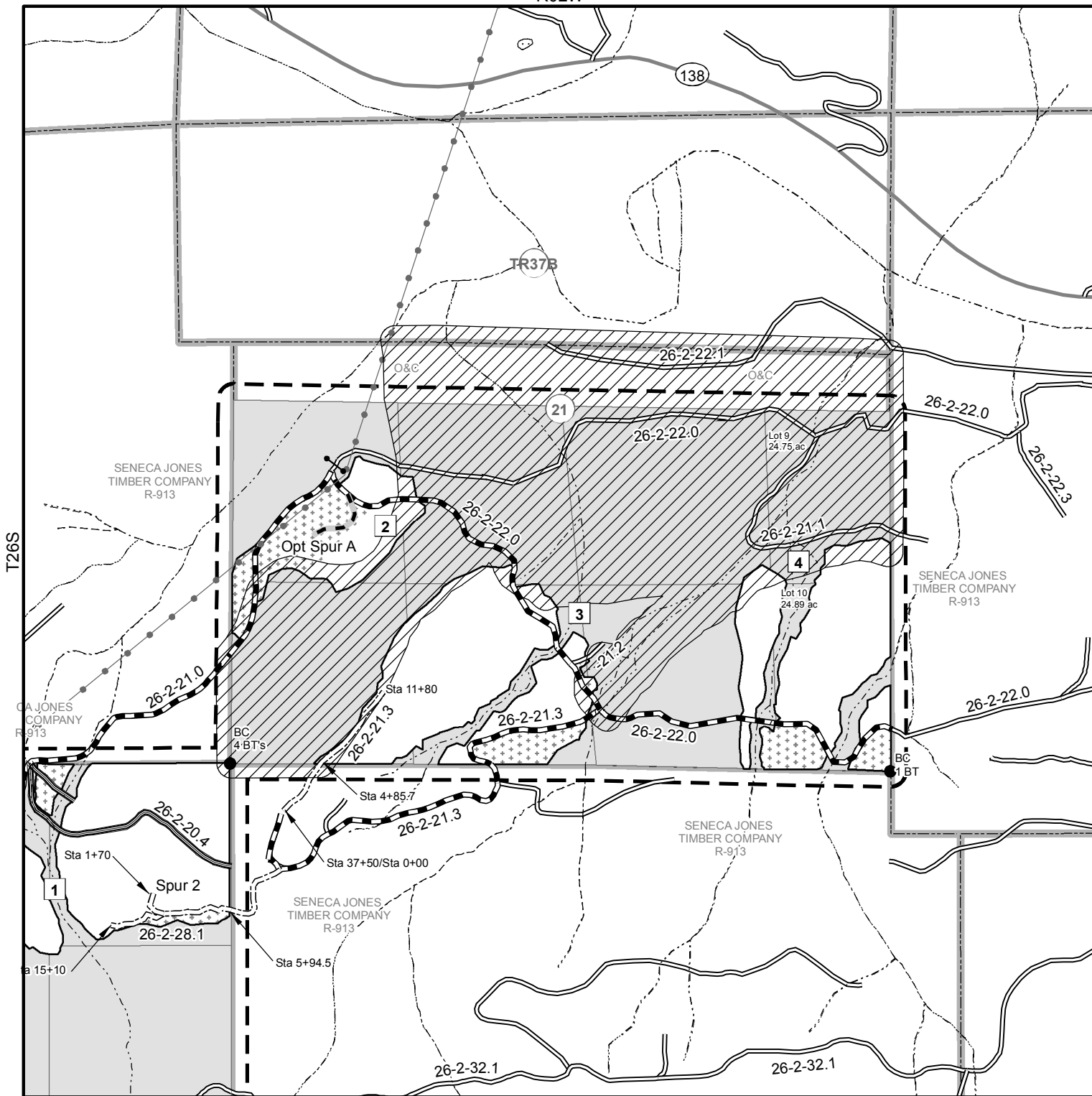
EXHIBIT E

Sheet 1 of 2

R02W

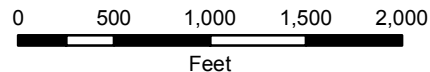
Rolling Thunder

Contract # ORR04-TS-2015.0001



Legend

- Survey Corner Found
- Gate
- Transmission Line
- Stream
- === Road Construction
- Optional Road Construction
- Road Renovation
- Existing Road
- Undriveable Road - Do Not Use
- Seasonal Restriction March 1 - July 15
- Harvest Area - Cable Yarding
- Harvest Area - Ground Based
- Contract Area



Date: 8/29/2014

Roseburg District
Bureau of Land Management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471

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



Bureau of Land Management

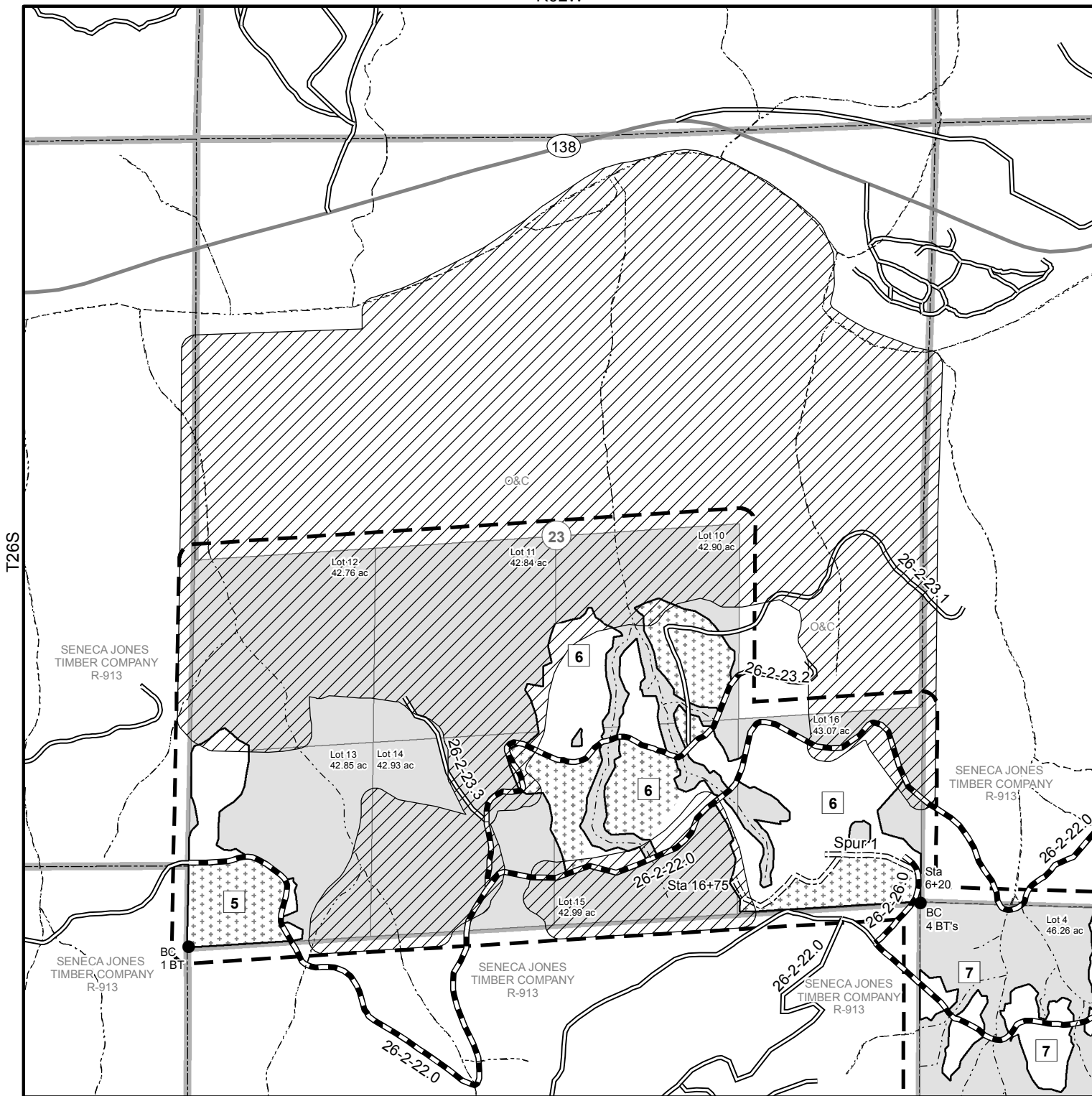
EXHIBIT E

Sheet 2 of 2

R02W

Rolling Thunder

Contract # ORR04-TS-2015.0001



Legend

- Survey Corner Found
- Existing Road
- - - Stream
- == Road Construction
- Road Renovation
- ▨ Northern Spotted Owl Seasonal Restriction March 1 - July 15
- Harvest Area - Cable Yarding
- Harvest Area - Ground Based
- ▭ Contract Area

0 500 1,000 1,500 2,000
Feet



Date: 8/29/2014

Roseburg District
Bureau of Land Management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471

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



Bureau of Land Management

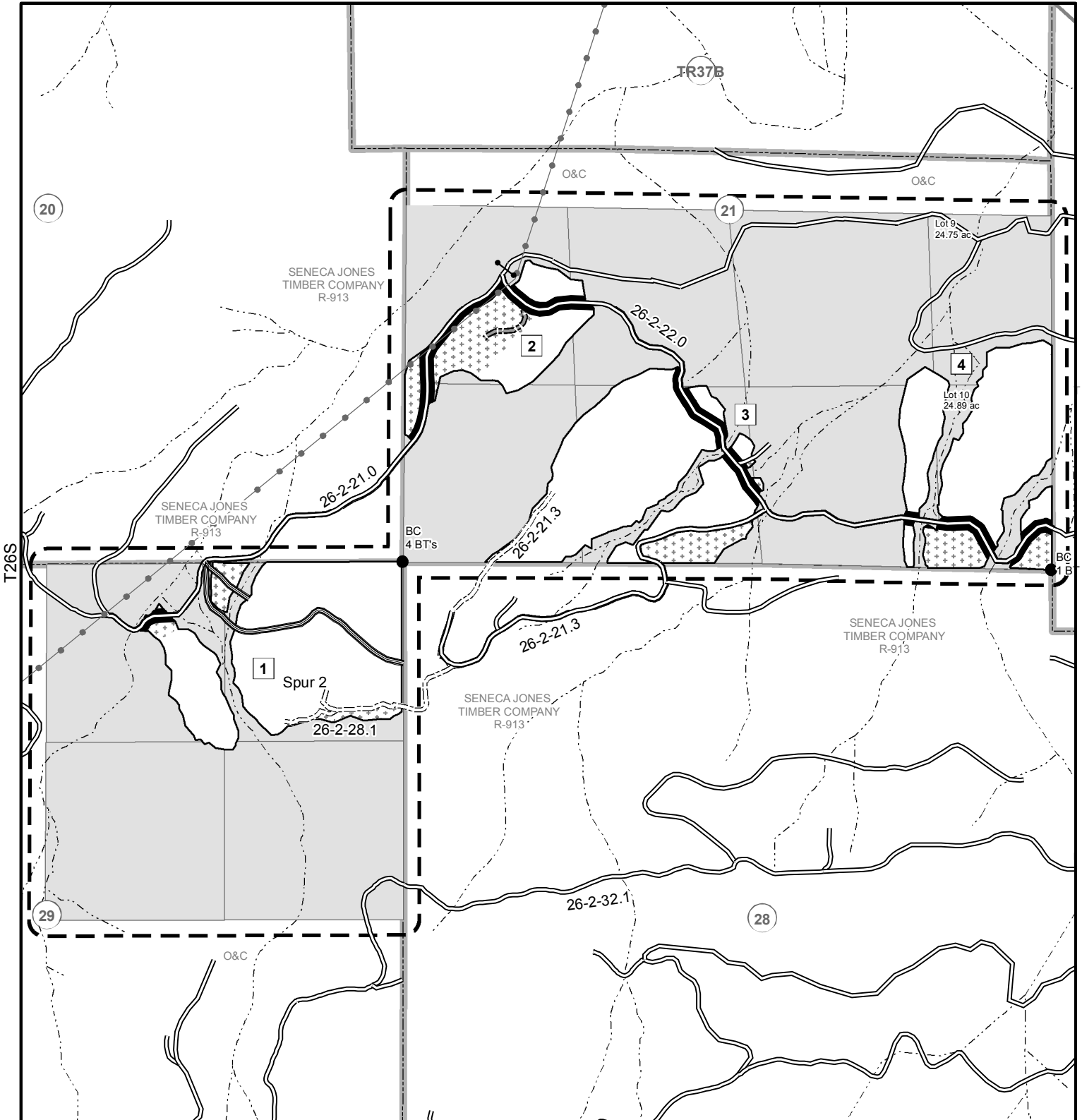
EXHIBIT F

Sheet 1 of 1

R02W

Rolling Thunder

Contract # ORR04-TS-2015.0001



Legend

- Gate
- Transmission_Line_clip
- Stream
- Road Construction
- Optional Road Construction
- Road Renovation
- Existing Road
- County Road
- Handpiling Area
- Harvest Area - Cable Yarding
- Harvest Area - Ground Based
- Contract Area

0 500 1,000 1,500 2,000

Feet



Date: 8/18/2014

Roseburg District
Bureau of Land Management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471

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



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

District : Roseburg	Contract # : ORR04-TS-2015.0001
Sale Name : Rolling Thunder	Job File # : R10-707
Sale Date : 11/18/2014	Master Unit : Douglas
Appraisal Method : 16' MBF	Planning Unit : Swiftwater

Contents

Timber Sale Summary	2
Stumpage Summary	4
Prospectus	5
Exhibit B	6
Volume Summary	9
Stump to Truck Costs	12
Other Allowances Costs	13
Consolidated Comments	14

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

Roseburg
Rolling Thunder
ORR04-TS-2015.0001

Legal Description

Forest Type	Township	Range	Section	Subdivision
O&C	26	2	21	Lots 9 and 10, SW1/4, W1/2 SE1/4
O&C	26	2	23	Lots 10, 11, 12, 13, 14, 15, and 16
O&C	26	2	25	Lots 3 and 4
O&C	26	2	29	NE1/4

Cutting Volume (16' MBF)

Unit	DF	GF	WH	WRC	IC	SP			Total	Regen	Partial	ROW
1	677	61	27	14	2				781	0	39	0
2	260	23	10	6	1				300	0	15	0
3	642	58	26	14	1				741	0	37	0
4	520	47	21	11	1				600	0	30	0
5	278	25	11	6	1				321	0	16	0
6	1,214	109	48	26	2				1,399	0	70	0
7	278	25	11	6	1				321	0	16	0
RW	145	9	2	2	2	7			167	0	0	3

Totals	4,014	357	156	85	11	7			4,630	0	223	3
--------	-------	-----	-----	----	----	---	--	--	-------	---	-----	---

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

Roseburg
Rolling Thunder
ORR04-TS-2015.0001

Logging Costs per 16' MBF

Stump to Truck	\$	157.26
Transportation	\$	62.76
Road Construction	\$	57.49
Road Amortization	\$	3.41
Road Maintenance	\$	15.75

Other Allowances :

Equipment Cleaning	\$ 0.18
Misc	\$ 2.78
Total Other Allowances :	\$ 2.96

Total Logging Costs per 16' MBF

\$ 299.62

Utilization Centers

Center #1 : Roseburg, OR 35 Miles
Center #2 0 Miles
Weighted distance to Utilization Centers 35

Length of Contract

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

Profit & Risk

Total Profit & Risk 12 %
Basic Profit & Risk 11 % + Additional Risk 1 %
Back Off 0 %

Tract Features

Avg Log Douglas-fir : 47 bf All : 47 bf
Recovery Douglas-fir : 97 % All : 95 %
Salvage Douglas-fir : 0 % All : 0 %
Avg Volume (16' MBF per Acre) 20
Avg Yarding Slope 55 %
Avg Yarding Distance (feet) 600
Avg Age 0
Volume Cable 72 %
Volume Ground 28 %
Volume Aerial 0 %
Road Construction Stations 45.35
Road Improvement Stations 0.00
Road Renovation Stations 395.70
Road Decommission Stations 166.85

Cruise

Cruised By Coppersmith
Date 05/20/2014
Type of Cruise PCMTRE, 100%
County, State Douglas, OR

Net Volume

Green (16' MBF) 4,630
Salvage (16' MBF) 0
Douglas-fir Peeler 0
Export Volume 0
Scaling Allowance (\$0.75 per 16' MBF) \$3,472.50

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Roseburg
Rolling Thunder
ORR04-TS-2015.0001

Stumpage Summary

Stumpage Computation (16' MBF)

Species	Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Cost	(+) Marginal Log Value	(-) Back Off	Appraised Price	Appraised Value
DF	19,907	4,014	\$ 548.65	\$ 65.84	\$ 299.62			\$ 183.20	\$ 735,364.80
GF	1,660	357	\$ 449.03	\$ 53.88	\$ 299.62			\$ 95.50	\$ 34,093.50
WH	1,345	156	\$ 423.68	\$ 50.84	\$ 299.62			\$ 73.20	\$ 11,419.20
WRC	1,123	85	\$ 573.53	\$ 68.82	\$ 299.62			\$ 205.10	\$ 17,433.50
IC	119	11	\$ 463.64	\$ 55.64	\$ 299.62			\$ 108.40	\$ 1,192.40
SP	12	7	\$ 285.18	\$ 34.22	\$ 299.62			\$ 28.50	\$ 199.50
Totals	24,166	4,630							\$ 799,702.90

Log Code by Percent

Species	Code #1	Code #2	Code #3	Code #4	Code #5	Code #6
Douglas-fir				29.0	64.0	7.0
Grand Fir				44.0	50.0	6.0
Western Hemlock				13.0	75.0	12.0
Western red-cedar						100.0
Incense-cedar						100.0
Sugar Pine				85.0	15.0	

Marginal Log Volume

Species	Grade #7	Grade #8
Douglas-fir		
Grand Fir		
Western Hemlock		
Western red-cedar		
Incense-cedar		
Sugar Pine		

Appraised By : Kress, Christopher

Date : 09/29/2014

Area Approval By : Coppersmith, Jason

Date : 09/29/2014

District Approval By : Snider, Douglas

Date : 09/29/2014

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

Roseburg
Rolling Thunder
ORR04-TS-2015.0001

Prospectus

Appraisal Method : (16' MBF)

Species	Trees	Net Volume 16' MBF	Net Volume 32' MBF	Net Volume CCF
Douglas-fir	19,907	4,014	3,332	
Grand Fir	1,660	357	292	
Western Hemlock	1,345	156	124	
Western red-cedar	1,123	85	65	
Incense-cedar	119	11	10	
Sugar Pine	12	7	5	
Total	24,166	4,630	3,828	

All Species

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
4,871	24,166	201	13.7	4,805	101,280	47

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
101,280	869	102,149	4.2	4,630	4,871	95 %

Douglas-fir

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
4,128	19,907	207	13.7	4,115	87,351	47

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
87,351	145	87,496	4.4	4,014	4,128	97 %

Cutting Areas

Unit	Regen Acres	Partial Cut Acres	Right Of Way Acres	Total Acres
1		39		39
2		15		15
3		37		37
4		30		30
5		16		16
6		70		70
7		16		16
RW			3	3
Totals :		223	3	226

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

Roseburg
Rolling Thunder
ORR04-TS-2015.0001

Exhibit B

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

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

Sale Totals (16' MBF)

Species	Net Volume	Bid Price	Sale SubTotal
Douglas-fir	4,014		
Grand Fir	357		
Western Hemlock	156		
Western red-cedar	85		
Incense-cedar	11		
Sugar Pine	7		
Sale Totals	4,630		

Unit Details (16' MB)

Unit 1 39 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	677		
Grand Fir	61		
Incense-cedar	2		
Western Hemlock	27		
Western red-cedar	14		
Unit Totals	781		

Unit 2 15 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	260		
Grand Fir	23		
Incense-cedar	1		
Western Hemlock	10		
Western red-cedar	6		
Unit Totals	300		

Roseburg
Rolling Thunder
ORR04-TS-2015.0001

Species	Net Volume	Bid Price	Species Value
Douglas-fir	642		
Grand Fir	58		
Incense-cedar	1		
Western Hemlock	26		
Western red-cedar	14		
Unit Totals	741		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	520		
Grand Fir	47		
Incense-cedar	1		
Western Hemlock	21		
Western red-cedar	11		
Unit Totals	600		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	278		
Grand Fir	25		
Incense-cedar	1		
Western Hemlock	11		
Western red-cedar	6		
Unit Totals	321		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	1,214		
Grand Fir	109		
Incense-cedar	2		
Western Hemlock	48		
Western red-cedar	26		
Unit Totals	1,399		

Roseburg
Rolling Thunder
ORR04-TS-2015.0001

Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	278		
Grand Fir	25		
Incense-cedar	1		
Western Hemlock	11		
Western red-cedar	6		
Unit Totals	321		

Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	145		
Grand Fir	9		
Incense-cedar	2		
Sugar Pine	7		
Western Hemlock	2		
Western red-cedar	2		
Unit Totals	167		

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

Roseburg
Rolling Thunder
ORR04-TS-2015.0001

Sale Volume Totals

226 Acres 0 Regen 223 Partial 3 R/W 8 Units

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Net	16' MBF GM	16' MBF Gross	32' MBF Net	32' MBF GM	32' MBF Gross	CCF Net	CCF GM	CCF Gross
Douglas-fir	19,907	87,351	145	4,014	4,115	4,128	3,332	3,407	3,417	0	0	0
Grand Fir	1,660	7,077	146	357	388	399	292	317	326	0	0	0
Western Hemlock	1,345	4,144	423	156	187	218	124	147	172	0	0	0
Western red-cedar	1,123	2,403	104	85	96	105	65	73	79	0	0	0
Incense-cedar	119	242	51	11	12	14	10	10	11	0	0	0
Sugar Pine	12	63	0	7	7	7	5	6	6	0	0	0
Totals	24,166	101,280	869	4,630	4,805	4,871	3,828	3,960	4,011	0	0	0

Unit Totals

Unit : 1 39 Acres 0 Regen 39 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	3,377	14,839	14	695	693	677
Grand Fir	285	1,217	22	68	66	61
Western Hemlock	232	716	71	38	32	27
Western red-cedar	194	413	18	18	16	14
Incense-cedar	18	35	8	2	2	2
Unit Totals	4,106	17,220	133	821	809	781

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

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,299	5,707	5	267	267	260
Grand Fir	110	468	9	26	25	23
Western Hemlock	89	275	27	14	13	10
Western red-cedar	74	159	7	7	6	6
Incense-cedar	7	13	3	1	1	1
Unit Totals	1,579	6,622	51	315	312	300

Unit : 3 37 Acres 0 Regen 37 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	3,204	14,078	13	659	657	642
Grand Fir	270	1,155	22	65	63	58

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

Roseburg
Rolling Thunder
ORR04-TS-2015.0001

Western Hemlock	220	679	67	36	31	26
Western red-cedar	183	392	17	17	16	14
Incense-cedar	17	33	8	2	1	1
Unit Totals	3,894	16,337	127	779	768	741

Unit : 4 30 Acres 0 Regen 30 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	2,598	11,415	11	535	533	520
Grand Fir	219	936	18	52	51	47
Western Hemlock	178	551	54	29	25	21
Western red-cedar	149	318	14	14	12	11
Incense-cedar	14	27	6	1	1	1
Unit Totals	3,158	13,247	103	631	622	600

Unit : 5 16 Acres 0 Regen 16 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,385	6,088	6	285	284	278
Grand Fir	117	499	10	28	27	25
Western Hemlock	95	294	29	15	13	11
Western red-cedar	79	169	7	7	7	6
Incense-cedar	7	14	3	1	1	1
Unit Totals	1,683	7,064	55	336	332	321

Unit : 6 70 Acres 0 Regen 70 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	6,062	26,635	25	1,247	1,244	1,214
Grand Fir	510	2,186	41	122	119	109
Western Hemlock	415	1,285	127	68	58	48
Western red-cedar	348	741	31	33	30	26
Incense-cedar	33	62	16	3	3	2
Unit Totals	7,368	30,909	240	1,473	1,454	1,399

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

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,385	6,088	6	285	284	278
Grand Fir	117	499	10	28	27	25
Western Hemlock	95	294	29	15	13	11
Western red-cedar	79	169	7	7	7	6
Incense-cedar	7	14	3	1	1	1

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

Roseburg
Rolling Thunder
ORR04-TS-2015.0001

Unit Totals	1,683	7,064	55	336	332	321
--------------------	--------------	--------------	-----------	------------	------------	------------

Unit : RW 3 Acres 0 Regen 0 Partial 3 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	597	2,501	65	155	153	145
Grand Fir	32	117	14	10	10	9
Sugar Pine	12	63		7	7	7
Western Hemlock	21	50	19	3	2	2
Incense-cedar	16	44	4	3	2	2
Western red-cedar	17	42	3	2	2	2
Unit Totals	695	2,817	105	180	176	167

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

Roseburg
Rolling Thunder
ORR04-TS-2015.0001

Stump to Truck Costs

Total (16' MBF)

Total Stump to Truck Costs	Net Volume	Cost / Net Volume
\$ 728,095.41	4,630	\$ 157.26

Detail

Yarding & Loading

Yarding System	Unit Of Measure	Units	Cost / Unit	Total Cost
Short Twr<40	Gross Merch	3,217	\$ 151.85	\$ 488,501.45
Short Twr<40	Gross Merch	249	\$ 379.63	\$ 94,527.87
Wheel Skidder	Gross Merch	1,163	\$ 103.55	\$ 120,428.65
Track Skidder	Gross Merch	168	\$ 90.53	\$ 15,209.04
Shovel	Gross Merch	8	\$ 78.55	\$ 628.40
Subtotal				\$ 719,295.41

Other Costs

Explanation	Unit Of Measure	Units	Cost / Unit	Total Cost
Intermediate Supports	Tree	16	\$ 250.00	\$ 4,000.00
Lift Trees	Tree	32	\$ 150.00	\$ 4,800.00
Subtotal				\$ 8,800.00

Additional Move-Ins

Equipment	# Move-In	Cost / Move In	Total Cost
Subtotal			

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

Roseburg
Rolling Thunder
ORR04-TS-2015.0001

Other Allowances Costs

Total (16' MBF)

Total Other Allowances Costs	Net Volume	Cost / Net Volume *	Total Buy Out Cost
\$13,683.00	4,630	\$2.96	\$2,531.74

Equipment Cleaning

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Yarder	\$ 165.00	\$ 0.04	N	\$ 0.00
Shovel	\$ 330.00	\$ 0.07	N	\$ 0.00
Track Skidder	\$ 165.00	\$ 0.04	N	\$ 0.00
Wheel Skidder	\$ 165.00	\$ 0.04	N	\$ 0.00
Subtotal	\$ 825.00	\$ 0.18		\$ 0.00

Misc

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Landing Piles	\$ 7,750.00	\$ 1.67		\$ 0.00
Burning Landing Piles	\$ 1,550.00	\$ 0.33	Y	\$ 1,904.95
Handpiles	\$ 3,048.00	\$ 0.66		\$ 0.00
Burning Handplies	\$ 510.00	\$ 0.11	Y	\$ 626.79
Subtotal	\$ 12,858.00	\$ 2.78		\$ 2,531.74

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

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

Roseburg
Rolling Thunder
ORR04-TS-2015.0001

General

Yarding & Loading

All logging cost is Cruisers estimates.
All yarding systems were appraised with \$4.25/gal and 4500 bf/load.
Short tower yarding 3217 G.M. is yarding uphill with 3 cutters at 4 loads/day.
Short tower yarding 249 G.M. is yarding downhill with 3 cutters at 2 loads/day in units 2, 4, and 7.
Wheel Skidder is for ground based yarding at 6 loads/day with 3.5 cutters.
Track Skidder is for yarding all the right-of-ways at 6 loads/day with 2 cutters.
Shovel is for yarding the daylighting along rock road at 6 loads/day with 2 cutters.

Road Costs

To BLM:
Maintenance = \$22,329.75
Rockwear = \$11,171.06
Credit From Douglas County = \$427.36
To Sencea:
Maintenance = \$19,730.74
Rockwear = \$13,471.71
Road Use Fees = \$13,206.66
To FIA/TGM:
Road Use Fees: \$2,578.56
To Purchaser (Credit) = \$5,814.83

(see Engineering Appraisal for details).

Transportation

-Wtd sale area to Little River/Hwy 138 jct = 108 RTM/17.4 miles
-Little River/Hwy 138 jct to Roseburg, Or. = 38 RTM/17.5 miles
-60 minute delay
-108 RTM + 38 RTM + 60 min delay = 206 minutes = 3.4 hours

4805 G.M / 4.5 MBF/load = 1068 Total Loads
3.4 Hours/Load X 1068 Total Loads = 3632 Total Hours

(see Transportation appendix for details).

Other Allowances

62 Landing Piles are Cruiser's estimate.
Buyout is at 22.9%.
Equipment Cleaning:
1 Yarder
2 Shovel
1 Track Skidder
1 Wheel Skidder
All 3 hours of cleaning per piece of equipment @ \$55.00/hour

Prospectus

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Version: 5.1.0.32
Updated: 6/30/2014

Summary of All Roads and Projects

T.S. Contract Name: Rolling Thunder Tract No: 2015.0001 Sale Date: 11/18/14
Prepared by: TMcNamara Ph: 464-3313 Print Date: 9/15/2014 10:07:03 AM
Construction: 45.35 sta
Improve: 0.00 sta Renov: 395.70 sta Decom: 0.00 sta Temp: 0.00 sta

200 Clearing and Grubbing: 3.1 acres	\$10,833.02
300 Excavation:	\$14,284.89
Haul < 500 ft: 0 sta-yds	
Haul > 500 ft: 0 yd-mi	
400 Drainage:	\$80,637.72
Culvert: 918 lf	DownSpout: 0 lf
PolyPipe: 0 lf	
500 Renovation:	\$14,870.90
Blading 7.27 mi	
700-1200 Surfacing:	\$133,362.49
Commercial Quarry Name: Thunder Mtn 3" 1,240 lcy	
Commercial Quarry Name: Thunder Mtn 6" 6,531 lcy	
Commercial Quarry Name: vians 6" 1,750 lcy	
1300 Geotextiles:	\$248.00
1400 Slope Protection:	\$3,094.68
Gradation Class 3: 60 cy	
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$2,192.08
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$4,791.80 Surf. \$1,847.35.....	\$6,639.15
Quarry Development:	\$0.00

Total: 4,630 mbf @ \$57.487/mbf = \$266,162.93

Notes:

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Contract Name: Rolling Thunder
Sale Date: 10/28/14
Tract No: 2015.0005

ROAD CONSTRUCTION SUMMARY

1/ Const/Impr/Renov/Decom/Temp			2/ yd-miles haul			3/ Lin ft CMP			4/ Lin ft Polypipe			5/ Lin ft Downspout			6/ slide removal cy		
Road Number	Type 1/	Miles	Clear Grubb	Excav -ation	Drain -age	Reno- vation	Surf- acing	Geo- textile	Slope Protect	Soil Stabil	Cattle Guard	Rdside Brush	Engin- eering	Miscel- laneous	Mobil- ization	Quarry Develop	Sub- Total
26-2-21.0	R	0.79			\$2,763 3/ 42'	\$1,152 0.79mi	\$465 401cy					\$373			\$96		\$4,849
26-2-21.3	R	0.71			\$5,678 3/ 104'	\$2,960 0.71mi	\$46,080 25701cy								\$1,513		\$56,230
26-2-21.3 Const	C	0.22	\$2,592 0.7acres	\$3,087			\$7,504 6141cy								\$363		\$13,546
26-2-22.0	R	5.27			\$60,633 3/ 574'	\$7,879 5.27mi	\$49,063 41051cy	\$248	\$3,095 60cy			\$1,399			\$3,062		\$125,379
26-2-23.1	R	0.50			\$4,029 3/ 60'	\$729 0.50mi	\$966 801cy					\$280			\$127		\$6,130
26-2-23.2	R	0.11				\$640						\$140			\$14		\$794
26-2-26.0	R	0.12	\$1,164 0.3acres			\$1,512	\$4,652 2981cy								\$194		\$7,522
26-2-28.1	C	0.29	\$2,982 0.8acres	\$4,144	\$4,040 3/ 74'		\$8,691 7341cy								\$510		\$20,368
Spur 1	C	0.32	\$3,479 1.0acres	\$5,525	\$3,494 3/ 64'		\$12,966 8781cy								\$642		\$26,107
Spur 2	C	0.03	\$616 0.2acres	\$1,529			\$2,506 1651cy								\$118		\$4,769

TIMBER SALE ROAD SPECIFICATIONS

TABLE OF CONTENTS

SECTION	DESCRIPTION
100	General
200	Clearing and Grubbing
300	Excavation and Embankment
400	Pipe Culverts
500	Renovation and Improvement of Existing Roads
600	Watering
1000	Aggregate Base Course - Crushed Rock
1400	Slope Protection
1700	Erosion Control
2100	Roadside Brushing

TIMBER SALE ROAD SPECIFICATIONS

GENERAL – 100

101 - Prewrite Conference(s):

A prework conference will be held prior to the start of new construction, improvement, renovation, and quarry development, surfacing, and mulching operations. The Purchaser shall request the conference at least 48 hours prior to the time it is to be held. The conference will be attended by the Purchaser and/or his representatives, subcontractors and/or his or their representatives and the Authorized Officer and/or his representatives.

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 subcontractors.

102 - Definitions:

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

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

ACI - American Concrete Institute

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

ASTM - American Society for Testing and Materials.

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

BLM - Bureau of Land Management

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

TIMBER SALE ROAD SPECIFICATIONS

Burst Strength - The resistance of a geotextile material to rupture from pressure applied at right angles to the plane of the geotextile material under specified conditions, usually

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

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

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

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

End Haul - Excavated material moved, other than by dozer, to an embankment or waste area to prevent side casting 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.

TIMBER SALE ROAD SPECIFICATIONS

Percent Open Area - The net area of a geotextile material that is not occupied by geotextile material filaments, normally determinable only for woven and nonwoven

geotextile material having distinct, visible, and measurable openings that continue directly through the geotextile material.

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

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

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

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

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

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

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

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

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

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

Road Centerline - The longitudinal center of a roadbed.

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

TIMBER SALE ROAD SPECIFICATIONS

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

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

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

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

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

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

Spalls - Flakes or chips of stone.

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

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

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

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

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

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

TIMBER SALE ROAD SPECIFICATIONS

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

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

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

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

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

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

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

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

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

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

102a - Tests Used in These Specifications:

AASHTO T 11

Quantity of rock finer than No. 200 sieve.

AASHTO T 27

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

AASHTO T 89

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

TIMBER SALE ROAD SPECIFICATIONS

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.

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-inch drop height.

AASHTO T 191

Sand Cone. Density of soil in place: For subgrade use 6-inch or 12-inch cone, for rock surfacing 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.

TIMBER SALE ROAD SPECIFICATIONS

AASHTO T 209

Maximum Specific Gravity of Bituminous Paving Mixtures.

AASHTO T 210

Durability of aggregates based on resistance to produce fines.

AASHTO T 224

Correction for coarse particles in the soil.

AASHTO T 238

Density of Soil and Soil-Aggregate in place by nuclear methods.

AASHTO T 248

Reducing field samples of aggregate to testing size by mechanical splitter, quartering, or miniature stockpile sampling.

ASTM D 4564

Determination of relative density of cohesionless soils.

DMSO (dimethyl sulfide)

Determines volume of expanding clays in aggregates. Usually associated with marine basalts.

- 103 - Compaction equipment shall meet the following requirements:
- 103a - Padded Drum (Tamping) Rollers. The unit shall consist of a drum with pads, be either self-propelled or towed by a tractor, and capable of operating at a speed of 6 mph. The drum shall be no less than 48 inches in diameter over the pads and not less than 60 inches in width. The pads shall have a minimum height of 3 inches, and a face area of not less than 14 square inches. The weight at drum shall be no less than 8000 lb.
- 103b - Sheepfoot (Tamping) rollers. A tamping roller unit shall consist of two watertight metal drums mounted in frames in such manner as to be fully oscillating, together with a tractor having sufficient weight and power under actual working conditions to pull the roller drums at a minimum speed of 2.5 miles per hour. The drums shall be no less than 60 inches in diameter and no less than 54 inches in length, measured at the drum's surface, and shall be studded with tamping feet projecting not less than 7 inches from the face of the drums.

TIMBER SALE ROAD SPECIFICATIONS

The distance between circumferential rows of tamper feet shall be such that the diagonal distance from any foot to the nearest foot in each adjacent row shall be not more than 12 inches. The cross-sectional area of the face of each tamper foot, measured perpendicular to the axis of the stud, shall be not less than 5-1/2 square inches nor more than 8 square inches.

The weight of the tamping-roller unit shall be such as to exert a minimum pressure of 250 pounds per square inch on the ground area in contact with the tamping feet, and the roller shall be so designed that the weight may be increased to exert a pressure up to 500 pounds per square inch on the ground area in contact with the tamping feet. The ground pressure shall be determined by dividing the total weight of the roller unit, not including the weight of the tractor, by the total cross-sectional area of the tamping feet in one row of tamping feet parallel to the axis of the roller.

- 103c - Smooth-wheel power rollers. Smooth-wheel power rollers shall either be of the 3-wheel type, weighing not less than 10 tons, or of the tandem type, 2-wheel or 3-wheel, weighing not less than 8 tons. Smooth-wheel roller shall provide compression of 325 pounds per linear inch of width of rear wheels or drum.
- 103d - Pneumatic-tired rollers. Pneumatic-tired rollers shall be of the double-axle type equipped with pneumatic tires each of equal size and type. The spacing between the sidewalls of adjacent tires shall not exceed 5 inches and the rear tires shall be staggered in relation to the front tires. The rolling width of the unit shall be not less than 60 inches, exclusive of the power unit. The roller shall be so constructed that the contact pressure is uniformly distributed on all of the tires, and the tires shall be inflated to maintain the air pressure in the several tires within a total tolerance of 5 pounds per square inch. The roller shall be so constructed that the total weight shall be between 1,000 and 2,000 pounds per tire. The actual operating weight of the rollers shall be as ordered by the Authorized Officer.

Each pneumatic-tired roller shall be drawn by equipment having sufficient power and weight under normal working condition to pull the roller at a minimum speed of 5 miles per hour, or it may be self-propelled to obtain a minimum speed of 5 miles per hour.

- 103e - Grid roller. A grid roller shall consist of two or more cylindrical drums independently mounted on a common shaft in a rigid frame. Each drum shall have a minimum outside diameter of 5 feet and a minimum width of 2 feet 6 inches. The overall width of the roller exclusive of frame shall be not less than 5

TIMBER SALE ROAD SPECIFICATIONS

feet 6 inches of which not more than 6 inches shall be used for center spacing between two roller drums. The face of the drums shall have the appearance of

woven open-mesh made by interlacing bars of not less than 1-1/4 inches nor more than 1-3/4 inches diameter space spaced on 4-1/2 inches to 5-1/2 inches center. Net opening between the bars shall be not less than 3 inches nor more than 4 inches. The roller shall be so constructed that counterweights can be used to adjust the gross weight of the roller to not less than 27,000 pounds. The grid roller shall be drawn by a power unit capable of propelling the fully loaded roller through 6 inches of loose embankment material at a speed of at least 4 miles per hour.

- 103f - Vibratory roller. The drum diameter shall be not less than 48 inches, the drum width not less than 58 inches, and have a turning radius of 15 feet or less. Vibration frequency shall be regulated in steps to 1400, 1500, and 1600 vibrations per minute (VPM), corresponding to engine speeds of 1575, 1690, and 1800 RPM. The centrifugal force developed shall be 7 tons at 1600 RPM. It shall be activated by a power unit of not less than 25 horsepower. The vibratory roller shall be self-propelled or drawn by a vehicle of sufficient horsepower to enable the unit to travel through a loose layer of material at a speed ranging from 0.9 mile to 1.8 miles per hour, as directed by the Authorized Officer.
- The towing vehicle and roller or self-propelled unit meeting the above requirements shall be considered a vibratory roller unit.
- 103g - Vibratory compactor. Vibratory compactors shall consist of multiple or gang-type compacting units or pads with a minimum variable width of 2 feet. It shall be self-contained and capable of compacting material as required.
- 103h - Drum drive self-propelled vibratory grid roller. The unit shall consist of one cylindrical drum with a drum diameter of not less than 56 inches, nor more than 66 inches and the drum width shall be 84 inches. Vibratory frequency shall be regulated in steps from 1200 to 1800 vibrations per minute (VPM), and the centrifugal force developed shall be at least 40,000 pounds at 1800 RPM. The vibratory grid roller shall be self-propelled and have a power unit of not less than 112 horsepower. The "grid" design shall be a herringbone or z-bar pattern around the circumference of the drum. The grid bars shall be 1 inch in height and spaced not more than 8-1/2 inches apart.
- 103i - Other. Compaction equipment approved by the Authorized Officer.

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.
- 201a - This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions from borrow pits, quarries, channel changes, stockpile sites, etc., in accordance with these specifications.
- 202 - Where clearing limits have not been staked, established by these specifications or shown on the plans, the limits shall extend 10 feet back of the top of the cut slope and 5 feet out from the toe of the fill slope.
- 202a - Where clearing limits for structures have not been staked or shown on the plans, the limits shall extend 10 feet out from the outside edge of the structure.
- 202b - Where clearing limits for borrow pits, or quarries, stockpile sites, channel changes, and ditches have not been staked or shown on the plans, the limits shall extend 10 feet back of the top of the cut slope and 5 feet outside of the outside slope lines.
- 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, 202a, and 202b as posted.
- 203a - Brush less than 2 feet in height need not be cut within the limits established for clearing.
- 203b - Standing trees and snags to be cleared shall be felled within the limits established for clearing unless otherwise authorized.
- 203c - Disposal of logs from private timber cleared within the limits established as staked on the ground shall be sold.
- 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

TIMBER SALE ROAD SPECIFICATIONS

result of the clearing operation in accordance with Subsections 204a, 204b, and 204c .

- 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. When authorized, stumps and other nonperishable objects may be left provided they do not extend more than 6 inches above the existing ground line.
- 204c - On excavated areas, roots and embedded wood shall be removed to a depth not less than 6 inches below the subgrade.
- 205 - Clearing and grubbing debris shall not be placed or permitted to remain in or under road embankment sections.
- 210 - Disposal of clearing and grubbing debris shall be by scattering over government owned lands outside of established clearing limits in a manner acceptable to the Authorized Officer. The areas for such scattering shall have the prior approval of the Authorized Officer.
- 210a - Disposal of clearing and grubbing debris on non-government property by scattering this material outside of clearing limits will be permitted provided the Purchaser obtains a written permit from the property owner on whose property the disposal is to be made. The Purchaser shall furnish the Authorized Officer a certified copy of the permit and a written release from the property owner absolving the Government from responsibilities in connection with the disposal of debris on said property.
- 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.
- 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.
- 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 12 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. Individual rocks and boulders greater than 12-inches in diameter may be used to construct 2-foot embankment layers, provided they are carefully distributed, with interstices filled with fine material to form a dense and compact mass.

- 306 - Layers of embankment, selected borrow, final subgrade and selected roadway excavation material as specified under Subsections 305a, and 305b shall be moistened or dried to a uniform optimum moisture content suitable for maximum density and compacted to full width with compacting equipment conforming to requirements of Subsections 103f and 103i.

- 306a - Minimum compaction for each layer of embankment, selected borrow, and selected roadway excavation material placed at optimum moisture shall be a minimum of 4 complete passes or until visual displacement ceases.

- 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 Subsection 306.

TIMBER SALE ROAD SPECIFICATIONS

- 320 - Ditches shall conform to the slope, grade, dimensions, and shape of the required cross section shown on the plans. Roots, stumps, rocks, and other projections shall be removed to form smooth, even slopes.
- 321 - Excess excavated, unsuitable, or slide materials shall not be disposed of on areas where the material will encroach on a stream course or other body of water. Such materials shall be disposed of in accordance with Subsection 321c. Materials not disposed of in this manner shall be retrieved and disposed of at the Purchaser's expense and at the direction of the Authorized Officer.
- 321c - End-dumping will be permitted for the placement of excess materials under Subsection 321 in designated disposal areas or within areas approved by the Authorized Officer. Watering, rolling, and placement in layers are not required. Materials placed shall be sloped, shaped, and otherwise brought to a visible condition acceptable to the Authorized Officer.
- 323 - In the construction of channel changes and stream-crossing embankment sections, natural stream flow shall be maintained unless otherwise provided.
- 324 - Excavated material shall not be allowed to cover boles of standing trees to a depth in excess of 2 feet on the uphill side.
- 327 - The finished grading shall be approved by the Authorized Officer in segments or for the total project. The Purchaser shall give the Authorized Officer 3 days' notice prior to start of surfacing operations.

PIPE CULVERTS - 400

- 401 - This work shall consist of furnishing and installing pipe culverts and other erosion control devices in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Individual lengths and locations are approximate; final lengths and locations will be determined by the Authorized Officer upon completion of the roadbed and upon installation of the appurtenance structures. Additional pipe and erosion control devices may be required at the option of the Authorized Officer, in which

TIMBER SALE ROAD SPECIFICATIONS

case a reduction in the total purchase price shall be made to offset the cost of furnishing and installing such items. Costs will be based upon the unit prices set forth in the current BLM Timber Appraisal Production Cost Schedule.

- 403 - Grade culverts shall have a gradient of from 2 percent to 4 percent greater than the 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.
- 405b - Corrugated-aluminum-alloy pipe culverts and pipe-arch culverts shall conform to the requirements of AASHTO M 196.
- 405e - Corrugated-polyethylene pipe for culverts 12-inch through 36-inch diameter shall meet the requirements of AASHTO M 294. Installation will be subject to the same specification as other pipe materials.
- 407 - Special sections, such as elbows, branch connections, and flared-end sections, shall be of the same gauge and material as the pipe to which they are joined. Metal pipe shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274.
- 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.

TIMBER SALE ROAD SPECIFICATIONS

- 411 - Trenches necessary for the installation of pipe culverts shall conform to the lines, grades, dimensions, and typical diagram that are shown on the Culvert Installation Detail Sheet.

- 412 - Where ledge rock or boulders are encountered, they shall be excavated a minimum of 10 inches below the invert grade for a width of at least 2 feet on each side of the pipe and shall be backfilled with compacted select fill.

- 412a - Where soft or spongy soils are encountered, they shall be excavated a minimum of 2 feet below the invert grade for a width of at least one pipe diameter on each side of the pipe and shall be backfilled with compacted select fill.

- 413 - Pipe culverts and pipe-arch culverts shall be bedded on a selected granular fill, crushed rock material, or fine readily compactable soil material having a depth of not less than 6 inches or as shown on the plans. Foundation material shall be of uniform density throughout the length of the structure and shall be shaped to fit the pipe.

- 416 - Select-fill material for pipe culverts shall be well graded crushed rock material free of excess moisture and devoid of rocks or stones 3 inches or larger 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 12 inches in depth and 1 pipe diameter/span, or a minimum of 2 feet in width each side of, and adjacent to, the full length of the pipe barrel.

Each layer shall be moistened or dried to uniform moisture content suitable for maximum compaction and immediately compacted by approved hand or pneumatic tampers as specified in Subsection 306A.

- 418 - Side fills beyond the compaction limits specified under Subsection 417 shall be compacted as specified under Section 300.

TIMBER SALE ROAD SPECIFICATIONS

- 419 - The pipe culvert after being bedded and backfilled as required by these specifications shall be protected by a 1-foot cover of fill before heavy equipment is permitted to cross the drainage structure. Removal of the protection fill shall be as directed by the Authorized Officer.
- 423 - Construction of catch basins conforming to lines, grades, dimensions and typical diagrams shown on the plans, shall be required for culverts.
- 424 - Construction of splash pads conforming to lines, grades, dimensions and typical diagram shown on the plans, shall be required for culverts as stated on the renovation notes and culvert summary.
- 427 - Record culvert sizes, lengths and location actually installed on a copy of the culvert list. This culvert list shall be furnished to the Authorized Officer.
- 428 - 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 in a manner that will avoid damage to adjacent property. Diversion streams shall not be returned to the natural channel until all in-stream work has been completed.

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, brushing vegetation from cut and embankment slopes, and installing, cleaning and repairing drainage structures of existing roads in accordance with these specifications, as shown on the plans and as marked on the ground with metal tags.
- 501a - This work shall include the removal and disposal of slides in accordance with these specifications.

TIMBER SALE ROAD SPECIFICATIONS

- 502 - The existing road surface shall be bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans and as marked on the ground with metal tags.

- 502a - Rocks larger than 4 inches in maximum dimension shall be removed from the scarified layers of the roadbed. Material so removed will not be permitted to remain on road shoulders or in ditches.

- 502b - Drainage ditches shall be bladed and shaped in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans.

- 504 - Existing road 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 and 103i.

- 504a - Minimum compaction required shall be a minimum of 3 passes over each full-width layer, or until visual displacement ceases.

- 506 - The inlet end of existing drainage structures shall be cleared of vegetative debris and boulders that are of sufficient size to obstruct normal stream flow. Pipe inverts shall be cleared of sediment and other debris lodged in the barrel of the pipe. The outflow area of pipe structures shall be cleared of 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.

- 509 - The finished grading shall be approved by the Authorized Officer 1 day prior to surfacing operations. The Purchaser shall give the Authorized Officer 3 days' notice prior to final inspection of the grading operations.

WATERING – 600

- 601 - This work shall consist of furnishing and applying water required for the compaction of embankments, roadbeds, backfills, base courses, surface courses, finishing and reconditioning of existing roadbeds, laying dust, or for other uses in accordance with these specifications.

TIMBER SALE ROAD SPECIFICATIONS

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

AGGREGATE BASE COURSE - 1000
CRUSHED ROCK MATERIAL

- 1001 - This work shall consist of furnishing, hauling and placing one or more lifts of crushed rock material on roadbeds and landings 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.
- 1002 - Crushed rock materials used in this work shall consist of quarry rock, stone, gravel, or other approved materials obtained from the sources shown on the plans.
- 1002a - Crushed rock materials may be obtained from commercial sources selected by the Purchaser at his option and expense providing that the rock materials selected comply with the specifications in this section.
- 1003 - Crushed rock material produced from gravel shall have 2 manufactured fractured faces on 65 percent, by weight, of the material retained on the No. 4 sieve.

TIMBER SALE ROAD SPECIFICATIONS

- 1004 - Crushed rock materials shall consist of hard durable rock fragments conforming to the following gradation requirements:

TABLE 1004

AGGREGATE BASE COURSE
CRUSHED ROCK MATERIAL

Percentage by Weight Passing Square Mesh Sieves
(AASHTO T 11 & T 27)
GRADATION

Sieve Designation	A	B	C	D	F	G	H	I
6-inch		-	-	-	-	-	-	100
3-inch	100-	-	100	-	100	-	-	45-65
2-inch	90-95	100	-	100	65-95	100	100	-
1 1/2-inch	-	90-95	-	-	-	-	-	-
1-inch	45-75	50-90	-	-	-	50-85	60-90	-
3/4-inch	-	-	-	-	28-70	-	-	-
1/2-inch	-	-	-	-	-	27-60	44-70	-
3/8-inch	-	-	-	-	-	-	-	-
No. 4	15-45	15-50	-	-	10-35	15-40	28-50	0-10
No. 8	-	-	-	-	-	-	20-41	-
No. 10	-	-	-	-	-	-	-	-
No. 30	-	-	-	-	5-22	8-26	9-26	-
No. 40	5-25	5-25	-	-	-	-	-	-
No. 200	2-15	2-15	-	-	3-10	3-12	3-12	-

- 1008a - 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.

TIMBER SALE ROAD SPECIFICATIONS

- 1009 - The roadbed, as shaped and compacted under Sections 300 and 500 of these specifications, shall be approved by the Authorized Officer prior to placement of crushed rock materials. Notification for final inspection prior to rocking shall be 3 days' notice prior to that inspection.
- 1010 - Crushed rock materials shall be placed and processed on the approved roadbed in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and compacted in layers not to exceed 4 inches in depth. When more than one layer is required, each shall be shaped, processed, compacted, and approved by the Authorized officer before the succeeding layer is placed. Irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and adding or removing crushed rock material until the surface is smooth and uniform.
- 1010a - Crushed rock material used to repair or reinforce a soft, muddy, frozen, yielding, or rutted roadbed shall not be construed as surfacing under this specification unless approved as such by the Authorized Officer prior to placement.
- 1012 - Each layer of crushed rock material shall be placed, processed, shaped, moistened or dried to uniform moisture content suitable for maximum compaction, and compacted to full width by compaction equipment conforming to the requirements of Subsection 103f and 103i. Minimum compaction shall be 3 passes over each full-width layer or until visual displacement ceases.
- 1015 - The Purchaser is authorized to remove Gradation 1004A & 1004I crushed rock material, from BLM stockpiles for placement on the roads in accordance with the requirements and details shown on the plans.

SLOPE PROTECTION - 1400

- 1401 - This work shall consist of furnishing, hauling, and placing stone materials for slope protection structures in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross-sections shown on the plans. Material not conforming to these specifications will be rejected and

TIMBER SALE ROAD SPECIFICATIONS

shall be removed from the slope protection structure at the purchaser's expense as directed by the Authorized Officer.

- 1402 - Stone material shall consist of 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.
- 1405 - Rip rap shall conform to the following gradations:

TIMBER SALE ROAD SPECIFICATIONS

TABLE 1405

Class	Approx. Cubic Dimension (inches)	Sphere Diameter (inches)	% of Total Volume Smaller than Size of Stone
1	6-8	8	100
	5-6	6	80
	2-5	6	50
	0-2	2	10
2	8-10	12	100
	6-8	8	80
	3-6	6	50
	0-3	4	10
3	14-16	21	100
	10-14	18	80
	5-10	12	50
	0-5	6	10
4	18-20	24	100
	14-18	22	80
	6-14	18	50
	0-6	8	10
5	26-28	36	100
	20-26	32	80
	8-20	25	50
	0-8	10	10
6	28-34	42	100
	22-28	34	80
	10-22	27	50
	0-10	12	10

*Rocks smaller than six inches in diameter are not counted.

TIMBER SALE ROAD SPECIFICATIONS

- 1406a - The embankment shall be placed in successive horizontal layers of sufficient depth to contain the maximum size rock present in the material. Spalls and finer fragments of stone other than specified in Subsection 1405 shall be used to chock the larger stones solidly in position and to fill voids between the major stones as laid in the embankment. The exposed face of the embankment shall be reasonably smooth and uniform; material shall be prevented from escaping beyond the toe of the structure.
- 1406b - Spaces in back of hand-laid embankment shall be filled with hand-tamped or rammed rock-spall material.
- 1407 - Determination of the acceptability of the slope protection material gradation will be through visual inspection by the Authorized Officer.
- 1408 - Trenches for slope protection structures shall be excavated to the lines, elevations, and typical diagram shown on the plans. They shall be of sufficient size to permit the placing of structure footing of the full widths and length shown. Trenches shall be approved by the Authorized Officer prior to placement of slope protection material.
- 1408a - Foundation trenches and other required excavation as shown on the plans shall be approved prior to placing the slope protection material.
- 1409 - Slope protection material shall be placed so as to form the cross sections shown on the plans. The face of the slope protection structure above the low-water line shall be uniform, free from humps, depressions, or large cavities.
- 1411 - Slope protection materials shall be placed on geotextile material as shown on the plans.

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

TIMBER SALE ROAD SPECIFICATIONS

other erosion control devices or methods in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans.

- 1708a - Road segments not completed during dry weather periods shall be winterized, by providing a well-drained roadway using water bars, maintaining drainage, and performing additional measures necessary to minimize erosion and other damage to the roadway, as directed by the Authorized Officer. Portions of roads not having surface rock in place will be blocked or barricaded to prevent vehicular traffic.

ROADSIDE BRUSHING – 2100

- 2101 - This work shall consist of the removal of vegetation from the road prism - variable distance, and inside curves in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail Sheet of this exhibit, at designated locations as shown in the plans.
- 2102 - Roadside brushing may be performed mechanically with self-powered, self-propelled equipment and/or manually with hand tools, including chain saws.
- 2103 - Vegetation cut manually and/ or mechanically less than 6 inches in diameter when measured 6 inches above the ground shall be cut to a maximum height of 2 inches above the ground surface or above obstructions such as rocks or stumps on cut and fill slopes and all limbs below the 2 inch area will be severed from the trunk.
- 2103a - Vegetation shall be cut and removed from the road bed between the outside shoulders and the ditch centerline and such vegetation shall be cut to a maximum height of 4 inches above the ground and running surface. Limbs below the 4 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.

TIMBER SALE ROAD SPECIFICATIONS

- 2104 - Trees in excess of 8 inches in diameter when measured 6 inches above the ground line shall be limbed, so that no limbs extend into the treated area or over the roadbed to a height of 14 feet above the running surface of the roadway on cut and fill slopes, within the road prism-variable distance. Limbs shall be cut to within 1 inch of the trunk to produce a smooth vertical face. Removal of trees larger than 6 inches in diameter for sight distance or safety may be directed by the Authorized Officer.

- 2105 - Vegetation that is outside of the road prism-variable distance that protrudes into the road prism and within 14 feet in elevation above the running surface shall be cut, to within 1 inch of the trunk to produce a smooth vertical face.

- 2106 - Vegetative growth capable of growing 1 foot in height or higher shall be cut, within the road prism-variable distance or as directed by the Authorized Officer.

- 2107 - Inside curves shall be brushed out for a sight distance of 200 feet chord distance or a distance of 15 feet from edge of subgrade, 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 downslope from the roadway. Debris shall not be allowed to accumulate in concentrations. Debris in excess of 1 foot in length and 2 inches in diameter shall not be allowed to remain on cut slopes, ditches, roadways or water courses, or as directed by the Authorized Officer.

- 2115 - Mechanical brush cutters shall not be operated when there are people and occupied vehicles within 400 feet of the immediate operating area.

- 2116 - Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the Manual on Uniform Traffic Devices.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ROSEBURG DISTRICT
TIMBER SALE EXHIBIT C

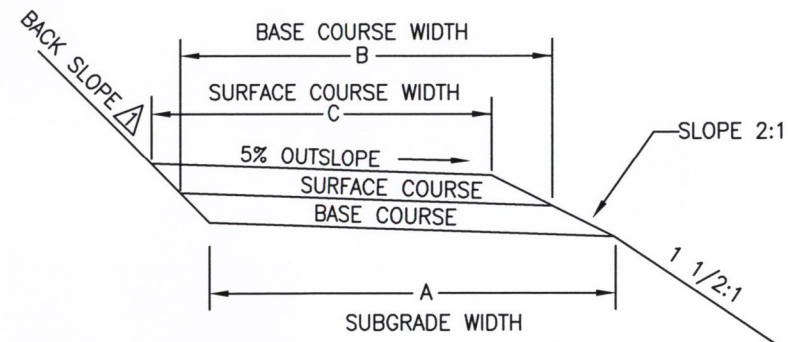
CONTRACT NAME: ROLLING THUNDER
CONTRACT NO: ORR04-TS-2015.0001

ROAD NUMBER	STA/MP	TO	STA/MP	CONST.	RENOV.	BASE COURSE		SURFACE COURSE		ROAD DIMENSIONS			TYP. ROAD SECTION	SHEET NO.
						DEPTH	TYPE	DEPTH	TYPE	A	B	C		
26-2-21.0	1+65	-	43+40		X				ROCK	EXISTING			4	4
26-2-21.3	0+00	-	37+50		X	6"	1004I	3"	1004A	16'	14'	13'	4	4
26-2-21.3	0+00	-	11+80	X		6"	1004I			16'	14'		5	6
26-2-22.0	0+00	-	54+00		X				ROCK	EXISTING			4	4
26-2-22.0	119+35	-	265+70		X				ROCK	EXISTING			4	4
26-2-22.0	265+70	-	343+50		X	6"	1004I		ROCK	16'	14'		4	4-5
26-2-23.1	0+00	-	26+50		X				ROCK	EXISTING			4	5
26-2-23.2	0+00	-	5+60		X				ROCK	EXISTING			4	5
26-2-26.0	0+00	-	6+20		X	6"	1004I			16'	14'		1	5
26-2-28.1	0+00	-	15+10	X		6"	1004I			16'	14'		5	7
SPUR 1	0+00	-	16+75	X		6"	1004I			16'	14'		3	8
SPUR 2	0+00	-	1+70	X		6"	1004I			16'	14'		5	7

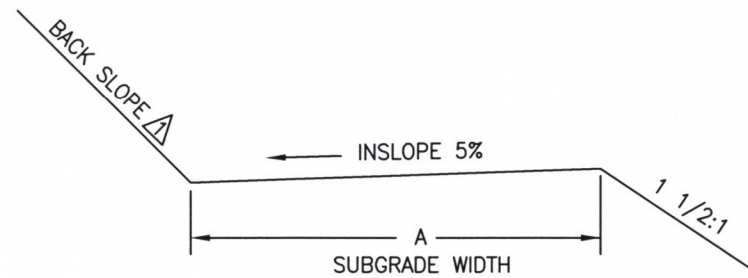
INDEX OF SHEETS	
SHEET	DESCRIPTION
1	ROAD SUMMARY
2	TYPICAL SECTION
3	VICINITY MAP
4	RENOVATION NOTES
5	RENOVATION NOTES CONTINUED
6	CONST. PLAN SPUR 26-2-21.3
7	CONST. PLAN SPUR 26-2-28.1 / SPUR 2
8	CONST. PLAN SPUR 1
9	CULVERT SUMMARY
10	CULVERT INSTALLATION
11	CULVERT REPLACEMENT PLAN
12	CULVERT REPLACEMENT DETAIL
13	BRUSHING DETAIL

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
ROLLING THUNDER ROAD SUMMARY ROSEBURG DISTRICT OREGON			
ENGINEERING APPROVAL	<i>Thane Herrera</i>		
SUBMITTED	<i>Paul D. Meinke</i>		
RECOMMENDED	<i>for [Signature]</i>		
APPROVED	<i>for [Signature]</i>		
DRAWN: TOM MCNAMARA	SCALE: AS SHOWN		
DATE: 08/21/2014	SHEET 1 OF 13		
	BLM #		

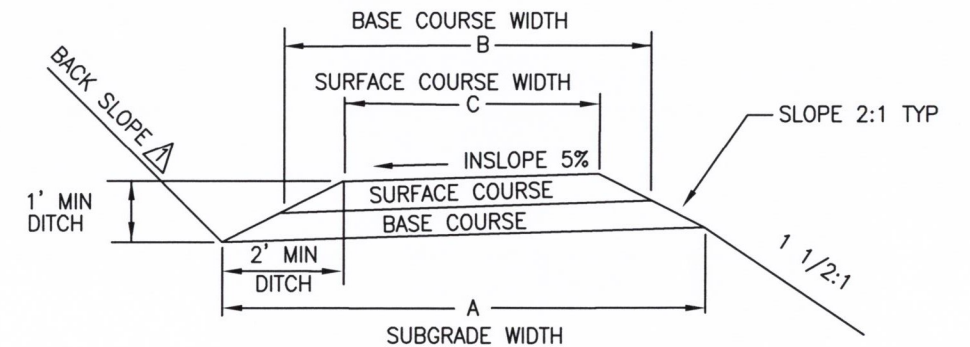




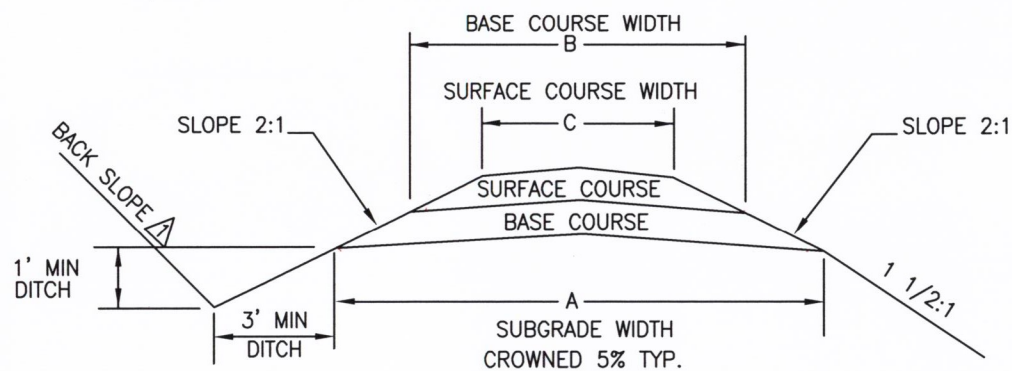
SECTION OUT SLOPE ROAD ①



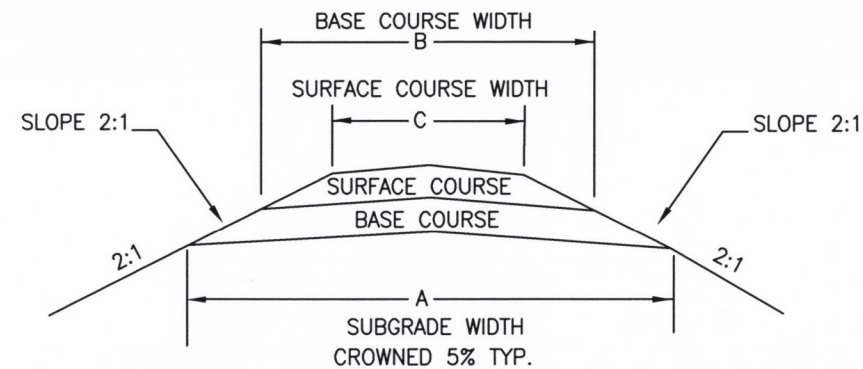
SECTION INSLOPE ROAD ②



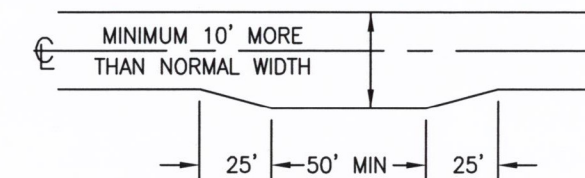
SECTION INSLOPE ROAD ③



SECTION ROAD ④



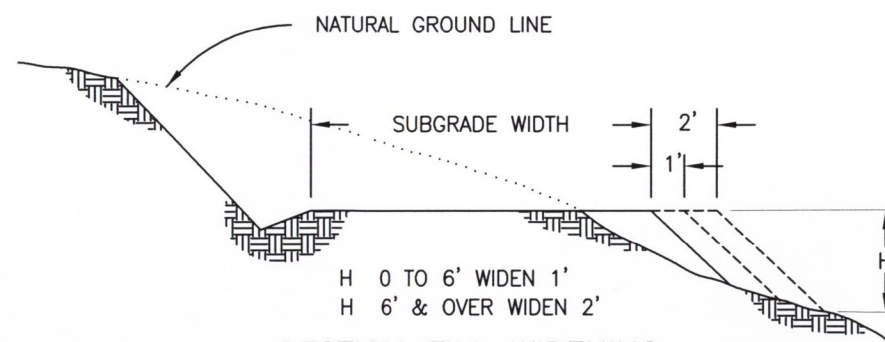
SECTION ROAD ⑤



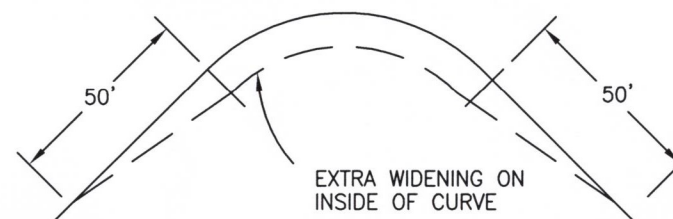
TYPICAL TURNOUT DIMENSIONS

NOTES:

1. Backslope to match existing backslope unless otherwise specified.
2. Backslope for Non-Design Roads:
Slopes under 50%, $\frac{3}{4}$:1
Slopes over 50%, $\frac{1}{2}$:1
Solid Rock $\frac{1}{4}$:1
3. Out slope road segments with grades less than 6%, crown or inslope road segments with grades exceeding 6%.
4. Inslope road sections permitted only for temporary roads. Native surface restricted to summer haul.



SECTION FILL WIDENING

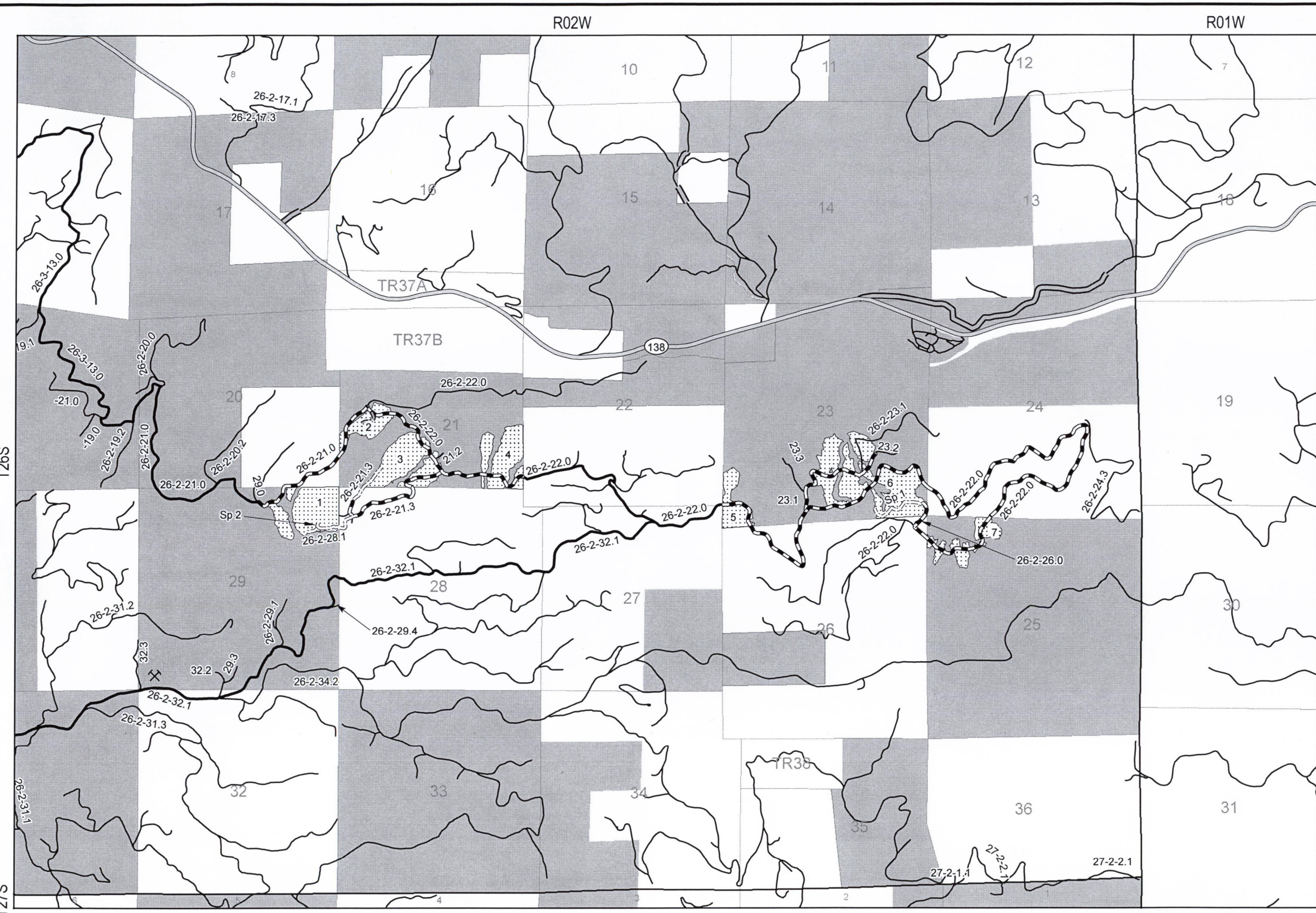


DEGREE OF CURVE	8-21	22-35	36-51	52-64	65-79	80-90
EXTRA WIDTH IN FEET	1	2	3	4	5	6

CURVE WIDENING TABLE FOR NON-DESIGN ROADS OR AS SHOWN ON PLANS. MAX 75' CURVE OR AS SHOWN ON PLANS.

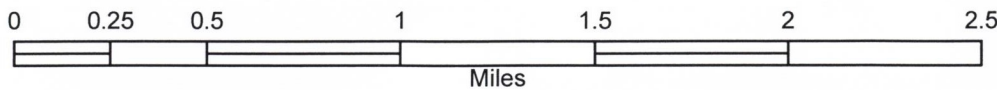


REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
ROLLING THUNDER TYPICAL SECTIONS ROSEBURG DISTRICT OREGON			
DESIGNED	<i>T. King</i>		
REVIEWED	<i>T. King</i>		
APPROVED	<i>Shane D. Spence</i>		
DRAWN: T. King		SCALE: NONE	
DATE: 4-18-2014		SHEET 2 OF 13	
BLM #			



LEGEND

- Quarry
- Road Construction
- Optional Construction
- Road Renovation
- Haul Route
- State Highway
- County Road
- Other Roads
- Harvest Area
- BLM
- Other



United States Department of the Interior
Bureau of Land Management
Roseburg District
777 NW Garden Valley Blvd
Roseburg, Oregon 97471

Transverse Mercator
Zone 10 North NAD 1983

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
ROLLING THUNDER VICINITY MAP			
ROSEBURG DISTRICT		OREGON	
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: BRAD TALBOT		SCALE: AS SHOWN	
DATE: 06/20/2014		SHEET: 3 OF 13	
		BLM #	

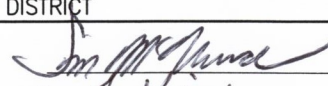
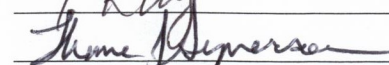
ROAD RENOVATION

Notes:

- 1. All roads shall be renovated in accordance with attached specifications and the work items listed below. Renovation may include roadside brushing, installing culverts and splash pads, blading, shaping, cleaning ditches, removing slide material, and cleaning existing drainage structures. Features to construct are so noted. Existing features are noted at approximate station in the notes below. Place 20 cy of 1004A crushed rock at each culvert installation for surface replacement. The Purchaser shall dispose of all culvert pipe removed as a part of the work described in this contract at a legal site off of BLM land.
- 2. All renovation and construction shall be done and approved prior to any hauling activity.
- 3. Existing turnouts, on roads to be renovated, shall be surfaced to the same standard as newly constructed turnouts.
- 4. Back slopes shall be cut to match existing unless otherwise specified.
- 5. All work shall be performed according to OSHA safety requirements.

STATION	DESCRIPTION	STATION	DESCRIPTION
26-2-21.0		26-2-22.0 CONTINUED	
0+00	STATIONING BEGINS AT JUNCTION OF 26-2-21.0 AND 26-2-29.0	25+00	REPLACE EXISTING CULVERT WITH 42" X 40' CULVERT BACKFILL WITH CRUSHED ROCK
1+65	BEGIN RENOVATION; BEGIN BRUSHING, PULL DITCH, CLEAN CULVERTS, BLADE AND COMPACT	27+65	REPLACE EXISTING CULVERT WITH 24" X 30' CULVERT WITH SPLASH PAD BACKFILL WITH CRUSHED ROCK
3+05	ENTER UNIT 1	30+60	JUNCTION 26-2-21.3 RIGHT
13+85	END UNIT 1	42+30	REPLACE EXISTING CULVERT WITH 42" X 40' CULVERT BACKFILL WITH CRUSHED ROCK
28+10	REPLACE EXISTING CULVERT WITH 24" X 42' CULVERT WITH SPLASH PAD BACKFILL WITH CRUSHED ROCK	49+25	REPLACE EXISTING CULVERTS WITH 60" X 60' CULVERT SEE DETAIL SHEETS PAGES 10, 11 AND 12
43+40	END RENOVATION	54+00	END RENOVATION LEAVE BLM UNIT 4, ENTER SENECA JONES PROPERTY
26-2-21.3		119+35	CONTINUE RENOVATION LEAVE SENECA JONES PROPERTY, ENTER BLM UNIT 5
0+00	BEGIN RENOVATION AT THE JUNCTION OF THE 26-2-21.3 AND 26-2-22.0 REMOVE WATER BARS, PULL DITCH, CLEAN CULVERTS, BLADE, COMPACT AND BEGIN SURFACING WITH 9" OF 1004I AGGREGATE BASE COURSE	132+20	LEAVE BLM UNIT 5, ENTER SENECA JONES PROPERTY
9+50	CONSTRUCT TURNOUT RIGHT	161+90	LEAVE SENECA JONES PROPERTY, ENTER BLM PROPERTY
12+00	LEAVE BLM PROPERTY, ENTER SENECA JONES PROPERTY	165+25	JUNCTION 26-2-23.1 LEFT
15+40	CONSTRUCT DITCHOUT LEFT	169+50	ENTER UNIT 6
17+00	INSTALL 18" X 40' CULVERT. BACKFILL WITH CRUSHED ROCK	203+80	LEAVE UNIT 6
19+00	BEGIN REESTABLISH DITCH	205+30	LEAVE BLM PROPERTY, ENTER SENECA JONES PROPERTY
21+05	END REESTABLISHED DITCH. INSTALL 18" X 34' CULVERT. BACKFILL WITH CRUSHED ROCK	265+70	BEGIN SURFACING WITH 6" OF 1004I AGGREGATE BASE COURSE. SURFACE 10 EXISTING TURNOUTS DETERMINED BY THE AUTHORIZED OFFICER
23+70	CONSTRUCT DITCHOUT LEFT	266+20	REMOVE TRENCH BARRIER
26+00	CONSTRUCT DITCHOUT RIGHT	271+70	INSTALL 18" X 40' CULVERT WITH SPLASH PAD. BACKFILL WITH CRUSHED ROCK
31+50	INSTALL 18" X 30' CULVERT. BACKFILL WITH CRUSHED ROCK	274+70	INSTALL 18" X 34' CULVERT WITH SPLASH PAD. BACKFILL WITH CRUSHED ROCK
33+00	26-2-28.1 JUNCTION LEFT	286+15	REPLACE EXISTING CULVERT WITH 18" X 34' CULVERT WITH SPLASH PAD. BACKFILL WITH CRUSHED ROCK
37+50	END RENOVATION; BEGIN CONSTRUCTION 26-2-21.3	288+75	EXISTING CULVERT
26-2-22.0			
0+00	BEGIN RENOVATION AT THE JUNCTION OF THE 26-2-22.0 AND 26-2-21.0 BEGIN BRUSHING, PULL DITCH, CLEAN CULVERTS, BLADE AND COMPACT		
18+50	REPLACE EXISTING CULVERT WITH 24" X 40' CULVERT AND INSTALL SPLASH PAD WITH 30 CY PIT RUN. BACKFILL WITH CRUSHED ROCK		

ALWAYS
THINK
SAFETY

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
ROLLING THUNDER RENOVATION NOTES ROSEBURG DISTRICT OREGON			
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: TOM MCNAMARA	SCALE: AS SHOWN		
DATE: 07/30/2014	SHEET 4 OF 12		
BLM #			

ROAD RENOVATION CONTINUED

STATION	DESCRIPTION
26-2-22.0 CONTINUED	
294+90	EXISTING CULVERT
308+35	REPLACE EXISTING CULVERT WITH 24" X 32' CULVERT WITH SPLASH PAD BACKFILL WITH CRUSHED ROCK
312+05	REPLACE EXISTING CULVERT WITH 24" X 30' CULVERT WITH SPLASH PAD BACKFILL WITH CRUSHED ROCK
313+90	LEAVE SENECA JONES PROPERTY, ENTER BLM UNIT 7
321+05	REPLACE EXISTING CULVERT WITH 48" X 50' CULVERT BACKFILL WITH CRUSHED ROCK
322+30	REPLACE EXISTING CULVERT WITH 24" X 32' CULVERT WITH SPLASH PAD BACKFILL WITH CRUSHED ROCK
322+95	REPLACE EXISTING CULVERT WITH 24" X 32' CULVERT WITH SPLASH PAD BACKFILL WITH CRUSHED ROCK
326+45	CONSTRUCT TURNOUT RIGHT. DISPOSAL SITE FOR CULVERT WASTE EXCAVATION
327+50	EXISTING CULVERT, INSTALL SPLASH PAD
331+50	REPLACE EXISTING CULVERT WITH 48" X 80' CULVERT BACKFILL WITH CRUSHED ROCK
332+55	REPLACE EXISTING CULVERT WITH 48" X 60' CULVERT BACKFILL WITH CRUSHED ROCK
334+35	CONSTRUCT TURNOUT RIGHT. DISPOSAL SITE FOR CULVERT WASTE EXCAVATION
336+05	EXISTING CULVERT, INSTALL 10 CY PIT RUN FOR SPLASH PAD
339+15	LEAVE BLM PROPERTY, ENTER SENECA JONES PROPERTY
342+55	EXISTING CULVERT
343+50	END SURFACING END RENOVATION

26-2-23.1

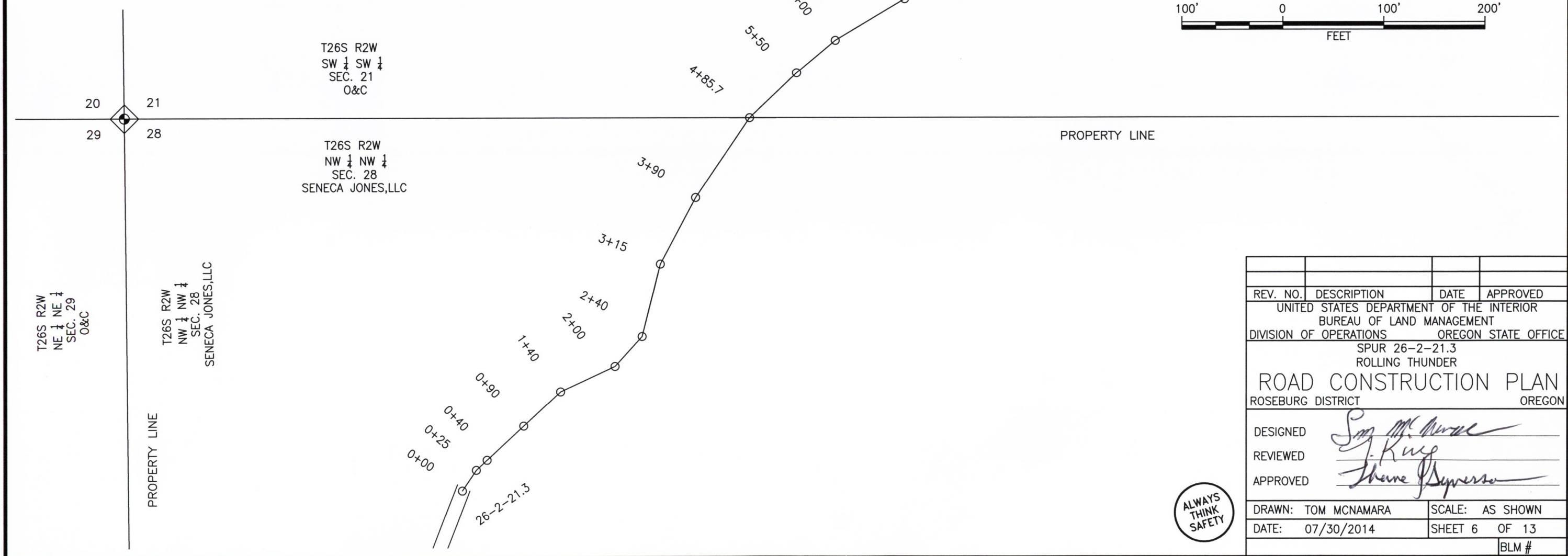
0+00	BEGIN RENOVATION AT THE JUNCTION OF THE 26-2-23.1 AND 26-2-22.0 BEGIN BRUSHING, PULL DITCH, CLEAN CULVERTS, BLADE AND COMPACT
5+30	JUNCTION 26-2-23.3 LEFT
23+60	REPLACE EXISTING CULVERT WITH 24" X 30' CULVERT WITH SPLASH PAD BACKFILL WITH CRUSHED ROCK
26+05	REPLACE EXISTING CULVERT WITH 24" X 30' CULVERT WITH SPLASH PAD BACKFILL WITH CRUSHED ROCK
26+50	END RENOVATION

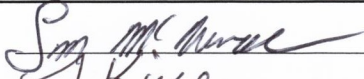
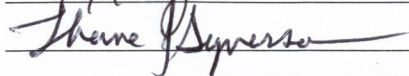
STATION	DESCRIPTION
26-2-23.2	
0+00	BEGIN RENOVATION AT THE JUNCTION OF THE 26-2-23.2 AND 26-2-23.1 BEGIN BRUSHING, PULL DITCH, CLEAN CULVERTS, BLADE AND COMPACT
5+60	END RENOVATION
26-2-26.0	
0+00	BEGIN RENOVATION AT THE JUNCTION OF THE 26-2-26.0 AND 26-2-22.0 BEGIN CLEARING, GRUBBING, BLADE, COMPACT AND SURFACE WITH 6" OF 1004I AGGREGATE BASE COURSE
6+20	END RENOVATION; BEGIN SPUR 1 CONSTRUCTION



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
ROLLING THUNDER RENOVATION NOTES CONT. ROSEBURG DISTRICT OREGON			
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: TOM MCNAMARA		SCALE: AS SHOWN	
DATE: 07/30/2014		SHEET 5 OF 12	
		BLM #	

26-2-21.3			
STA	DISTANCE FT	BEARING	% GRADE
0+00	25	N34E	8%
0+25	15	N47E	16%
0+40	50	N47E	11%
0+90	50	N47E	9%
1+40	60	N65E	8%
2+00	40	N42E	-1%
2+40	75	N14E	-10%
3+15	75	N28E	-4%
3+90	95.7	N34E	0%
4+85.7	64.3	N46E	-1%
5+50	50	N50E	-1
6+00	80	N59E	-1%
6+80	65	N51E	-12%
7+45	100	N30E	-7%
8+45	100	N36E	-9%
9+45	100	N31E	-7%
10+45	65	N31E	-8%
11+10	70	N19E	-1%
11+80			

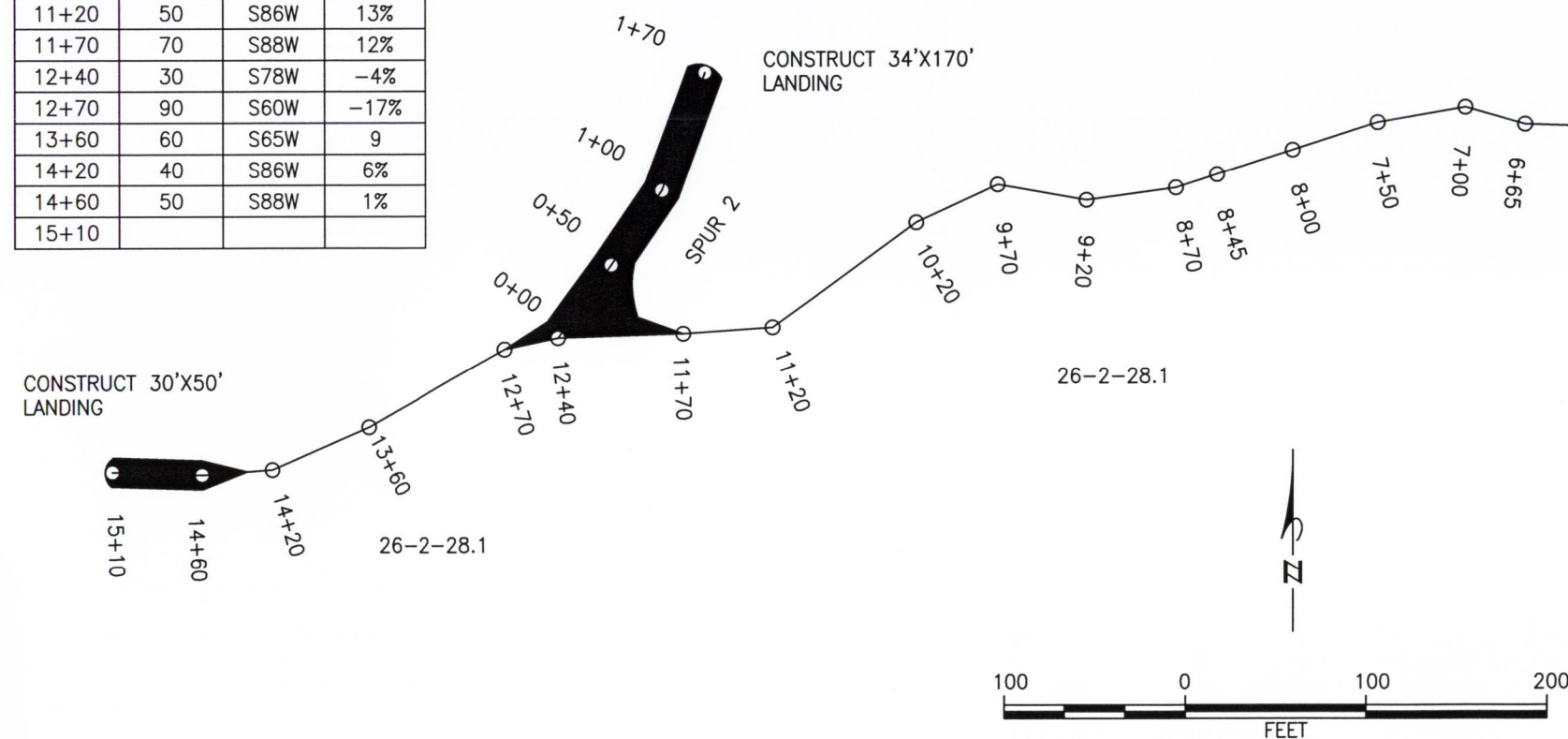


REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
SPUR 26-2-21.3 ROLLING THUNDER			
ROAD CONSTRUCTION PLAN			
ROSEBURG DISTRICT		OREGON	
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: TOM MCNAMARA		SCALE: AS SHOWN	
DATE: 07/30/2014		SHEET 6 OF 13	
			BLM #



26-2-28.1			
STA	DISTANCE FT	BEARING	% GRADE
0+00	35	S52W	8%
0+35	20	S52W	11%
0+55	100	S65W	15%
1+55	45	S60W	11%
2+00	40	S30W	13%
2+40	30	S7E	12%
2+70	30	S7E	12%
3+00	40	S7E	13%
3+40	25	S7E	18%
3+65	40	S7E	17%
4+05	40	S22W	18%
4+45	30	S60W	15%
4+75	45	WEST	10%
5+20	20	N82W	18%
5+40	54.5	N82W	16%
5+94.5	70.5	N88W	17%
6+65	35	N74W	17%
7+00	50	S80W	18%
7+50	50	S72W	16%
8+00	45	S72W	19%
8+45	25	S72W	18%
8+70	50	S82W	17%
9+20	50	N80W	10%
9+70	50	S65W	12%
10+20	100	S54W	13%
11+20	50	S86W	13%
11+70	70	S88W	12%
12+40	30	S78W	-4%
12+70	90	S60W	-17%
13+60	60	S65W	9%
14+20	40	S86W	6%
14+60	50	S88W	1%
15+10			

SPUR 2			
STA	DISTANCE FT	BEARING	% GRADE
0+00	50	N36E	1
0+50	50	N34E	0
1+00	70	N20E	-4
1+70			

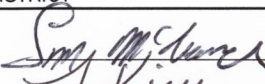
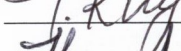
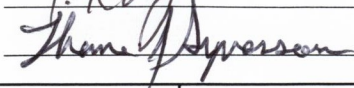


T26S R2W
NE 1/4 NE 1/4
SEC. 29
O&C

T26S R2W
NW 1/4 NW 1/4
SEC. 28
SENECA JONES, LLC

PROPERTY LINE

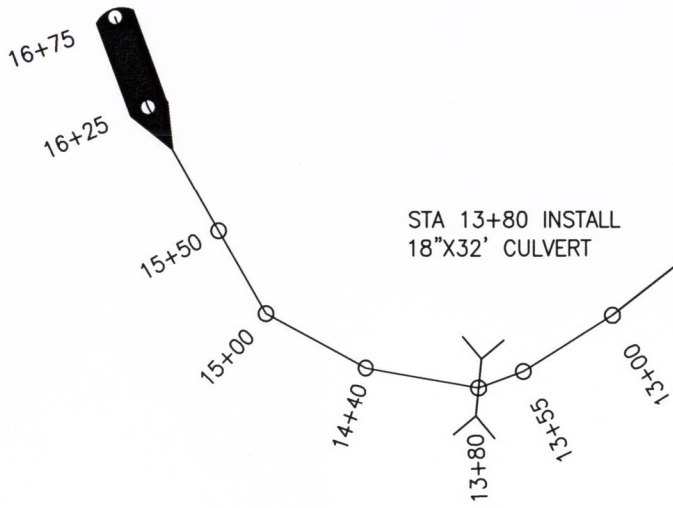
PROPERTY LINE

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
26-2-28.1 / SPUR 2 ROLLING THUNDER			
ROAD CONSTRUCTION PLAN			
ROSEBURG DISTRICT		OREGON	
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: TOM MCNAMARA		SCALE: AS SHOWN	
DATE: 07/30/2014		SHEET 7 OF 13	
			BLM #



SPUR # 1			
STA	DISTANCE FT	BEARING	% GRADE
0+00	45	N24W	12%
0+45	55	N50W	9%
1+00	100	N64W	9%
2+00	100	N64W	10%
3+00	50	N84W	5%
3+50	90	N80W	-4%
4+40	100	S86W	-8%
5+40	100	S86W	-7%
6+40	50	S52W	4%
6+90	50	S22W	7%
7+40	30	S22W	8%
7+70	100	S38W	-4%
8+70	60	S66W	-4%
9+30	50	N80W	1%
9+80	80	N84W	-4%
10+60	90	S60W	-3%
11+50	100	S60W	-3%
12+50	50	S52W	-5%
13+00	55	S58W	-7%
13+55	25	S57W	-7%
13+80	60	N80W	4%
14+40	60	N62W	8%
15+00	50	N30W	8%
15+50	75	N30W	6%
16+25	50	N20W	2%
16+75			

CONSTRUCT 34'X50'
LANDING



CONSTRUCT 34'X50'
LANDING

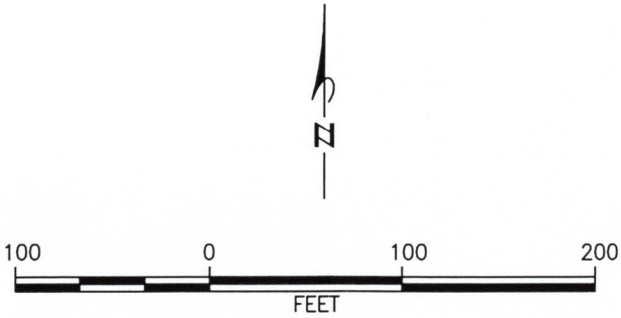
SPUR 1

T26S R2W
SE 1/4 SE 1/4
SEC. 23
O&C

CONSTRUCT 34'X75'
LANDING

STA 9+30 INSTALL
18"X32' CULVERT

SPUR 1



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
SPUR 1 ROLLING THUNDER ROAD CONSTRUCTION PLAN ROSEBURG DISTRICT OREGON			
DESIGNED	<i>Tom M. Lunn</i>		
REVIEWED	<i>J. King</i>		
APPROVED	<i>Terrie King For T. Sylvester</i>		
DRAWN: TOM MCNAMARA		SCALE: AS SHOWN	
DATE: 07/30/2014		SHEET 8 OF 13	
BLM #			

ALWAYS
THINK
SAFETY

CULVERT LIST

CULVERT LOCATIONS										DOWNSPOUT (NOTE 4)				REMARKS (NOTE 6)
DESIGNED (NOTE 2)						AS BUILT								
ROAD NO. STATION OR M.P.	SIZE (IN)	GAGE	LENGTH (FT)	SKEW ANGLE	INSTALL TYPE (NOTE 3)	ROAD NO. STATION OR M.P.	SIZE (IN)	GAGE	LENGTH (FT)	TYPE	SIZE (IN)	LENGTH (FT)	ELBOW TYPE (NOTE 5)	
26-2-21.0														
28+10	24"		42'	EXISTING	1									INSTALL SPLASH PAD
26-2-21.3														
17+00	18"		40'	30°	3									
21+05	18"		34'	30°	3									
31+50	18"		30'	30°	3									
26-2-22.0														
18+50	24"		40'	EXISTING	1									INSTALL SPLASH PAD
25+00	42"		40'	EXISTING	1									
27+65	24"		30'	EXISTING	1									INSTALL SPLASH PAD
42+30	42"		40'	EXISTING	1									
49+25	60"		60'	EXISTING	1									SEE PAGES 11 AND 12
271+70	18"		40'	30°	3									INSTALL SPLASH PAD
274+70	18"		34'	30°	3									INSTALL SPLASH PAD
286+15	18"		34'	EXISTING	3									INSTALL SPLASH PAD
308+35	24"		32'	EXISTING	1									INSTALL SPLASH PAD
312+05	24"		30'	EXISTING	1									INSTALL SPLASH PAD
321+05	48"		50'	EXISTING	1									
322+30	24"		32'	EXISTING	1									INSTALL SPLASH PAD
322+95	24"		32'	EXISTING	1									INSTALL SPLASH PAD
331+50	48"		80'	EXISTING	1									
332+55	48"		60'	EXISTING	1									
26-2-23.1														
23+60	24"		30'	EXISTING	1									INSTALL SPLASH PAD
26+05	24"		30'	EXISTING	1									INSTALL SPLASH PAD
26-2-28.1														
2+70	18"		38'	30°	3									
3+65	18"		36'	30°	3									
SPUR 1														
9+30	18"		32'	30°	3									
13+80	18"		32'	30°	3									

ROUND PIPE CULVERT				
MATERIAL	SIZE (IN)	GAGE	CORRUGATIONS	LENGTH (FT)
*	18"	14	SEE NOTE 2	350'
*	24"	14	SEE NOTE 2	298'
ALUMINIZED	42"	14	SEE NOTE 2	80'

* ALUMINIZED OR POLYETHYLENE

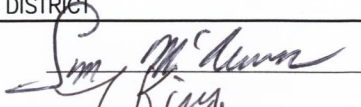
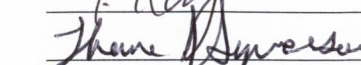
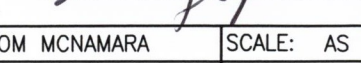
ROUND PIPE CULVERT				
MATERIAL	SIZE (IN)	GAGE	CORRUGATIONS	LENGTH (FT)
ALUMINIZED	48"	14	SEE NOTE 2	190'
ALUMINIZED	60"	12	SEE NOTE 2	60'

NOTES:

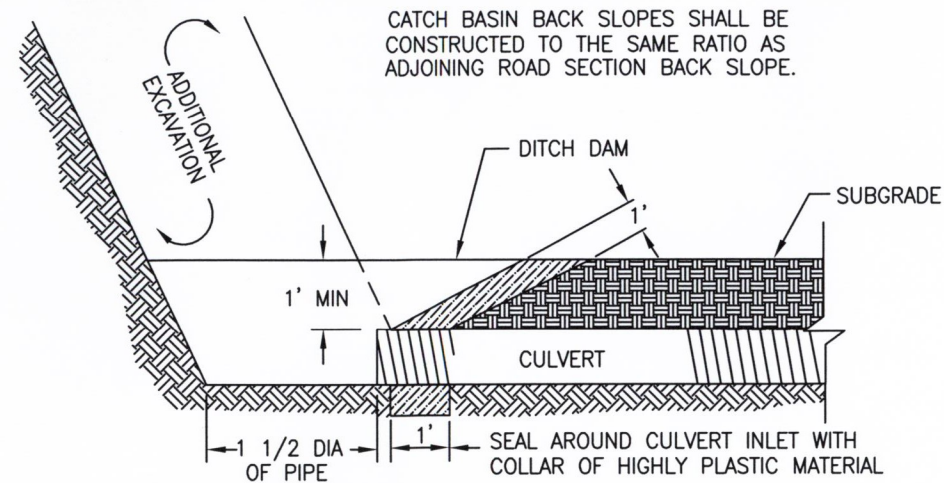
- DESIGNED CULVERT LENGTHS AND LOCATIONS ARE APPROXIMATE.
- ALL CULVERTS HAVE 2 2/3" X 1/2" CORRUGATIONS UNLESS OTHERWISE SPECIFIED.
- SEE CULVERT INSTALLATION SHEET.
- DOWNSPOUT TYPES:
 - FULL
 - HALF
 - FLUME
- ELBOW TYPES:
 - CONVENTIONAL OR FABRICATED
 - TURNER TYPE
 - SLIP JOINT
- INCLUDE SPECIAL SECTIONS, STRUCTURES, HEADWALLS, FOOTINGS, AND OTHER DATA.

GAGE CHART

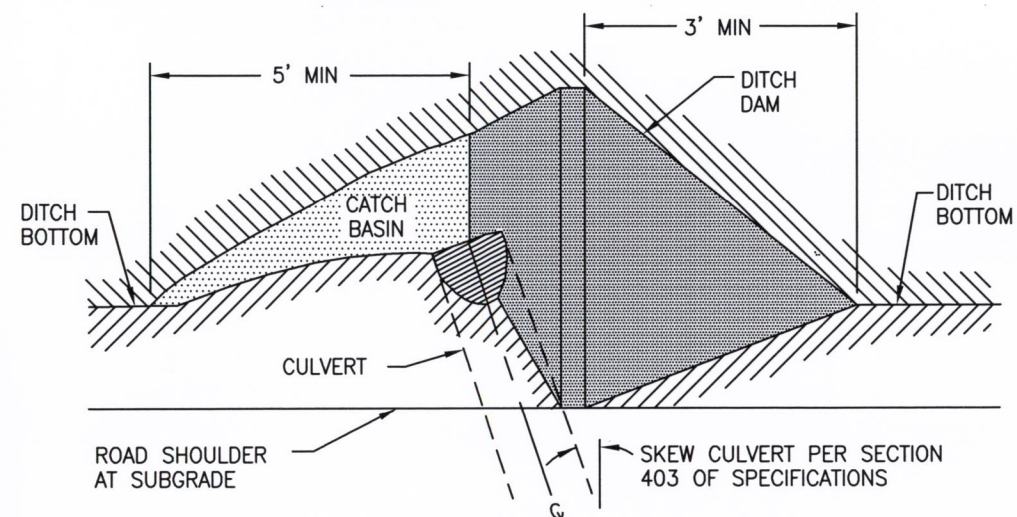
GAGE	DEC. EQUIV INCHES	
	STEEL	ALUM.
10	0.1380	0.1350
12	0.1090	0.1050
14	0.0790	0.0750
16	0.0640	0.0600

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
ROLLING THUNDER CULVERT SUMMARY ROSEBURG DISTRICT OREGON			
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: TOM MCNAMARA	SCALE: AS SHOWN		
DATE: 07/30/2014	SHEET 9 OF 13		
BLM #			

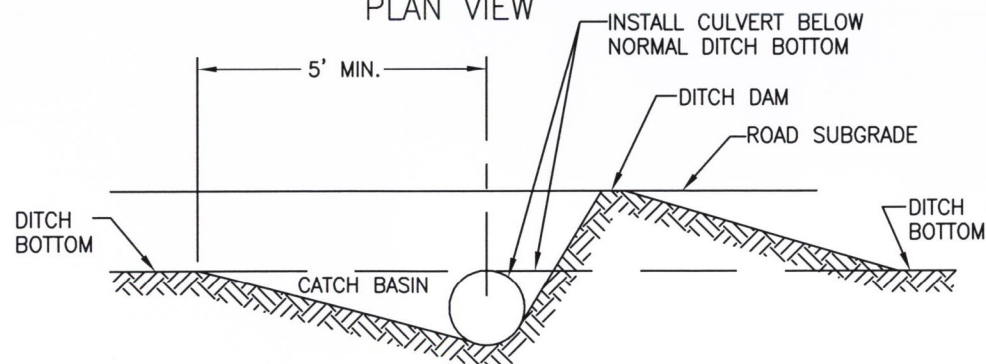




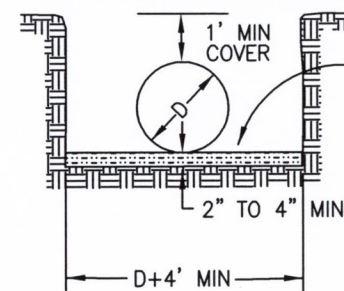
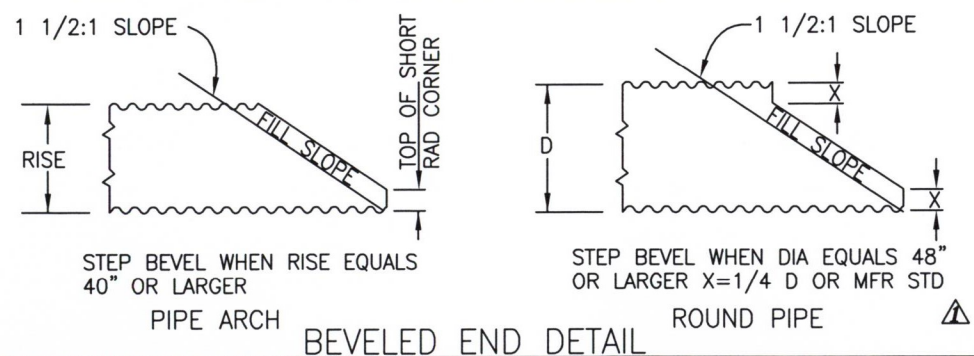
CROSS SECTION AT CATCH BASIN
CULVERT INSTALLATION TYPE 2, 3, AND 4



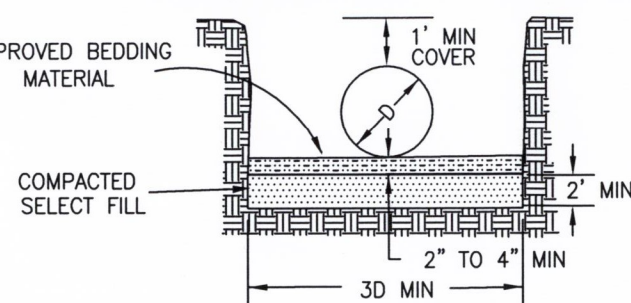
PLAN VIEW



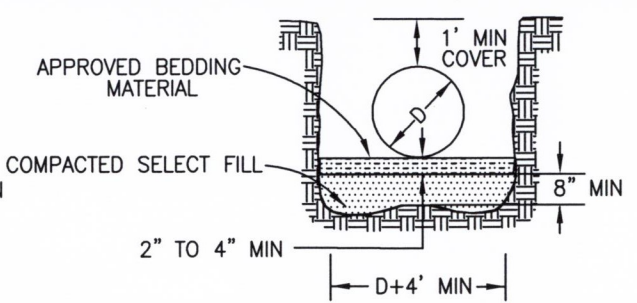
CATCH BASIN ELEVATION



BEDDING OF CULVERTS ON STABLE NATURAL GROUND FOUNDATION



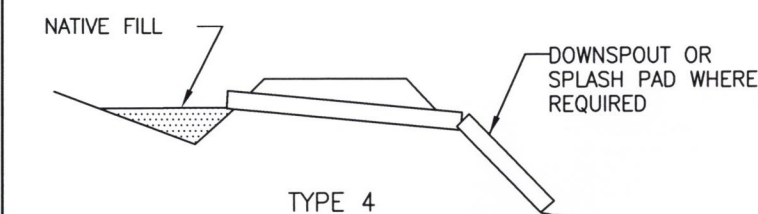
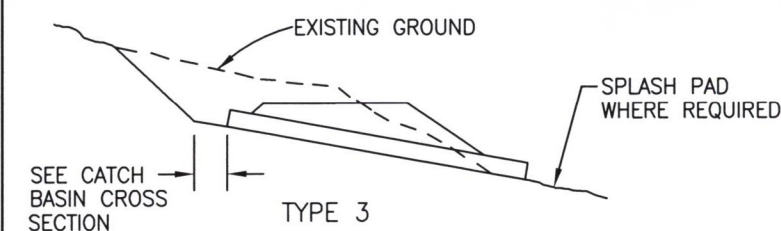
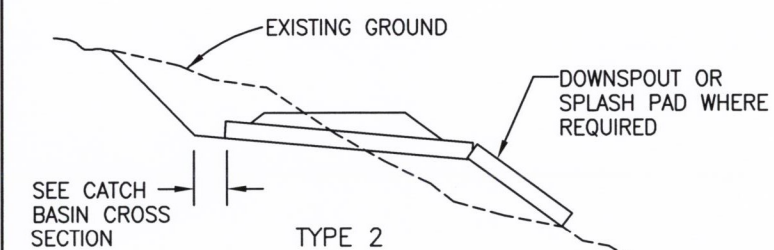
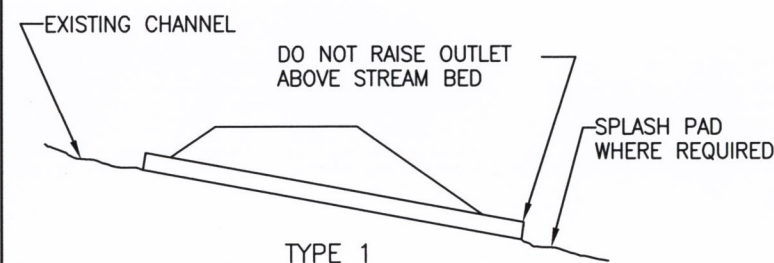
BEDDING OF CULVERTS ON SOFT SPONGY, UNSTABLE SOIL FOUNDATION OR COMPACTED EMBANKMENT



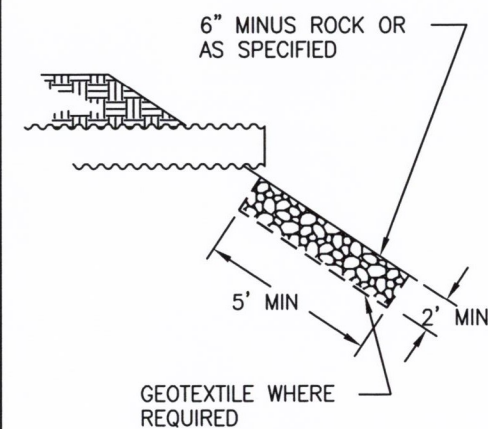
BEDDING OF CULVERTS IN SOLID ROCK OR BOULDER FOUNDATION

- NOTES:
1. BEDDING MATERIAL SHALL BE PLACED LOOSE AND SHAPED TO FIT THE BOTTOM OF THE CULVERT
 2. BACKFILL IN ACCORDANCE WITH SECTION 417 OF SPECIFICATIONS
 3. MAINTAIN 8" MIN DEPTH BETWEEN HIGH POINT OF ROCK AND/OR BOULDERS AND THE BOTTOM OF THE CULVERT BEDDING

BEDDING OF CULVERTS

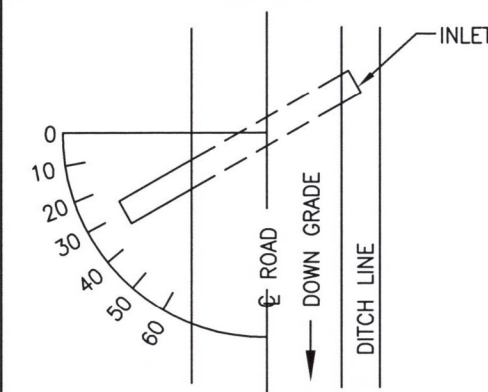


CULVERT INSTALLATION TYPES



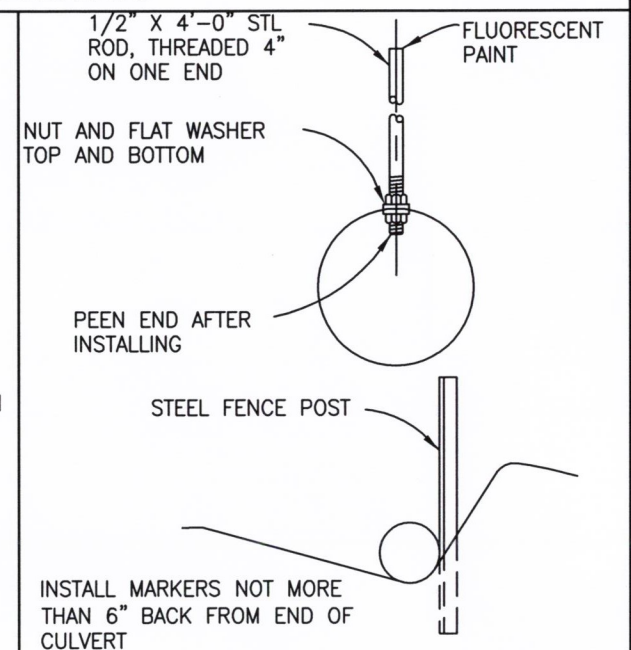
SPLASH PAD SHALL BE 1' WIDER THAN PIPE DIA ON EACH SIDE

SPLASH PAD



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

SKUEW DIAGRAM



CULVERT MARKER INSTALLATION

REV. NO.	DESCRIPTION	DATE	APPROVED
	UNITED STATES DEPARTMENT OF THE INTERIOR		
	BUREAU OF LAND MANAGEMENT		
	DIVISION OF OPERATIONS		OREGON STATE OFFICE

ROLLING THUNDER
CULVERT INSTALLATIONS
ROSEBURG DISTRICT OREGON

DESIGNED *Terrie King*
REVIEWED *Terrie King*
APPROVED *Thane J. Jenson*

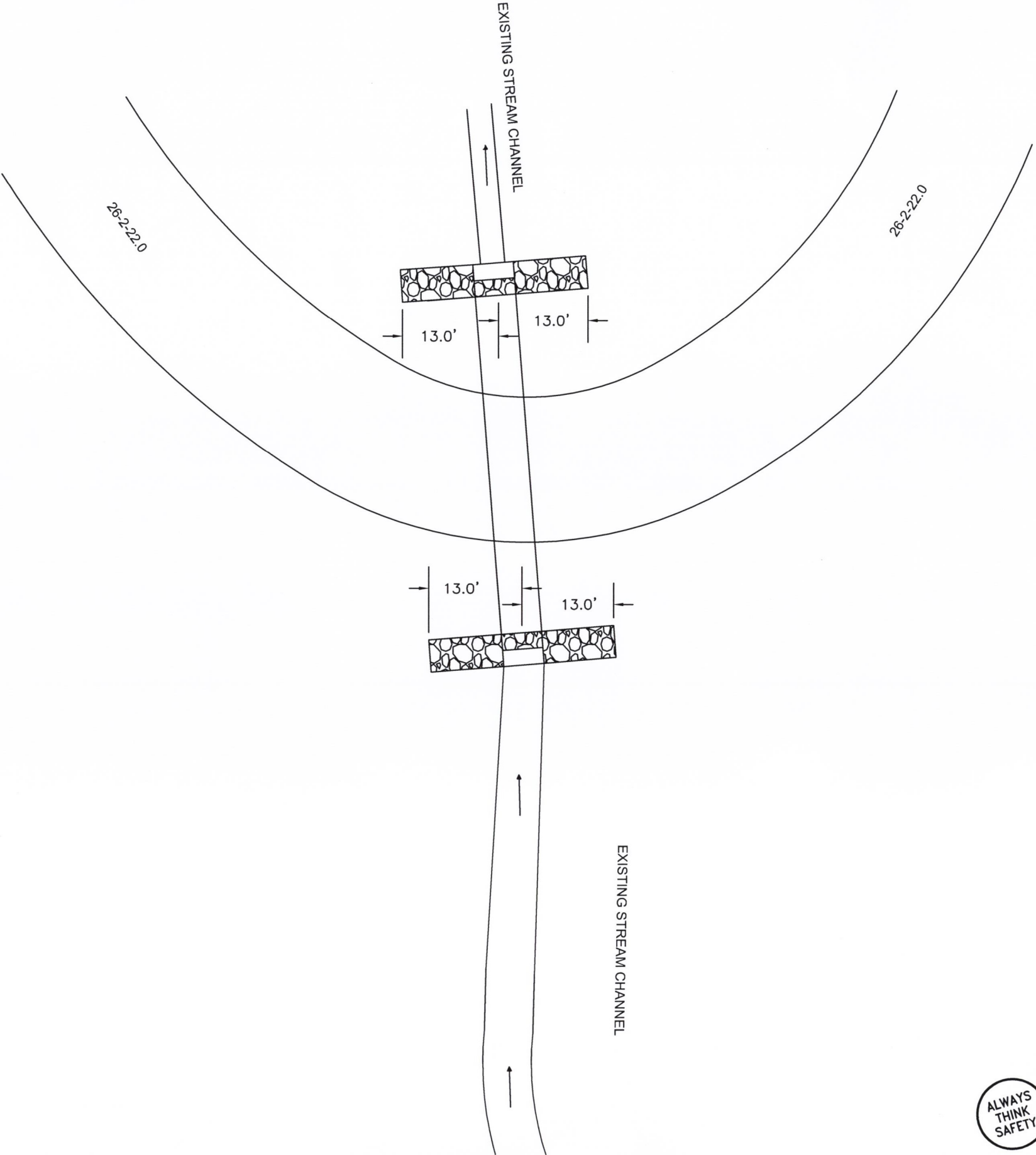
DRAWN: TERRIE KING SCALE: NOT TO SCALE

DATE: 2/20/2013 SHEET 10 OF 13

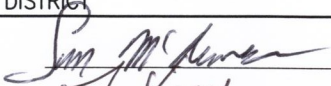
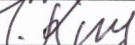
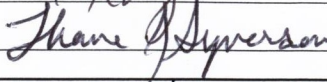
BLM #



26-2-22.0
STATION 49+25
PLAN VIEW



26-2-22.0
STATION 49+25
PLAN VIEW

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
26-2-22.0 STA. NO. 49+25 ROLLING THUNDER PLAN VIEW			
ROSEBURG DISTRICT		OREGON	
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: TOM MCNAMARA		SCALE: NTS	
DATE: 07/30/2014		SHEET 11 OF 13	
		BLM #	



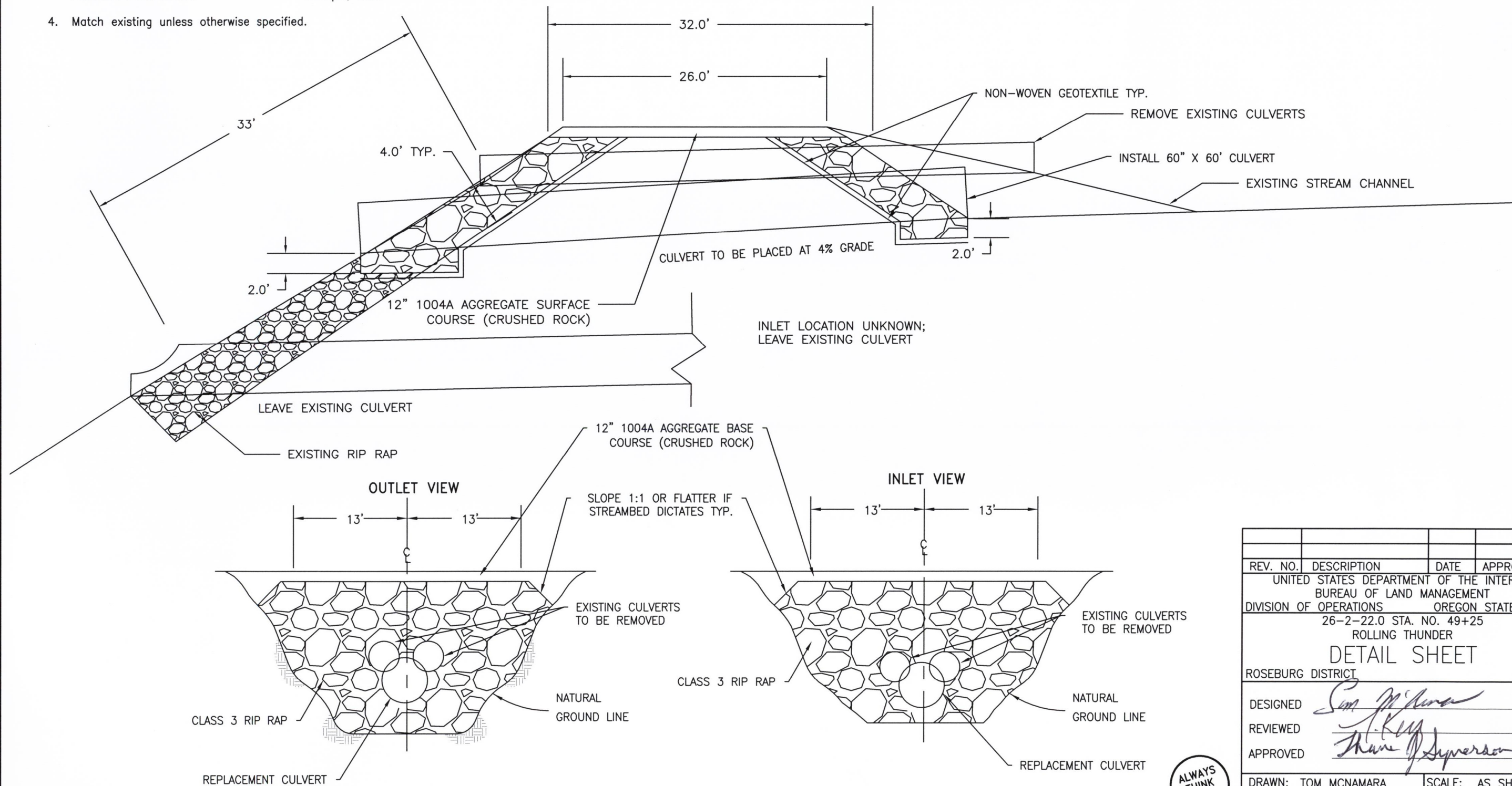
NOTES:

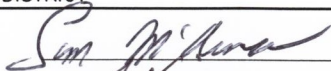

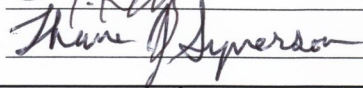
1. Slope protection shall conform to the 1400 specifications.
2. Install geotextile simultaneously with slope protection.
3. Geotextile shall conform to the following minimum standards or approved equivalent:

Geotextile Property	Test Results for Geotextile
Weight ASTM D3776	10 oz.sq.yd., min.
Grab Tensile Strength ASTM D4632	250 lbs/in., min
Puncture ASTM D4833	100 psi, min.


4. Match existing unless otherwise specified.

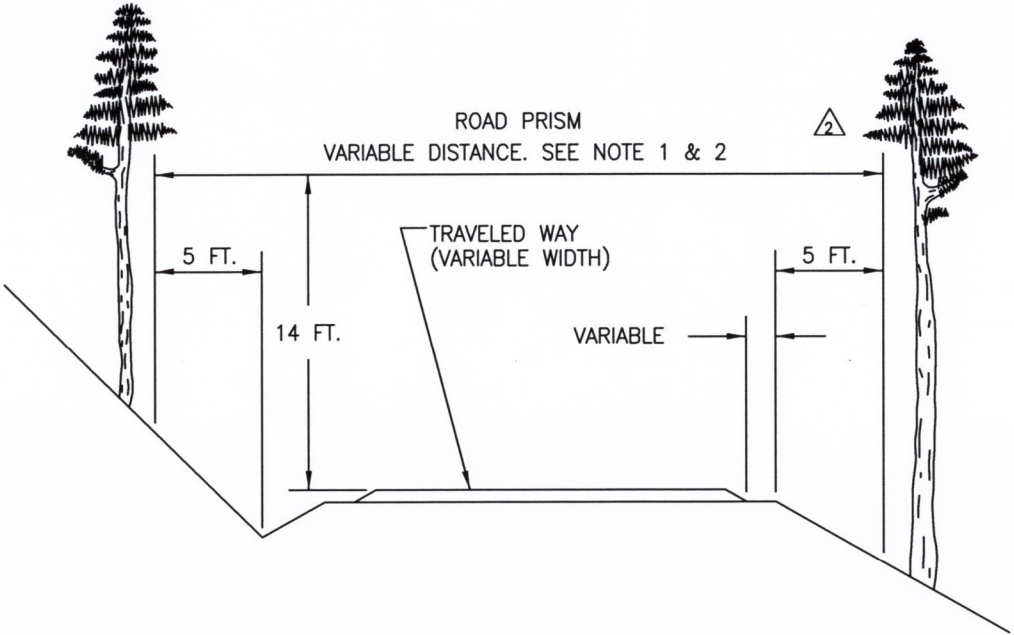
23-6-22.0
STATION 49+25
SECTION VIEW



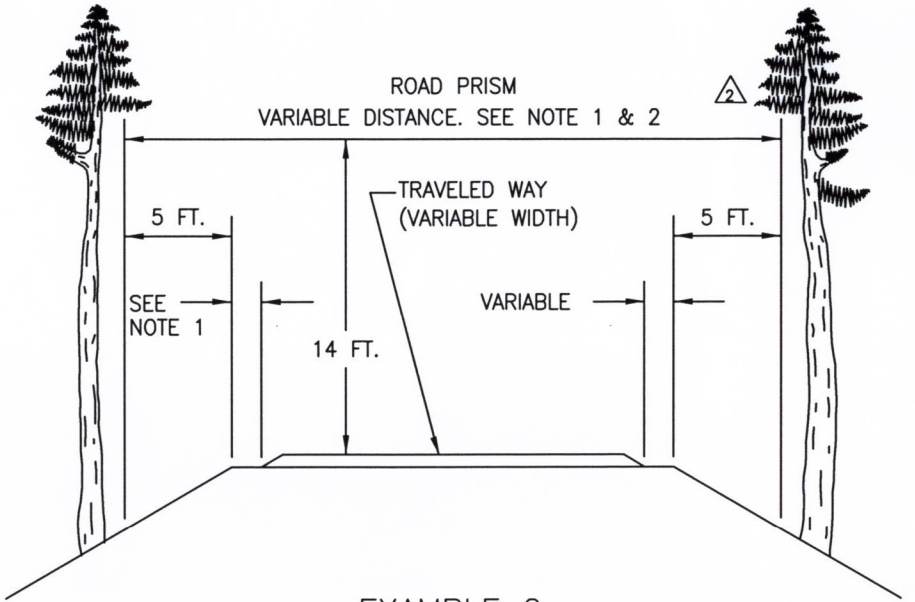
REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
26-2-22.0 STA. NO. 49+25 ROLLING THUNDER DETAIL SHEET			
ROSEBURG DISTRICT		OREGON	
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: TOM MCNAMARA		SCALE: AS SHOWN	
DATE: 07/30/2014		SHEET 12 OF 13	
		BLM #	

ALWAYS
THINK
SAFETY

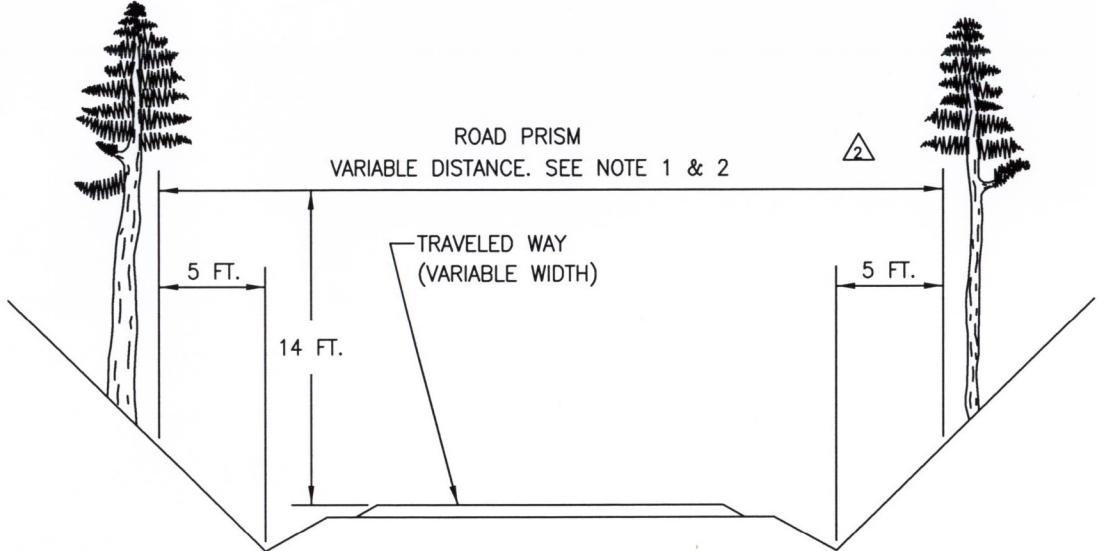
- NOTE:
1. ALL AREAS WITHIN THE VARIABLE DISTANCE SHALL BE CLEARED OF VEGETATION.
 2. ALL AREAS WITHIN THE VARIABLE DISTANCE SHALL BE FREE OF ALL OVERHANGING LIMBS AND BRANCHES WITHIN 14 FEET ELEVATION ABOVE RUNNING SURFACE. 



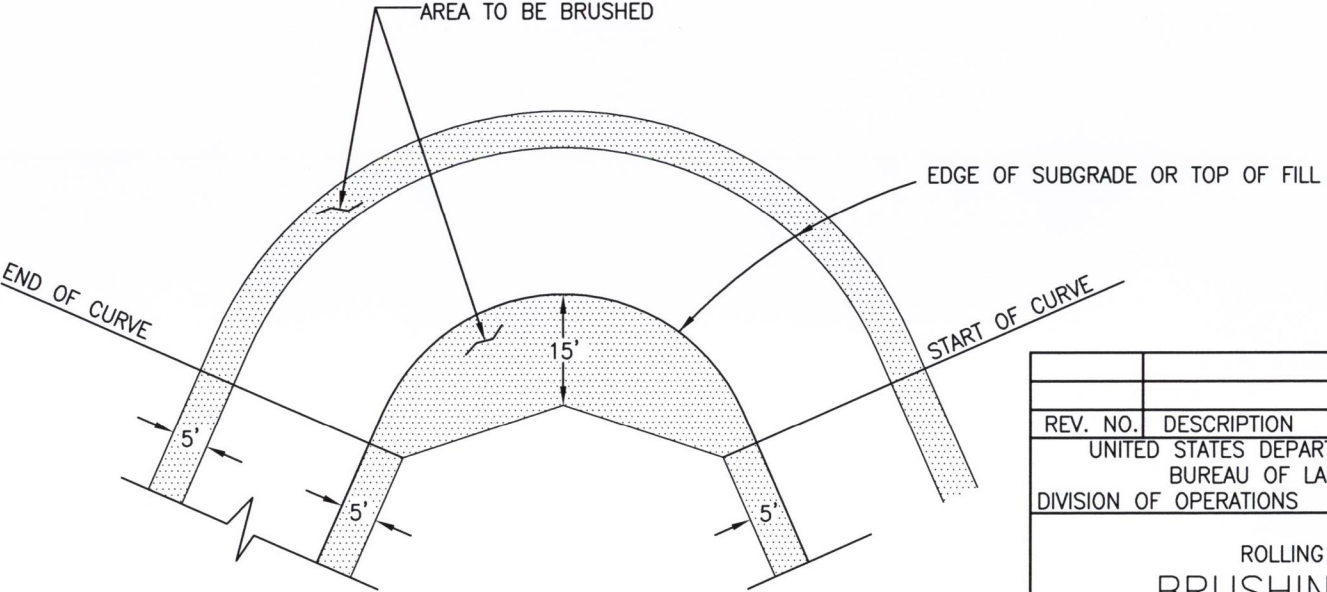
EXAMPLE 1



EXAMPLE 2

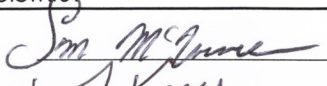
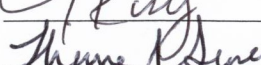
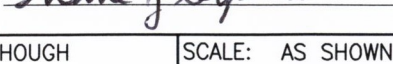


EXAMPLE 3



CURVE



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
ROLLING THUNDER BRUSHING DETAIL			
ROSEBURG DISTRICT		OREGON	
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: BILL HOUGH		SCALE: AS SHOWN	
DATE: 2/21/01		SHEET 13 OF 13	
		BLM #	