PROSPECTUS

D X D SCALED SALE

GRANTS PASS RESOURCE AREA
JOSEPHINE MASTER UNIT

Medford Sale # ORM07-TS-13-06
July 25, 2013 (AF)

#1. WILLIAMS THIN, Josephine County, O&C. BID DEPOSIT REQUIRED: $45,000.00

All timber designated for cutting in S½SW¼ Section 1,SE¼ Section 3, N½NW¼ Section 12, Lots 6, 10, and 11 Section 23, NW¼NW¼, SW¼SW¼ Section 25, N½NE¼, SW¼NE¼ Section 26, T. 39S. R. 6W., Willamette Meridian.

Approx. Number Merch. Trees	Est. Volume MBF 32' Log	Species	Est. Volume MBF 16' Log	Appr. Price Per MBF*	Est. Volume Times Appraised Price
12,426	1,633	Douglas-fir	2,023	$ 207.70	$ 420,177.10
2371	250	White Fir	313	$ 82.90	$ 25,947.70
711	27	Port-Orford-cedar	38	$ 82.70	$ 3,142.60
89	5	Incense-cedar	6	$ 84.00	$ 504.00
7	1	Ponderosa Pine	1	$ 97.40	$ 97.40
15,605	1,916	**Totals**	2,381		$ 449,868.80

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

TIMBER AUCTION LOCATION – The timber auction will be held at the Grants Pass Inter-agency Office, located at 2164 NE Spalding Ave, Grants Pass, OR, at 9 a.m. on Thursday, July 25, 2013.

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

CRUISE INFORMATION - The Douglas-fir within the gaps (scattered clusters of blue marked harvest trees) has been cruised using the 3-P sampling method to select sample trees in units 1-4, 12-3, 23-4, 25-13, 26-1A and 26-1B. The volume of all other species in the above mentioned gaps has been derived from individual tree measurements taken during a 100% cruise using form class tables for estimating board foot volume of trees in 16-foot logs. The Douglas-fir and white fir within the gaps in units 3-17A and 3-17B has been cruised using the 3-P sampling method to select sample trees. The volume of all other species within the gaps in units 3-17A and 3-17B has been derived from individual tree measurements taken during a 100% cruise using form class tables for estimating board foot volume of trees in 16-foot logs. The Douglas-fir within the temporary routes has been cruised using the 3-P sampling method to select sample trees in units. The volume of all other species in the temporary routes has been derived from individual

tree measurements taken during a 100% cruise using form class tables for estimating board foot volume of trees in 16-foot logs. All of the sample trees have been measured, utilizing the VOLT system of measurement, and the volume expanded to a total sale volume. The timber within the unit boundaries but outside of the gaps and temporary routes has been cruised using the PCMTRE sampling method to select sample trees. The sample trees have been measured, utilizing the VOLT system of measurement, and the volume expanded to a total sale volume. Maps showing the location and description of these sample trees and PCMTRE plot centers are available at the Grants Pass Interagency Office.

With respect to merchantable trees of all conifer species: the average tree is 13.9 inches DBHOB; the average gross merchantable log contains 45 bd. ft.; the total gross volume is approximately 2,381 M bd. ft; and 94% recovery is expected. (Average DF is 14.1 inches DBHOB; average gross merchantable log DF contains 46 bd. ft.)

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

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

CUTTING AREA – Eight (8) units containing one hundred forty nine (149) acres must be partial cut.

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

ACCESS -Access to the sale area is available via public roads to the contract area. To access units 23-4, 26-1A, 26-1B, and 25-13 from Williams, Oregon turn west on Cedar Flat Road, proceed to Caves Camp Road. Turn south on Caves Camp Road, which turns into BLM road 39-5-18.1, and proceed approximately 4.5 miles to BLM road 39-6-11.0. Turn west on BLM road 39-6-11.0 and proceed approximately 2.2 miles to the northwest boundary of units 26-1A and 26-1B. Continue approximately another one mile on BLM road 39-6-11.0 to unit 23-4. To reach unit 25-13, instead of turning onto BLM road 39-6-11.0, continue on BLM road 39-5-18.1 (from junction of BLM road 39-6-11.0 and BLM road 39-5-18.1) for approximately one mile and unit 25-13 will be on the west side of the road. To access units 1-4, 3-17A, 3-17B, and 12-3 from Williams, Oregon turn west on Cedar Flat Road and proceed to BLM road 39-5-6.0. Turn south on BLM road 39-5-6 and proceed approximately four miles to units 1-4 and 12-3. To access units 3-17A and 3-17B, proceed on BLM road 39-5-6.0 road for approximately two miles, (past units 1-4 and 12-3) until BLM road 39-6-2.2 is reached. Turn south on BLM road 39-6-2.2 and continue approximately one quarter mile to the north boundary of units 3-17A and 3-17B. See Exhibit A, Williams Thin Timber Sale Location Map, and Grants Pass Resource Area transportation maps for more detailed information on roads and unit locations. Among other conditions, Agreement No. M-1166 (*with Indian Hill, LLC*) requires completion of an agreement between the Purchaser and Permittee and payment of **$1,025.98** for the removal of right-of-way timber; Agreement No. M-660 (*with Tristar Southwest Oregon Timberland, LLC*) requires a road use fee of **$26.18** and the completion of an agreement between the Purchaser and Permittee; and Agreement No. M-1538 (*Josephine County Forestry*) requires the completion of an agreement between the Purchaser and Permitee and payment for the removal of right-of-way timber **in an amount to be determined upon completion of the Josephine County Forestry cruise and appraisal**.

ROAD MAINTENANCE – The Purchaser will be required to maintain 9.11 miles of BLM and Private roads utilized for timber harvest operations and pay a maintenance fee of $0.65 per MBF for the use of BLM roads shown in Section 42(C)(4) and a rock wear fee of $0.51 per MBF, for the use of BLM roads shown in Section 42(C)(5).

ROAD CONSTRUCTION/RENOVATION - The contract will require the Purchaser to renovate 482.6 stations of existing road and construct 19.0 stations of Temp Route. Additional information is available in the timber sale prospectus.

SOIL DAMAGE PREVENTION - Pursuant to Section 26 of Form 5450-3, Timber Sale Contract, no tractor yarding/ground based yarding, road maintenance/renovation, temporary route/swing road, landing construction, and skid trail, landing, temporary route/swing road decommissioning shall be conducted on the contract area between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request, in writing, a conditional waiver of this restriction. If soil moisture conditions are dry, as determined by the inability of soil sample taken at 4"-6" to maintain form when compressed and by the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks, the Contracting Officer may approve a conditional waiver. If impacts to soil resulting from said conditional waiver are not acceptable, as determined by the Authorized Officer, the waiver will be revoked. The Purchaser shall construct waterbars on tractor skid roads and block skid roads where they intersect with haul roads. Ripping of main skid roads required.

EQUIPMENT REQUIREMENTS –

1. Yarding tractor not greater than 9 feet wide, as measured from the outer edges of standard width track shoes and equipped with integral arch and winch capable of lining logs 75 feet.
2. Skyline yarder capable of one end log suspension, minimum lateral yarding capability of seventy-five (75) feet while maintaining a fixed position during inhaul, and yarding logs uphill approximately 950 feet. Multispan capable, (see Other).
3. A minimum two hundred (200) flywheel horsepower tractor with mounted rippers and capable of ripping to a depth of eighteen (18) inches will be required for decommissioning temporary spurs, natural surface landings, and main tractor skid roads.

SLASH DISPOSAL – Appraised slash disposal consists of seventy-five (75) acres of hand pile and cover, seventy-four (74) acres of lop and scatter, and two (2) acres of covering landing decks.

CONTRACT TERMINATION – 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.

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

OTHER –

1. No extension of time beyond the normal 30 days will be granted for completing bonding and contract signing requirements.
2. All leave trees will be selected by the Purchaser through Designation by Description (DxD) criteria as outlined in Exhibit E, (L-26M).
3. Seasonal operating constraints. (L-18, L-18a).
4. Slash treatment concurrent with logging.
5. Cleaning of equipment to eliminate noxious weed seeds is required prior to move in of equipment onto federal lands.
6. Cleaning of equipment and vehicles is required prior to move in onto federal lands. Other measures as necessary to control spread of Port-Orford root disease, 42(D)(12).
6. Whole tree, (limbs, tops attached) yarding will be required unless unacceptable damage occurs, (L-6).
7. Mechanical harvesters may be used. Restrictions apply. Section 42(B)(6)L-7.
8. It is estimated that approximately four (4) skyline corridors in units 1-4 and 12-3 will need to be logged in a multispan configuration. Intermediate trees confirmed. Appraisal covers tree climbing costs.
9. It estimated that fourteen (14) skyline corridors will need tail (lift) trees between 30 and 55 feet in units 3-17B, 12-3, 25-13, and 26-1B. Appraisal covers tree climbing costs.
10. This sale is located in a Late Successional Reserve, (LSR). Conifer trees 20 inch D.B.H.O.B. and larger are reserved, (IR-1, IR-3M). Any cutting of trees this size must be left on site.
11. This contract contains provisions, (L-25), for the sale and removal of additional timber necessary to facilitate safe and efficient Purchaser operations. These provisions include: The designation and sale of additional timber, such as skid, corridor and guyline trees, at contract price, as necessary to facilitate safe and efficient logging. Such trees may be felled and removed when they are painted by the Authorized Officer; Sale of additional timber volume at current fair market value where the species of trees are not representative of the forest stands being thinned; Government reservation of trees previously marked for cutting (replacement) when the Authorized Officer determines that it is necessary in order to maintain stand densities consistent with objectives set forth in management prescriptions; The use of unilateral modifications executed by BLM for such additional (replacement) timber; Revocation of the Purchaser's right to cut additional timber if the Authorized Officer determines that trees have been cut and removed that were not previously marked and approved for cutting and removal by the Authorized Officer; and, It is estimated that approximately 25 MBF of such additional timber may be removed under the contract, but is not included in the advertised sale volume nor was it included in the timber sale appraisal. This estimate is a net figure reduced by the estimate of the volume of trees previously marked for cutting, which the Authorized Officer may elect to reserve.
12. Haul off the 39-6-26.0 road has a truck turn-around approximately one mile north on and adjacent to the 39-6-11.0 road, (just north of unit 23-4).

NARRATIVE DESCRIPTION OF HOW TO GET TO THE TIMBER SALE AREA – Access to the sale area is available via public roads to the contract area. To access units 23-4, 26-1A, 26-1B, and 25-13 from Williams, Oregon turn west on Cedar Flat Road, proceed to Caves Camp Road. Turn south on Caves Camp Road, which turns into BLM road 39-5-18.1, and proceed approximately 4.5 miles to BLM road 39-6-11.0. Turn west on BLM road 39-6-11.0 and proceed approximately 2.2 miles to the northwest boundary of units 26-1A and 26-1B. Continue approximately another one mile on BLM road 39-6-11.0 to unit 23-4. To reach unit 25-13, instead of turning onto BLM road 39-6-11.0, continue on BLM road 39-5-18.1 (from junction of BLM road 39-6-11.0 and BLM road 39-5-18.1) for approximately one mile and unit 25-13 will be on the west side of the road. To access units 1-4, 3-17A, 3-17B, and 12-3 from Williams, Oregon turn west on Cedar Flat Road and proceed to BLM road 39-5-6.0. Turn south on BLM road 39-5-6 and proceed approximately four miles to units 1-4 and 12-3. To access units 3-17A and 3-17B,

proceed on BLM road 39-5-6.0 road for approximately two miles, (past units 1-4 and 12-3) until BLM road 39-6-2.2 is reached. Turn south on BLM road 39-6-2.2 and continue approximately one quarter mile to the north boundary of units 3-17A and 3-17B. See Exhibit A, Williams Thin

Timber Sale Location Map, and Grants Pass Resource Area transportation maps for more detailed information on roads and unit locations.

ENVIRONMENTAL ASSESSMENT - An environmental assessment DOI-BLM-OR-M070-2012-009-EA was prepared for this sale, and a Finding of No Significant Impact has been documented. This document is available for inspection as background for this sale at the Medford Interagency Office.

Seasonal Restriction Matrix

Williams Thin T.S.

OR110-TS13-06

Unrestricted

Restricted To Dry Condition/Season Waiver Required Outside of Operating Season

Additional Restriction due to POC

Restriction due to N. Spotted Owl

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

Dry Condition Haul- No hauling on natural surface roads, temporary routes, or rocked roads shall be conducted on the contract area between **October 15** of one calendar year and **May 15** of the following calendar year, both days inclusive. Purchaser may request, in writing, a conditional waiver of this restriction. If moisture conditions on the road are deemed acceptable and do not result in continuous mud splash or tire slide, fines being pumped through road surfacing from the subgrade and resulting in a layer of surface sludge, road drainage causing a visable increase in stream turbidities, surface rutting, or any condition that would result in water being chronically routed into tire tracks or away from designed road drainage during precipitation events, Contracting Officer may approve a conditional waiver. If moisture conditions on the road resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.

Dry Season Operations due to Port-Orford-Cedar root disease- Road construction, road maintenance/renovation, hauling, and the transportation of personnel and equipment shall be limited to dry periods during the dry season between **June 1** of one calendar year and **September 30** of the same calendar year, both days inclusive. Purchaser may request, in writing, a conditional waiver of this restriction. If moisture conditions do not indicate puddles in roads, water running in ditches, or increases in soil moisture, and likelihood of spreading P. lateralis, (Port-Orford-cedar root disease) is low, Contracting Officer may approve a conditional waiver. If moisture conditions described above resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked. If dry season rain events result in unacceptable said moisture conditions, cessation of above operations will be required until moisture conditions are acceptable as determined by the Authorized Officer.

Dry Condition Groundbased Yarding- No tractor yarding/ground based yarding, road maintenance/renovation, temporary route/swing road construction, landing construction, or skid trail, landing, temporary route/swing road decommissioning shall be conducted on the contract area between **October 15** of one calendar year and **May 15** of the following calendar year, both days inclusive. Purchaser may request, in writing, a conditional waiver of this restriction. If soil moisture conditions are dry, as determined by the inability of soil sample taken at four (4) to six (6) inches to maintain form when compressed and by the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks, the Contracting Officer may approve a conditional waiver. If impacts to soil resulting from said conditional waiver are not acceptable, as determined by the Authorized Officer, the waiver will be revoked.

Spotted Owl Restriction- No road construction, road improvement, landing construction, felling, yarding, chainsaw operation, or prescribed fire operations shall be conducted within unit **23-4** between **March 1** and **June 30** of the same calendar year, both days inclusive. This restriction will not apply if it can be shown from Spotted Owl protocol surveys conducted by the Bureau of Land Management in accordance with accepted standards that Spotted Owl nesting and/or fledging activities are not occurring during the year of harvest.

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Units: All Units	Falling and Bucking*																								
	Ground Based Yarding/Skid Trail Construction, Decommisioning																								
	Cable Yarding																								
	Loading, Hauling, Road Construction, Renovation & Maintenance																								
Unit: 23-4 Owl Restriction	Falling and Bucking*																								
	Ground Based Yarding/Skid Trail Construction, Decommisioning																								
	Loading, Road Construction, Renovation & Maintenance																								

WILLIAMS THIN
SPECIAL PROVISIONS

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

Sec. 41. TIMBER RESERVED FROM CUTTING - The following timber on the contract area is hereby reserved from cutting and removal under the terms of this contract and is retained as the property of the Government.

(A) AR-1 All timber on the Reserve Areas as shown on Exhibit A and all orange painted/or posted trees which are on or mark the boundaries of the Reserve Areas.

(B) IR-1 Approximately one hundred seventy eight (178) conifer trees marked with orange paint in units 1-4, 3-17A, 3-17B, 12-3, 23-4, 25-13, 26-1A and 26-1B as shown on Exhibit A. All marked residual trees greater than twenty (20) inch D.B.H.O.B. that must be cut for yarding corridor removal or yarder anchors will be left on site or as directed by the Authorized Officer.

(C) IR-3M All hardwood trees which are larger than eight (8) inches D.B.H.O.B. in units 1-4, 3-17A, 3-17B, 12-3, 23-4, 25-13, 26-1A and 26-1B shown on Exhibit A.

(D) IR-3M All snags which are larger than sixteen (16) inches D.B.H.O.B. and all wind thrown trees in all units except hazard snags. Any felled hazard snags must remain where felled or as directed by the Authorized Officer.

(E) IR-3M All conifer trees which are larger than twenty (20) inches D.B.H.O.B. within temporary route boundries as shown on Exhibit A. All conifer trees which are larger than twenty (20) inch D.B.H.O.B. that must be cut for temporary route clearance must be left on site or as directed by the Authorized Officer.

(F) IR-7 All leave trees required to meet Selection Criteria outlined in Exhibit E except approximately two thousand five hundred twenty seven (2527) Douglas-fir trees, six hundred fifty five (655) White-fir trees, twenty six (26) Port-Orford cedar trees, five (5) Ponderosa-pine trees, and two (2) Incense-cedar trees marked for cutting heretofore by the Government with blue paint above and below stump height in units 1-4, 3-17A, 3-17B, 12-3, 23-4, 25-13, 26-1A and 26-1B as shown on Exhibit A.

(G) IR-10 All trees marked with a band of orange paint about six feet from the ground and with a yellow, metal, SEED TREE tag in the partial cutting areas shown on Exhibit A. These trees are selected, genetically superior trees and are specially valued as a component of the tree improvement program. Any damage to such reserve trees caused by the Purchaser shall be charged for on the basis of the resulting total loss to the Government including any loss in value as a superior seed source

(H) IR-11M All trees which were severed from the stump or cut into logs prior to the date this contract was entered into, and all pre-existing dead and down woody debris within all units as shown on Exhibit A.

WILLIAMS THIN
SPECIAL PROVISIONS

Section 42

(A) Log Exports

(1) LE-1 All timber 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 (8 3/4) 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 (8 3/4) inches in thickness or less; (6) shakes and shingles.

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

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

(a) Date of last export sale.

(b) Volume of timber contained in last export sale.

(c) Volume of timber exported in the past twelve (12) months from the date of last export sale.

(d) Volume of Federal timber purchased in the past twelve (12) months from the date of last export sale.

(e) Volume of timber exported in succeeding twelve (12) months from date of last export sale.

(f) Volume of Federal timber purchased in succeeding twelve (12) months from date of last export sale.

In the event the Purchaser elects to sell any or all of the timber sold under this contract in the form of unprocessed timber, the Purchaser shall require each party buying, exchanging, or receiving such timber to execute a "Certificate as to Nonsubstitution and the Domestic Processing of Timber". The original of such certificate 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 the form specified by the Authorized Officer and furnish the information to the Authorized Officer.

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

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

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

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

In the event of the Purchasers 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.

(B) Logging

(1) L-1 Before beginning operations on the contract area for the first time or after a shutdown of seven (7) or more days, the Purchaser shall notify the Authorized Officer in writing of the date he plans to begin operations. This written notification must be received by the Authorized Officer no less than seven (7) days prior to the date the Purchaser plans to begin or resume operations. The Purchaser shall also notify the Authorized Officer in writing if he intends to cease operations for any period of seven (7) or more days.

(2) L-3 All trees designated for cutting in variable density thin harvest units shall be cut so that the resulting stumps shall not be higher than twelve (12) inches measured from the ground on the uphill side of the trees.

(3) L-4 All conifers marked with blue paint for cutting shall be felled in all units shown on Exhibit A.

(4) L-5 All conifer trees eight (8) inches or larger D.B.H.O.B. and not reserved in Section 41 nor in Exhibit E shall be felled in all variable density thin harvest units as shown on Exhibit A.

(5) L-6 In all units shown on Exhibit A, all trees designated for cutting shall be felled and yarded to approved landing locations either tree length, or with tops attached. If excessive stand damage occurs from bark slippage, girdling, broken tops, damage to live crowns, or soil disturbance greater than 15% over harvest area, as determined by the Authorized Officer, all trees shall be bucked into lengths not to exceed forty one (41) feet prior to being yarded.

(6) L-7 In units 3-17A, 23-4, 26-1A and tractor portions of 12-3, and 25-13 as shown on Exhibit A, harvest trees may be felled mechanically using a harvester, feller-processor or feller-buncher with the approval of the Authorized Officer and in accordance with the following specifications:

(a) Mechanized felling operations shall be limited to slopes of thirty-five (35) percent or less.

(b) Mechanized felling operations are subject to seasonal operating restrictions as described in Section 42(B)(11) 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 boom must have a lateral reach of twenty (20) feet or more, and the machine's lateral reach must be utilized as much as possible. The purpose-built carrier may be of the articulated, rubber-tired design or the zero-clearance tail swing, leveling track-mounted design.

(d) The harvest equipment shall walk on existing or created slash as directed by the Authorized Officer. If Purchaser is required to create slash to walk on, then the Purchaser shall not be required to tree length yard, or with tops attached.

(7) L-7MC Yarding on the areas designated herein and shown on Exhibit A shall be done in accordance with the yarding requirements or limitations for the designated area

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Designated Area	Yarding Requirements or Limitations
Entire contract area	All temporary routes and swing roads will not exceed fourteen (14) feet in width.
Cable Unit 1-4,3-17B, 12-3, 25-13, 26-1B	Yarding will be done with a cable yarding system which will suspend one end of the log clear of the ground during inhaul on the yarding corridor. A carriage is required which will maintain a fixed position on the skyline during lateral yarding and has a minimum lateral yarding capability of seventy-five (75) feet. Yarding corridors will be approximately one hundred fifty (150) feet apart and perpendicular to the contours. Corridors will be limited to one (1) per landing unless otherwise approved by the Authorized Officer. Corridor widths shall not exceed six (6) feet either side of the skyline centerline. Prior to falling any timber in the units, all tail/lift trees and/or

Designated Area	Yarding Requirements or Limitations
	intermediate support trees shall be identified by the Purchaser and approved by the Authorized Officer. The carriage will be a minimum of fifteen (15) feet above the ground during lateral yarding. Skyline yarding equipment shall be capable of yarding in multi-span configurations in unit 1-4 and 12-3. Yarding corridors are not permitted up or down any draw. Cable corridors that are hydrologically connected to streams via ditchlines shall be water-barred and shall have slash placed over them prior to winter rain events to protect water quality.
Tractor Units 3-17A, 12-3,23-4, 25-13, 26-1A	Yarding tractor width will not be greater than nine (9) feet as measured from the outer edges of standard width track shoes. Skid roads shall not exceed a width of twelve (12) feet on average per unit. The location of the tractor skid roads must be clearly designated approximately one hundred fifty (150) feet apart, where topography allows, and approved by the Authorized Officer prior to felling of timber to be yarded over the tractor skid roads. Yarding tractors will be equipped with integral arches capable of one-end suspension during skidding and winch systems capable of lining logs at least seventy-five (75) feet. No yarding will be allowed up or down draw bottoms. Landing size shall not exceed one-quarter (1/4) acre. Design landings with adequate drainage so that they are not hydrologically connected to the ditchline of roads. Ground based equipment shall be limited to slopes less than thirty-five (35) percent, and existing skid trails shall be utilized to the greatest extent possible.

Designated Area	Yarding Requirements or Limitations
	Use of mechanized equipment off of designated skid roads shall require approval from the Authorized Officer. All operations shall maintain soil compaction of 12% or less across the harvest area.

(8) L-9 No yarding or loading is permitted in or through the reserve areas as shown on Exhibit A unless approved by the Authorized Officer.

(9) L-18 Road construction, road maintenance/renovation, hauling, and the transportation of personnel and equipment shall be limited to dry periods during the dry season between June 1 of one calendar year and September 30 of the same calendar year, both days inclusive. Purchaser may request, in writing, a conditional waiver of this restriction. If moisture conditions do not indicate puddles in roads, water running in ditches, or increases in soil moisture, and likelihood of spreading *P. lateralis*, (Port-Orford-cedar root disease) is low, Contracting Officer may approve a conditional waiver. If moisture conditions described above resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked. If dry season rain events result in unacceptable said moisture conditions, cessation of above operations will be required until moisture conditions are acceptable as determined by the Authorized Officer.

(10) L-18 No hauling on natural surface roads, temporary routes, or rocked roads shall be conducted on the contract area between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request, in writing, a conditional waiver of this restriction. If moisture conditions on the road are deemed acceptable and do not result in continuous mud splash or tire slide, fines being pumped through road surfacing from the subgrade and resulting in a layer of surface sludge, road drainage causing a visable increase in stream turbidities, surface rutting, or any condition that would result in water being chronically routed into tire tracks or away from designed road drainage during precipitation events, Contracting Officer may approve a conditional waiver. If moisture conditions on the road resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.

(11) L-18 No tractor yarding/ground based yarding, road maintenance/renovation, temporary route/swing road construction, landing construction, or skid trail, landing, temporary route/swing road decommissioning shall be conducted on the contract area between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request, in writing, a conditional waiver of this

restriction. If soil moisture conditions are dry, as determined by the inability of soil sample taken at four (4) to six (6) inches to maintain form when compressed and by the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks, the Contracting Officer may approve a conditional waiver. If impacts to soil resulting from said conditional waiver are not acceptable, as determined by the Authorized Officer, the waiver will be revoked.

(12) L-18a No road construction, road improvement, landing construction, felling, yarding, chainsaw operation, or prescribed fire operations shall be conducted within unit 23-4 between March 1 and June 30 of the same calendar year, both days inclusive. This restriction will not apply if it can be shown from Spotted Owl protocol surveys conducted by the Bureau of Land Management in accordance with accepted standards that Spotted Owl nesting and/or fledging activities are not occurring during the year of harvest.

(13) L-19 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.

(14) L-24 Prior to the commencement of operations, the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract which shall include measures needed to assure protection of the environment and watershed. A prework conference between the Purchasers authorized representative and the Authorized Officers representative must be held at a location designated by the Authorized Officer before the logging plan will be approved.

(15) L-25 Before cutting and removing any trees necessary to facilitate logging in all units and adjacent reserve areas shown on Exhibit A, the Purchaser shall identify the location of the skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the Logging Plan. Said Purchaser identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding with cutting the following conditions must be met:

(a) All skid and/or cable yarding roads upon which timber is identified by the Purchaser to be cut and removed in accordance with this special provision must be necessary for the safe and expeditious removal of timber sold under this contact and shall be limited to the minimum width necessary for yarding of logs with a minimum of damage to reserve trees, however, unless otherwise approved in writing by the

Authorized Officer, the width of each skid and/or cable yarding road shall be limited to twelve (12) feet.

(b) The Purchaser may immediately cut and remove additional timber to clear skid and/or cable yarding roads; and provide tailhold, tieback, guyline, lift, and intermediate support trees; and clear danger trees when the trees have been marked with red 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 will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Section 3.(b). of the contract or sufficient bonding has been provided in accordance with Section 3.(d). of the contract.

(c) The Purchaser agrees that sale of this additional timber shall be accomplished by a unilateral modification of the contract executed by the Contracting Officer and that such timber shall be sold at the unit prices shown in Exhibit B of this contract unless: the value of the timber must be reappraised subject to the terms for contract extension set forth in Section 9 of the contract; or, the Authorized Officer determines that Sugar pine trees otherwise reserved in Section 41 of the contract shall be appraised and sold by bilateral modification of the contract at current fair market value in accordance with Section 8 of the contract.

(d) This authorization for the Purchaser to cut and remove additional timber prior to the execution of a modification may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser has cut and removed any tree not previously marked and approved for cutting by the Authorized Officer, which under Section 10 of the contract constitutes a violation of the contract and under Section 13 of the contract may constitute a trespass rendering the Purchaser liable for damages under applicable law.

(e) If authorization is withdrawn, the Contracting Officer shall issue a written notice to the Purchaser that the sale of additional timber under this special provision is no longer approved. In this case, the Purchaser shall inform the Authorized Officer at least one (1) working day prior to the need for cutting and removing any additional timber, and execute a bilateral modification prior to cutting for such additional approved timber at the unit prices 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 roads and/or cable yarding roads when the Authorized Officer determines such reservation is necessary to maintain stand densities consistent with objectives set forth in the management prescription(s). This may include the replacement of trees damaged by storm events, or insects or disease. The volume of this timber to be reserved will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and the value shall be based on the unit prices shown in Exhibit B of the contract. The Purchaser agrees that the Total Purchase Price shall be reduced accordingly through a unilateral modification to the contract executed by the Contracting Officer.

(16) L-26M Before falling any trees in variable density thin harvest units 1-4, 3-17A, 3-17B, 12-3, 23-4, 25-13, 26-1A, and 26-1B as shown on Exhibit A, the Purchaser shall mark the entire unit as outlined in Exhibit E. Identification of leave trees shall be done by paint as approved by the Authorized Officer. Upon acceptance of each harvest unit inspection by the Authorized Officer, the Purchaser may proceed with operations.

(17) L-27 In all units shown on Exhibit A, all trees designated for cutting which are within a tree length of the streams and springs to be protected shall be felled away from those streams and springs.

(18) L-27 In all units shown on Exhibit A, all trees designated for cutting which are within a tree length of the unit boundaries shall be felled away from the boundaries and into the unit.

(19) L-27 In all tractor yarding units as shown on Exhibit A, all trees designated for cutting shall be directionally felled towards pre-approved skid trails.

(C) Road Construction - Maintenance – Use

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

(2) RC-1b Prior to removal of any timber, except right-of-way timber from Williams Thin Timber Sale, the Purchaser shall complete all construction, improvement, or renovation of structures and roads, as specified in Exhibit C.

(3) RC-1d The Purchaser shall not commence work on road improvements, or

renovation until receiving written notice to do so from the Authorized Officer. Work shall be commenced no later than 5 days after such notice, and shall be completed within 1 year after such notice.

(4) RC-2 The Purchaser is authorized to use the roads listed below and shown on Exhibit D which are under the jurisdiction of the Bureau of Land Management, for the removal of Government timber sold under the terms of this contract and/or the hauling of rock as required in Exhibit C, provided that the Purchaser pay the required maintenance fees described in Section 42(C)(7). The Purchaser shall pay current Bureau of Land Management maintenance fees for the sale of additional timber under modification to the contract.

Road No. and Segment	Length Miles Used	Road Control	Road Surface Type
39-5-18.1 (A-D)	3.80	BLM	BST
39-5-6.0 (A-D)	6.19	BLM	BST
Total	**9.99**		

(5) RC-2a The Purchaser is authorized to use the roads listed below and shown on Exhibit D which are under the jurisdiction of the Bureau of Land Management, Indian Hill LLC, Josephine County Forestry, and/or Tristar Southwest Oregon Timberland LLC for the removal of Government timber sold under the terms of this contract and the hauling of rock as required in Exhibit C, provided that the Purchaser comply with the conditions set forth in Section 42(C)(10) and pay the required rockwear fee described in Section 42(C)(8). The Purchaser shall pay current Bureau of Land Management rock wear fees for the sale of additional timber under modification to the contract.

Road No. and Segment	Length Miles Used	Road Control	Road Surface Type
39-5-18.1 (E)	0.27	BLM	ASC
39-6-2 (A-B)	0.37	TRISTAR	NAT
39-6-2 (C)	0.19	BLM	NAT
39-6-2.1 (A)	0.21	TRISTAR	NAT
39-6-2.1 (B)	0.51	BLM	NAT
39-6-2.2	0.54	BLM	ASC
39-2-11 (A)	0.20	BLM	ASC
39-6-11 (D)	3.24	BLM	ASC

39-6-11.1 (A1)	0.34	BLM	ASC
39-6-11.1 (A2)	0.33	TRISTAR	ASC
39-6-12.1	0.22	BLM	ASC
39-6-12.5	0.08	BLM	ASC
39-6-23.3	0.16	BLM	ASC
39-6-25.4 (A)	0.29	BLM	NAT
39-6-25.4 (B)	0.30	INDIAN HILL	NAT
39-6-25.4 (C)	0.08	BLM	NAT
39-6-25.4 (D)	0.07	INDIAN HILL	NAT
39-6-25.4 (E)	0.38	BLM	NAT
39-6-26.1	0.25	INDIAN HILL	NAT
39-6-26.2	0.10	INDIAN HILL	NAT
39-6-26.0 (A)	0.44	JO COUNTY	NAT
39-6-26.0 (B)	0.26	BLM	NAT
39-6-36.1	0.07	JO COUNTY	NAT
39-6-36.2 (A)	0.06	JO COUNTY	NAT
39-6-36.2 (B)	0.15	BLM	NAT
Total Miles	**9.11**		

(6) RC-2d The Purchaser shall be authorized to use other roads not included in Section 42(C)(4) and Section 42(C)(5); provided, that in the use of such roads, the Purchaser shall pay the Government current Bureau of Land Management road maintenance and/or rockwear fees for the particular surface type of the roads used.

For administrative purposes the total maintenance and rockwear obligation due shall be based upon the estimated volume set forth in Exhibit B of this contract and mileage of roads used as determined by the Authorized Officer.

In the event logs are hauled over more than one route, the estimated volume set forth in Exhibit B shall be proportioned on the basis of actual volume removed. Prior to the use of such roads, the Purchaser shall give written notice to the Authorized Officer of the roads intended for use in the removal of the timber purchased under this contract, together with an estimate of the volume to be hauled over such roads.

Section 42(C)(7) and Section 42(C)(8) of this contract shall be amended to include adjustments of fee obligations.

(7) RC-2e The Purchaser is authorized to use the roads listed in Section 42(C)(4) which are under the jurisdiction of the Bureau of Land Management for the removal of Government timber sold under the terms of the contract; provided, that the Purchaser shall pay a **road maintenance fee** of **$0.65** per thousand board feet log scale per mile for the use of said roads. The total maintenance fee due shall be based upon volumes determined pursuant to Section 2 and 3 of this contract and mileage of roads used as determined by the Authorized Officer. Prior to the use of such roads, the Purchaser shall give written notice to the Authorized Officer of the roads intended for use in the removal of timber purchased under this contract, together with an estimate of the volume to be hauled over such roads. **The Purchaser will be required to label, with a permanent ink marker, each load ticket with the corresponding unit number as directed by the Authorized Officer.** The Authorized Officer shall establish an installment schedule of payment of the maintenance obligation. If it is determined by the Authorized Officer, after all merchantable timber has been cut and scaled, that the total maintenance payments made under this contract exceed the total maintenance payment due, such excess shall be returned to the Purchaser within 60 days after such determination is made.

(8) RC-2e$_{(RW)}$ The Purchaser is authorized to use the roads listed in Section 42(C)(5) which are under the jurisdiction of the Bureau of Land Management for the removal of Government timber sold under the terms of the contract; provided, that the Purchaser shall pay a **road rock wear fee** of **$0.51** per thousand board feet log scale per mile for the use of said roads. The total rock wear fee due shall be based upon volumes determined pursuant to Section 2 and 3 of this contract and mileage of roads used as determined by the Authorized Officer. Prior to the use of such roads, the Purchaser shall give written notice to the Authorized Officer of the roads intended for use in the removal of timber purchased under this contract, together with an estimate of the volume to be hauled over such roads. **The Purchaser will be required to label, with a permanent ink marker, each load ticket with the corresponding unit number as directed by the Authorized Officer.** The Authorized Officer shall establish an installment schedule of payment of the rockwear obligation. If it is determined by the Authorized Officer, after all merchantable timber has been cut and scaled, that the total rockwear payments made under this contract exceed the total rockwear payment due, such excess shall be returned to the Purchaser within 60 days after such determination is made.

(9) RC-2e$_{(LA)}$ The Purchaser shall pay an estimated road use fee and/or maintenance fee for each License Agreement specified in Section 42(C)(11), Section 42(C)(12), and Section 42(C)(13) per thousand board feet log scale per mile for the use of roads specified. The total fee due to each Licensor shall be based upon volumes determined pursuant to Section 2 and 3 of this contract and mileage of roads used as determined by the Authorized Officer. Prior to the use of such roads, the Purchaser (Licensee) shall give written notice to the Authorized Officer and Licensor of the roads intended for use in the removal of timber purchased under this contract, together with an estimate of the volume to be hauled over such roads. **The Purchaser will be required to label, with a permanent ink marker, each load ticket with the corresponding unit number as directed by the Authorized Officer.** The Purchaser (Licensee) shall comply with the terms of each License Agreement for the use of roads listed in Section 42(C)(11), Section 42(C)(12), and Section 42(C)(13) for the payment of fees and final fee reconciliation with Licensor upon report of final volume removed as determined by the Authorized Officer.

(10) RC-2h Except for road maintenance in accordance with Section 42(C)(4), the Purchaser shall perform any required road repair and maintenance work on roads used by him, under the terms of Exhibit D, "Road Maintenance Specifications", of this contract, which is attached hereto and made a part hereof.

(11) RC-3 In the use of roads 39-6-26.1, 39-6-26.2, and 39-6-25.4 (Segments B & D) the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-1166 dated January 31, 1978 between the United States of America and Indian Hill LLC. These conditions include: Payment to **Indian Hill LLC**, a road use obligation of **Zero and no/100 dollars ($0.00)** and a road maintenance and rockwear obligation of **Zero and no/100 dollars ($0.00)** payable at the time indicated in the license agreement. This document is available for inspection at the Bureau of Land Management, Medford Interagency Office, 3040 Biddle Road, Medford, Oregon 97504. Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed License Agreement. Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.

(12) RC-3 In accordance with Section 42(C)(9), the use of roads 39-6-2.0 (Segments A & B), 39-6-2.1 (Segment A), and 39-6-11.1 (Segment A2) the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-660 dated October 5, 1962 between the United States of America and Tristar

Southwest Oregon Timberland LLC. These conditions include: Payment to **Tristar Southwest Oregon Timberland LLC**, a road use obligation of **Twenty Six and Eighteen /100 dollars ($26.18)**, and a road maintenance and rockwear obligation of **Zero and no/100 dollars ($0.00)** payable at the time indicated in the license agreement. This document is available for inspection at the Bureau of Land Management, Medford Interagency Office, 3040 Biddle Road, Medford, Oregon 97504. Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed License Agreement. Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.

(13) RC-3 In the use of roads 39-6-26.0 (Segment A), 39-6-36.1, and 39-6-36.2 (Segment A) the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-1538 dated February 23, 1989 between the United States of America and Josephine County Forestry. These conditions include: Payment to **Josephine County Forestry**, a road use obligation of **Zero and no/100 dollars ($0.00)** and a road maintenance and rockwear obligation of **Zero and no/100 dollars ($0.00)** payable at the time indicated in the license agreement. This document is available for inspection at the Bureau of Land Management, Medford Interagency Office, 3040 Biddle Road, Medford, Oregon 97504. Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed License Agreement. Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.

(14) RC-5 In the renovation of roads 39-6-25.4 (Segment B & D), 39-6-26.1, and 39-6-26.2, as shown on Exhibit C, the Purchaser shall comply with the conditions of the Right-of-Way and Road Use Agreement No. M-1166 dated January 31, 1978 between the United States and **Indian Hill, LLC**. These conditions include: (1) Any right-of-way merchantable timber to be cut by Licensee in connection with such road renovations shall be paid for **prior** to cutting, (2) Appraisal will be based on fair market value at the time the timber was cruised, and (3) Shall comply with the road renovation plans outlined in both the letter and the Plats signed April 5, 2013. Right-of-way timber is identified as twelve (12) trees blue marked above and below stump height. This document is available for inspection at the Bureau of Land Management, Medford Interagency Office, 3040 Biddle Road, Medford, Oregon 97504.

(15) RC-5 In the renovation of roads 39-6-26.0, 39-6-36.1 and 39-6-36.2 (Segment A), as shown on Exhibit C, the Purchaser shall comply with the conditions of the Right-of-Way and Road Use Agreement No. M-1538 dated February 23, 1989 between the United States and **Josephine County Forestry**. These conditions include: (1) Any right-of-way merchantable timber to be cut by Licensee in connection with such road renovations shall be paid for **prior** to cutting. This document is available for inspection at the Bureau of Land Management, Medford Interagency Office, 3040 Biddle Road, Medford, Oregon 97504.

(16) RC-5 In the renovation of roads 39-6-2.0 (Segments A & B), 39-6-2.1 (Segment A) and 39-6-11.1 (Segment A2), as shown on Exhibit C, the Purchaser shall comply with the conditions of the Right-of-Way and Road Use Agreement No. M-660 dated October 5, 1962 between the United States and **Tristar Southwest Oregon Timberland LLC**. This document is available for inspection at the Bureau of Land Management, Medford Interagency Office, 3040 Biddle Road, Medford, Oregon 97504.

(17) RC-6 Prior to cutting or removing any timber from the road right-of-ways on roads 39-6-25.4 (Segment B & D), 39-6-26.1, and 39-6-26.2, as shown on Exhibit C, the Purchaser shall pay to **Indian Hill, LLC**, the owner of the right-of-way timber, the total purchase price of **One Thousand twenty five and 98/100 dollars ($1,025.98)** for that timber.

(18) RC-6 Prior to cutting or removing any timber from the road right-of-way on road 39-6-36.1, as shown on Exhibit C, the Purchaser shall pay to **Josephine County Forestry**, the owner of the right-of-way timber, the total value of that timber to be determined upon completion of Josephine County Forestry cruise and appraisal for that timber.

(19) RC-8 The Purchaser shall be required to secure written approval to use vehicles or haul equipment over Government owned or controlled roads and/or structures when that vehicle or equipment exceeds the maximum allowable weights or dimensions established by the State for vehicles operating without a permit.

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

Details shall include:

(a) Axle weights when fully loaded.
(b) Axle spacing.
(c) Transverse wheel spacing.
(d) Tire size.
(e) Outside width of vehicle.
(f) Operating speed.
(g) Frequency of use.
(h) Special features (e.g., running tracks, overhang loads, etc.)

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

(D) Environmental Protection

(1) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall prior to October 15 of the same operating season, "winterize" all temporary routes, natural surface landings, cable corridors, skid trails, and other areas of exposed soils by properly installing any water bars, berms, sediment basins, gravel pads, hay bales, seed and/or mulch, and small dense woody debris to reduce sediment runoff and divert runoff water away from headwalls, slide areas, high landslide hazard locations or steep erodible fill slopes as directed by the Authorized Officer.

(2) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall construct water dips and/or water bars on all main tractor skid roads, cable yarding corridors, and temporary routes/swing roads. Construction for skid roads will be concurrent with yarding, in accordance with Exhibit W, or as directed by the Authorized Officer. Water bar construction for cable yarding corridors shall be as directed by the Authorized Officer. Skid roads shall be blocked where they intersect with haul roads.

(3) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall hand seed and straw mulch (native and weed free) all natural surfaced landings, temporary routes/swing roads, and main tractor skid roads in the riparian reserve with native grass seed at a rate of fifteen (15) pounds per acre and straw mulch applied at no less than two thousand (2000) pounds per acre or as directed by the Authorized Officer. Native grass seed and straw shall be supplied by the government. If the quantity of native grass seed is not available from the government

a mixture of annual rye, native grass, and sterile wheatgrass shall be applied at a rate of fifteen (15) pounds per acre. The purchaser shall provide written certification that the seed is free of noxious weeds. (Mixture requirements: seven (7) pounds annual rye, five (5) pounds native grass, three (3) pounds sterile wheatgrass). Seed shall be applied from February 1 to April 1 or September 30 to November 1.

(4) E-1 In addition to the requirement set forth in Section 26 of this contract, the Purchaser shall as directed by the Authorized Officer decommission/rehabilitate all main tractor skid roads, temporary routes/swing roads, and all natural surface landings outside of the road prism by one of the following methods:

(a) If the Authorized Officer deems ripping will not cause unacceptable damage to the root systems of residual trees the Purchaser shall discontinuously subsoil with winged ripper teeth, simultaneously water bar, place slash over, and barricade.

(1) Use a minimum 200 flywheel horsepower tractor with mounted rippers having shanks and teeth consistent with drawings and specifications shown on Exhibit R of this contract, which, is attached hereto and made a part hereof.

(2) Rip to a depth of eighteen (18) inches, and no further than thirty six (36) inches apart.

(3) Ripping will occur before **October 15** of the year of harvest.

(4) Any step landings shall be re-contoured following use.

(b) If the Authorized Officer deems ripping will cause an unacceptable amount of damage to the root systems of residual trees the Purchaser shall scarify to a depth of up to six (6) inches and simultaneously water bar, place slash over, and barricade.

All rehabilitation shall occur within twenty four (24) months of harvest and during the dry season.

(5) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall place material removed during excavation in locations where it cannot enter streams or other water bodies.

(6) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not locate new landings in areas that contribute eroded fines to dry

draws and swales. If landing location cannot be avoided, ensure that properly installed sediment control measures are placed and maintained, as needed, to keep eroded material onsite.

(7) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall ensure that silt fencing or other sediment control measures are properly placed and maintained during use and periods of non-use when utilizing existing landings that have the potential to release eroded fines into a stream or wet area, directly or via draws or ditchlines.

(8) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall only be allowed to use logging, construction, rock crushing, and/or transportation equipment that is free of noxious weed seeds prior to entering federal lands in the contract area as shown on Exhibit A. If equipment is not considered free of noxious weed seeds by the Government, it shall be cleaned prior to entering federal lands. Cleaning shall be defined as removal of dirt, grease, plant parts, and material that may carry noxious weed seeds on to federal lands. Cleaning prior to entering federal lands may be accomplished by using a pressure hose.

Equipment shall be subject to visual inspection by the Government to certify that the equipment is free of noxious weed seeds. Only equipment inspected by the Government shall be allowed to operate on federal lands within the contract area. The Purchaser shall make equipment available for Government inspection at an agreed upon location off federal lands prior to any move-in of equipment.

Requirements as outlined above may be waived by the Government if move-in is from one "weed free area" to another "weed free area", as determined by the Government, or as conditions warrant.

(9) E-1 In addition to the requirement set forth in Section 26 of this contract, the Purchaser shall not refuel equipment, store, or cause to have stored, any fuel or other petroleum products within one hundred fifty (150) feet of all riparian management or wet areas. All petroleum products shall be stored in durable containers and located so that any accidental releases will be contained and not drain into any stream system. Hyraulic fluid lines on heavy mechanized equipment would be in proper working condition in order to minimize potential for leakage into streams. Absorbent materials shall be onsite to allow for immediate containment of any accidental spills. Spilled fuel and oil shall be cleaned up and disposed of at an approved disposal site.

(10) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall prepare a Spill Prevention, Control, and Countermeasure Plan for all hazardous substances to be used in the contract area, as directed by the Authorized Officer.

Such plan shall include identification of Purchaser's representatives responsible for supervising initial containment action for releases and subsequent cleanup. Such plans must comply with the State of Oregon DEQ OAR 340-142, Oil and Hazardous Materials Emergency Response Requirements.

(11) E-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 30 days, the First Installment held on deposit may be temporarily reduced upon the written request of the purchaser. For the period of suspension extending beyond 30 days, the First Installment on deposit may be reduced to five (5) percent of the First Installment amount listed in Section 3.a. of the contract. Any First Installment amount temporarily reduced may be refunded or transferred to another BLM contract at the request of the Purchaser. However, if the Purchaser has outstanding debt owing the United State, 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.a. of the contract within 15 days after the bill for collection is issued, subject to Section 3.g. of the contract. The Purchaser shall not resume contract operations until the First Installment amount is fully restored.

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

In the event that operating time is lost as a result of the incorporation of additional contract requirements, or delays due to Endangered Species Act consultation with the

U.S. Fish and Wildlife Service or U.S. National Marine Fisheries Service, or court-ordered injunctions, the Purchaser agrees that an extension of time, without reappraisal, will constitute a full and complete remedy for any claim that delays due to the suspension hindered performance of the contract or resulted in damages of any kind to the Purchaser.

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

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

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

(12) E-5A In order to control the spread of Port-Orford cedar root disease, the Purchaser shall conduct all operations involving the transportation and use of equipment and vehicles in strict accordance with the requirements shown on Exhibit P which is attached hereto and made part hereof.

(13) E-6 The Purchaser shall notify the Authorized Officer in writing by February 1 of each calendar year in which operations are expected to take place on the contract area as limited in Section 42(L-18a) of the contract between March 1 and June 30, both days inclusive. If notification is not received by the Authorized Officer by February 1, felling, bucking, yarding, road construction, or any other activity with the potential to disturb nesting owls may not be allowed during this time period.

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

(F) Fire Prevention and Control

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

(a) Prior to the operation of power driven equipment in construction or logging operations under this contract during the closed fire season or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the State of Oregon, Department of Forestry.

(b) Provide and maintain in good repair, on the contract area, the following equipment for use during closed fire season or periods of fire danger:

(1) F-2a Fire fighting tools shall be kept at each landing or at such other place as the Authorized Officer shall designate whenever people are working on the contract area. All fire fighting tools shall be kept in a sturdily constructed box which shall be painted red and lettered on the front or top in large letters, "For Fire Only."

The box shall have a hinged lid and a hasp by which the lid can be sealed. One box may serve two landings not over six hundred (600) feet apart. When filled, the box shall not weigh over two hundred (200) pounds. The fire tools shall be in good condition, be tight on strong handles, and have sharp cutting edges. There shall not be less than four (4) tools in each box nor less than one (1) tool for each person working on the contract area. Three-fourths (3/4) of all

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

(2) F-2b A round pointed size "0" or larger shovel in good condition, shall be within fifty (50) feet of any power saw when in operation

(3) F-2c At each landing during periods of operation one (1) tank truck. Each truck shall have three hundred (300) gallons minimum capacity with five hundred (500) feet minimum of hose and a nozzle acceptable to the Authorized Officer and a mounted or portable pump conforming to the standards set forth in Oregon Revised Statute (ORS) 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.410 as amended or be provided with suitable adapters. At the close of each working day, all bulldozers and tank trucks shall be filled with fuel and made ready for immediate use. All tank trucks and portable tanks shall be filled with water and made available for immediate use.

(4) F-2d Serviceable radio or radio-telephone equipment able to provide prompt and reliable communication between the contract area and Grants Pass, Oregon. Such communication shall be available during periods of operation including the time watch-service is required.

(5) F-2e A pair of headlights capable of being quickly attached to each bulldozer used on the contract area. The headlights shall be adequate to provide illumination sufficient to allow use of the bulldozers for fire fighting and construction of fire trails at night.

(6) F-2f A headlight for each person in the woods crew adequate to provide sufficient illumination for night fire fighting. A headlight shall be of the type that can be fastened to the head so as to allow independent use of the hands. It shall be equipped with a battery case so designed that it can be either carried in the hip pocket or fastened to the belt. The head of the light and the battery case shall be connected by insulated wires. At least one extra set of batteries shall be provided for each such headlight.

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

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

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

(G) Slash Disposal and Site Preparation

(1) SD-1 Fire Hazard Reduction. In addition to the requirements of Sec. 15 of this contract, and notwithstanding the Purchasers satisfactory compliance with State laws and regulations regarding offsetting or abating the additional fire hazard created by this operation and the States 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 measure(s) required by this contract:

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

(a) SD-1a LOP AND SCATTER Lop and scatter slash located in units 3-17A, 3-17B, 23-4, 26-1A, and 26-1B as directed by the Authorized Officer. All cut slash (any material less than six inches in diameter) shall be lopped to no

more than eight (8) feet in length and all top and side branches must be free of the central stem so that slash is reduced to the extent that it is within eighteen (18) inches of the ground at all points. All slash shall be arranged in a discontinuous pattern across the forest floor.

(b) SD-1c HAND PILING Hand pile slash in units 1-4, 3-17A, 3-17B, 12-3, 23-4, 25-13, 26-1A, and 26-1B as directed by the Authorized Officer in accordance with the following specifications:

Slash, as defined for this section, shall mean all material (brush, limbs, tops, unmerchantable stems, and chunks) severed or knocked over as a result of Purchasers operations under the terms of this contract.

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

Pile all slash which is between one (1) and seven (7) inches in diameter on the large end and exceeds two (2) feet in length.

A six (6) foot by six (6) foot sheet of four (4) mil. black plastic shall be placed on each pile in a manner such that approximately one-third (1/3) of the pile lies above it to hold it in place and so that a two (2) foot by two (2) foot dry ignition point is maintained for one (1) year or until burned. The ignition point will consist of fine fuel material such as needles, small limbs, and branches less than one-half (1/2) inch in diameter and free of dirt. Piles shall be constructed by aligning individual pieces in the same direction and placing the heavier slash on top. Piles shall have a stable base to prevent toppling. The long axis of individual pieces shall be oriented up and down the slope. Protruding pieces shall be trimmed to allow covering in a manner that permits the pile to shed water. Height shall be no less than five (5) feet and no greater than eight (8) feet; width shall not exceed six (6) feet; piles shall be circular and not windrowed. No pile shall be located in any stream channel; on down logs, stumps, talus slopes, roadways, drainage ditches, turnouts, shoulders, cut banks, and within ten (10) feet of reserve trees or any other pile or boundry. No portion of the pile will be under the crown of any living conifer tree.

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

(1) Units shall be piled and covered during the same season that they are logged. Piling shall be completed in each unit or portion thereof,

within eight (8) weeks after being notified of BLM site treatment determination.

(c) SD-1i LANDING PILES Pile all slash located within fifty (50) feet on each side of log landing. Slash shall be piled by hand or machine. Finished piles shall be tight and free of earth and located at least fifteen (15) feet away from any reserve trees adjacent to landing. A minimum twenty (20) foot on the ground shall be cleared of slash and other vegetation, litter, and debris around each landing pile to prevent escaped fire.

(1) A ten (10) foot by ten (10) foot cover of four (4) mil. black plastic material shall cap each tractor pile to maintain a dry ignition point. The cover shall be firmly fixed to each pile to hold it in place. Landings shall be piled and covered during the same season that they are logged.

(2) Landing piles shall be burned, chipped, or otherwise removed from these sites within eighteen (18) months of unit harvest completition.

(2) SD-5 Perform logging residue reduction and site preparation work on approximately one hundred fifty one (151) acres of harvest area located in the harvest units as shown on Exhibit A.

(a) The required work shall consist of any treatment or combination of treatments listed in the table below as determined by the Authorized Officer and specified in writing by the Contracting Officer. The number of acres of each treatment shall be determined by the Authorized Officer.

Treatment			Cost/Acre
Hand pile and Cover	0-20 piles/ac	L1	$288.00
Hand pile and Cover	21-40 piles/ac	L2	$376.00
Hand pile and Cover	41-60 piles/ac	L3	$507.00
Hand pile and Cover	61-80 piles/ac	L4	$617.00
Lop and Scatter			$42.00
Cover Landing Decks			$28.00

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

Appraised Treatment	Acres	Cost/Acre	Total Cost per Treatment
Hand Pile and Cover 21-40 piles/ac	75	$376.00	$28,200.00
Lop and Scatter	74	$42.00	$3,108.00
Cover Landing Decks	2	$28.00	$56.00
Total Appraised Cost			$31,364.00

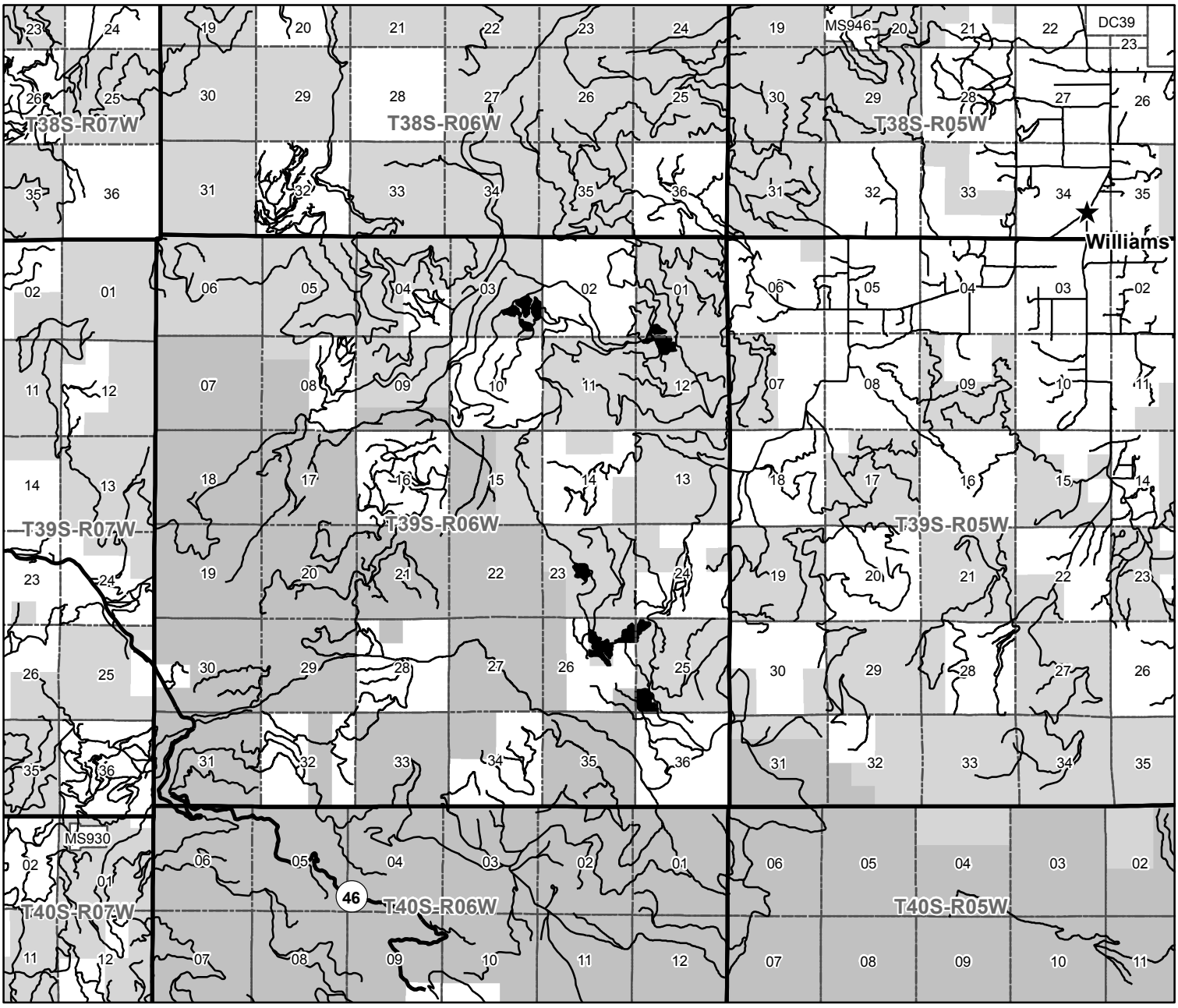
(c) The Total Purchase Price set forth in Section 2 shall be adjusted by the amount that the total cost of the site preparation treatment designated pursuant to section 42(G)(2)(a) differs from $31,364.00 as calculated by using the estimated acres determined by the Authorized Officer and the per acre cost listed in Section 42(G)(2)(a).

(H) Equal Opportunity in Employment

Certification of Nonsegregated Facilities attached hereto and made a part hereof.

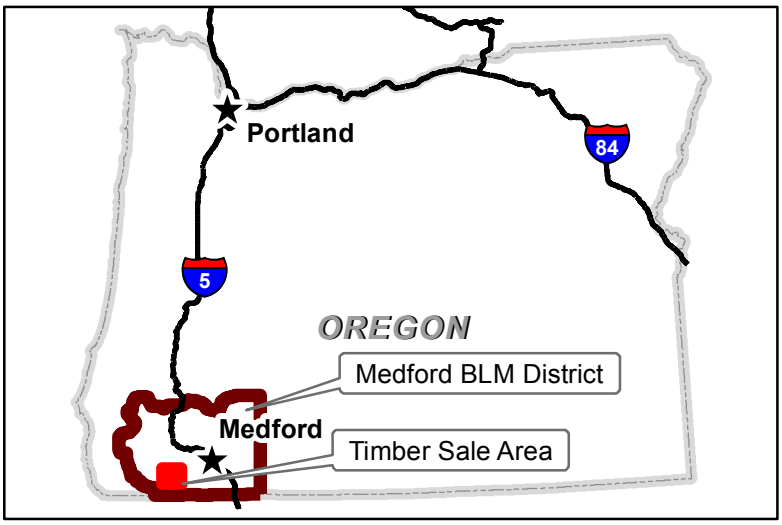
U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-13-06
WILLIAMS THIN TIMBER SALE
GRANTS PASS RESOURCE AREA
JOSEPHINE COUNTY

TIMBER SALE LOCATION MAP
CONTRACT NO. ORM07-TS-13-06



BLM
Other
USFS

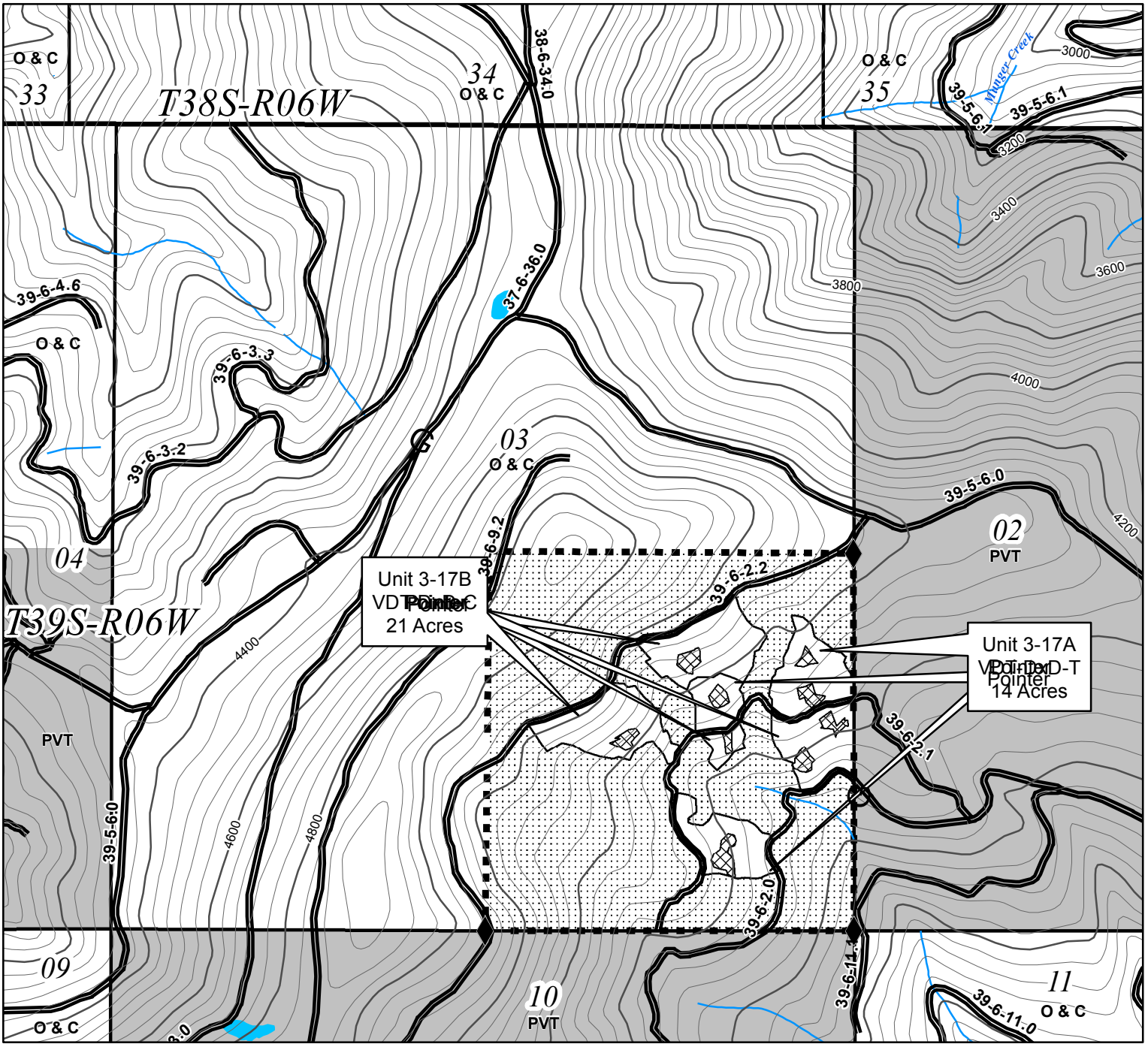
Miles
0
2.5
5



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.

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-13-06
T. 39 S., R. 6 W., SEC. 3, WILL. MER.
WILLIAMS THIN TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
CONTRACT NO. ORM07-TS-13-06
EXHIBIT A



0 500 1,000 2,000 Feet

1 inch = 1,000 feet

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

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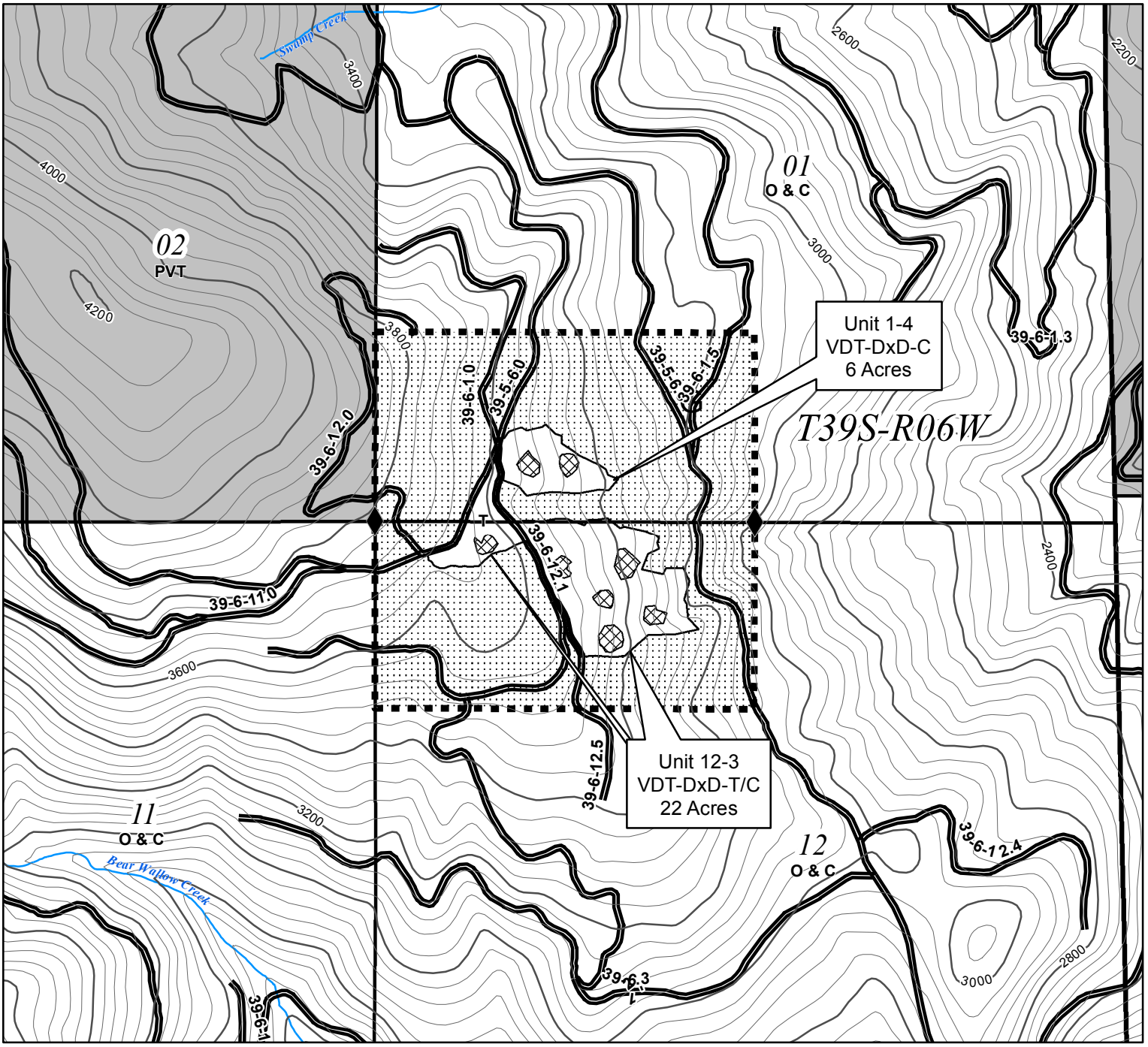
May 31, 2013

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-13-06
T. 39 S., R. 6 W., SEC. 1 AND 12, WILL. MER.
WILLIAMS THIN TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
CONTRACT NO. ORM07-TS-13-06
EXHIBIT A



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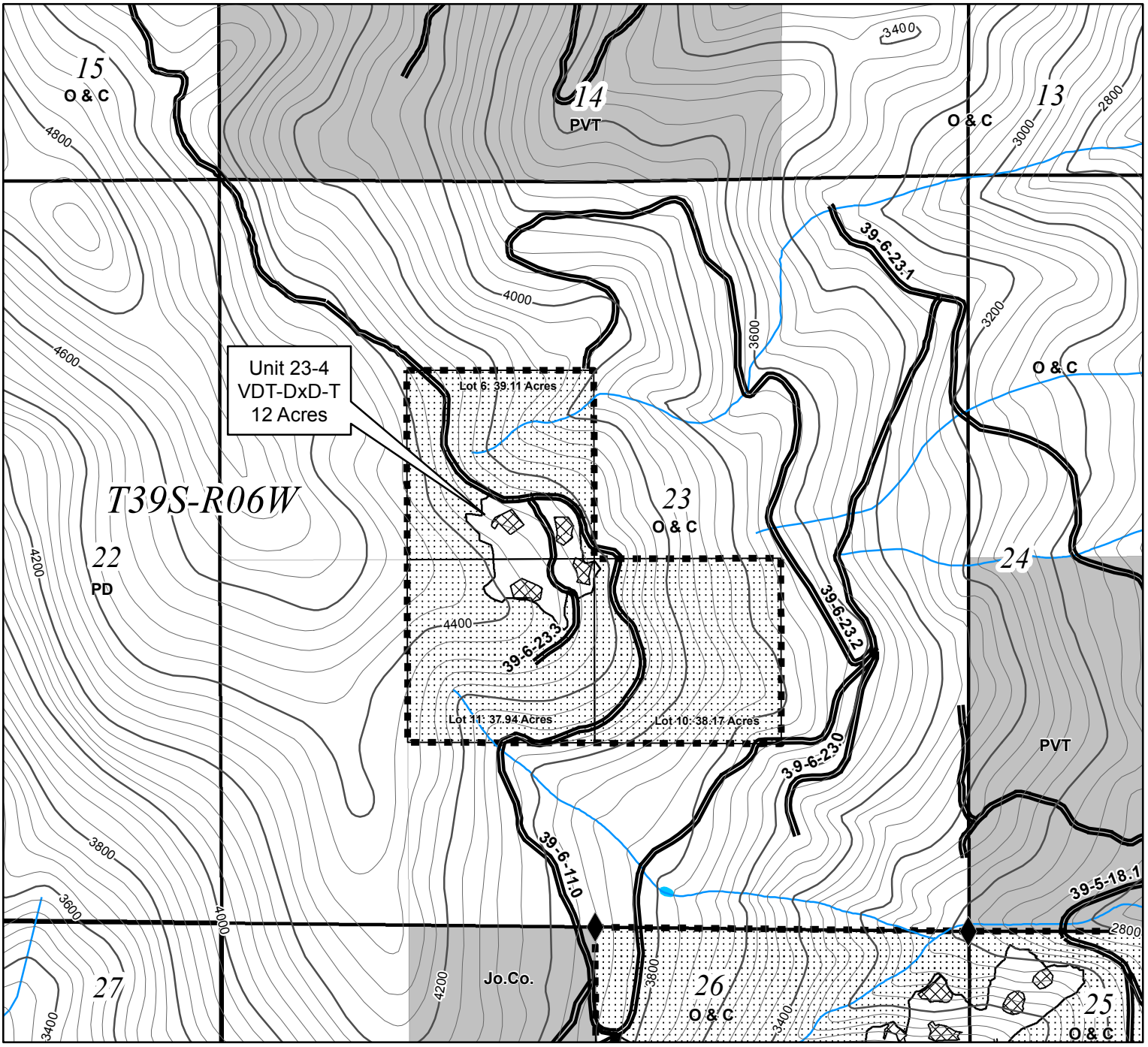
May 31, 2013

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-13-06
T. 39 S., R. 6 W., SEC. 23, WILL. MER.
WILLIAMS THIN TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
CONTRACT NO. ORM07-TS-13-06
EXHIBIT A



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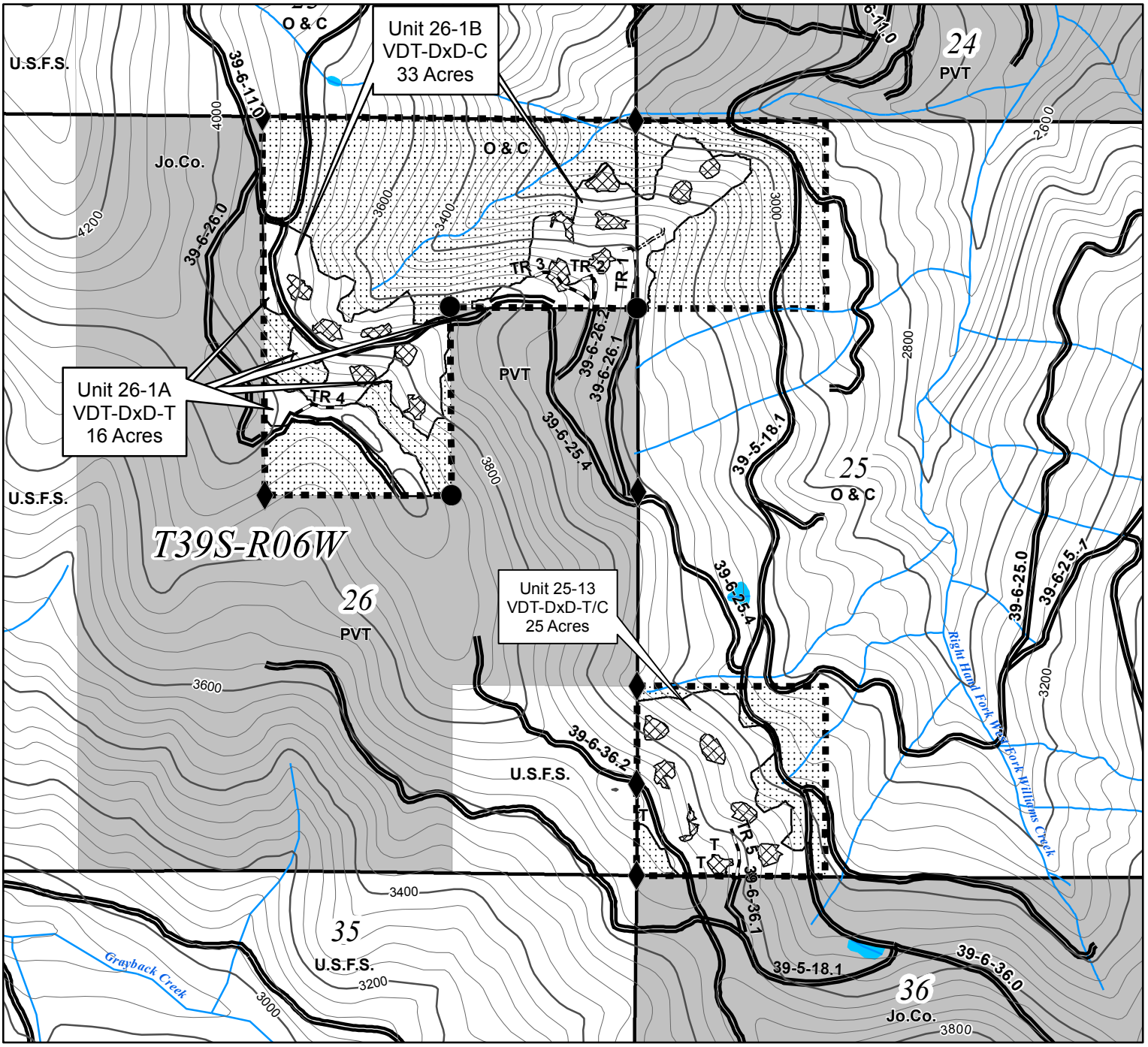
Medford, OR 97504
(541) 618-2200

May 31, 2013

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-13-06
T. 39 S., R. 6 W., SEC. 25 AND 26, WILL. MER.
WILLIAMS THIN TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
CONTRACT NO. ORM07-TS-13-06
EXHIBIT A



0 500 1,000 2,000 Feet

1 inch = 1,000 feet

Swing Road
Temporary Route

**Note: Temporary Road (TR#) boundaries are posted with right of way tags and flagged in orange.

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W E
S

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

May 31, 2013

Legend

- Index 200 ft Contour
- Intermediate 40 ft Countour
- Brass Cap Monument
- Iron Rod
- G — Gate
- Perennial Stream
- County Roads
- Roads
- Swing Road
- Temporary Construction
- Contract Boundary
- Reserve Area
- Gap-Scattered Clusters Of Blue Marked Trees To Harvest
- T — Tractor (Ground Base) Yard Area
- C — Cable Yard Area
- Williams Thin Timber Sale Units
- Lot
- Sections
- Township

Ownership

- Federal
- Non-Federal
- O&C — BLM O & C Land
- PD — BLM Public Domain Land
- PVT — Private Lands
- Jo.Co. — Josephine County Lands
- U.S.F.S. — US Forest Service Lands

Summary

Unit	Perscription/Marking Method/Logging System	Acres
1-4	VDT-DxD-C	6
3-17A	VDT-DxD-T	14
3-17B	VDT-DxD-C	21
12-3	VDT-DxD-T/C	22
23-4	VDT-DxD-T	12
25-13	VDT-DxD-T/C	25
26-1A	VDT-DxD-T	16
26-1B	VDT-DxD-C	33
	Total	**149**

VDT-DxD-C	VARIABLE DENSITY THIN-DESIGNATION BY DESCRIPTION- CABLE YARD	60 ACRES
VDT-DxD-T	VARIABLE DENSITY THIN-DESIGNATION BY DESCRIPTION- TRACTOR YARD	42 ACRES
VDT-DxD-T/C	VARIABLE DENSITY THIN-DESIGNATION BY DESCRIPTION- TRACTOR AND CABLE	47 ACRES
	TOTAL TIMBER SALE UNIT AREA	149 ACRES
	RESERVE AREA	486.22 Ac
	Total Contracted Area	635.22 Ac

***Unit boundaries are flagged in orange ribbon, posted and painted orange.
Unit acreages were determined by the Global Positioning System (GPS).

United States of America

Department of the Interior

Bureau Of Land Management

Timber Sale Appraisal

District :	Medford	**Contract # :**	ORM07-TS-13-06
Sale Name :	Williams Thin	**Job File # :**	M11290
Sale Date :	07/25/2013	**Master Unit :**	Josephine
Appraisal Method :	16' MBF	**Planning Unit :**	Grants Pass

Contents

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	2,023		
White Fir	313		
Port-Orford-cedar	38		
Incense-cedar	6		
Ponderosa Pine	1		
Sale Totals	**2,381**		

Unit Details (16' MB)

Unit 12-3 **22 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	318		
Incense-cedar	1		
Ponderosa Pine			
Port-Orford-cedar	7		
White Fir	28		
Unit Totals	**354**		

Unit 1-4 **6 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	82		
Incense-cedar			
Port-Orford-cedar	2		
White Fir	7		
Unit Totals	**91**		

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Unit 23-4 **12 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	202		
Incense-cedar	1		
Port-Orford-cedar	4		
White Fir	14		
Unit Totals	**221**		

Unit 25-13 **25 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	388		
Incense-cedar	1		
Ponderosa Pine	1		
Port-Orford-cedar	8		
White Fir	27		
Unit Totals	**425**		

Unit 26-1A **16 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	215		
Incense-cedar	1		
Port-Orford-cedar	5		
White Fir	17		
Unit Totals	**238**		

Unit 26-1B **33 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	537		
Incense-cedar	2		
Port-Orford-cedar	11		
White Fir	44		
Unit Totals	**594**		

Unit 3-17A **14 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	86		
White Fir	83		
Unit Totals	**169**		

Unit **3-17B** **21 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	143		
White Fir	93		
Unit Totals	**236**		

Unit **TR-1** **1 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	19		
Port-Orford-cedar			
White Fir			
Unit Totals	**19**		

Unit **TR-2** **1 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	9		
Port-Orford-cedar			
Unit Totals	**9**		

Unit **TR-3** **1 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	9		
Port-Orford-cedar			
White Fir			
Unit Totals	**9**		

Unit **TR-4** **1 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	7		
Port-Orford-cedar	1		
White Fir			
Unit Totals	**8**		

Unit **TR-5** **1 Acres** **Value per Acre : $0.00**

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT (BLM)

Contract No.: ORM07-TS-13-06

Sale Name: Williams Thin

Issuing Office: Medford District

EXHIBIT B
SCALE SALE
PURCHASE PRICE SCHEDULE AND MEASUREMENT SPECIFICATIONS

I. **Total Actual Purchase Price** - In accordance with Section 3.(f). of the contract, the Purchaser agrees to pay the Government for the timber sold under the contract in accordance with the following schedule and measurement requirements. Timber sold is comprised of Merchantable Timber, Merchantable Timber Remaining, and Other Timber as defined below. In the event an Extension of Time is approved, the prices per measurement unit are subject to readjustment (refer to Section 9 of the contract).

Schedule of Species, Measurement Units, and Prices		
Species	Measurement Unit	Price Per Measurement Unit
Merchantable logs - Douglas-fir	MBF	
White fir	MBF	
Port-Orfard-cedar	MBF	
Incense-cedar	MBF	
Ponderosa Pine	MBF	
Utility logs	MBF	Not Applicable

II. **Merchantable Timber** - All timber which can be cut into logs, which equal or exceed the following specifications, shall be considered merchantable timber. Purchaser shall pay for same in accordance with Sec. 3 of the contract at the unit prices shown in Section I of this Exhibit.

Schedule of Minimum Material Specifications			
Species and Products	Length	Diameter (inside bark at small end)	Net Scale
All Species	8 feet	5 inches	33 1/3% of gross volume of any log segment

If Purchaser elects to remove any logs which do not meet the above minimum log specifications and which have not been reserved to Government in Sec. 41 of the contract, such logs shall be scaled for their merchantable content as provided herein and be paid for in accordance with Sec. 2 and 3 of this contract and the value in Section 1 of this Exhibit.

III. **Merchantable Timber Remaining - Measurement Requirements** - The remaining volume of any merchantable sold timber on the contract area shall be determined as provided in Section 3.(g). of the contract. Purchaser shall pay for same in accordance with Sec. 3 of the contract at the unit prices

shown in Section I of this Exhibit.

IV. **Scaling**

A. **Log Rule and Measurement** - All logs shall be scaled according to the Northwest Log Rules Eastside Log Scaling Handbook, as amended, or supplemented by BLM before the first advertisement date of the sale. A Scaling Authorization Form (OR 5300-18) must be completed prior to beginning of operations. If sample log scaling is agreeable to the Purchaser and the Contracting Officer, the procedures will be agreed upon in writing regarding sample design, number of log sorts, expansion of sample volumes for computation of Merchantable Timber volume, etc.

B. **Scaling Service** - Log scaling services shall be provided and performed by BLM personnel or parties under contract to BLM.

1. All logs shall be scaled and volumes determined by BLM or a certified contract scaler.

2. The BLM scaler or contract scaler is designated to collect Eastside MBF scale data from all loads.

C. **Other Timber** - If any timber is of a species or size not listed in Section II of this Exhibit (above) or is of a quality different from merchantable timber described herein, the Authorized Officer shall establish volumes and values in accord with Standard BLM methods.

D. **Defect Caused by Abnormal Delay** - Scaling deductions made for rot, check or other defect resulting from abnormal delay in scaling caused by Purchaser shall be recorded separately and charged to the Purchaser in accordance with Section 3. of the contract.

E. **Log Presentation** - Purchaser shall present logs so that they may be scaled in an economical and safe manner in accordance with the Memorandum(s) of Agreement for Yard Scaling required in Section IV.G.5. of this Exhibit.

F. **Check Scale** - The Government will conduct check scales as set forth in Instruction Memorandum OR-2003-081, Item 2b (Administrative Check Scaler). Determinations as to volume of timber made by a government check scaler in conformance with the standards as set forth herein shall be final. All loads check scaled by BLM will be identified with the check scaler’s initials legibly marked or painted in the face of the first log in each load. When such checks show a variance in scale in excess of acceptable standards, as set forth in Instruction Memorandum OR-2003-081, Item 2b (Administrative Check Scaler), in two or more consecutive check scales, an adjustment to the volume reported as scaled will be made by BLM. Such adjustments will be made based on the difference between available BLM check scales and the original scale during the period covered by the unsatisfactory check scales. Unless otherwise approved in writing by the Authorized Officer, the volume to which this difference will be applied will be 50 percent of the volume scaled between the last satisfactory check and the first unsatisfactory check, 100 percent of the volume scaled during the unsatisfactory check, and 50 percent of the volume between the last unsatisfactory check scale and the next satisfactory check scale.

G. **Accountability**

1. Purchaser shall notify the Authorized Officer five (5) days prior to starting or stopping of hauling operations performed under the contract.

2. **All logs will be painted and branded at the landing and accounted for in accordance with Sec. 42.____ of the contract. If Sale Area is within a State that maintains a log brand register, brands shall be registered with the State. Purchaser shall use assigned brand(s) exclusively on logs from this sale until the Authorized Officer releases the brand(s).** Each truck driver shall obtain a load receipt and a BLM scaler receipt from the Log Truck Ticket Book issued by the Authorized Officer and comply with the instructions specified on the cover of said book. While products are in transit, the truck driver shall display the load receipt and BLM scaler receipt on the bunk or wing log at the front of the load on the driver's side. All logs on each load shall be delivered to the destination listed on the woods receipt. The BLM scaler receipt shall be surrendered at the location of BLM scaling, the unloading location, or as requested by BLM. A designated area shall be identified at the yard scaling location for logs arriving during off hours. Logs arriving during off hours shall be left on the truck or may be off loaded to the designated area.

3. The Purchaser shall not haul logs from the contract area on weekends; Memorial Day, Fourth of July, Labor Day, Thanksgiving, Christmas, and New Year's holidays; or outside the hours of 4:00 a.m. to 8:00 p.m. daily, unless otherwise approved in writing by the Authorized Officer or designated in the Approved Logging Plan (Refer to Section 42___ of the contract).

4. The Purchaser shall furnish BLM a map showing the route which shall be used to haul logs from the timber sale area to the scaling location. Such route shall be the most direct haul route between the two points, unless another route is approved by BLM. The route of haul may be changed only with advance notice to and approval by BLM. The haul route map shall be attached to the Approved Logging Plan.

5. All loads will be scaled at scale locations listed on the Scaling Authorization (Form OR 5300-18) as approved by the Authorized Officer. The Purchaser shall ensure that all scale site owners listed on the Scaling Authorization enter into a Memorandum of Agreement for Yard Scaling before requesting BLM approval of the Scaling Authorization. Areas for scaling BLM logs will be designated on the ground and identified on the yard map as required in the Memorandum(s) of Agreement for Yard Scaling.

6. Any removal of logs from loaded trucks before being accounted for and/or scaled as required by the contract shall be considered a willful trespass and render the Purchaser liable for damages under applicable law. Any payment made for purchase of such logs shall be deducted from amount due because of trespass.

H. **Scaling Lost Products** - The value of lost loads shall be equal to the highest value load for the month in which the lost load is hauled regardless of where the highest value load is scaled. If no loads have been scaled in that month, value will be determined from the closest month in which loads were scaled.

V. **Estimated Volumes and Values -** The following volume estimates and calculations of value of timber sold are made solely as an administrative aid for determining payment amounts, when payments are due, the value of timber subject to any special bonding provisions, and other purposes specified in various portions of the contract. The cutting areas are shown on Exhibit A of the contract.

A. **Merchantable Timber Volume Removed from Contract Area** - The total volume of removed timber shall be determined using the Government's records of scaled volumes of timber skidded or yarded monthly, or a shorter period if agreed to by the Purchaser and Government, to loading points or removed from the contract area.

B. **Merchantable Timber Not Yet Removed from Contract Area** - The value of merchantable timber which has not been removed will be determined by multiplying the value per acre as shown below times the amount of acreage subject to the purpose of the value determination, as determined by the Authorized Officer:

Total Estimated Purchase Price And/Or Schedule of Volumes and Values for Merchantable Timber Not Yet Removed from Contract Area					
Cutting Area		Total Estimated Volume (MBF)		Total Estimated Purchase Price	
Cutting Area Number	Approximate Number of Acres	Volume per Acre	Total Volume	Value per Acre	Total Value
1-4	6	15.8	91		
3-17A	14	13.1	169		
3-17B	21	12.1	236		
12-3	22	17.0	354		
23-4	12	19.3	221		
25-13	25	17.9	425		
26-1A	16	15.7	238		
26-1B	33	19.0	594		
TR1	ROW	19	19		
TR2	ROW	9	9		
TR3	ROW	9	9		
TR4	ROW	8	8		
TR5	ROW	8	8		
Sale Total	149	16.0	2,381		

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

EXHIBIT C1
SHEET 1 OF 1

WILLIAMS THIN
TIMBER SALE
TRACT NO. ORM07-TS-13-06

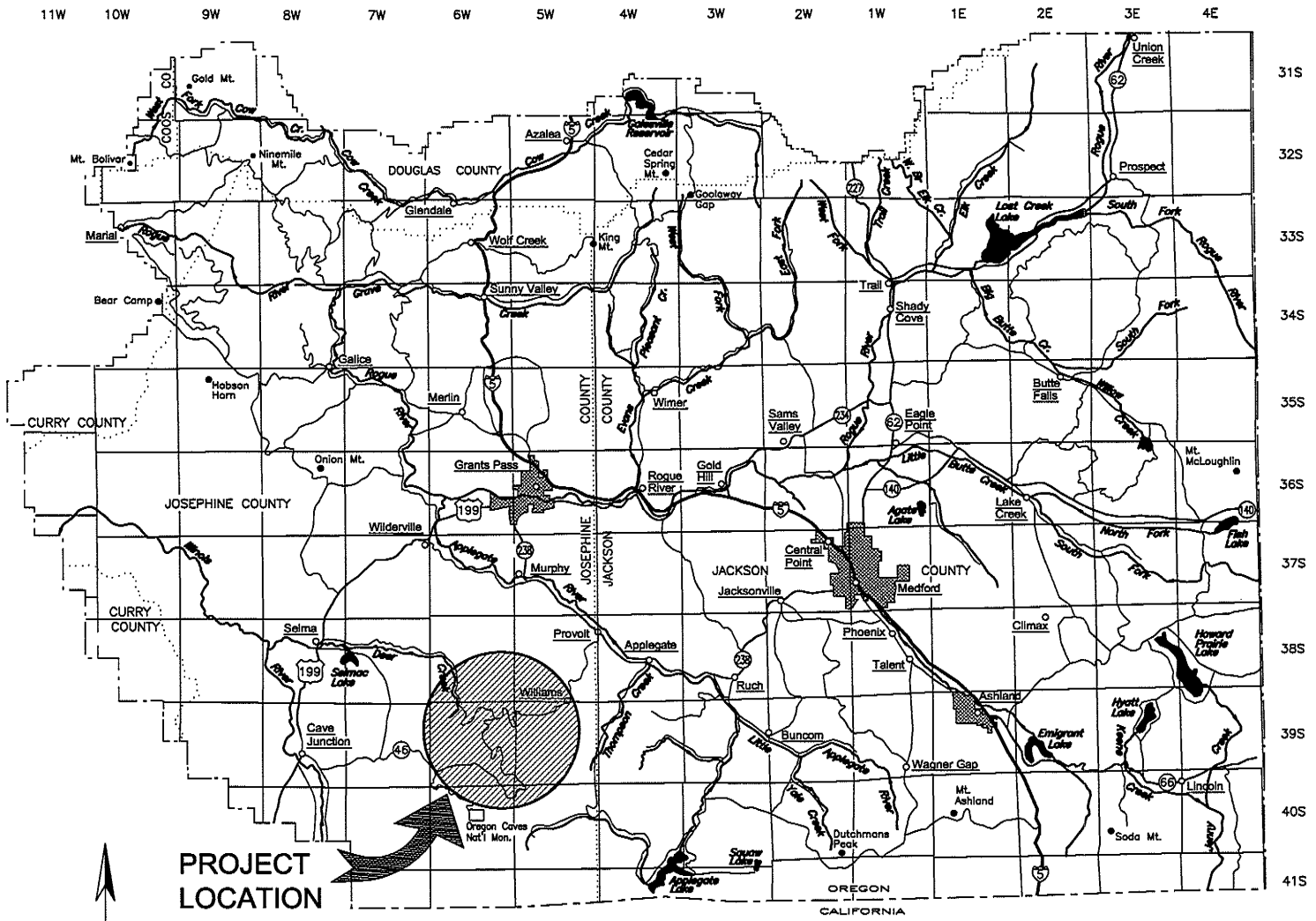

EXHIBIT NO.	DESCRIPTION
C1	TITLE SHEET
C2	OVERALL SALE & ROAD RENOVATION MAPS
C3	ESTIMATE OF QUANTITIES
C4	SPECIFICATION SHEET
C5	TYPICAL ROAD DATA
C6	CULVERT INSTALL DETAIL
C7	CULVERT BAND DETAIL
C8	DRAINAGE & EROSION CONTROL INSTALLATION
C9	ARMORED WATER DIP
C10	ROADSIDE BRUSHING DETAIL
C11	ROAD RENOVATION WORKLIST
C12	WRITTEN SPECIFICATIONS
C13	SPECIAL PROVISIONS
D1	ROAD MAINTENANCE SPECIFICATIONS
D2	ROAD MAINTENANCE MAP

REV. NO.	DESCRIPTION	DATE	APPROV.

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

WILLIAMS THIN
TIMBER SALE
TITLE SHEET

DESIGNED:	
REVIEWED:	
APPROVED:	
DRAFTED BY: ELF	SCALE: 1" = 12 MI
DATE: APR 2013	SHEET: 1 OF 1
DRAWING NO.: OR-11-9113.4-1	

ALWAYS THINK SAFETY

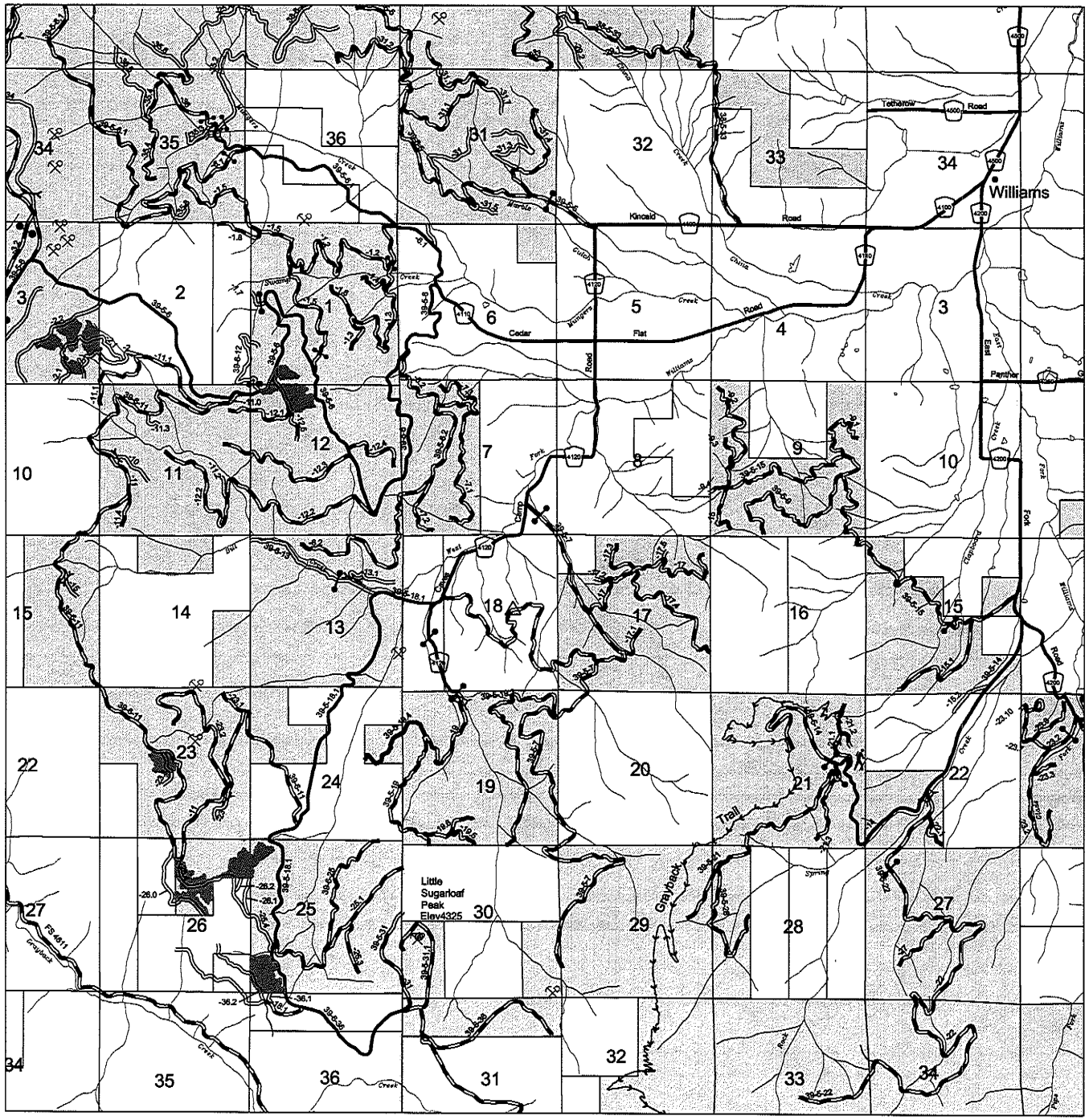

EXHIBIT C2

SHEET 1 OF 3

WILLIAMS THIN
TIMBER SALE
TRACT NO. ORM07-TS-13-06

BLM OWNERSHIP

T.S. UNITS

BST ROAD

ROCKED ROAD

NATURAL SURFACE ROAD

EX. GATE/CLOSURE

N

ALWAYS
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REV. NO.	DESCRIPTION	DATE	APPROV.

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

WILLIAMS THIN TIMBER SALE OVERALL SALE AREA MAP

DESIGNED: E.Free	
REVIEWED: E.Free	
APPROVED: E.Free	
DRAFTED BY: ELF	SCALE: 1" = 1 MILE
DATE: APR 2013	SHEET: 1 OF 3
DRAWING NO.: OR-11-9113.4-1	

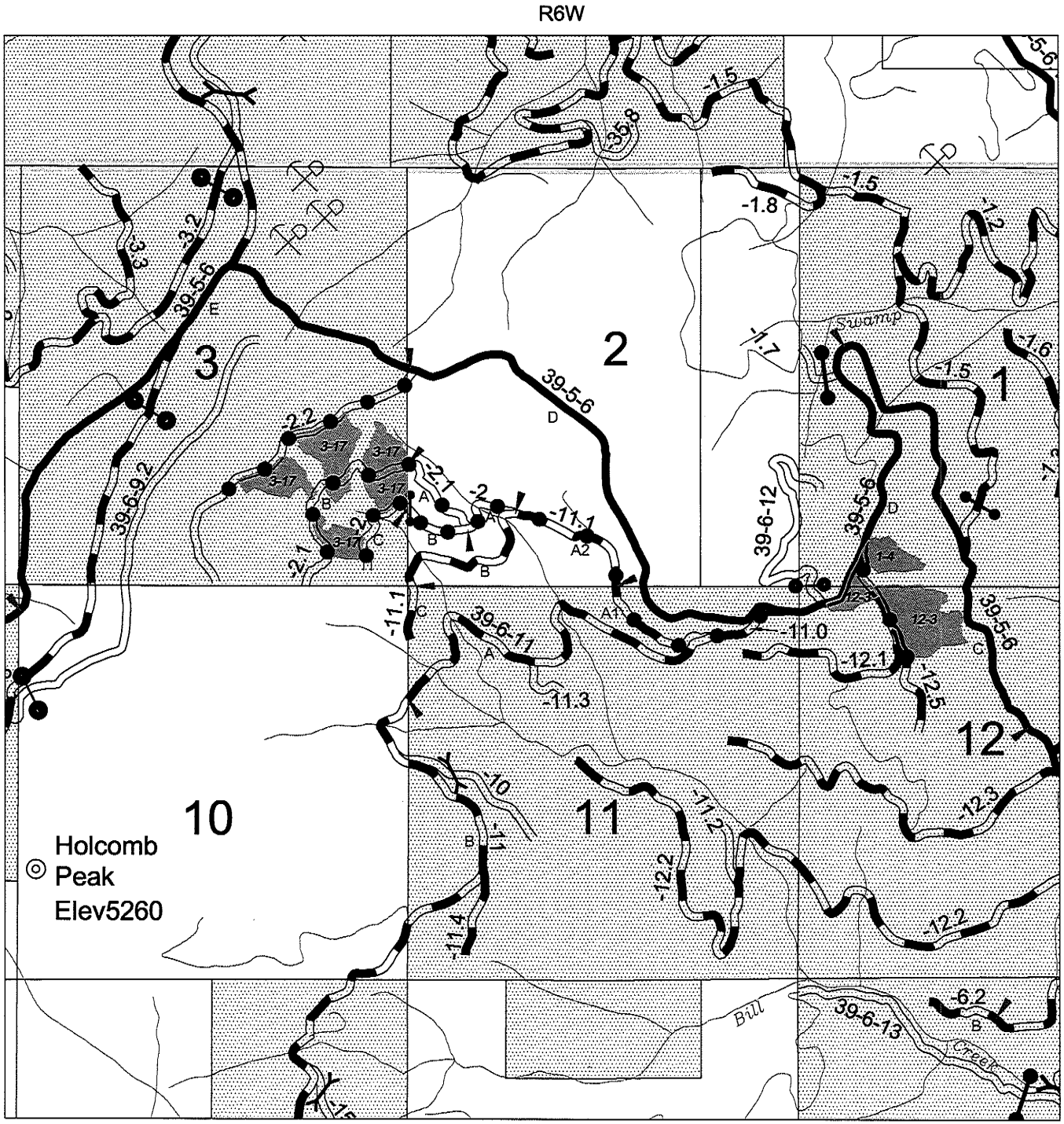

EXHIBIT C2

SHEET 2 OF 3

WILLIAMS THIN
TIMBER SALE
TRACT NO. ORM07-TS-13-06

BLM OWNERSHIP

T.S. UNITS 20-1

BST ROAD

CRUSHED ROCKED ROAD

NATURAL SURFACE ROAD

EX. GATE/CLOSURE

ROAD RENOVATION

N

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REV. NO.	DESCRIPTION	DATE	APPROV.

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

WILLIAMS THIN TIMBER SALE SALE AREA MAP

DESIGNED: E. Free	
REVIEWED: E. Free	
APPROVED: E. Free	
DRAFTED BY: ELF	SCALE: 1" = 2,000 FT
DATE: APR 2013	SHEET: 2 OF 3
DRAWING NO.: OR-11-9113.4-1	

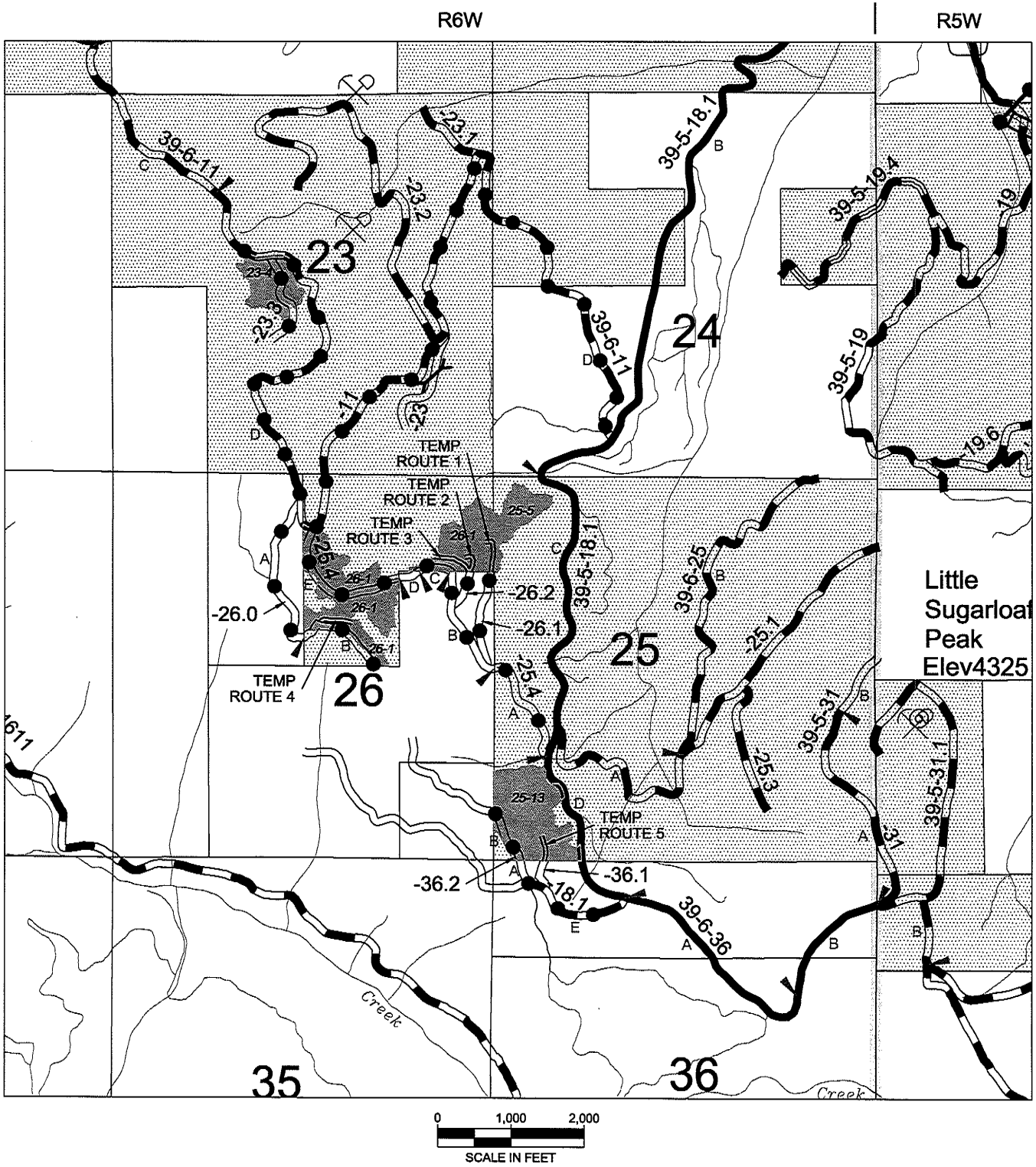

EXHIBIT C2

SHEET 3 OF 3

WILLIAMS THIN
TIMBER SALE
TRACT NO. ORM07-TS-13-06

BLM OWNERSHIP

T.S. UNITS 20-1

BST ROAD

CRUSHED ROCKED ROAD

NATURAL SURFACE ROAD

EX. GATE/CLOSURE

ROAD RENOVATION

N

ALWAYS THINK SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.

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

WILLIAMS THIN TIMBER SALE SALE AREA MAP

DESIGNED: E.F.	
REVIEWED: E.F.	
APPROVED: E.F.	
DRAFTED BY: ELF	SCALE: 1" = 2,000 FT
DATE: APR 2013	SHEET: 3 OF 3
DRAWING NO.: OR-11-9113.4-1	

EXHIBIT C3
SHEET 1 OF 2

ROAD NUMBER	FROM (M.P.)	TO (M.P.)	LENGTH (MILES)	CLEARING AND GRUBBING	EXCAVATION		DRAINAGE									RENOVATION			AGGREGATE						MISC.			
							CORRUGATED METAL PIPE 16 GA																					
							SIZE					DOWNSPOUT																
												FULL ROUND		HALF ROUND														
					ROCK	COMMON	18"	24"	30"	36"	ELBOWS	18"	24"	18"	24"	RESHAPE EX. ROAD SURFACE	DITCH & CULVERT CLEANING	SCARIFICATION	PIT RUN	CRUSHED BASE ROCK	CRUSHED SURFACE ROCK	EXISTING STOCK PILE	SOIL STABILIZATION	ROADSIDE BRUSHING AND CHIPPING	RESHAPE EX. WATERDIPS	RECONSTRUCT WATERBARS	BARRICADE	CONTINUOUS RIPPING
SPECIFICATION NO. →				200	300		400									500			700	1000	1200		1800	2100	8000			
UNITS →	MP	MP	MILE	ACRE	CY	CY	LF	LF	LF	LF	EA	LF	LF	LF	LF	MILE	MILE	MILE	CY	CY	CY	CY	ACRE	MILE	EA	EA	EA	MILE
39-5-18.1 (E)	3.82	4.09	0.27				40									0.27	0.27				12			0.27				
39-6-2.0 (A-C)	0.00	0.59	0.59													0.59	0.59	0.10						0.59				
39-6-2.1 (A)	0.00	0.21	0.21													0.21										3		
39-6-2.1 (B)	0.21	0.72	0.51	1.21												0.51								0.51		1		
39-6-2.2	0.00	0.54	0.54													0.54	0.54							0.54	1			
39-6-11.0 (A)	0.00	0.20	0.20													0.20	0.20							0.20				
39-6-11.0 (D)	0.00	3.24	3.24				168	112						40	20	3.24	3.24	0.10			96			3.24				
39-6-11.1 (A1-2)	0.00	0.67	0.67				60									0.67	0.67	0.05			12			0.67				
39-6-12.1	0.00	0.22	0.22													0.22	0.22							0.22				
39-6-12.5	0.00	0.08	0.08													0.08	0.08							0.08				
39-6-23.3	0.00	0.16	0.16													0.16								0.16				
39-6-25.4 (A-E)	0.00	1.12	1.12	1.28												1.12	0.15		12					1.12	2	26	2	
39-6-26.1	0.00	0.25	0.25				30									0.25	0.02		12						1	13		
TOTALS		*SEE EXHIBIT C3 - SHEET 2 OF 2 FOR QUANTITY TOTALS* →																										

RENOVATION NOTES

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

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

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

AGGREGATE GRADATION REQUIREMENTS

ITEM 900

SIZE	GRADATION
4 inch	A
3 inch	B
2 inch	C
1 1/2 inch	D

ITEM 1000

SIZE	GRADATION
3 inch	A,C,F
2 inch	B,D,G,H

ITEM 1200

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

ALWAYS THINK SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.

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

WILLIAMS THIN TIMBER SALE ESTIMATE OF QUANTITIES

DESIGNED: E. Free	
REVIEWED: E. Free	
APPROVED: E. Free	
DRAFTED BY: ELF	SCALE: NONE
DATE: APR 2013	SHEET: 1 OF 2
DRAWING NO.: OR-11-9113.4-1	

EXHIBIT C3
SHEET 2 OF 2

ROAD NUMBER	FROM (M.P.)	TO (M.P.)	LENGTH (MILES)	CLEARING AND GRUBBING	EXCAVATION		DRAINAGE									RENOVATION			AGGREGATE				SOIL STABILIZATION	ROADSIDE BRUSHING AND CHIPPING	MISC.			
							CORRUGATED METAL PIPE 16 GA																					
							SIZE					DOWNSPOUT																
												FULL ROUND		HALF ROUND														
					ROCK	COMMON	18"	24"	30"	36"	ELBOWS	18"	24"	18"	24"	RESHAPE EX. ROAD SURFACE	DITCH & CULVERT CLEANING	SCARIFICATION	PIT RUN	CRUSHED BASE ROCK	CRUSHED SURFACE ROCK	EXISTING STOCK PILE			RESHAPE EX. WATERDIPS	RECONSTRUCT WATERBARS	BARRICADE	CONTINUOUS RIPPING / DECOMMISION
SPECIFICATION NO. →				200	300		400									500			700	1000	1200		1800	2100	8000			
UNITS →	MP	MP	MILE	ACRE	CY	CY	LF	LF	LF	LF	EA	LF	LF	LF	LF	MILE	MILE	MILE	CY	CY	CY	CY	ACRE	MILE	EA	EA	EA	MILE
39-6-26.2	0.00	0.10	0.10	0.24												0.10								0.10		2		
39-6-26.0 (A-B)	0.00	0.70	0.70													0.70	0.02							0.70	1	7	1	
39-6-36.1	0.00	0.07	0.07	0.17												0.07								0.07				
39-6-36.2 (A-B)	0.00	0.21	0.21													0.21								0.21	1			
Temp Route 1	0.00	0.09	0.09	0.30		740																	0.30			3	1	0.09
Temp Route 2	0.00	0.04	0.04	0.10		211																	0.10			1	1	0.04
Temp Route 3	0.00	0.08	0.08	0.30		1,535																	0.30			3	1	0.08
Temp Route 4	0.00	0.08	0.08	0.30																			0.30			3		0.08
Temp Route 5	0.00	0.07	0.07	0.30		370																	0.30			2	1	0.07
TOTALS			9.50	4.20		2,856	298	112						40	20	9.14	6.00	0.25	24		120		1.30	8.68	6	64	7	0.36

RENOVATION NOTES

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

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

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

AGGREGATE GRADATION REQUIREMENTS

ITEM 900

SIZE	GRADATION
4 inch	A
3 inch	B
2 inch	C
1 1/2 inch	D

ITEM 1000

SIZE	GRADATION
3 inch	A,C,F
2 inch	B,D,G,H

ITEM 1200

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

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REV. NO.	DESCRIPTION	DATE	APPROV.

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

WILLIAMS THIN TIMBER SALE
ESTIMATE OF QUANTITIES

DESIGNED: E. Free
REVIEWED: E. Free
APPROVED: E. Free

DRAFTED BY: ELF	SCALE: NONE
DATE: APR 2013	SHEET: 2 OF 2
DRAWING NO.: OR-11-9113.4-1	

EXHIBIT C4
SHEET 1 OF 3

ROAD NUMBER	FROM (M.P.)	TO (M.P.)	LENGTH (MILES)	TYPICAL STATION TYPE	ALIGNMENT: MAXIMUM DEGREE OF CURVE	ROAD WIDTH [1-3]: SUBGRADE	ROAD WIDTH [1-3]: DITCH	GRADIENT: MAXIMUM FAVORABLE	GRADIENT: MAXIMUM ADVERSE	BRUSHING WIDTH: BEYOND: TOP CUT	BRUSHING WIDTH: BEYOND: TOE FILL	BRUSHING WIDTH: EXISTING ROAD(S): L	BRUSHING WIDTH: EXISTING ROAD(S): R	SURFACING [3]: BASE COURSE: MINIMUM WIDTH	BASE COURSE: COMPACTION DEPTH	BASE COURSE: TYPE [2]	BASE COURSE: GRADING	SURFACE COURSE: MINIMUM WIDTH	SURFACE COURSE: COMPACTION DEPTH	SURFACE COURSE: TYPE [2]	SURFACE COURSE: GRADING	REMARKS
39-5-18.1 (E)	3.82	4.09	0.27	6		20'	3'	-	-			4	4							D		
39-6-2.0 (A-C)	0.00	0.59	0.59	5		17'	3'	-	-			4	4							NAT		
39-6-2.1 (A-B)	0.00	0.72	0.72	3		12'	-	-	-			4	4							NAT		
39-6-2.2	0.00	0.54	0.54	5		17'	3'	-	-			4	4							NAT		
39-6-11.0 (A)	0.00	0.20	0.20	6		18'	3'	-	-			4	4							D		
39-6-11.0 (D)	0.00	3.24	3.24	6		18'	3'	-	-			4	4							D		
39-6-11.1 (A1)	0.00	0.31	0.31	6		17'	3'	-	-			4	4							D		
39-6-11.1 (A2)	0.31	0.67	0.36	6		14'	3'	-	-			4	4							D		
39-6-12.1	0.00	0.22	0.22	6		14'	3'	-	-			4	4							D		
39-6-12.5	0.00	0.08	0.08	6		14'	3'	-	-			4	4							D		
39-6-23.3	0.00	0.16	0.16	3		14'	-	-	-			4	4							NAT		
39-6-25.4 (A)	0.00	0.15	0.15	5		14'	3'	-	-			4	4							NAT		
39-6-25.4 (A-E)	0.15	1.12	0.97	3		14'	-	-	-			4	4							NAT		

NOTES

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

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

2. SURFACING TYPES
   - A. PIT RUN ROCK
   - B. GRID ROLLED ROCK MATERIAL
   - C. SCREENED ROCK MATERIAL
   - D. CRUSHED ROCK MATERIAL

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

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

5. CLEARING WIDTH
   SEE SUBSECTION 2100

ALWAYS THINK SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.

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

WILLIAMS THIN TIMBER SALE SPECIFICATION SHEET

DESIGNED: E. Free	
REVIEWED: E. Free	
APPROVED: E. Free	
DRAFTED BY: ELF	SCALE: NONE
DATE: APR 2013	SHEET: 1 OF 3
DRAWING NO.: OR-11-9113.4-1	

EXHIBIT C4
SHEET 2 OF 3

ROAD NUMBER	FROM (M.P.)	TO (M.P.)	LENGTH (MILES)	TYPICAL STATION TYPE	ALIGNMENT	ROAD WIDTH [1-3]		GRADIENT		BRUSHING WIDTH				SURFACING [3]								REMARKS
										BEYOND		EXISTING ROAD(S)		BASE COURSE				SURFACE COURSE				
					MAXIMUM DEGREE OF CURVE	SUBGRADE	DITCH	MAXIMUM FAVORABLE	MAXIMUM ADVERSE	TOP CUT	TOE FILL	L	R	MINIMUM WIDTH	COMPACTION DEPTH	TYPE [2]	GRADING	MINIMUM WIDTH	COMPACTION DEPTH	TYPE [2]	GRADING	
39-6-26.1	0.00	0.25	0.25	3		14'	-	-	-			4	4							NAT		
39-6-26.2	0.00	0.10	0.10	3		14'	-	-	-			4	4							NAT		
39-6-26.0 (A-B)	0.00	0.67	0.67	3		14'	-	-	-			4	4							NAT		
39-6-36.1	0.00	0.07	0.07	3		14'	-	-	-			4	4							NAT		
39-6-36.2 (A-B)	0.00	0.21	0.21	3		14'	-	-	-			4	4							NAT		
Temp Route 1	0.00	0.09	0.09	3		12'														NAT		
Temp Route 2	0.00	0.06	0.06	3		12'														NAT		
Temp Route 3	0.00	0.10	0.10	3		12'														NAT		
Temp Route 4	0.00	0.09	0.09	3		12'														NAT		
Temp Route 5	0.00	0.06	0.06	3		12'														NAT		

NOTES

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

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

2. SURFACING TYPES
   - A. PIT RUN ROCK
   - B. GRID ROLLED ROCK MATERIAL
   - C. SCREENED ROCK MATERIAL
   - D. CRUSHED ROCK MATERIAL

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

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

5. CLEARING WIDTH
   SEE SUBSECTION 2100

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REV. NO.	DESCRIPTION	DATE	APPROV.

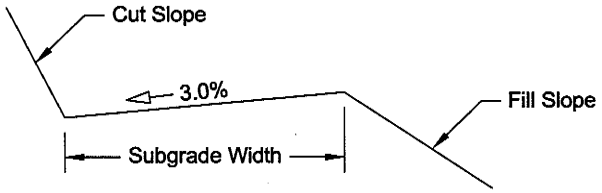
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

WILLIAMS THIN TIMBER SALE SPECIFICATION SHEET

DESIGNED: E. Free
REVIEWED: E. Free
APPROVED: E. Free

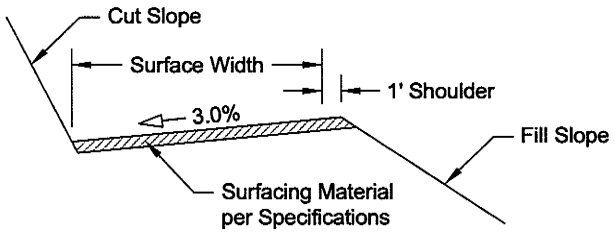
DRAFTED BY: ELF	SCALE: NONE
DATE: APR 2013	SHEET: 2 OF 3
DRAWING NO.: OR-11-9113.4-1	

EXHIBIT C4
SHEET 3 OF 3



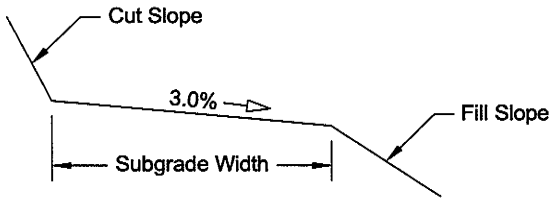
TYPICAL GRADING SECTION

TYPE 1



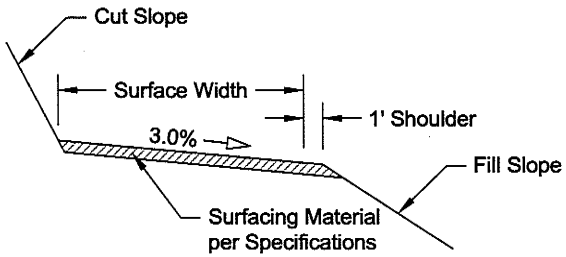
TYPICAL SURFACING SECTION

TYPE 2



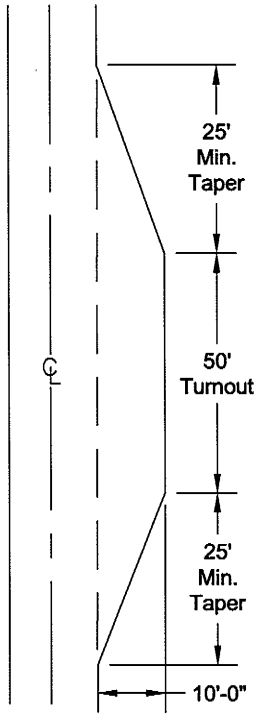
TYPICAL GRADING SECTION

TYPE 3



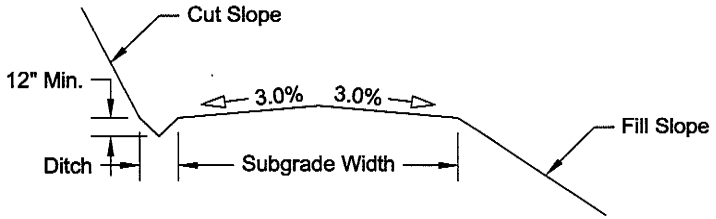
TYPICAL SURFACING SECTION

TYPE 4



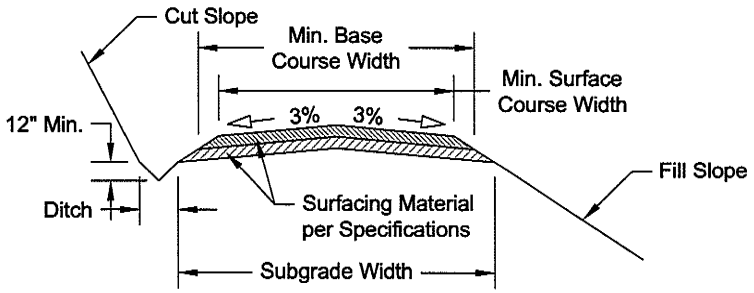
TYPICAL TURNOUT

PLAN VIEW



TYPICAL GRADING SECTION

TYPE 5



TYPICAL SURFACING SECTION

TYPE 6

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SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.

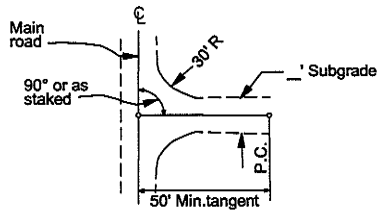
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

WILLIAMS THIN TIMBER SALE SPECIFICATION SHEET

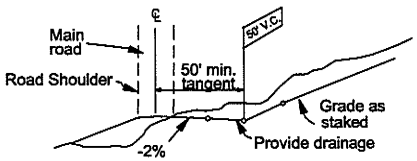
DESIGNED:	
REVIEWED:	
APPROVED:	
DRAFTED BY: ELF	SCALE: NONE
DATE: APR 2013	SHEET: 3 OF 3
DRAWING NO.: OR-11-9113.4-1	

EXHIBIT C5
SHEET 1 OF 1

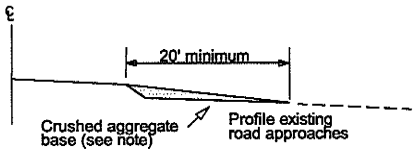
TYPICAL ROAD APPROACHES



PLAN



PROFILE



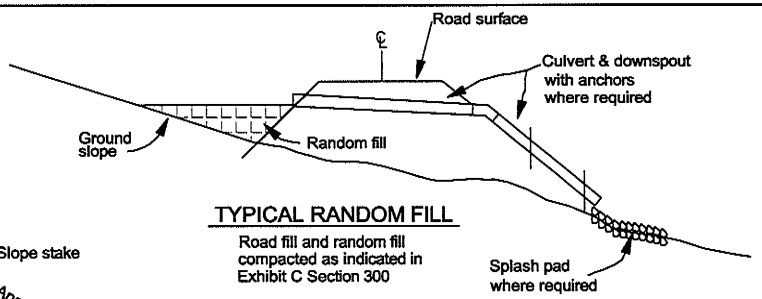
TYPICAL SURFACING SECTION

NOTES:

1. The profile of the existing approach roads shall be tapered to meet the shoulder line of the main roadway and shall receive the same wearing surface.

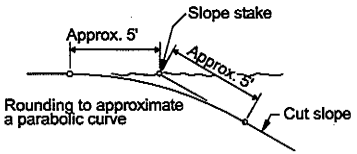
2. The crushed aggregate base shall be of the same gradation as used in the adjacent roadbed.

3. Approaches shall be finished with the same treatment as shown for the adjacent roadbed.

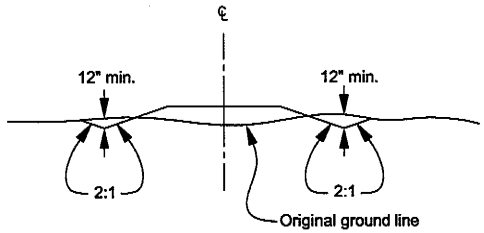


TYPICAL RANDOM FILL

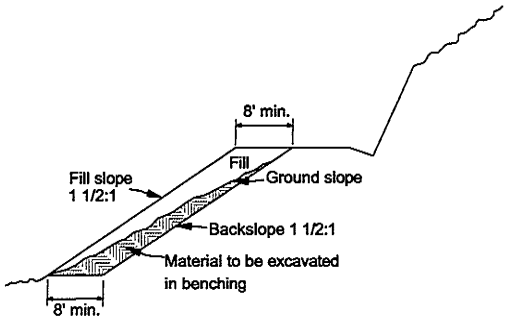
Road fill and random fill compacted as indicated in Exhibit C Section 300



CUT SLOPE ROUNDING

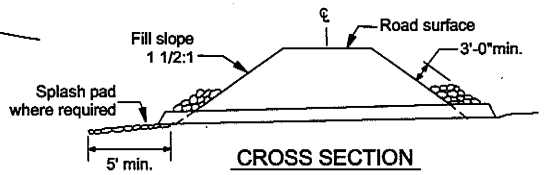


TYPICAL ROAD SECTION FOR TURNPIKE CONSTRUCTION

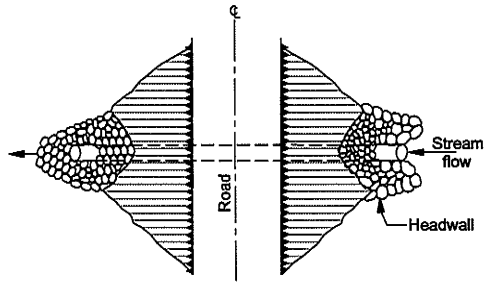


SPECIAL COMPACTION
TYPICAL BENCHING SECTION

RIPRAP AT CULVERTS



CROSS SECTION



PLAN

NOTES: RIPRAP AT CULVERTS

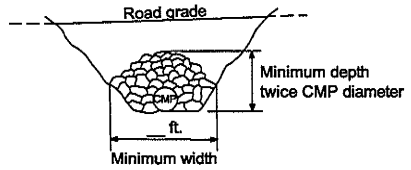
1. Riprap shall be placed in such a manner that it will not damage the culvert.

2. Trenching will be done as required by the Authorized Officer.

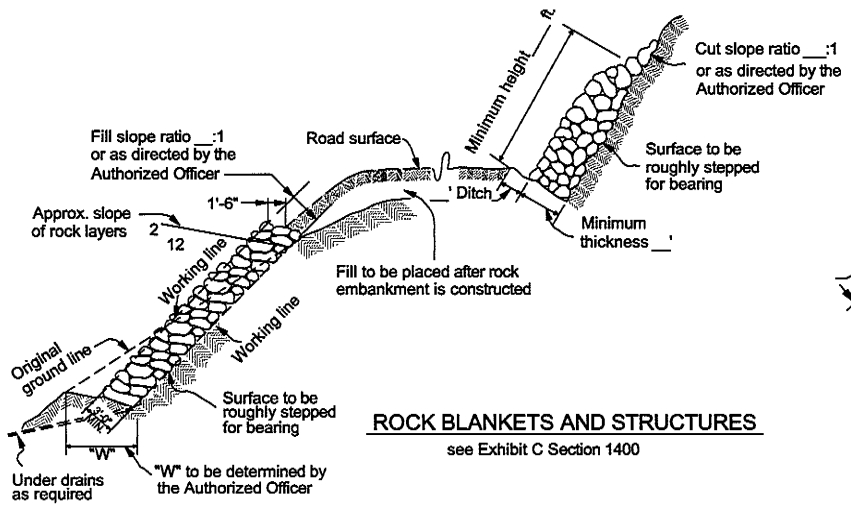
3. Minimum depth of splash pads shall be 1FT.

4. Minimum quantity shall be 1CY per culvert.

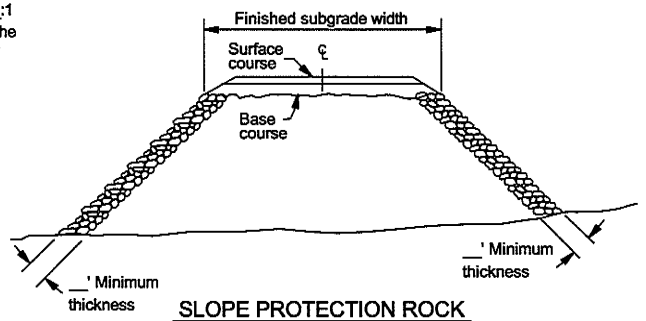
5. Riprap shall be placed before October 1st of the year the culvert is installed.



ELEVATION



ROCK BLANKETS AND STRUCTURES
see Exhibit C Section 1400



SLOPE PROTECTION ROCK
see Exhibit C Section 1400

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REV. NO.	DESCRIPTION	DATE	APPROV.

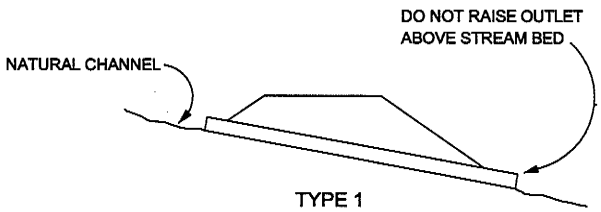
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

WILLIAMS THIN TIMBER SALE
TYPICAL ROAD DATA

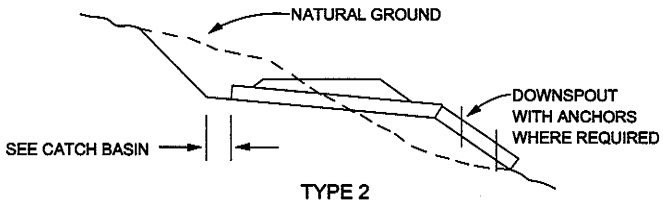
DESIGNED:	
REVIEWED:	
APPROVED:	
DRAFTED BY: ELF	SCALE: NONE
DATE: APR 2013	SHEET: 1 OF 1
DRAWING NO.: OR-11-9113.4-4	

EXHIBIT C6
SHEET 1 OF 2

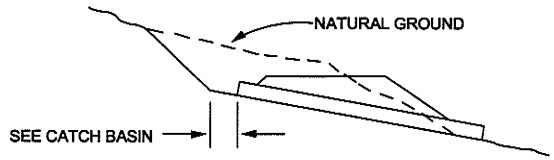
CULVERT INSTALLATION TYPES



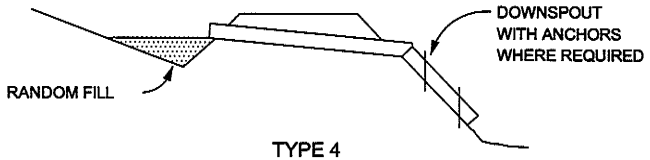
TYPE 1



TYPE 2

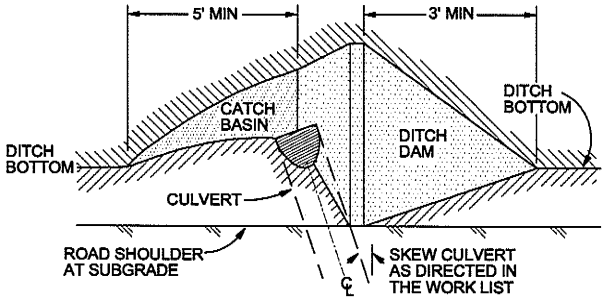


TYPE 3

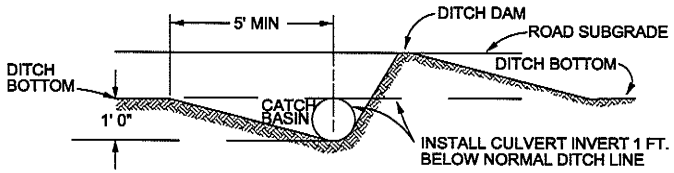


TYPE 4

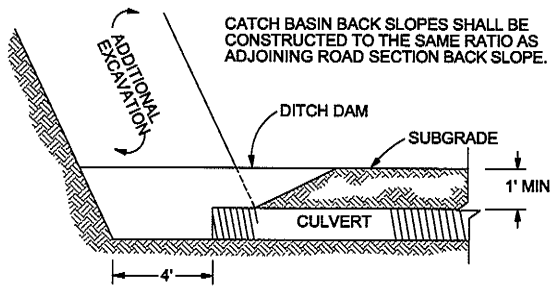
CATCH BASIN



PLAN VIEW

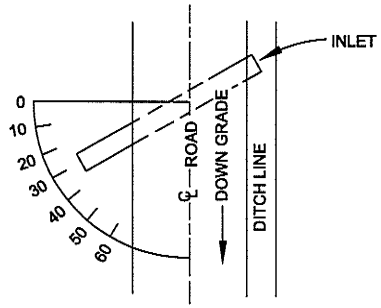


ELEVATION



CROSS SECTION AT CATCH BASIN

SKEW DIAGRAM



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

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REV. NO.	DESCRIPTION	DATE	APPROV.

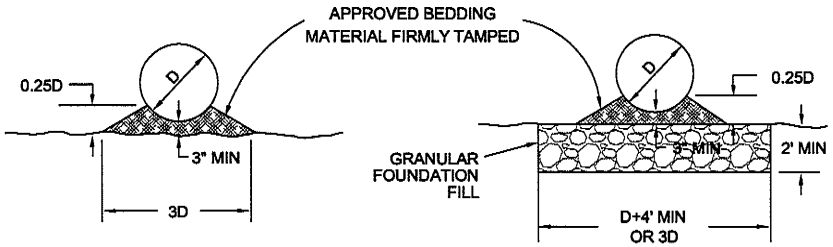
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

WILLIAMS THIN TIMBER SALE
CULVERT INSTALL DETAIL

DESIGNED: E. Free	
REVIEWED: E. Free	
APPROVED: E. Free	
DRAFTED BY: ELF	SCALE: NONE
DATE: APR 2013	SHEET: 1 OF 2
DRAWING NO.: OR-11-9113.4-4	

EXHIBIT C6
SHEET 2 OF 2

BEDDING OF CULVERTS



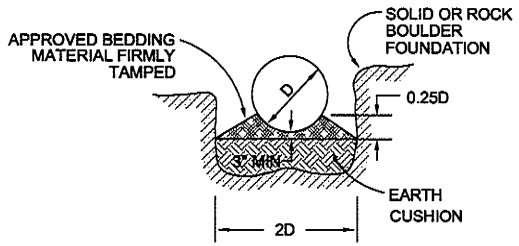
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT.

BEDDING OF CULVERTS ON STABLE NATURAL GROUND FOUNDATION OR COMPACTED EMBANKMENT

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

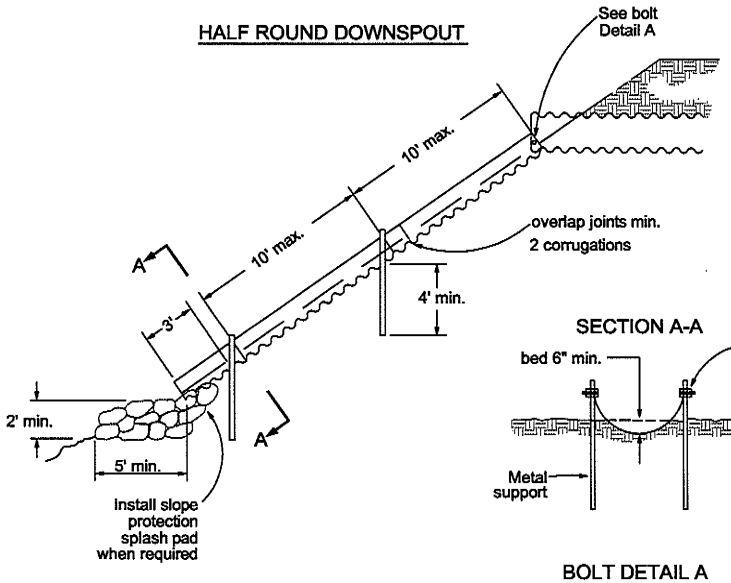
BEDDING OF CULVERTS ON SOFT SPONGY OR UNSTABLE SOIL FOUNDATION

BEDDING OF CULVERT IN SOLID ROCK OR BOULDER FOUNDATION



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

HALF ROUND DOWNSPOUT



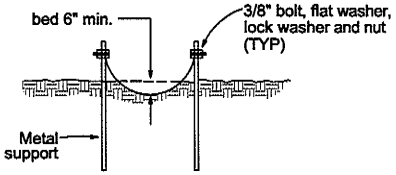
NOTES:

1. The half round shall be one diameter size larger and of the same material and coating as the culvert it is attached to.

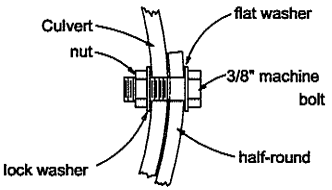
2. The half round shall be fabricated from 16 gauge metal with 2 2/3" x 1/2" corrugations.

3. Supports may be steel bar, angle iron, or approved equivalent metal posts.

SECTION A-A



BOLT DETAIL A



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

REV. NO.	DESCRIPTION	DATE	APPROV.

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

WILLIAMS THIN TIMBER SALE CULVERT INSTALL DETAIL

DESIGNED: E. Free	
REVIEWED: E. Free	
APPROVED: E. Free	
DRAFTED BY: ELF	SCALE: NONE
DATE: APR 2013	SHEET: 2 OF 2
DRAWING NO.: OR-11-9113.4-4	

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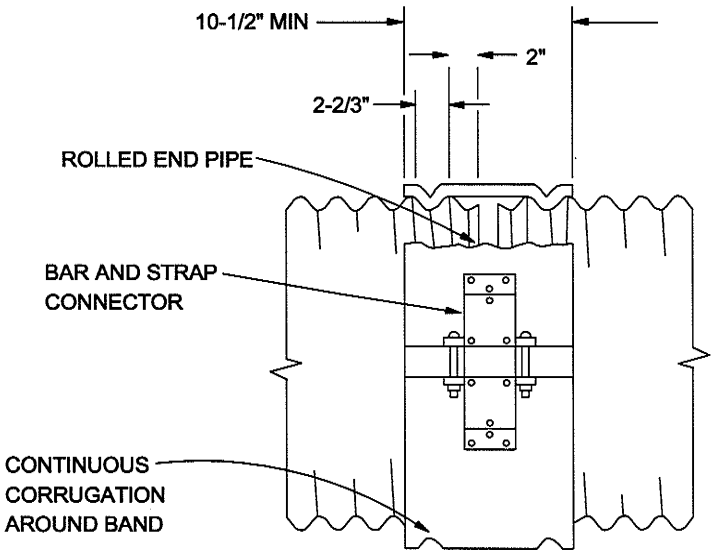
EXHIBIT C7
SHEET 1 OF 1

CSP "HUGGER" COUPLER BANDS



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

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

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

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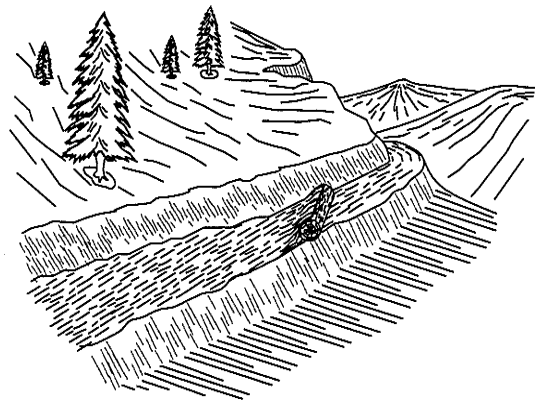
REV. NO.	DESCRIPTION	DATE	APPROV.

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

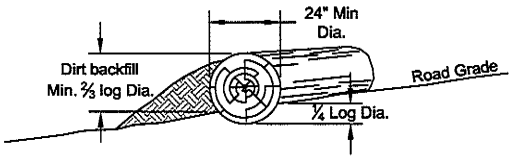
WILLIAMS THIN TIMBER SALE CULVERT BAND DETAIL

DESIGNED: E.L.Free	
REVIEWED: E.L.Free	
APPROVED: E.L.Free	
DRAFTED BY: ELF	SCALE: NONE
DATE: APR 2013	SHEET: 1 OF 1
DRAWING NO.: OR-11-9113.4-4	

EXHIBIT C8
SHEET 1 OF 1



LOG BARRICADE

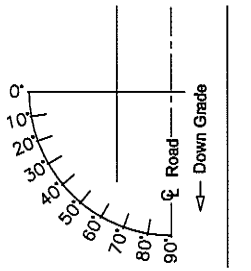


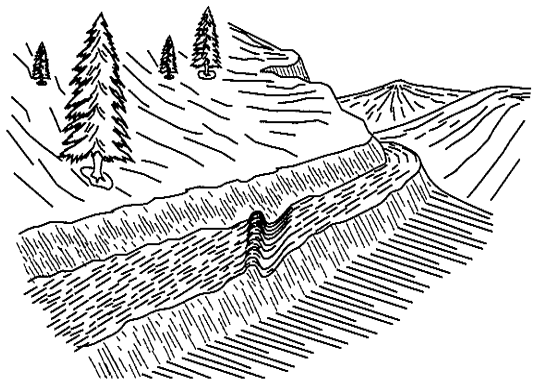
1. Log barricade shall be constructed as shown above.
2. Exact location will be flagged by the authorized officer prior to construction, unless reconstructing an existing barricade.
3. All barricades shall be skewed 30 degrees.
4. The length shall be sufficient to extend from the cut bank to the fill slope.
5. The minimum small end diameter of the log barricade shall be 24".

BARRICADE LOCATION

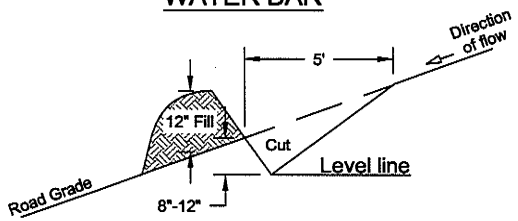
ROAD NUMBER	M.P.
39-6-25.4 (A)	*0.03*
39-6-25.4 (E)	*1.10*
39-6-26.3 (A)	*0.02*
Temp 1	*0.02*
Temp 2	*0.02*
Temp 3	*0.02*
Temp 5	*0.02*

SKEW DIAGRAM





WATER BAR



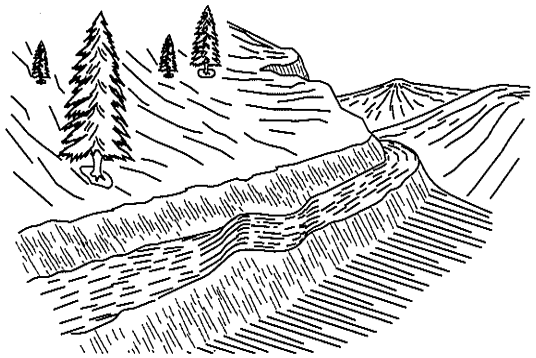
1. Water bars shall be constructed as shown above.
2. Exact location will be flagged by the Authorized Officer prior to construction, unless reconstructing an existing bar.
3. All water bars shall be skewed 30 degrees.
4. Upon completion of skidding logs, for the logging season, each skid road will have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

WATER DIP/BAR SPACING*

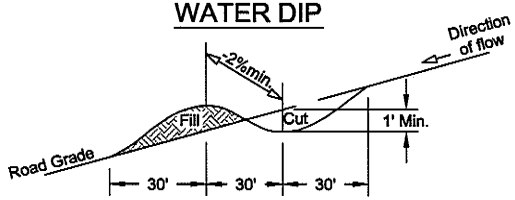
ROAD GRADE	LOAM OR CLAY LOAM	DECOMPOSED GRANITE
%	FEET	FEET
4-6	400	300
7-9	300**	200**
10-14	200	150
15-20	150	90
21-40	90	50
41-60	50	25

* Distances are maximum.

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



WATER DIP



1. Water dips shall be constructed as shown above.
2. Exact location will be flagged by the Authorized Officer prior to construction, unless reconstructing an existing dip.
3. All water dips shall be skewed 30 degrees.
4. The length shall be sufficient to extend from the cut bank to the fill slope and be readily crossed by passenger type vehicles.

ALWAYS
THINK
SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.

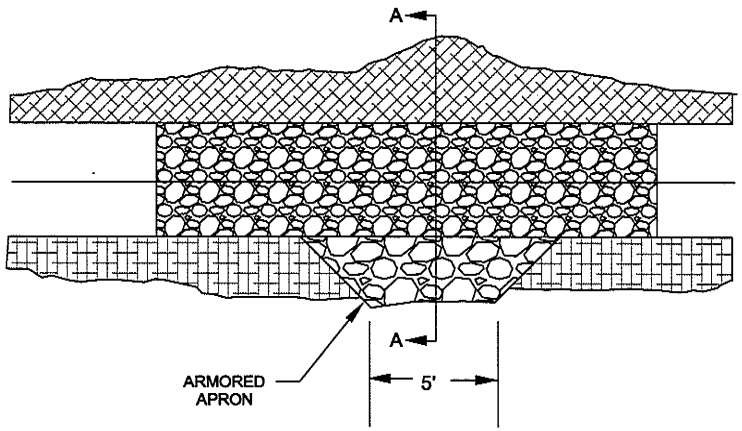
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

WILLIAMS THIN TIMBER SALE DRAINAGE & EROSION CONTROL DETAILS

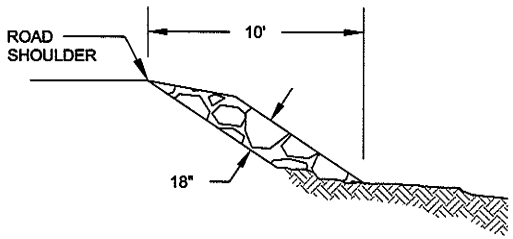
DESIGNED:	
REVIEWED:	
APPROVED:	
DRAFTED BY: ELF	SCALE: NONE
DATE: APR 2013	SHEET: 1 OF 1
DRAWING NO.: OR-11-9113.4-4	

EXHIBIT C9
SHEET 1 OF 1

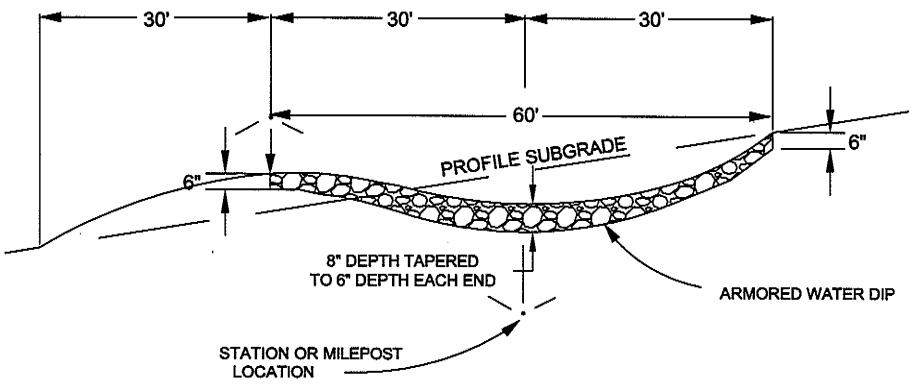
PLAN



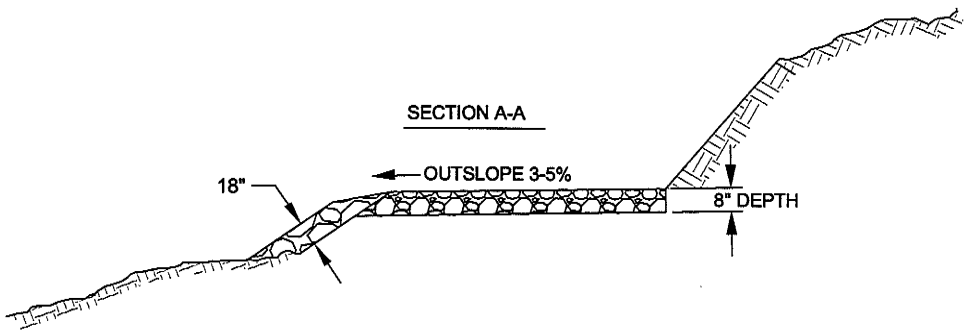
ARMORED APRON



PROFILE



SECTION A-A



NOTES

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

LEGEND

CUT/FILL SLOPES

SUBGRADE ARMOR MATERIAL (Pit-Run)

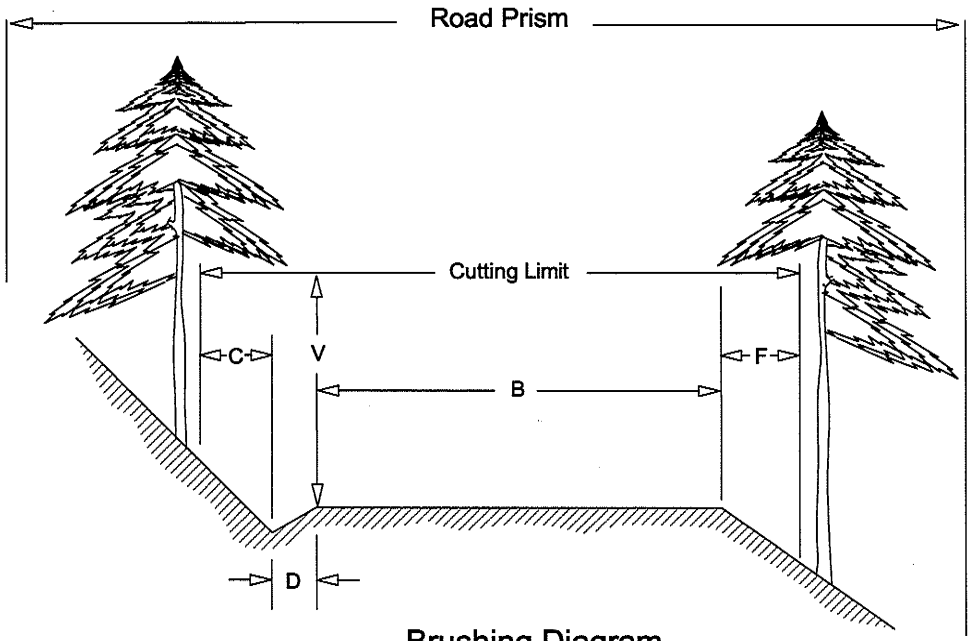
REV. NO.	DESCRIPTION	DATE	APPROV.

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

WILLIAMS THIN TIMBER SALE ARMORED WATER DIP

DESIGNED:	
REVIEWED:	
APPROVED:	
DRAFTED BY: ELF	SCALE: NONE
DATE: APR 2013	SHEET: 1 OF 1
DRAWING NO.: OR-11-9113.4-1	

EXHIBIT C10
SHEET 1 OF 1



Brushing Diagram

Cutting Limit = C + D + B + F

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

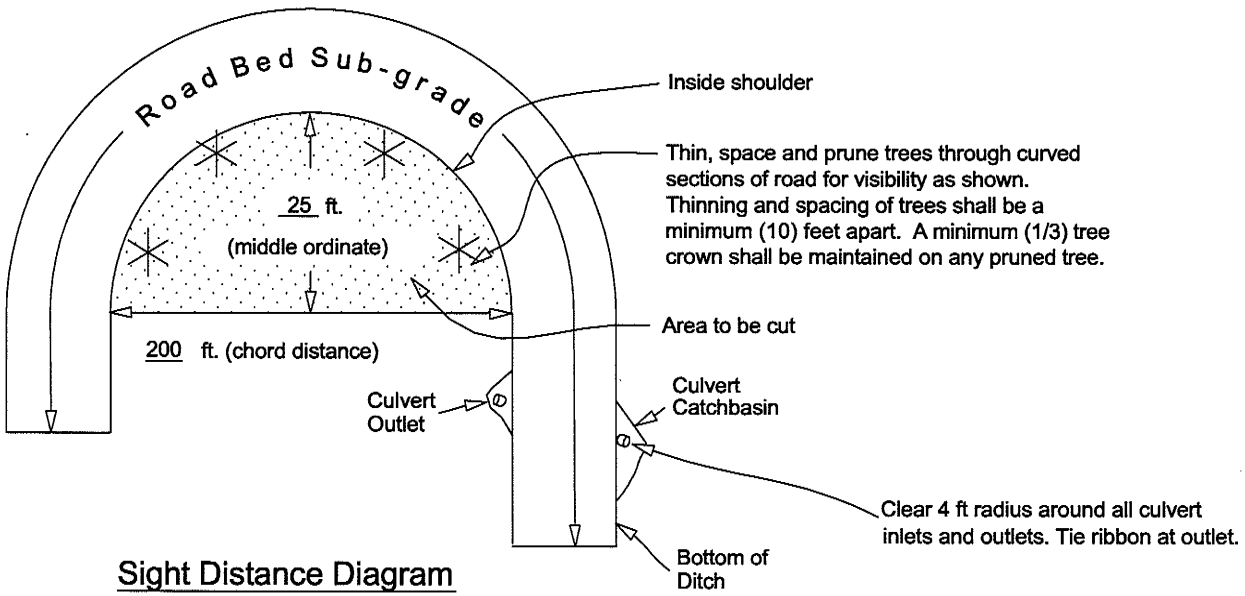
C = 4 ft - Distance to be brushed on cut slope
beyond centerline of ditch. Cut all vegetation to max height of 6".

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

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

V = 14 ft - Height of vertical cutting limit

Inside Corner



Sight Distance Diagram

REV. NO.	DESCRIPTION	DATE	APPROV.

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

WILLIAMS THIN TIMBER SALE ROADSIDE BRUSHING DETAIL

DESIGNED: E. Free	
REVIEWED: E. Free	
APPROVED: E. Free	
DRAFTED BY: ELF	SCALE: NONE
DATE: APR 2013	SHEET: 1 OF 1
DRAWING NO.: OR-11-9113.4-4	

revised 08/2010

All distances shown are horizontal except for V

ALWAYS THINK SAFETY

ROAD RENOVATION WORK LIST

Definitions:

BST – Bituminous Surface Treatment
ABC – Aggregate Base Course
ASC – Aggregate Surface Course
GRR – Grid Rolled Rock
PRR – Pit Run Rock
NAT – Natural Surface Roads
AWD – Armored Water Dip
CMP – Corrugated Metal Pipe
CY – Cubic Yards

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

ROAD 39-5-6.0 - Cedar Flat
(Segment A-D) BST

MP	TASKS
0.00	Junction with Cedar Flat Road (County). ***BLM maintenance.***
0.75	Junction left, 39-5-6.2.
2.08	Junction left, 39-5-12.2 Road.
2.50	Junction left, 39-5-12.3 Road.
2.56	Junction right, 39-5-12.4 Road.
3.17	Junction right, 39-6-1.5 Road.
3.95	Junction right, 39-6-1.7 Road.
4.49	Junction right, 39-6-1.0 Road; junction left, 39-6-12.1 Road.
4.68	Junction right, 39-6-12.0 Road.
4.79	Junction left, 39-6-11.0 Road.
6.19	Junction left, 39-6-2.2 Road.

ROAD 39-6-12.1 – Cedar Flat Spur
ASC

MP	TASKS
0.00	Junction with 39-5-6.0 Road. Begin road renovation which includes brushing; blading, watering, rolling and reshaping road surface; cleaning ditch lines; cleaning or enlarging all existing culvert catch basins; and clearing all culvert inlets and outlets.
0.06	Existing 18” CMP.
0.13	Existing 18” CMP.
0.19	Existing 18” CMP.
0.22	Junction left, 39-6-12.5 Road. End road renovation.

ROAD 39-6-12.5 – Cedar Wallow Spur
ASC

MP	TASKS
0.00	Junction with 39-6-12.1 Road. Begin road renovation which includes brushing; blading, watering, rolling and reshaping road surface; and cleaning ditch lines.
0.08	End road renovation at unit boundary.

ROAD 39-6-11.0 – Bear Wallow

(Segment A) ASC

MP	TASKS
0.00	Junction with 39-5-6.0 Road. Begin road renovation which includes brushing; blading, watering, rolling and reshaping road surface; cleaning ditch lines; cleaning or enlarging all existing culvert catch basins; and clearing all culvert inlets and outlets.
0.05	Existing 18" CMP.
0.15	Existing 18" CMP.
0.20	Junction right, 39-6-11.1 Road. End road renovation.

ROAD 39-6-11.1 – Cedar Flat Spur

(Segment A1) ASC

MP	TASKS
0.00	Junction with 39-6-11.0 Road. Begin road renovation which includes brushing; blading, watering, rolling and reshaping road surface; cleaning ditch lines; cleaning or enlarging all existing culvert catch basins; clearing all culvert inlets and outlets; and replacing specified culverts and surface material. Existing 18" CMP.
0.05	Begin road scarification of rutting and potholes. Existing 18" CMP.
0.10	End road scarification.
0.31	Boundary line between Sections 11 and 2. End Segment.

(Segment A2 - Private) ASC

MP	TASKS
0.31	Continue road renovation.
0.32	Existing 18" CMP.
0.40	Existing 18" CMP.
0.50	Existing 18" CMP.
0.56	Existing 18" CMP.
0.63	Existing 18" CMP.
0.64	Install a new 18" x 60' CMP. Properly bed, backfill, and compact materials per Exhibits C6 and C7. All excavation shall comply with current OSHA regulations. Reconstruct road prism to original road grade elevations and cross section. Furnish, place, water, and roll (compact) a 4" lift of 1-1/2" minus crushed rock material (12 CY) per contract specifications.
0.67	Junction right, 39-6-2.0 Road. End road renovation.

ROAD 39-6-2.0 – Elk B Sp Bear Wall

(Segment A - Private) NAT

MP	TASKS
0.00	Junction with 39-6-11.1 Road. Begin road renovation which includes brushing; blading, watering, rolling and reshaping road surface; cleaning ditch lines; cleaning or enlarging all existing culvert catch basins; and clearing all culvert inlets and outlets. Begin road scarification of rutting and potholes.
0.01	Existing 18" CMP.
0.08	Existing 18" CMP.
0.10	End road scarification.
0.12	Existing 18" CMP.
0.20	Junction right, 39-6-2.1 Road. End Segment.

(Segment B - Private) NAT

MP	TASKS
0.20	Continue road renovation.
0.36	End Segment at boundary line between Sections 2 and 3. Existing private green gate. Contact Tristar Southwest Oregon Timberland LLC for key; phone number is (541) 494-4400 and point of contact is either Rich Conner at extension 27 or Russ Morrison at extension 26.

(Segment C) NAT

MP	TASKS
0.36	Continue road renovation.
0.47	Existing 24" CMP at draw/live stream.
0.56	Existing 18" CMP.
0.59	End road renovation at unit boundary.

ROAD 39-6-2.1 – Elk B Sp

(Segment A - Private) NAT

MP	TASKS
0.00	Junction with 39-6-2.0 Road. Begin road renovation which includes blading, watering, rolling and reshaping road surface; and reconstructing existing water bars.
0.01	Replace existing water bar at completion of harvest.
0.04	Replace existing water bar at completion of harvest.
0.08	Replace existing water bar at completion of harvest.
0.21	Boundary line between Sections 2 and 3. End Segment A.

(Segment B) NAT

MP	TASKS
0.21	Continue road renovation.
0.22	Replace existing water bar at completion of harvest. Begin heavy road renovation which includes clearing and grubbing; brushing; and blading, watering, rolling and reshaping road surface.
0.72	End road renovation at unit boundary.

ROAD 39-6-2.2 – Cedar Flat Spur

NAT

MP	TASKS
0.00	Junction with 39-5-6.0 Road. Begin road renovation which includes brushing; blading, watering, rolling and reshaping road surface; cleaning ditch lines; cleaning or enlarging all existing culvert catch basins; clearing all culvert inlets and outlets; and reconstructing existing water dips.
0.19	Existing 18" CMP.
0.24	Junction right, jeep road.
0.33	Existing 18" CMP.
0.37	Existing 24" CMP with downspout.
0.44	Reconstruct existing water dip.
0.54	End road renovation at unit boundary.

ROAD 39-5-18.1 - Low Divide

(Segment A-D) BST

MP	TASKS
0.00	Junction with Caves Camp Road (County). ***BLM maintenance.***
0.02	Junction left, private drive.
0.08	Junction left, private drive.
0.43	Junction right, 39-6-13.0 Road.
2.26	Junction right, 39-6-11.0 Road.
3.24	Junction left, 39-6-25.0 Road.
3.34	Junction right, 39-6-25.4 Road.
3.82	Junction left, 39-6-36.0 Road. End Segment D and BLM maintenance.

(Segment E) ASC

MP	TASKS
3.82	Junction left, 39-6-36.0 Road. Begin road renovation which includes brushing; blading, watering, rolling and reshaping road surface; cleaning ditch lines; cleaning or enlarging all existing culvert catch basins; clearing all culvert inlets and outlets; and replacing specified culverts and surface material.
3.96	Remove existing 18" culvert and replace with 18" x 40' CMP. Properly bed, backfill, and compact materials per Exhibits C6 and C7. All excavation shall comply with current OSHA regulations. Reconstruct road prism to original road grade elevations and cross section. Furnish, place, water, and roll (compact) a 4" lift of 1-1/2" minus crushed rock material (12 CY) per contract specifications.
4.06	Junction right, 39-5-36.1 Road.
4.09	Junction right, 39-5-36.2 Road. End road renovation.

ROAD 39-6-36.1 - Spur 1

(County) NAT

MP	TASKS
0.00	Junction with 39-6-18.1 Road. Begin road renovation which includes clearing and grubbing; brushing; and blading and reshaping road surface.
0.07	End road renovation at boundary line between Sections 36 and 25. Begin Temp Route 5.

ROAD 39-6-36.2 - Spur 2

(Segment A - County) NAT

MP	TASKS
0.00	Junction with 39-6-18.1 Road. Begin road renovation which includes clearing and grubbing; brushing; blading and reshaping road surface; and reconstructing existing water dips.
0.06	Boundary line between Sections 36 and 25. End Segment.

(Segment B) NAT

MP	TASKS
0.06	Continue road renovation.
0.10	Reconstruct existing water dip.
0.21	End road renovation at boundary line between Sections 25 and 26.

ROAD 39-6-25.4 - Spur

(Segment A) ASC/NAT

MP	TASKS
0.00	Junction with 39-6-18.1 Road. Begin road renovation which includes brushing; blading, watering, rolling and reshaping road surface; cleaning ditch lines; cleaning or enlarging all existing culvert catch basins; clearing all culvert inlets and outlets; reconstructing existing water dips and bars; and removing and replacing existing barricades. Existing road surface at entrance is ASC; protect surface material.
0.03	Remove existing barricade and reconstruct at completion of harvest operations. End ASC surface and begin NAT surface.
0.06	Replace existing water bar at completion of harvest.
0.08	Replace existing water bar at completion of harvest.
0.09	Existing 18" HDPE culvert.
0.11	Replace existing water bar at completion of harvest.
0.12	Existing 18" HDPE culvert.
0.13	Replace existing water bar at completion of harvest.
0.14	Existing 18" CMP.
0.15	End of crown/ditch roadway section; begin out-slope roadway section.
0.16	Replace existing water bar at completion of harvest.
0.19	Replace existing water bar at completion of harvest.
0.20	Replace existing water bar at completion of harvest.
0.23	Replace existing water bar at completion of harvest.
0.25	Replace existing water bar at completion of harvest.
0.27	Replace existing water bar at completion of harvest.
0.29	End Segment at boundary line between Sections 25 and 26.

(Segment B - Private) NAT

MP	TASKS
0.29	Continue road renovation.
0.30	Reconstruct existing water dip.
0.31	Junction right, 39-6-26.1 Road. Large existing landing area. Replace existing water bar at completion of harvest.
0.33	Replace existing water bar at completion of harvest.
0.36	Replace existing water bar at completion of harvest.
0.41	Replace existing water bar at completion of harvest.
0.43	Replace existing water bar at completion of harvest.
0.45	Replace existing water bar at completion of harvest.
0.47	Replace existing water bar at completion of harvest.
0.51	Junction right, 39-6-26.2 Road. Replace existing water bar at completion of harvest.
0.53	Replace existing water bar at completion of harvest.
0.55	Replace existing water bar at completion of harvest.
0.57	Replace existing water bar at completion of harvest.
0.59	End Segment at property line within Section 26.

(Segment C) NAT

MP	TASKS
0.59	Continue road renovation. Begin clearing and grubbing.
0.67	End Segment at property line within Section 26.

(Segment D - Private) NAT

MP	TASKS
0.67	Continue road renovation.
0.68	Replace existing water bar at completion of harvest.

0.70	Replace existing water bar at completion of harvest.
0.74	End Segment at property line within Section 26.

(Segment E) NAT

MP	TASKS
0.74	Continue road renovation.
0.78	Replace existing water bar at completion of harvest.
0.84	Junction right, jeep road.
0.91	Replace existing water bar at completion of harvest.
0.98	Water running across road. Construct AWD. Furnish, place, water, and roll (compact) a lift of pit run rock material (12 CY) per contract specifications.
1.10	Replace existing water bar at completion of harvest.
1.12	Junction with 39-6-11.0 Road. End road renovation and clearing and grubbing.

ROAD 39-6-26.1 - Spur

(Private) NAT

MP	TASKS
0.00	Junction with 39-6-25.4 Road. Begin road renovation which includes brushing; blading, watering, rolling and reshaping road surface; install a new culvert with lead in ditches; reconstructing existing water bars; and constructing an AWD.
0.01	Replace existing water bar at completion of harvest.
0.02	Replace existing water bar at completion of harvest.
0.04	Replace existing water bar at completion of harvest.
0.06	Replace existing water bar at completion of harvest.
0.08	Existing large landing area.
0.12	Replace existing water bar at completion of harvest.
0.13	Replace existing water bar at completion of harvest.
0.14	Replace existing water bar at completion of harvest.
0.15	Construct AWD. Furnish, place, water, and roll (compact) a lift of pit run rock material (12 CY) per contract specifications.
0.16	Spring continuously seeping across road. Install a new 18" x 30' CMP. Properly bed, backfill, and compact materials per Exhibits C6 and C7. All excavation shall comply with current OSHA regulations. Reconstruct road prism to original road grade elevations and cross section. ***Install erosion and sediment control devices and dewater site prior to installation***.
0.17	Replace existing water bar at completion of harvest.
0.19	Replace existing water bar at completion of harvest.
0.20	Replace existing water bar at completion of harvest.
0.21	Replace existing water bar at completion of harvest.
0.22	Replace existing water bar at completion of harvest.
0.23	Replace existing water bar at completion of harvest.
0.25	End road renovation at property line within Section 26. Begin Temp Route 1.

ROAD 39-6-26.2 - Spur

(Private) NAT

MP	TASKS
0.00	Junction with 39-6-25.4 Road. Begin road renovation which includes clearing and grubbing/stump removal; brushing; blading, watering, rolling and reshaping road surface; and reconstructing existing water bars.
0.02	Replace existing water bar at completion of harvest.
0.06	Replace existing water bar at completion of harvest.

0.10	End road renovation at property line within Section 26. Begin Temp Route 2.

ROAD 39-6-11.0 – Bear Wallow
(Segment D) ASC

MP	TASKS
0.00	Junction with 39-5-18.1 Road. Begin road renovation which includes brushing; blading, watering, rolling and reshaping road surface; cleaning ditch lines; cleaning or enlarging all existing culvert catch basins; and clearing all culvert inlets and outlets.
0.07	Existing 18" CMP with 1/2-round downspout. Remove debris pile from downspout and reattach.
0.22	Remove existing 18" culvert and replace with 18" x 32' CMP with 10' 1/2-round anchored downspout. Properly bed, backfill, and compact materials per Exhibits C6 and C7. All excavation shall comply with current OSHA regulations. Reconstruct road prism to original road grade elevations and cross section. Furnish, place, water, and roll (compact) a 4" lift of 1-1/2" minus crushed rock material (12 CY) per contract specifications.
0.26	Remove existing 18" culvert with downspout and replace with 18" x 32' CMP with 10' 1/2-round anchored downspout. Properly bed, backfill, and compact materials per Exhibits C6 and C7. All excavation shall comply with current OSHA regulations. Reconstruct road prism to original road grade elevations and cross section. Furnish, place, water, and roll (compact) a 4" lift of 1-1/2" minus crushed rock material (12 CY) per contract specifications.
0.35	Begin road scarification of rutting and potholes.
0.37	Remove existing 18" culvert and replace with 18" x 36' CMP with 10' 1/2-round anchored downspout. Properly bed, backfill, and compact materials per Exhibits C6 and C7. All excavation shall comply with current OSHA regulations. Reconstruct road prism to original road grade elevations and cross section. Furnish, place, water, and roll (compact) a 4" lift of 1-1/2" minus crushed rock material (12 CY) per contract specifications.
0.45	End road scarification.
0.46	Existing 18" CMP. Round-out inlet.
0.53	Property line within Section 24. Remove existing 24" CMP at draw/live stream and replace with 24" x 32' CMP. Properly bed, backfill, and compact materials per Exhibits C6 and C7. All excavation shall comply with current OSHA regulations. Reconstruct road prism to original road grade elevations and cross section. Furnish, place, water, and roll (compact) a 4" lift of 1-1/2" minus crushed rock material (12 CY) per contract specifications. ***Install erosion and sediment control devices and dewater site prior to installation***.
0.60	Remove existing 18" culvert with downspout and replace culvert with 18" x 32' CMP utilizing the existing 1/2-round downspout; re-anchor downspout. Properly bed, backfill, and compact materials per Exhibits C6 and C7. All excavation shall comply with current OSHA regulations. Reconstruct road prism to original road grade elevations and cross section. Furnish, place, water, and roll (compact) a 4" lift of 1-1/2" minus crushed rock material (12 CY) per contract specifications.
0.69	Existing 18" CMP.
0.77	Remove existing culvert and replace with 24" x 38' CMP with 10' 1/2-round anchored downspout. Properly bed, backfill, and compact materials per Exhibits C6 and C7. All excavation shall comply with current OSHA regulations. Reconstruct road prism to original road grade elevations and cross section.

	Furnish, place, water, and roll (compact) a 4" lift of 1-1/2" minus crushed rock material (12 CY) per contract specifications.
0.85	Existing 18" CMP. Furnish and install a 10' 1/2-round anchored downspout.
0.91	Existing 18" CMP.
1.00	Junction right, 39-6-23.1 Road.
1.16	Remove existing 18" culvert and replace with 18" x 36' CMP. Properly bed, backfill, and compact materials per Exhibits C6 and C7. All excavation shall comply with current OSHA regulations. Reconstruct road prism to original road grade elevations and cross section. Furnish, place, water, and roll (compact) a 4" lift of 1-1/2" minus crushed rock material (12 CY) per contract specifications.
1.30	Remove existing 18" CMP at draw/live stream and replace with 24" x 42' CMP with 10' 1/2-round anchored downspout. Properly bed, backfill, and compact materials per Exhibits C6 and C7. All excavation shall comply with current OSHA regulations. Reconstruct road prism to original road grade elevations and cross section. Furnish, place, water, and roll (compact) a 4" lift of 1-1/2" minus crushed rock material (12 CY) per contract specifications. ***Install erosion and sediment control devices and dewater site prior to installation***.
1.42	Existing 18" CMP.
1.51	Junction right, 39-6-23.2 Road and junction left, 39-6-23.0 Road.
1.54	Existing 18" CMP.
1.62	Existing 18" CMP.
1.72	Existing 18" CMP.
1.78	Existing 18" CMP.
1.80	Existing 24" CMP.
1.86	Existing 18" CMP.
1.92	Existing 18" CMP.
1.98	Existing 18" CMP.
2.01	Existing 18" CMP.
2.14	Existing 18" CMP.
2.18	Junction left, 39-6-25.4 Road.
2.25	Existing 18" CMP.
2.27	Junction left, 39-6-26.0 Road. Existing 18" CMP at entrance to -26.0 Road.
2.34	Existing 18" CMP.
2.40	Existing 18" CMP.
2.50	Existing 18" CMP.
2.62	Existing 24" CMP.
2.72	Existing 18" CMP.
2.82	Existing 18" CMP.
2.96	Existing 18" CMP.
3.06	Existing 18" CMP.
3.15	Junction left, 39-6-23.3 Road.
3.24	Truck turn-around location. End road renovation.

ROAD 39-6-26.0 - Spur
(Segment A - County) NAT

MP	TASKS
0.00	Junction with 39-6-11.0 Road. Begin road renovation which includes brushing; blading, watering, rolling and reshaping road surface; cleaning ditch lines; cleaning or enlarging all existing culvert catch basins; clearing all culvert inlets and outlets; reconstructing existing water bars and dips; and removing and replacing existing barricades.

0.02	Remove existing barricade and reconstruct at completion of harvest operations.
0.05	Reconstruct existing water dip.
0.06	Replace existing water bar at completion of harvest.
0.08	Replace existing water bar at completion of harvest.
0.10	Replace existing water bar at completion of harvest.
0.11	Junction right, jeep road.
0.12	Replace existing water bar at completion of harvest.
0.14	Existing 24" CMP with lead in ditches.
0.15	Replace existing water bar at completion of harvest.
0.19	Replace existing water bar at completion of harvest.
0.21	Replace existing water bar at completion of harvest.
0.22	Junction right, jeep road.
0.44	End Segment at property line within Section 26.

(Segment B) NAT

MP	TASKS
0.44	Continue road renovation.
0.47	Begin through-cut roadway section.
0.50	Junction left, Temp Route 4.
0.52	End through-cut roadway section; begin out-sloped roadway section.
0.70	End road renovation at property line/unit boundary within Section 26.

ROAD 39-6-23.3 – Low Divide Spur

NAT

MP	TASKS
0.00	Junction with 39-6-11.0 Road. Begin road renovation which includes brushing; and blading, watering, rolling and reshaping road surface.
0.16	End road renovation at unit boundary.

TEMP ROUTE RENOVATION WORK LIST

Temp Route 1

NAT

MP	TASKS
0.00	At end of 39-6-26.1 Road, begin Temp Route reconstruction. Decommission, waterbar, seed and mulch, and barricade after use.
0.01	Construct barricade after use.
0.09	Proposed landing location. End Temp Route reconstruction.

Temp Route 2

NAT

MP	TASKS
0.00	At end of 39-6-26.2 Road, begin Temp Route reconstruction. Decommission, waterbar, seed and mulch, and barricade after use.
0.01	Construct barricade after use.
0.015	Junction left, Temp Route 3.
0.04	Proposed landing location. End Temp Route reconstruction.

Temp Route 3
NAT

MP	TASKS
0.00	Junction with Temp Route 2. Begin Temp Route construction. Decommission, waterbar, seed and mulch, and barricade after use.
0.01	Construct barricade after use.
0.02	Heavy clearing and grubbing. Properly remove large stump.
0.03	Begin full bench roadway section.
0.06	Old large downed tree.
0.08	Proposed landing location. End Temp Route construction.

Temp Route 4
NAT

MP	TASKS
0.00	Junction with 39-6-26.0 Road, begin Temp Route reconstruction. Decommission, waterbar, seed and mulch, and barricade after use.
0.01	Construct barricade after use.
0.08	Proposed landing location. End Temp Route reconstruction.

Temp Route 5
NAT

MP	TASKS
0.00	At end of 39-6-36.1 Road, begin Temp Route reconstruction. Decommission, waterbar, seed and mulch, and barricade after use.
0.01	Construct barricade after use.
0.07	Proposed landing location. End Temp Route reconstruction.

GENERAL – 100

101 - Prework Conference(s):

A prework conference will be held prior to the start of any work or harvesting operations. The Purchaser shall request the conference at least 48 hours prior to the time it is to be held. The conference will be attended by the Purchaser and/or his representative(s), subcontractor(s) and/or his or their representative(s) and the Authorized Officer and/or his representative(s).

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

102 - Definitions:

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

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

ACI - American Concrete Institute

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

ASTM - American Society for Testing and Materials.

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

BLM - Bureau of Land Management

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

Burst Strength - The resistance of a geotextile material to rupture from pressure applied at right angles to the plane of the geotextile material under specified conditions, usually expressed as the amount of pressure causing failure. Rupture or burst results from tensile failure of the geotextile material.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Road Centerline - The longitudinal center of a roadbed.

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

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

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

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

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

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

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

Spalls - Flakes or chips of stone.

Specifications - A general term applied to all directions, provisions, and requirements

pertaining to performance of the work.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

102a - Tests Used in These Specifications:

AASHTO T 11	Quantity of rock finer than No. 200 sieve.
AASHTO T 27	Sieve analysis of fine and coarse aggregate using sieves with square openings; gradation.
AASHTO T 89	Liquid limit of material passing the No. 40 sieve. Water content at which the soil passes from a plastic to a liquid state.
AASHTO T 90	Plastic limits and plasticity index of soil. a. Plastic limit - lowest water content at which the soil remains plastic. b. Plasticity index - range of water content, within which the material is in a plastic state. Numerical difference between the liquid and plastic limits of the soil.
AASHTO T 96	Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.
AASHTO T 99	Relationship between soil moisture and maximum density of soil. Method A - 4" mold, soil passing a No. 4 Sieve. 25 blows/layer & 3 layers. Method D - 6" mold, soil passing a 19.00mm (3/4 inches) sieve. 56 blows/layer & 5 layers.
AASHTO T 176	Shows relative portions of fine dust or claylike materials in soil or graded aggregate.
AASHTO T 180	(OSHD 106-71) moisture density relationship of soil same as AASHTO T 99 proctor but uses a 10-lb rammer & 18-in drop.
AASHTO T 191	Sand Cone. Density of soil in place: For subgrade use 6-inch or 12-inch cone. For rock surfacing for 1-1/2-inch minus to 3-inch minus use 12-inch cone.
AASHTO T 205	Rubber balloon. Density of soil in place. Use for compacted or firmly bonded soil.
AASHTO T 210	Durability of aggregates based on resistance to produce fines.
AASHTO T 224	Correction for coarse particles in the soil.
AASHTO T 310	Determination of density of soil and soil-aggregates in place by nuclear methods.
AASHTO T 248	Reducing field samples of aggregate to testing size by mechanical

splitter, quartering, or miniature stockpile sampling.

ASTM D 4564 Determination of relative density of cohensionless soils.

DMSO (dimethyl sulfide) - Determines volume of expanding clays in aggregates. Usually associated with marine basalts.

103 - Compaction equipment shall meet the following requirements:

103f - Vibratory roller. The drum diameter shall be not less than 48 inches, the drum width not less than 58 inches, and have a turning radius of 15 feet or less. Vibration frequency shall be regulated in steps to 1400, 1500, and 1600 vibrations per minute (VPM), corresponding to engine speeds of 1575, 1690, and 1800 RPM. The centrifugal force developed shall be 7 tons at 1600 RPM. It shall be activated by a power unit of not less than 25 horsepower. The vibratory roller shall be self-propelled or drawn by a vehicle of sufficient horsepower to enable the unit to travel through a loose layer of material at a speed ranging from 0.9 mile to 1.8 miles per hour, as directed by the Authorized Officer.

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

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

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

CLEARING AND GRUBBING - 200

201 - This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions within the clearing limits in accordance with these specifications.

202 - Where clearing limits have not been posted, 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, the limits shall extend 10 feet out from the outside edge of the structure.

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

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

203c - Disposal of logs from private timber cleared within the limits established shall consist of decking at a location designated by the Authorized Officer.

204 - Grubbing shall consist of the removal and disposal of stumps, roots, and other wood material embedded in the ground and protruding obstacles remaining as a result of the clearing operation in accordance with Subsections 204c and 204e. Undisturbed stumps, roots and other solid objects which will be a minimum of 3 feet below subgrades or slope surfaces or embankments are excluded.

204c - On excavated areas, roots and embedded wood shall be removed to a depth not less than 6 inches below the subgrade.

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

205 - Clearing and grubbing debris shall not be placed or permitted to remain in or under road embankment sections. Such debris will, however, be permitted to remain under waste material from full-bench construction on steep side slopes.

206 - Clearing and grubbing debris shall be disposed of by scattering in accordance with Subsection 210 and at the following road locations:

Road No.	From M.P.	To M.P.
39-6-2.1 (B)	0.21	0.72
39-6-25.4 (C-E)	0.59	1.12
39-6-26.2	0.00	0.10
39-6-36.1	0.00	0.07
All Temp Routes (1-5)	0.00	End of Temp

210 - Disposal of clearing and grubbing debris shall be by scattering over government owned lands outside of established clearing limits in a manner acceptable to the Authorized Officer. The areas for such scattering shall have the prior approval of the Authorized Officer.

210a - Disposal of clearing and grubbing debris on non-government property by scattering and/or piling this material outside of clearing limits will be permitted provided the Purchaser obtains a written permit from the property owner on whose property the disposal is to be made. The Purchaser shall furnish the Authorized Officer a certified copy of the permit and a written release from the property owner absolving the Government from responsibilities in connection with the disposal of debris on said property.

212 - No grading will be permitted prior to completion and approval by the Authorized Officer of the required clearing and grubbing work, except that stump grubbing may proceed with the excavation of the road prism.

213 - No clearing or grubbing debris shall be left lodged against standing trees.

EXCAVATION AND EMBANKMENT - 300

301 - This work shall consist of excavating, overhaul, placement of embankments, backfilling, leveling, ditching, grading, out-sloping, and scarification of the subgrade, compaction, disposal of excess and unsuitable materials, and other earth-moving work in accordance with these specifications and conforming to the typical cross sections shown on the plans.

302 - Excavation shall also consist of the excavation of temporary route and landing cut sections, backfilling, leveling, ditching, grading, compaction, and other earth moving work necessary for the construction of the temporary routes in accordance with these specifications and conforming to the typical cross sections shown on the plans.

303 - Suitable material removed from the excavation shall be used in the formation of embankment subgrade, shoulders, slopes, bedding, backfill for structures, and for other purposes as shown on the plans.

305 - Embankment construction shall consist of the placement of excavated materials, backfilling, leveling, grading, compaction, and other earth-moving work necessary for the construction of the temporary routes and landings in accordance with these specifications and conforming to the typical cross sections shown on the plans.

305a - Material used in the construction of embankment sections shall be free of stumps, cull logs, brush, muck, sod, roots, frozen material, and other deleterious materials and shall be placed and compacted as specified.

305b - Embankment materials shall be placed in successive parallel layers on areas cleared of stumps, cull logs, brush, sod, and other vegetative and deleterious materials, except as provided under Subsection 204. Temporary route embankments of earth material shall be placed in horizontal layers not exceeding 8 inches in depth.

306a - Minimum compaction for each layer of embankment and selected temporary route excavation material placed at optimum moisture shall be 6 passes over each full-width layer or fraction thereof.

306g - All fill slopes shall be compacted to 85% of maximum density, either by walking with cat/excavator or by pressing with excavator bucket, to prevent surface erosion and raveling.

309 - The top of cut slopes shall be rounded by blending into the adjacent terrain for a distance not less than 1 foot and not more than 3 feet beyond the top of the cut. Rounding shall be performed in soils that can be shaped without ripping or

blasting.

314 - When heavy clays, muck, clay shale, or other deleterious material for forming the temporary route roadbed is encountered in cuts at subgrade, it shall be excavated to a minimum depth of 2 feet below the subgrade elevation and the excavated area backfilled with a selected excavated material approved by the Authorized Officer. The backfill material shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density in accordance with the requirements of Subsection 306g. Unsuitable material shall be disposed of as directed by the Authorized Officer.

321 - Excess excavated, unsuitable, or slide materials shall not be disposed of on areas where the material will encroach on a stream course or other body of water. Such materials shall be end dumped and disposed of as directed by the Authorized Officer.

321c - End-dumping will be permitted for the placement of excess materials under Subsection 321 in designated disposal areas or within areas approved by the Authorized Officer. Watering, rolling, and placement in layers are not required. Materials placed shall be sloped, shaped, and otherwise brought to a visible condition acceptable to the Authorized Officer.

324 - Excavated material shall not be allowed to cover boles of standing trees to a depth in excess of 2 feet on the uphill side.

PIPE CULVERTS - 400

401 - This work shall consist of furnishing and installing pipe culverts and half round downspouts in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Individual lengths and locations are approximate; final lengths and locations will be determined by the Authorized Officer.

402 - The pipe culverts shall be installed on the following roads and location locations:

Road No.	M.P.
39-5-18.1 (E)	3.96
39-6-11.0 (D)	0.22, 0.26, 0.37, 0.53, 0.60, 0.77, 1.16, & 1.30
39-6-11.1 (A2)	0.64
39-6-26.1	0.16

403 - Grade culverts shall have a gradient of from 2 percent to 4 percent greater than the adjacent road grade, except grades shall not exceed 10 percent. Grade culverts shall be skewed down grade 30 degrees as measured from the perpendicular to the centerline unless otherwise specified on the plans.

404 - Damage to the spelter, or burn back in excess of 3/8 inch, shall be wire brushed and painted with two coats of zinc-rich paint on zinc-coated, steel pipe and aluminum-rich paint on aluminum or aluminum-coated pipe.

405a - Corrugated aluminized steel-welded pipe culverts shall conform to the requirements of AASHTO M 274.

406a - "Hugger"-type coupling bands shall only be used with annular corrugated pipe culverts, or helically corrugated pipe culverts having annular reformed ends. Annular reformed ends shall consist of 2 annular corrugations.

406d - Pipe culverts at the following locations:

Road No.	M.P.
39-5-18.1 (E)	3.96
39-6-11.0 (D)	0.22, 0.26, 0.37, 0.53, 0.60, 0.77, 1.16, & 1.30
39-6-11.1 (A2)	0.64
39-6-26.1	0.16

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

407a - Half round downspouts conforming to the material and construction requirements shown on Exhibit C's shall be constructed for culverts as shown on the plans at the following locations:

Road No.	M.P.
39-6-11.0 (D)	0.22, 0.26, 0.37, 0.77, 0.85, & 1.30

408 - Pipe culverts and shall be placed on the bed starting at the downstream end with the inside circumferential laps pointing downstream and with the longitudinal laps at the side or quarter points. Coupling bands of the type required under these specifications shall be installed so as to provide the circumferential and longitudinal strength necessary to preserve the pipe alignment, prevent separation of the pipe sections, and minimize infiltration of fill material.

410 - Pipe shall be unloaded and handled with reasonable care. If the Authorized Officer determines any structure is damaged to the extent that it is unsuitable for use in the road construction, it shall be replaced at the Purchaser's expense.

411 - Trenches necessary for the installation of pipe culverts shall conform to the typical diagram included in the plans and the Culvert Installation Detail Sheet.

412 - Where ledge rock, boulders, soft, or spongy soils are encountered, they shall be excavated a minimum of 24 inches below the invert grade for a width of at least one pipe diameter or span on each side of the pipe and shall be backfilled with

selected granular or fine readily compactable soil material.

413 - Pipe culverts shall be bedded on a fine readily compactable soil material having a depth of not less than 10 percent of the diameter or height of the drainage structure concerned or a minimum depth of:

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

Foundation material shall be of uniform density throughout the length of the structure and shall be shaped to fit the pipe.

414 - The invert grade of the bedding shall be cambered in accordance with the requirements and details shown on the plans and as directed by the Authorized Officer.

416 - Side-fill material for pipe culverts shall be placed within 1 pipe diameter, or a minimum of 2 feet, of the sides of the pipe barrel, and to 1 foot over the pipe with fine, readily compactable soil or granular fill material free of excess moisture, muck, frozen material, roots, sod, or other deleterious or caustic material and devoid of rocks or stones of sizes which may impinge upon and damage the pipe or otherwise interfere with proper compaction.

417 - For pipe culverts, side-fill material conforming to the requirements of Subsection 416 shall be placed and compacted under the haunches of the pipe, and shall be brought up evenly and simultaneously on both sides of the pipe to 1 foot above the pipe, in layers not exceeding 6 inches in depth and 1 pipe diameter/span, or a minimum of 2 feet in width each side of, and adjacent to, the full length of the pipe barrel. Each layer shall be moistened or dried to a uniform moisture content suitable for maximum compaction and immediately compacted by approved hand or pneumatic tampers until a uniform density of 85 percent of the maximum density.

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

419 - The pipe culverts after being bedded and backfilled as required by these specifications shall be protected by a 2-foot cover of fill before heavy equipment is permitted to cross the drainage structures. Removal of the protection fill shall be as directed by the Authorized Officer.

423 - Construction of catch basins conforming to lines, grades, dimensions and typical diagrams shown on Exhibit C6, included in the plans, shall be required for

culverts at the following locations:

Road No.	M.P.
39-6-26.1	0.16

427 - The Purchaser shall record culvert sizes, lengths and location actually installed, where they vary from the plans, on a copy of the culvert list. This culvert list shall be furnished to the Authorized Officer.

428 - The Purchaser shall be responsible for removal and disposal of the old culverts in a legal manner, and for any fees required. The Purchaser shall remove the old culverts from the project site prior to acceptance of road construction for each road renovation.

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

RENOVATION OF EXISTING ROADS - 500

501 - This work shall consist of reconditioning and preparing the roadbed and shoulders, cleaning and shaping drainage ditches, trimming vegetation from cut and embankment slopes, and cleaning and repairing drainage structures of existing roads in accordance with these specifications and as marked on the ground with stakes.

502 - The existing road surface shall be scarified to its full width and to a depth of 6 inches to eliminate surface irregularities, bladed, shaped, watered, and rolled to the lines, grades, dimensions, and typical cross sections shown on the plans at the following location(s):

Road No.	From M.P.	To M.P.
39-6-2.0 (A)	0.00	0.10
39-6-11.0 (D)	0.35	0.45
39-6-11.1 (A1)	0.05	0.10

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

504 - Existing road surfaces shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width with equipment conforming to requirements of Subsections 103f, 103g, and 103i and in accordance with the following table:

Road No.	From M.P.	To M.P.	Subsection 504
39-5-18.1 (E)	3.82	4.09	504a
39-6-11.0 (A)	0.00	0.20	504a
39-6-11.0 (D)	0.00	3.24	504a
39-6-11.1 (A1-A2)	0.00	0.67	504a
39-6-12.1	0.00	0.22	504a

504 – (Continued):

Road No.	From M.P.	To M.P.	Subsection 504
39-6-12.5	0.00	0.08	504a

504a - Minimum compaction required shall be 6 passes over each full-width layer, or fraction thereof, as measured along the centerline per layer of material.

506 - The inlet end of all existing drainage structures

Road No.	From M.P.	To M.P.
39-5-18.1 (E)	3.82	4.09
39-6-2.0 (A-C)	0.00	0.59
39-6-2.2	0.00	0.54
39-6-11.0 (A)	0.00	0.20
39-6-11.0 (D)	0.00	3.24
39-6-11.1 (A1-A2)	0.00	0.67
39-6-12.1	0.00	0.22
39-6-12.5	0.00	0.08
39-6-25.4 (A)	0.00	0.15
39-6-26.1	0.15	0.17
39-6-26.0 (A)	0.13	0.15

shall be cleared of vegetative debris and boulders that obstruct normal stream flow. Pipe inverts shall be cleared of sediment and other debris lodged in the barrel of the pipe. The outflow area of all pipe structures shall be cleared of rock and vegetative obstructions which will impede the structure's designed outflow configuration. Catch basins shall conform to the lines, grade, dimensions, and typical diagram shown on the plans.

507 - Existing drainage structures at the following locations:

Road No.	M.P.
39-5-18.1 (E)	3.96
39-6-11.0 (D)	0.22, 0.26, 0.37, 0.53, 0.60, 0.77, 1.16, & 1.30
39-6-11.1 (A2)	0.64
39-6-26.1	0.16

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

508 - Vegetation within the drainage ditches of existing roads at the following locations:

Road No.	From M.P.	To M.P.
39-5-18.1 (E)	3.82	4.09
39-6-2.0 (A-C)	0.00	0.59
39-6-2.2	0.00	0.54
39-6-11.0 (A)	0.00	0.20
39-6-11.0 (D)	0.00	3.24
39-6-11.1 (A1-A2)	0.00	0.67
39-6-12.1	0.00	0.22
39-6-12.5	0.00	0.08
39-6-25.4 (A)	0.00	0.15
39-6-26.1	0.15	0.17
39-6-26.0 (A)	0.13	0.15

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

509 - The finished grading shall be approved in writing by the Authorized Officer 2 days prior to surfacing operations. The Purchaser shall give the Authorized Officer 3 days' notice prior to final inspection of the grading operations.

WATERING - 600

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

602 - Water, when needed for compaction or laying dust, shall be applied at the locations, in the amounts, and during the hours as directed by the Authorized Officer. Amounts of water to be provided will be the minimum needed to properly execute the compaction requirements in conformance with these specifications, and for laying dust during work periods.

603 - Water trucks used in this work shall be equipped with a distributing device of ample capacity and of such design as to ensure uniform application of water on the road bed.

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

AGGREGATE BASE COURSE - 700
PITRUN ROCK MATERIAL

701 - This work shall consist of furnishing, hauling and placing one or more layers of pitrun rock material on roadbeds and waterdips approved for placing pitrun materials in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans.

702a - Pitrun rock materials used in this work may be obtained from source selected by the Purchaser at his option, providing the materials furnished comply with these specifications and the source is approved in writing by the Authorized Officer prior to use.

703 - Pitrun rock materials shall consist of talus rock, bank run or river run gravels, partly decomposed granite or basalt, cinders, or other approved materials. The materials shall be reasonably free from vegetative matter or other deleterious material.

705 - Pitrun rock material shall be placed in layers of sufficient thickness to accommodate the material, except that the maximum thickness of any layer shall not exceed 6 inches.

706 - Oversize material that cannot be accommodated in the layer shall be removed at the source or on the road, and shall be disposed of as directed by the Authorized Officer.

708 - The roadbed as shaped and compacted under Section 500 of these specifications shall be approved in writing by the Authorized Officer prior to placement of pitrun rock material. Notification for final inspection prior to rocking shall be 72 hours prior to the inspection and shall be 10 days prior to start of surfacing operations.

709 - Pitrun rock material shall be placed on roadbed waterdip, blade processed and spread to required dimensions.

710 - Pitrun rock material shall be compacted by routing construction and hauling equipment over the full width of each layer placed.

712 - Pitrun rock material shall be surface bladed during the compaction operation to remove irregularities and to produce a smooth running surface.

AGGREGATE SURFACE COURSE - 1200
CRUSHED ROCK MATERIAL

1201 - This work shall consist of furnishing, hauling, and placing one or more layers of crushed rock material on roadbeds approved for placing crushed rock material in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans. Material not conforming to these specifications will be rejected, and shall be removed from the road.

1202a - Crushed rock materials used in this work may be obtained from commercial sources selected by the Purchaser at his option and expense, providing the rock materials furnished comply with the specifications.

1203 - When crushed rock material is produced from gravel, not less than 65 percent by weight of the particles retained on the No. 4 sieve will have 2 manufactured fractured faces. If necessary to meet the above requirements or to eliminate an excess of filler, the gravel shall be screened before crushing.

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

TABLE 1204

AGGREGATE SURFACE COURSE
CRUSHED ROCK MATERIAL
Percentage by weight passing square mesh sieves
AASHTO T 11 & T 27

GRADATION

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

1205 - Crushed rock material retained on the No. 4 sieve shall have a percentage of loss of not more than 35 at 500 revolutions, as determined by AASHTO T 96.

1206 - Crushed rock material shall show a durability value of not less than 35 as determined by AASHTO T210.

1207 - That portion of crushed rock material passing the No. 40 sieve, including blending filler, shall have a liquid limit of not more than 35 and a plasticity index of not less than 4 and not more than 12 as determined by AASHTO T 89 and AASHTO T 90.

1207a - That portion of crushed rock material passing No. 4 sieve, including blending filler, shall have a sand equivalent of not less than 35, as determined by AASHTO T 176, except where that portion exhibits a sand equivalence of less than 35, the aggregate will be accepted if it complies with the additional requirement as follows:

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

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

1210 - Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Compacted layers shall not exceed 4 inches in depth. When more than one layer is required, each shall be shaped, processed, compacted, and approved by the Authorized Officer before the succeeding layer is placed. Irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and then adding or removing crushed rock material until the surface is smooth and uniform.

1210a - Crushed rock material used to repair or reinforce soft, muddy, frozen, yielding, or rutted roadbed shall not be construed as surfacing required by this specification.

1212 - Each layer of crushed rock material placed, processed, and shaped as specified shall be moistened or dried to a uniform moisture content suitable for maximum compaction and compacted to full width by compacting equipment conforming to

the requirements of Subsections 103f, 103g, or 103i. Minimum compaction shall be 6 passes over each full-width layer, or fraction thereof.

1213a - Each layer of crushed aggregate surface rock placed, processed, and shaped in accordance with these specifications shall be uniformly moistened or dried to the optimum moisture content suitable for maximum compaction and compacted to full width until a uniform density of not less than 85 percent of the maximum density is attained.

SOIL STABILIZATION – 1800

1801 - This work shall consist of seeding and mulching on designated cut, fill, borrow, disposal, and special areas in accordance with these specifications and as shown on the plans. This work is required for road acceptance under Section 18 of this contract.

1802a - Soil stabilization work consisting of seeding and mulching shall be performed on new temporary route construction, road renovation, disturbed areas, and disposal sites in accordance with these specifications.

1803 - Soil stabilization work as specified under Subsection 1802a shall be performed during the following seasonal periods:

From: September 15th	To: October 31st

If soil stabilization of disturbed areas is not completed by the specified fall date, the Purchaser shall treat disturbed areas and then complete the requirements of Soil Stabilization 1800 the next construction season.

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

1803a - The Purchaser shall begin soil stabilization work within 10 days of the starting work date when notified by the Authorized Officer.

1806a - Additional soil stabilization work consisting of seeding and mulching may be required at the option of the Authorized Officer. Providing the additional stabilization is not due to Purchaser negligence as specified in Sec. 12 of the contract, a reduction in the total purchased price shall be made to offset the cost of furnishing and applying such additional stabilization material. Cost shall be based upon the unit price set forth in the current BLM Timber Appraisal Production Cost Schedule.

1808 - Mulch materials conforming to the requirements of Subsection 1808a shall be furnished by the Purchaser in the amounts specified under Subsection 1811 and applied in accordance with Subsection 1812.

1808a - Straw mulch shall be certified weed free from commercial grain fields and native grass fields. Straw mulch shall be from oats, wheat, rye, or other approved grain crops and shall be free from, mold, or other objectionable material. Straw mulch shall be in an air-dry condition and suitable for placement.

1809 - Mulch material shall be delivered to the work area in a dry state. Material found to be wet will not be accepted. Material to be used in the mulching operation may be stockpiled along the road designated for treatment provided that it is maintained in a dry state and has the approval of the Authorized Officer.

1811 - The Purchaser shall apply to approximately 1.30 acres designated for treatment as specified under Subsections 1802a and 1806a, Government furnished native grass seed and Purchaser furnished mulch material at the following rate of application:

a. Two Stage Dry:

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

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

1812 - The Purchaser shall furnish and apply to the area designated for treatment as shown on the plans and as specified under Subsections 1802a and 1806a, native grass seed and mulch material at the application rate to be determined by the Authorized Officer based on visual observation of trial applications.

Mulches shall be spread/placed in treatment areas to a depth of 2 inches to allow seed germination or as directed by the Authorized Officer. Treatment area will be covered evenly and completely. Mulch can be broadcast onto the soil surface by hand or with hand/mechanical operated spreaders.

1814 - The Purchaser may reduce the application rate on partially covered slopes and refrain from application on areas already well stocked with grass or on rock surfaces as determined by the Authorized Officer.

1815 - The seed and mulch materials shall be placed by the dry method in accordance with the requirements set forth in Subsection 1815b.

1815b - Dry Method - Blowers, mechanical seeders, seed drills, landscape seeders, cultipaker seeders, or other approved mechanical seeding equipment may be used when seed are to be applied in dry form.

1819 - The Purchaser shall notify the Authorized Officer at least 3 days in advance of date he intends to commence the specified soil stabilization work.

1821 - Mulch that collects at the end of culverts or accumulates to excessive depths on the slopes shall be evenly spread by hand methods, as directed by the Authorized Officer.

1824 - Twine, rope, sacks, and other debris resulting from the soil-stabilization operations shall be picked up and disposed of to the satisfaction of the Authorized Officer.

ROADSIDE BRUSHING - 2100

2101 - This work shall consist of the removal of vegetation from the road prism - variable distance, and inside curves in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail Sheet of this exhibit, at designated locations as shown in the plans.

2102 - Roadside brushing may be performed mechanically with self-powered, self-propelled equipment or manually with hand tools, including chain saws.

2103 - Vegetation cut manually and/or mechanically less than 6 inches in diameter when measured at DBH shall be cut to a maximum height of 1 inch above the ground surface or above obstructions such as rocks or stumps on cut and fill sloped and all limbs below the 1 inch area will be severed from the trunk.

2103a - Vegetation shall be cut and removed from the road bed between the outside shoulders and the ditch centerline and such vegetation shall be cut to a maximum height of 1 inch above the ground and running surface. Limbs below the 1 inch area will be severed from the trunk. Sharp pointed ends will not be permitted. Cuts shall be parallel to the ground line or running surface.

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

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

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

2107 - Inside curves shall be brushed out for a sight distance of 200 feet chord distance or a middle ordinate distance of 25 feet, whichever is achieved first. Overhanging limbs and vegetation in excess of 1 foot in height, shall be cut within these areas.

2108 - Self-propelled equipment shall not be permitted on cut and fill slopes or in ditches.

2109 - Debris resulting from this operation shall be scattered downslope from the

roadway. Debris shall not be allowed to accumulate in concentrations. Debris in excess of 1 foot in length and 2 inches in diameter shall not be allowed to remain on cut slopes, ditches, roadways or water courses, or as directed by the Authorized Officer.

2113 - Roadside brushing shall be accomplished as shown on the plans and as listed below:

Road No.	From M.P.	To M.P.
39-5-18.1 (E)	3.82	4.09
39-6-2.0 (A-C)	0.00	0.59
39-6-2.1 (B)	0.21	0.72
39-6-2.2	0.00	0.54
39-6-11.0 (A)	0.00	0.20
39-6-11.0 (D)	0.00	3.24
39-6-11.1 (A1-A2)	0.00	0.67
39-6-12.1	0.00	0.22
39-6-12.5	0.00	0.08
39-6-23.3	0.00	0.16
39-6-25.4 (A-E)	0.00	1.12
39-6-26.2	0.00	0.10
39-6-26.0 (A-B)	0.00	0.70
39-6-36.1	0.00	0.07
39-6-36.2 (A-B)	0.00	0.21

2115 - Sections of roadway to have vegetation removed will be marked at start and stop points with one piece each of white and red ribbon tied to red-topped painted stakes.

2116 - Mechanical brush cutters shall not be operated when there are people and occupied vehicles within 400 feet of the immediate operating area.

2117 - Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the current version of the Manual on Uniform Traffic Devices.

DECOMMISSIONING – 2600

2601 - Decommissioning includes ripping, installing water bars, placement of slash and soil stabilization material, and blocking road from access by vehicles. This work is required for road acceptance under Section 18 of this contract.

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

2604 - Decommissioning work shall be completed after timber extraction, logging activities, and after road use.

2606 - Stockpiled slash shall be used to protect exposed areas created by the Purchaser's decommissioning operations described in these sections. Slash shall be uniformly spread and placed without bunching. The operation shall produce a dense, uniform mat. All slash stockpiles created by the purchaser shall be utilized for decommissioning operations. Where slash is not available or no longer remaining, exposed soil areas shall be stabilized in accordance with section 1800 – Soil Stabilization.

2608 - Protect areas mulched and treated with slash placement from damage by Purchaser traffic or construction equipment. Damaged areas shall be repaired by the Purchaser.

2609 - Access shall be blocked with barricades as shown on the typical detail sheet and at locations listed on Exhibit C11.

2610 - All vegetation and slash shall be removed from the immediate area designated for excavation. Temporary routes shall be cleared of all vegetation and slash prior to ripping. The resultant slash shall be stockpiled in a manner that will allow retrieval and uniform spreading in accordance with section 2606. No vegetation or slash shall be mixed with excavated material to be placed.

2613 - Water bars shall be installed across full width of temporary routes. Water bars shall be constructed as shown on Exhibit 8.

2614 - Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with section 1800 and placement of slash described in section 2606 on temporary routes, disturbed areas, landings, cut banks, fill slopes and other areas disturbed by the purchaser's decommissioning operations in accordance with these specifications and as shown in the plans.

SPECIAL PROVISIONS

1. Before the initial start of road renovation, construction, reconstruction, or surfacing operations, or after a shutdown of 7 or more days, the Purchaser shall notify the Authorized Officer 48 hours in advance of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer if they intend to cease operations for any period of 30 or more days.

2. The contractor shall protect and is responsible for any damage to existing telephone lines, transmission lines, fiber optic lines, fences, ditches, and other existing improvements as required in Section 14. Damage to utilities and existing improvements shall be promptly paid for or repaired to a condition which is, in the opinion of the Authorized Officer and the governing utility company, at least as good as the condition just prior to such damage.

3. All disturbed soil shall be seeded and mulched. Purchaser shall apply native grass seed and Certified Weed Free straw mulch for soil stabilization operations. BLM will furnish native grass seed, **if available**. Certified weed free straw mulch will be the responsibility of the contractor.

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

5. Ensure that all large wood is retained in the stream channel during culvert cleaning activities by moving logs which had accumulated on the stream side of a culvert to the downstream side of the culvert.

6. Roadside brushing cutting limits beneath or adjacent to bridges shall extend 8 feet horizontally from each side of the outermost projected line of the bridge including abutments, curbs, rails or decks. Cut brush and trees shall be removed from beneath the bridge and from the stream channel.

7. While roadside brushing, there shall be no scarring or any other damage of the tree trunk or bole allowed. All debris resulting from roadside brushing activities shall be scattered downslope. Use of Excavators for brush removal will be at the discretion of the Authorized Officer. **All culvert inlets and outlets shall be brushed for a radius of 4 feet.**

8. While roadside brushing through private industry lands, conifer trees at the edges of the cleared area (see cutting limit, Exhibit C10) shall have the branches pruned rather than being felled.

9. All stumps, designated by the Authorized Officer, which would interfere with normal blading and road renovation operations (including turnouts), shall be removed in such a way as to not cause damage to the drainage ditch or the road bed. Stumps that are ground-down, shall be ground to a minimum of 3 inches below existing grade.

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

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

GENERAL - 3000

3001 - The Purchaser shall be required to maintain all roads listed and/or referenced in Section 42, as shown on the Exhibit D maps of this contract, and in accordance with Sections 3000, 3100, 3200, 3300, and 3400 of this exhibit.

3001a - The Purchaser shall be required to provide maintenance on roads in accordance with Subsection 3403.

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 road(s) with logging units substantially completed prior to moving operations to other roads. The maximum length of non-maintained or non-cleanup of the road prism shall not exceed the sum of one (1) mile at any time. Release of maintenance requirements may be granted, upon written request, when the conditions specified in Sections 3300 and 3400 are met satisfactorily.

OPERATIONAL MAINTENANCE - 3100

3101 - The Purchaser shall blade and shape the road surface and shoulders with a motor grader. Banks shall not be undercut. Back blading with tractors or similar equipment will be allowed only around landings and other areas when approved by the Authorized Officer.

3103 - The Purchaser shall maintain established berms and place additional berms using adjacent material where needed to protect fills as directed by the Authorized Officer.

3104 - The Purchaser shall perform other road cleanup including removal of debris, fallen timber, bank slough, and slides which can practicably be accomplished by a motor grader, rubber tired front end bucket loader, rubber tired backhoe or comparable equipment, and by the use of hand tools.

3104a - Removal of bank slough and slide material includes placement of material at the nearest designated, suitable disposal site where material cannot erode into streams, lakes, or reservoirs or cause undue damage to road fill slopes which have been planted or mulched to control soil erosion as directed by the Authorized Officer.

3104b - The Purchaser shall be responsible for removal of all slides or slough, up to fifteen station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the Purchaser.

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

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

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

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

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

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

SEASONAL MAINTENANCE - 3200

3201 - The Purchaser shall perform preventative maintenance at the end of Purchaser's hauling each season and during non-hauling periods which occur between other operations on the contract area. This includes requirements specified in Section 3100.

3202 - The Purchaser shall perform and complete maintenance specified in Sections 3000, 3100, and 3200 on all roads maintained by him, prior to October 1st each year, except as specified in Subsection 3203, after initial commencement of construction or logging operations. Thereafter, all roads shall have continuous preventive maintenance and road cleanup until suspension of seasonal operations. This includes all roads used and not used during the proceeding operating seasons.

3203 - The Purchaser shall complete road cleanup and maintenance, as specified in Section 3100, at the completion of logging operations on any roads located in an area separate from the area where logging activities will resume.

3204 - The Purchaser shall be responsible for performing post storm inspections and maintenance during the winter season to minimize erosion and potential road or watershed damage.

FINAL MAINTENANCE - 3300

3301 - The Purchaser shall complete final maintenance and/or damage repairs on all roads used under terms of their contract within thirty 30 calendar days following the expiration of Purchaser's right to cut and remove timber (Sec. 4) and in accordance with Sec. 16(b) of this contract. This work shall include any maintenance and/or damage repairs specified in Sections 3000, 3100, and 3200 necessary to meet the conditions specified in Subsection 3002 and shall be executed in accordance with Subsection 3302 of this section.

The Authorized Officer may grant acceptance of Purchaser's maintenance responsibility in part where certain individual roads or road segments are no

longer of any use to the Purchaser's remaining removal operations, providing that all contract requirements as specified under Sec. 16(b), Special Provisions (Sections 3000, 3100, 3200 and 3300 of the maintenance specifications) have been completed and a relinquishment of cutting and removal rights on cutting units tributary to these roads is signed by the Purchaser. Request for partial acceptance must be submitted in writing by the Purchaser.

3302 - The Purchaser shall perform final road maintenance only when weather or soil moisture conditions are suitable for normal maintenance equipment operations as determined by the Authorized Officer.

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

OTHER MAINTENANCE - 3400

3401 - The Purchaser shall repair any damage to road surfaces that was specified under Subsection 3108 and 3108a. This repair includes restoring the roadway to the designed standard and replacement of surfacing with approved surface material. This repair is not limited to use of equipment specified in Subsection 3104.

3403 - The Purchaser shall be required to furnish and apply non-saline water during dry hauling periods, when directed by the Authorized Officer, for the purpose of laying dust and to prevent loss of surface material. The first application of water shall be made at the rate of one- half gallon per yd^2 of road surface traveled. Subsequent applications shall be made for each 40 MBF of timber or 120 yds^3 of rock hauled. Subsequent watering may be done at a rate less than one-half gallon per yd^2 when a specified lesser rate is approved by the Authorized Officer.

The following roads shall be watered:

Road Number	From Sta./M.P.	to Sta./M.P.
39-5-18.1 (E)	3.82	4.09
39-6-2.0 (A-C)	0.00	0.59
39-6-2.1 (A)	0.21	0.72
39-6-2.2	0.00	0.54
39-6-11.0 (A)	0.00	0.20
39-6-11.0 (D)	0.00	3.24
39-6-11.1 (A1-A2)	0.00	0.67

39-6-12.1	0.00	0.22
39-6-12.5	0.00	0.08
39-6-23.3	0.00	0.16
39-6-25.4 (A-E)	0.00	1.12
39-6-26.1	0.00	0.25
39-6-26.2	0.00	0.10
39-6-26.0 (A-B)	0.00	0.70
39-6-36.1	0.00	0.07
39-6-36.2 (A-B)	0.00	0.21

- Other roads as needed

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

DECOMMISSIONING – 3500

3501 - Decommissioning shall consist of ripping, installing water bars, seed and mulching, and blocking temporary routes from access by vehicles. This work is required for road acceptance under Section 18 of this contract.

3503 - Decommissioning shall be performed on temporary routes in accordance with these specifications, and as shown on the plans at the following locations:

Road No or Site	From Sta/MP	To Sta/MP
Temp Route 1	0.00	0.09
Temp Route 2	0.00	0.04
Temp Route 3	0.00	0.08
Temp Route 4	0.00	0.08
Temp Route 5	0.00	0.07

3504 - Decommissioning work shall be completed at the end of timber hauling. All decommissioning work shall be performed during the following seasonal periods to address soil moisture:

From: September 15th	To: October 31st

3507 - Culverts not designated as salvage by the Authorized Officer for the Government shall become the property of the Purchaser. The Purchaser shall be responsible for disposal of materials in a legal manner and for payment of any fees required.

Sale of material on site is not allowed unless authorized in writing by the Authorized Officer.

3508 - Protect mulched areas from damage by Purchaser traffic or construction equipment. Damaged areas shall be repaired by the Purchaser.

3509 - Access shall be blocked with barricades as shown on the typical detail sheet as shown on Exhibit C8.

3513 - Water bars shall be installed across full width of temporary routes at locations listed on the Exhibit C11 worklist and shall be constructed as shown on Exhibit C8. No water bar will be installed closer than 50 feet to a draw crossing.

3514 - Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800 on designated roadways, disturbed areas, and other areas disturbed by the Purchaser's decommissioning operations in accordance with these specifications and as shown in the plans.

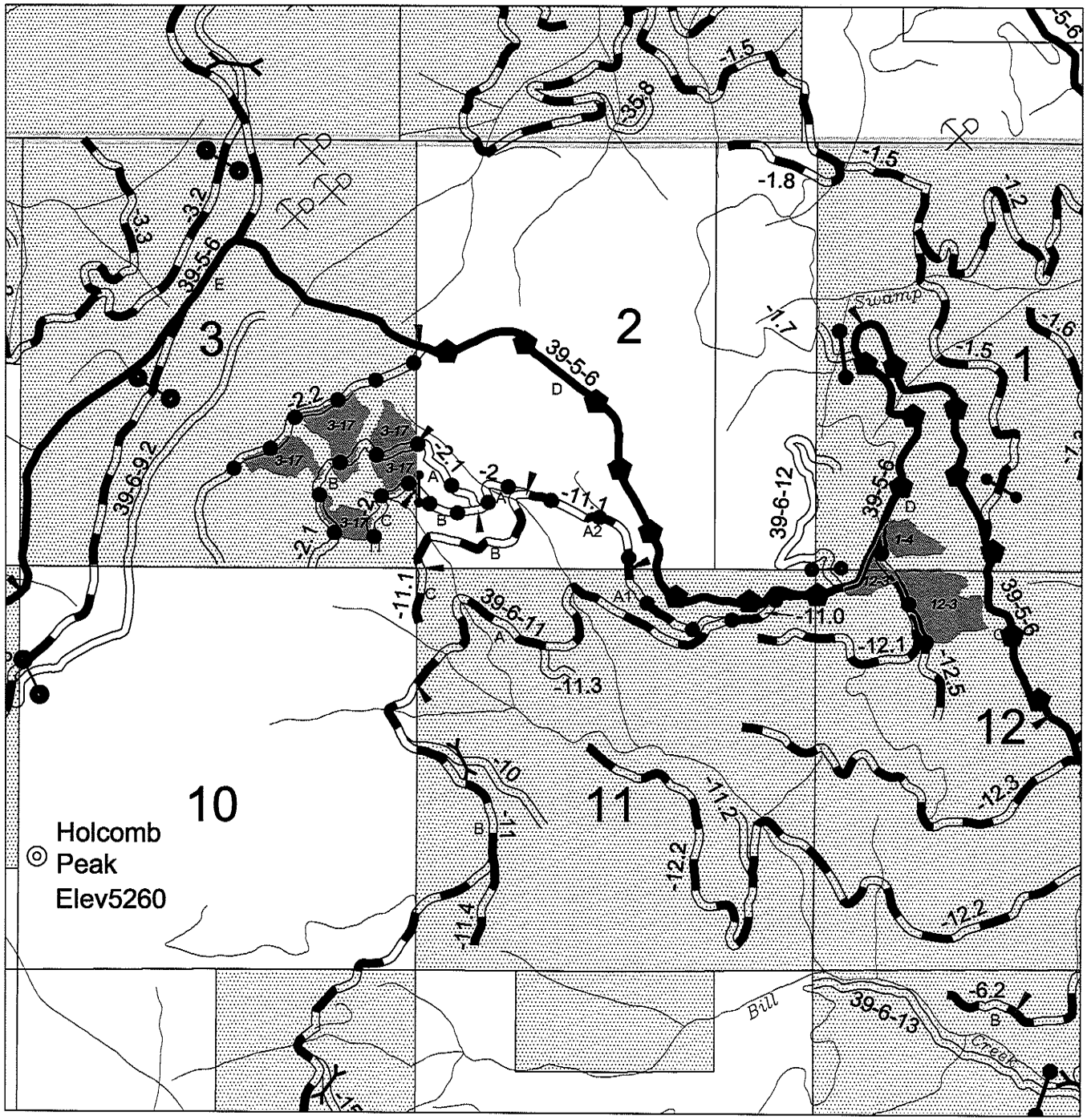


EXHIBIT D2

SHEET 1 OF 2

WILLIAMS THIN
TIMBER SALE
TRACT NO. ORM07-TS-13-06

BLM OWNERSHIP

T.S. UNITS 20-1

BST ROAD

CRUSHED ROCKED ROAD

NATURAL SURFACE ROAD

EX. GATE/CLOSURE

PURCHASER MAINTENANCE

BLM MAINTENANCE

N

ALWAYS
THINK
SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.

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

WILLIAMS THIN TIMBER SALE MAINTENANCE MAP

DESIGNED: E. Free	
REVIEWED: E. Free	
APPROVED: L. Popoff	
DRAFTED BY: ELF	SCALE: 1" = 2,000 FT
DATE: APR 2013	SHEET: 1 OF 2
DRAWING NO.: OR-11-9113.4-1	

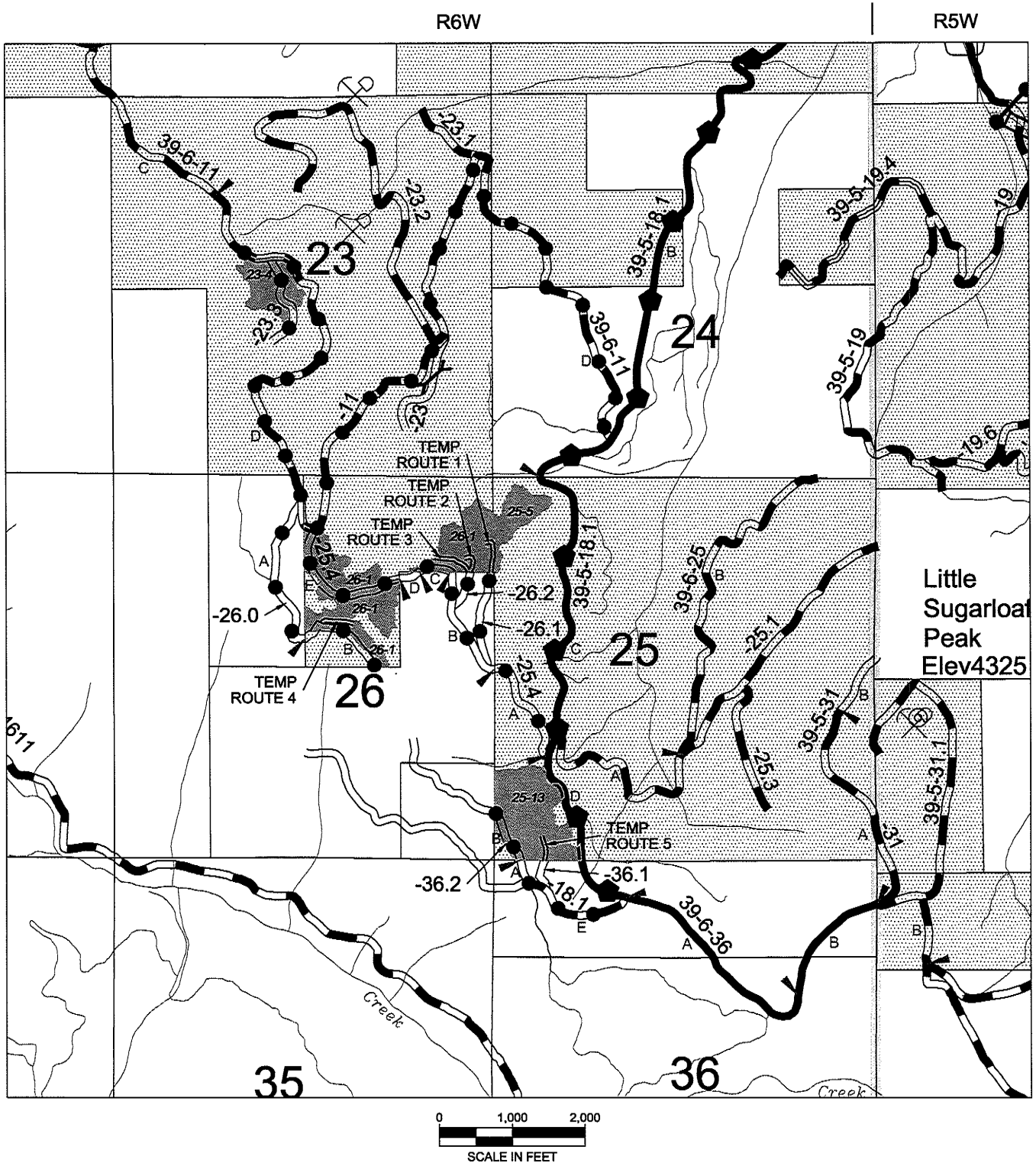


EXHIBIT D2

SHEET 2 OF 2

WILLIAMS THIN
TIMBER SALE
TRACT NO. ORM07-TS-13-06

BLM OWNERSHIP

T.S. UNITS 20-1

BST ROAD

CRUSHED ROCKED ROAD

NATURAL SURFACE ROAD

EX. GATE/CLOSURE

PURCHASER MAINTENANCE

BLM MAINTENANCE

N

ALWAYS THINK SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.

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

WILLIAMS THIN TIMBER SALE MAINTENANCE MAP

DESIGNED: E. Free	
REVIEWED: E. Free	
APPROVED: Jo Roper	
DRAFTED BY: ELF	SCALE: 1" = 2,000 FT
DATE: APR 2013	SHEET: 2 OF 2
DRAWING NO.: OR-11-9113.4-1	

SELECTION CRITERIA-DESIGNATION BY DESCRIPTION EXHIBIT E

The Selection Criteria shown below shall be used by the Purchaser in determining which trees are to be painted for retention and which trees are to be cut and removed.

The Selection of retention and cut trees shall comply with Williams Special Provisions Sec. 41. The Purchaser shall leave all boundary trees, trees marked with orange paint and/or flagging, hardwood trees, non-hazardous snags, and pre-existing dead and down material in commercial thin harvest units.

Before marking and removing any trees necessary to facilitate logging in all harvest units shown on Exhibit A, the Purchaser shall identify the location of the skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the Logging Plan. Said Purchaser identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding with removal, the conditions found in Williams Special Provisions Sec. 42(B)(16) must be met. Trees that are removed to facilitate logging do not count toward the leave tree requirements described below.

FOR ALL HARVEST UNITS, THE WHOLE UNIT SHALL BE MARKED PRIOR TO CUTTING.

Unit 3-17A (14 AC):

- Retain fifty percent (50%) canopy cover across the harvest unit. Before falling any trees in this unit, the Purchaser shall mark entire unit as outlined in Exhibit E. Identification of leave trees may be done by paint; paint color shall be approved by the Authorized Officer. Upon acceptance of the mark by the Authorized Officer, the Purchaser may proceed with operations.

- Remove all conifers (see species to be retained below) that meet merchantable specifications in Exhibit B that are within **sixteen feet (16')** slope distance of another live conifer with a larger stump diameter. Beyond the sixteen feet (16') slope distance spacing, leave the next closest conifer with the largest stump diameter and repeat the spacing mark.

- Mark to retain all conifers greater than twenty inches (20") DBH and include in the spacing.

- Blue marked conifers are confined to gaps. Remove all conifers marked with blue paint.

- For trees with two stems, the diameter at stump height shall determine whether the tree is a take or a leave tree.

- Remove all Port Orford cedar less than twenty inches (20") DBH for a distance of fifty feet (50') **below** and twenty-five feet (25') **above** each natural surface road within the harvest unit boundary (unless marked with orange paint). Outside of this distance, retain unmarked Port Orford cedar fourteen inches (14") DBH and greater: do not include these trees in spacing - they are invisible to the spacing mark.

- Unit boundary trees may be included in the spacing **IF** they would be selected for leave based on stump diameter.

- Twenty-four (24) conifer trees within the unit boundary have been designated as leave trees with **ONE (1)** band of orange paint at breast height and orange paint at the stump base. Retain all orange marked trees within unit boundaries **AND** use as leave trees to include in spacing.

    - Of these trees, two (2) Port Orford cedar with the number 25 painted on the tree bole with orange paint indicates the clearing distance (slope distance) in feet to be used for those individual reserve trees. Purchaser shall remove all conifers less than twenty inches (20") DBH that meet merchantable specification within this clearing distance, except for additional trees within the clearing distance that are marked with orange paint above and below stump height.

- Five (5) conifer trees within the unit boundary have been designated as leave trees with **TWO (2)** bands of orange paint at breast height and orange paint at the stump base. Retain all orange marked trees within unit boundaries **but do not** include these double-banded orange marked trees in spacing (these are invisible to the spacing mark).

- Retain all hardwoods. Do not include in spacing.

- Retain all snags. Do not include in spacing.

Unit 3-17B (21 AC):

- Retain fifty percent (50%) canopy cover across the harvest unit. Before falling any trees in this unit, the Purchaser shall mark entire unit as outlined in Exhibit E. Identification of leave trees may be done by paint; paint color shall be approved by the Authorized Officer. Upon acceptance of the mark by the Authorized Officer, the Purchaser may proceed with operations.

- Below (south of) BLM Road #39-6-2.1, as shown on Exhibit A, remove all conifers (see species to be retained below) that meet merchantable specifications in Exhibit B that are within **sixteen feet (16')** slope distance of another live conifer with a larger stump diameter. Beyond the sixteen feet (16') slope distance spacing, leave the next closest conifer with the largest stump diameter and repeat the spacing mark.

- Above (north of) BLM Road #39-6-2.1, as shown on Exhibit A, remove all conifers (see species to be retained below) that meet merchantable specifications in Exhibit B that are within **eighteen feet (18')** slope distance of another live conifer with a larger stump diameter. Beyond the eighteen feet (18') slope distance spacing, leave the next closest conifer with the largest stump diameter and repeat the spacing mark.

- Below (south of) BLM Road #39-6-2.2 **only in the westernmost piece of 3-17b and only for a distance of approximately one-hundred feet (100')** remove all conifers (see species to be retained below) that meet merchantable specifications in Exhibit B that are within **twenty-two feet (22')** slope distance of another live conifer with a larger stump diameter. Beyond the twenty-two feet (22') slope distance spacing, leave the next closest conifer with the largest stump diameter and repeat the spacing mark. In this west piece, the break between eighteen feet (18') and twenty-two feet (22') is marked on trees with one diagonal band of orange paint on both the uphill and downhill side of each tree. Below (south of) this band resumes the eighteen feet (18') spacing.

- Mark to retain all conifers greater than twenty inches (20") DBH and include in the spacing.

- Blue marked conifers are confined to gaps. Remove all conifers marked with blue paint.

- For trees with two stems, the diameter at stump height shall determine whether the tree is a take or a leave tree.

- Remove all Port Orford cedar less than twenty inches (20") DBH for a distance of fifty feet (50') **below** and twenty-five feet (25') **above** each natural surface road within the harvest unit boundary (unless marked with orange paint). Outside of this distance, retain unmarked Port Orford cedar fourteen inches (14") DBH and greater: do not include these trees in spacing - they are invisible to the spacing mark.

- Unit boundary trees may be included in the spacing **IF** they would be selected for leave based on stump diameter.

- Sixteen (16) conifer trees within the unit boundary have been designated as leave trees with **ONE (1)** band of orange paint at breast height and orange paint at the stump base. Retain all orange marked trees within unit boundaries **AND** use as leave trees to include in spacing.

- Of these trees, one (1) sugar pine with the number 30 painted on the tree bole with orange paint indicates the clearing distance (slope distance) in feet to be used for that reserve tree. Purchaser shall remove all conifers less than twenty inches (20") DBH that meet merchantable specification within this clearing distance, except for additional trees within the clearing distance that are marked with orange paint above and below stump height.

- Sixteen (16) conifer trees within the unit boundary have been designated as leave trees with **TWO (2)** bands of orange paint at breast height and orange paint at the stump base. Retain all orange marked trees within unit boundaries **but do not** include these double-banded orange marked trees in spacing (these are invisible to the spacing mark).

- Retain all hardwoods. Do not include in spacing.

- Retain all snags. Do not include in spacing.

Unit 25-13 (25 AC):

- Retain fifty percent (50%) canopy cover across the harvest unit. Before falling any trees in this unit, the Purchaser shall mark entire unit as outlined in Exhibit E. Identification of leave trees may be done by paint; paint color shall be approved by the Authorized Officer. Upon acceptance of the mark by the Authorized Officer, the Purchaser may proceed with operations.

- Remove all conifers (see species to be retained below) that meet merchantable specifications in Exhibit B that are within **nineteen feet (19')** slope distance of another live conifer with a larger stump diameter. Beyond the nineteen feet (19') slope distance spacing, leave the next closest conifer with the largest stump diameter and repeat the spacing mark.

- Mark to retain all conifers greater than twenty inches (20") DBH and include in the spacing.

- Blue marked conifers are confined to gaps. Remove all conifers marked with blue paint.

- For trees with two stems, the diameter at stump height shall determine whether the tree is a take or a leave tree.

- Remove all Port Orford cedar less than twenty inches (20") DBH for a distance of fifty feet (50') **below** and twenty-five feet (25') **above** each natural surface road within the harvest unit boundary (unless marked with orange paint). Outside of this distance, retain unmarked Port Orford cedar fourteen inches (14") DBH and greater: do not include these trees in spacing - they are invisible to the spacing mark.

- Unit boundary trees may be included in the spacing **IF** they would be selected for leave based on stump diameter.

- Retain all hardwoods. Do not include in spacing.

- Retain all snags. Do not include in spacing.

- Twenty-three (23) conifer trees within the unit boundary have been designated as leave trees with a band of orange paint at breast height and orange paint at the stump base. Retain all orange marked trees within unit boundaries **AND** use as leave trees to include in spacing.

Unit 26-1A (20 AC):

- Retain forty percent (40%) canopy cover across the harvest unit. Before falling any trees in this unit, the Purchaser shall mark entire unit as outlined in Exhibit E. Identification of leave trees may be done by paint; paint color shall be approved by the Authorized Officer. Upon acceptance of the mark by the Authorized Officer, the Purchaser may proceed with operations.

- Remove all conifers (see species to be retained below) that meet merchantable specifications in Exhibit B that are within **sixteen (16')** slope distance of another live conifer with a larger stump diameter. Beyond the sixteen (16') slope distance spacing, leave the next closest conifer with the largest stump diameter and repeat the spacing mark.

- Mark to retain all conifers greater than twenty inches (20") DBH and include in the spacing.

- Blue marked conifers are confined to gaps. Remove all conifers marked with blue paint.

- For trees with two stems, the diameter at stump height shall determine whether the tree is a take or a leave tree.

- Remove all Port Orford cedar less than twenty inches (20") DBH for a distance of fifty feet (50') **below** and twenty-five feet (25') **above** each natural surface road within the harvest unit boundary (unless marked with orange paint). Outside of this distance, retain unmarked Port Orford cedar fourteen inches (14") DBH and greater: do not include these trees in spacing - they are invisible to the spacing mark.

- Unit boundary trees may be included in the spacing **IF** they would be selected for leave based on stump diameter.

- Eleven (11) conifer trees within the unit boundary have been designated as leave trees with **ONE (1)** band of orange paint at breast height and orange paint at the stump base. Retain all orange marked trees within unit boundaries **AND** use as leave trees to include in spacing.

    - Of these trees, those with a number painted on the tree bole with orange paint indicates the clearing distance (slope distance) in feet to be used for each reserved tree. Purchaser shall remove all conifers less than twenty inches (20") DBH that meet merchantable specification within this clearing distance, except for additional trees within the clearing distance that are marked with orange paint above and below stump height.

- Nine (9) conifer trees within the unit boundary have been designated as leave trees with **TWO (2)** bands of orange paint at breast height and orange paint at the stump base. Retain all orange marked trees within unit boundaries **but do not** include these double-banded orange marked trees in spacing (these are invisible to the spacing mark).

- Retain all hardwoods. Do not include in spacing.

- Retain all snags. Do not include in spacing.

Unit 26-1B (33 AC):

- Retain fifty percent (50%) canopy cover across the harvest unit. Before falling any trees in this unit, the Purchaser shall mark entire unit as outlined in Exhibit E. Identification of leave trees may be done by paint; paint color shall be approved by the Authorized Officer. Upon acceptance of the mark by the Authorized Officer, the Purchaser may proceed with operations.

- Remove all conifers (see species to be retained below) that meet merchantable specifications in Exhibit B that are within **fifteen feet (15')** slope distance of another live conifer with a larger stump diameter. Beyond the fifteen feet (15') slope distance spacing, leave the next closest conifer with the largest stump diameter and repeat the spacing mark.

- Mark to retain all conifers greater than twenty inches (20") DBH and include in the spacing.

- Blue marked conifers are confined to gaps. Remove all conifers marked with blue paint.

- For trees with two stems, the diameter at stump height shall determine whether the tree is a take or a leave tree.

- Remove all Port Orford cedar less than twenty inches (20") DBH for a distance of fifty feet (50') **below** and twenty-five feet (25') **above** each natural surface road within the harvest unit boundary (unless marked with orange paint). Outside of this distance, retain unmarked Port Orford cedar fourteen inches (14") DBH and greater: do not include these trees in spacing - they are invisible to the spacing mark.

- Unit boundary trees may be included in the spacing **IF** they would be selected for leave based on stump diameter.

- Twenty (20) conifer trees within the unit boundary have been designated as leave trees with **ONE (1)** band of orange paint at breast height and orange paint at the stump base. Retain these orange marked trees within unit boundaries **AND** use as leave trees to include in spacing.

    - Of these trees, those with a number painted on the tree bole with orange paint indicate the clearing distance (slope distance) in feet to be used for each reserved tree. Purchaser shall remove all conifers less than twenty inches (20") DBH that meet merchantable specification within this clearing distance, except for additional trees within the clearing distance that are marked with orange paint above and below stump height.

- In addition, two clumps of leave trees exist with each tree individually marked with orange paint totaling 38 trees. The approximate location of these two clumps are shown on the map.

- Retain all hardwoods. Do not include in spacing.

- Retain all snags. Do not include in spacing.

Unit 12-3 (22 AC):

- Retain fifty percent (50%) canopy cover across the harvest unit. Before falling any trees in this unit, the Purchaser shall mark entire unit as outlined in Exhibit E. Identification of leave trees may be done by paint; paint color shall be approved by the Authorized Officer. Upon acceptance of the mark by the Authorized Officer, the Purchaser may proceed with operations.

- Remove all conifers (see species to be retained below) that meet merchantable specifications in Exhibit B that are within **seventeen feet (17')** slope distance of another

live conifer with a larger stump diameter. Beyond the seventeen feet (17') slope distance spacing, leave the next closest conifer with the largest stump diameter and repeat the spacing mark.

- Mark to retain all conifers greater than twenty inches (20") DBH and include in the spacing.

- Blue marked conifers are confined to gaps. Remove all conifers marked with blue paint.

- For trees with two stems, the diameter at stump height shall determine whether the tree is a take or a leave tree.

- Retain unmarked Port Orford cedar fourteen inches (14") DBH and greater. Do not include in spacing. These are invisible to the spacing mark.

- Unit boundary trees may be included in the spacing **IF** they would be selected for leave based on stump diameter.

- Six (6) conifer trees within the unit boundary have been designated as leave trees with a band of orange paint at breast height and orange paint at the stump base. Retain all orange marked trees within unit boundaries **AND** use as leave trees to include in spacing.

- Three (3) incense cedar trees within the unit boundary have been designated as leave trees with a band of orange paint at breast height, orange paint at the stump base, and a number thirty (30) painted on the tree bole with orange paint. The number designates the clearing distance (slope distance) in feet to be used for each reserved incense cedar. Purchaser shall remove all conifers less than twenty inches (20") DBH that meet merchantable specification within this clearing distance, except for additional trees within the clearing distance that are marked with orange paint above and below stump height.

- Retain all hardwoods. Do not include in spacing.

- Retain all snags. Do not include in spacing.

Unit 1-4 (6 AC):

- Retain fifty percent (50%) canopy cover across the harvest unit. Before falling any trees in this unit, the Purchaser shall mark entire unit as outlined in Exhibit E. Identification of leave trees may be done by paint; paint color shall be approved by the Authorized Officer. Upon acceptance of the mark by the Authorized Officer, the Purchaser may proceed with operations.

- Remove all conifers (see species to be retained below) that meet merchantable specifications in Exhibit B that are within **twenty feet (20')** slope distance of another live conifer with a larger stump diameter. Beyond the twenty feet (20') slope distance spacing, leave the next closest conifer with the largest stump diameter and repeat the spacing mark.

- Mark to retain all conifers greater than twenty inches (20") DBH and include in the spacing.

- Blue marked conifers are confined to gaps. Remove all conifers marked with blue paint.

- For trees with two stems, the diameter at stump height shall determine whether the tree is a take or a leave tree.

- Unit boundary trees may be included in the spacing **IF** they would be selected for leave based on stump diameter.

- Retain all hardwoods. Do not include in spacing.

- Retain all snags. Do not include in spacing.

- One (1) Port Orford cedar tree within the unit boundary has been designated as a leave tree with a band of orange paint at breast height, orange paint at the stump base, and the number forty (40) painted on the tree bole with orange paint. The number designates the clearing distance (slope distance) in feet to be used. Purchaser shall remove all conifers less than twenty inches (20") DBH that meet merchantable specification within this clearing distance, except for additional trees within the clearing distance that are marked with orange paint above and below stump height.

- Two (2) Port Orford cedar trees within the unit boundary have been designated as leave trees with a band of orange paint at breast height and orange paint at the stump base. Retain all orange marked trees within unit boundaries **AND** use as leave trees to include in spacing.

Unit 23-4 (12 AC):

- Retain fifty percent (50%) canopy cover across the harvest unit. Before falling any trees in this unit, the Purchaser shall mark entire unit as outlined in Exhibit E. Identification of leave trees may be done by paint; paint color shall be approved by the Authorized Officer. Upon acceptance of the mark by the Authorized Officer, the Purchaser may proceed with operations.

- Remove all conifers (see species to be retained below) that meet merchantable specifications in Exhibit B that are within **seventeen feet (17')** slope distance of another live conifer with a larger stump diameter. Beyond the seventeen feet (17') slope distance spacing, leave the next closest conifer with the largest stump diameter and repeat the spacing mark.

- Mark to retain all conifers greater than twenty inches (20") DBH and include in the spacing.

- Blue marked conifers are confined to gaps. Remove all conifers marked with blue paint.

- For trees with two stems, the diameter at stump height shall determine whether the tree is a take or a leave tree.

- Unit boundary trees may be included in the spacing **IF** they would be selected for leave based on stump diameter.

- Eight (8) conifer trees within the unit boundary have been designated as leave trees with a band of orange paint at breast height and orange paint at the stump base. Retain all orange marked trees within unit boundaries **AND** use as leave trees to include in spacing.

- Retain all hardwoods. Do not include in spacing.

- Retain all snags. Do not include in spacing.

DEFINITIONS:

– Distances between trees are measured slope distances, outside bark at stump height to outside bark at stump height at the closest face between trees. DxD stump height is six (6) inches on the high side of the tree and is used only for measurement purposes and not to be confused with the contract felling stump height.

– Diameter breast height outer bark (DBHOB) is measured at four point five (4.5') feet above the ground on the uphill side of the tree. Diameters are measured perpendicular to the bole of the tree.

– All trees determined to be removed by these guidelines cannot be used to remove another tree with a smaller stump diameter.

– Bole: The well-defined trunk portion of a tree, also called the stem.

- Canopy cover: The ground area covered by the crown of mid-story and larger trees as delimited by the vertical projection of crown perimeters expressed as a percent of total ground area. For purposes of this contract canopy cover cannot exceed 100%.

- Conifer: A tree that is usually evergreen with cones and needle-shaped leaves and produce wood known commercially as “softwood”.

- Cut tree: A tree desingated by the silvicultural prescription which is to be removed.

- DBH: Diameter breast height (DBH) is the outer bark diameter of a tree perpendicular to the bole measured at four point five (4.5) feet above the ground on the uphill side of the tree.

- Hardwood: A broad-leaved tree which usually has a single well-defined trunk and is capable of attaining a height greater than 20 feet. Hardwoods include, but are not limited to species such as alder, chinquapin, bigleaf maple, madrone, and oak species. Sprouting hardwood species may be in the form of multi-stemmed lumps originating from the base of a single defined stump.

- Leave tree: Tree to be reatined as designated by the silvicultural prescription.

- Slope Distance: The distance between two points as measured on the incline.

- Snag: A standing dead tree from which the leaves and most of the branches have fallen or a standing section of the stem of a tree broken off at a height of twenty feet (20’) or more.

- Stem: The trunk of a tree.

- Stump Diameter: For the purpose of this contract stump diameter is measured at six inches (6”) from the ground on the uphill side of the tree.

SPECIAL PROVISIONS TO CONTROL THE SPREAD OF PORT-ORFORD CEDAR ROOT DISEASE

A. VEHICLE AND EQUIPMENT CLEANING:

1. Cleaning shall consist of the removal of soil by washing with a high pressure hose or steam cleaning. Vehicles and equipment shall be cleaned and inspected at washing stations as shown on Exhibit A, or at other locations designated by the Authorized Officer. Washing at project site will require that water is treated with Clorox® bleach at a ratio of 1 gallon bleach to 1,000 gallons water. Water source for site washing is shown on Exhibit A, or at other locations designated by the Authorized Officer.

2. All equipment parts shall be cleaned as designated by the Authorized Officer. For equipment cleaning checklist see page 2 of this exhibit.

B. OPERATIONS:

1. Seasonal Restriction. All road construction and log hauling operations and the transportation of personnel and equipment shall be limited to dry periods during the dry season, as designated by the Authorized Officer, unless prior to entering uninfested areas or prior to leaving infested areas, all vehicles and equipment are cleaned in accordance with Sections A.1. and A.2. above. An exception will be made for the transportation of personnel if all vehicles are confined to operating on bituminous or gravel-surfaced roads and stay on the designated surfacing at all times. The Authorized Officer will designate access routes and areas for parking vehicles.

2. Cleaning of Project Equipment. All project equipment that comes into contact with soils, as designated by the Authorized Officer, shall be cleaned prior to entering uninfested areas or prior to leaving infested areas in accordance with Sections A.1. and A.2. above.

3. Water for Non-Washing Use. Water for roadwork, dust abatement, or fire prevention will be approved by the Authorized Officer and shall be from uninfested water sources or shall be treated with Clorox®.

Equipment Cleaning Checklist

This checklist (for optional use) is referenced in the Washing Project Equipment management practice.

The purpose of this checklist is to provide guidance in the cleaning of equipment, as stipulated in contracts, to control or prevent the spread of noxious weeds and PL. The checklist directs attention to specific areas on equipment that are likely to accumulate soil and organic material.

Questions to ask about overall equipment cleanliness are:

1) Does the equipment appear to have been cleaned?
2) Is the equipment clean of clumps of soil and organic matter?

Rubber-Tired Vehicles

- Tires
- Wheel rims (underside and outside)
- Axles
- Fenders/wheel wells/trim
- Bumpers

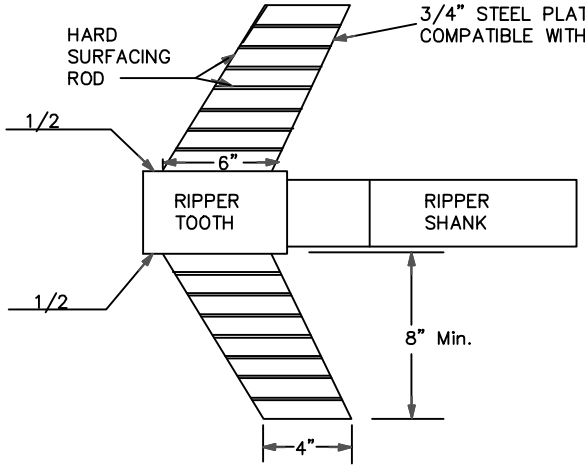
Track-Laying Vehicles

- Tracks
- Road wheels
- Drive gears
- Sprockets
- Roller frame
- Track rollers/idlers

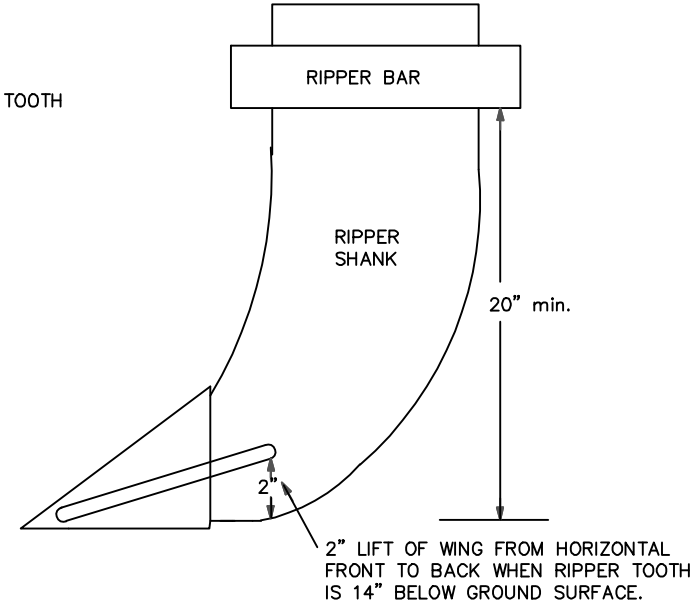
All Vehicles

- Frame
- Belly pan (inside)
- Stabilizers (jack pads)
- Grapple and arms
- Dozer blade or bucket and arms
- Ripper
- Brush rake
- Winch
- Shear head
- Log loader
- Water tenders (empty or with treated water)
- Trailers (low-boys)
- Radiator/grill
- Air filter/pre-cleaner
- Struts/springs/shocks
- Body seams

EXHIBIT R
*SHEET _1_ OF _1_*

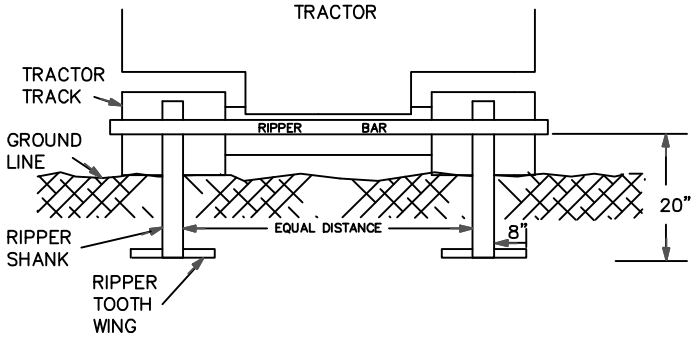


TOP VIEW



SIDE VIEW

TYPICAL RIPPER POSITION



NOTES: TYPICAL RIPPER TOOTH CONSTRUCTION

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

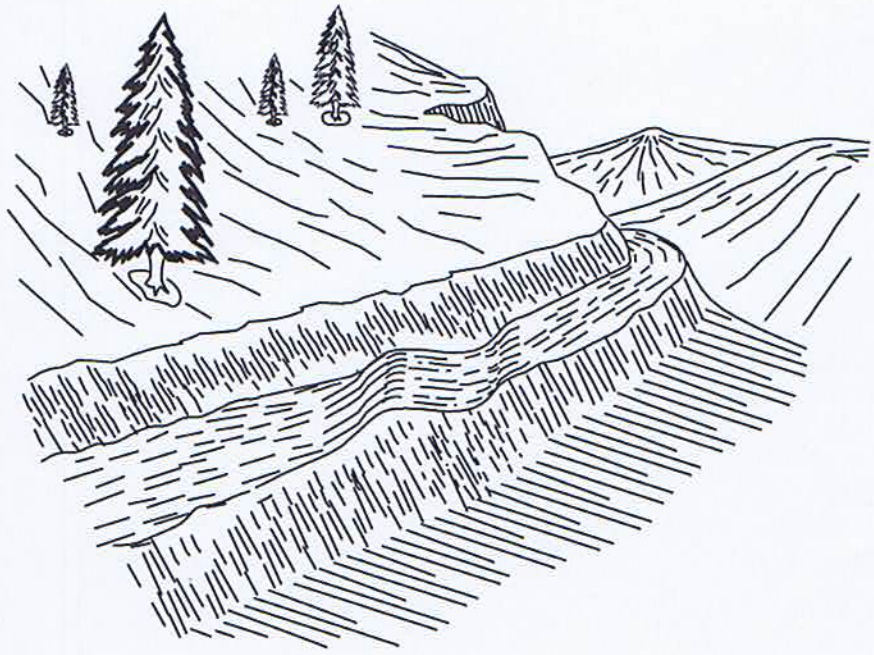
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ASHLAND RESOURCE AREA MEDFORD DISTRICT

WING RIPPER DETAIL

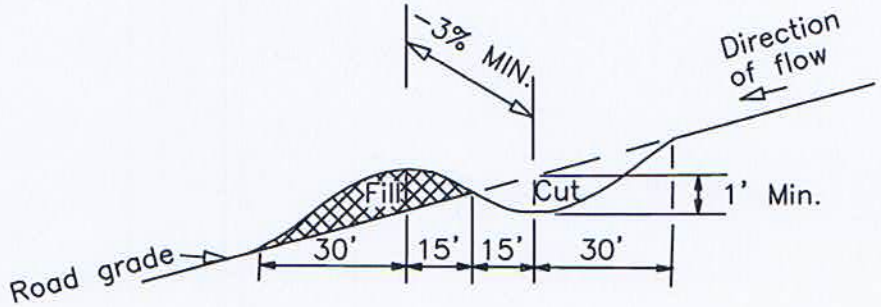
DESIGNED _____
REVIEWED _____
APPROVED _____
CHIEF, BRANCH OF ENGINEERING OR DISTRICT ENGINEER

DRAWN: JWR	SCALE: NONE
DATE: October 2009	SHEET 1 OF 1
DRAWING NO.	

EXHIBIT **W**



WATER BAR



1. WATER BARS SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL WATER BARS SHALL BE SKEWED 30 DEGREES.
4. THE LENGTH SHALL BE SUFFICIENT TO EXTEND FROM THE CUT BANK TO THE FILL SLOPE.

United States of America

Department of the Interior

Bureau Of Land Management

Timber Sale Appraisal

District : Medford
Sale Name : Williams Thin
Sale Date : 07/25/2013
Appraisal Method : 16' MBF

Contract # : ORM07-TS-13-06
Job File # : M11290
Master Unit : Josephine
Planning Unit : Grants Pass

Contents

Legal Description

Forest Type	Township	Range	Section	Subdivision
O&C	39S	6W	1	S1/2SW1/4
O&C	39S	6W	3	SE1/4
O&C	39S	6W	12	N1/2NW1/4
O&C	39S	6W	23	Lots 6, 10, 11
O&C	39S	6W	25	NW1/4NW1/4, SW1/4SW1/4
O&C	39S	6W	26	N1/2NE1/4, SW1/4NE1/4

Cutting Volume (16' MBF)

Unit	DF	WF	POC	IC	PP				Total	Regen	Partial	ROW
1-4	82	7	2	0					91	0	6	0
3-17A	86	83							169	0	14	0
3-17B	143	93							236	0	21	0
12-3	318	28	7	1	0				354	0	22	0
23-4	202	14	4	1					221	0	12	0
25-13	388	27	8	1	1				425	0	25	0
26-1A	215	17	5	1					238	0	16	0
26-1B	537	44	11	2					594	0	33	0
TR-1	19	0	0						19	0	0	1
TR-2	9		0						9	0	0	1
TR-3	9	0	0						9	0	0	1
TR-4	7	0	1						8	0	0	1
TR-5	8			0	0				8	0	0	1
Totals	**2,023**	**313**	**38**	**6**	**1**				**2,381**	**0**	**149**	**5**

Logging Costs per 16' MBF

Stump to Truck	$	152.42
Transportation	$	74.26
Road Construction	$	33.34
Road Amortization	$	0.01
Road Maintenance	$	8.66

Other Allowances :

Fuels Treatment	$ 13.15
Misc	$ 4.46
Other Costs	$ 6.85
Total Other Allowances :	**$ 24.46**

Total Logging Costs per 16' MBF $ **293.15**

Utilization Centers

Center #1 : White City, OR	61	Miles
Center #2	0	Miles
Weighted distance to Utilization Centers	61	

Length of Contract

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

Profit & Risk

Total Profit & Risk		8 %
Basic Profit & Risk	8 % + Additional Risk	0 %
Back Off		0 %

Tract Features

Avg Log	Douglas-fir : 46 bf	All : 45 bf
Recovery	Douglas-fir : 94 %	All : 94 %
Salvage	Douglas-fir : 0 %	All : 0 %

Avg Volume (16' MBF per Acre)	15
Avg Yarding Slope	0 %
Avg Yarding Distance (feet)	350
Avg Age	60
Volume Cable	66 %
Volume Ground	34 %
Volume Aerial	0 %
Road Construction Stations	19.00
Road Improvement Stations	0.00
Road Renovation Stations	482.60
Road Decomission Stations	0.00

Cruise

Cruised By	D.Caulfield, A.Franks, G.Cannon
Date	04/15/2013
Type of Cruise	PCMTRE, 3P, 100%
County, State	Josephine, OR

Net Volume

Green (16' MBF)	2,381
Salvage (16' MBF)	0
Douglas-fir Peeler	0
Export Volume	38
Scaling Allowance ($0.75 per 16' MBF)	$1,785.75

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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	12,426	2,023	$ 544.41	$ 43.55	$ 293.15			$ 207.70	$ 420,177.10
WF	2,371	313	$ 408.71	$ 32.70	$ 293.15			$ 82.90	$ 25,947.70
POC	711	38	$ 408.54	$ 32.68	$ 293.15			$ 82.70	$ 3,142.60
IC	89	6	$ 409.98	$ 32.80	$ 293.15			$ 84.00	$ 504.00
PP	7	1	$ 424.55	$ 33.96	$ 293.15			$ 97.40	$ 97.40
Totals	**15,604**	**2,381**							**$ 449,868.80**

Log Code by Percent

Species	Code #1	Code #2	Code #3	Code #4	Code #5	Code #6
Douglas-fir				36.0	56.0	8.0
White Fir				23.0	67.0	10.0
Port-Orford-cedar					78.0	22.0
Incense-cedar					58.0	42.0
Ponderosa Pine					91.0	9.0

Marginal Log Volume

Species	Grade #7	Grade #8
Douglas-fir		
White Fir		
Port-Orford-cedar		
Incense-cedar		
Ponderosa Pine		

Appraised By : Franks, Annie **Date :** 05/30/2013

Area Approval By : Caulfield, Dave **Date :** 05/30/2013

District Approval By : **Date :**

Prospectus

Appraisal Method : (16' MBF)

Species	Trees	Net Volume 16' MBF	Net Volume 32' MBF	Net Volume CCF
Douglas-fir	12,426	2,023	1,633	3,865
White Fir	2,371	313	250	610
Port-Orford-cedar	711	38	27	78
Incense-cedar	89	6	5	13
Ponderosa Pine	7	1	1	2
Total	**15,604**	**2,381**	**1,916**	**4,568**

All Species

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
2,538	15,604	162	13.9	2,517	56,519	45

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
56,519	1,179	57,698	3.7	2,381	2,538	94 %

Douglas-fir

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
2,147	12,426	172	14.1	2,130	46,683	46

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
46,683	943	47,626	3.8	2,023	2,147	94 %

Cutting Areas

Unit	Regen Acres	Partial Cut Acres	Right Of Way Acres	Total Acres
1-4		6		6
3-17A		14		14
3-17B		21		21
12-3		22		22
23-4		12		12
25-13		25		25
26-1A		16		16
26-1B		33		33
TR-1			1	1
TR-2			1	1
TR-3			1	1
TR-4			1	1
TR-5			1	1
Totals :		**149**	**5**	**154**

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	2,023		
White Fir	313		
Port-Orford-cedar	38		
Incense-cedar	6		
Ponderosa Pine	1		
Sale Totals	**2,381**		

Unit Details (16' MB)

Unit 12-3 **22 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	318		
Incense-cedar	1		
Ponderosa Pine			
Port-Orford-cedar	7		
White Fir	28		
Unit Totals	**354**		

Unit 1-4 **6 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	82		
Incense-cedar			
Port-Orford-cedar	2		
White Fir	7		
Unit Totals	**91**		

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Unit 23-4 **12 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	202		
Incense-cedar	1		
Port-Orford-cedar	4		
White Fir	14		
Unit Totals	**221**		

Unit 25-13 **25 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	388		
Incense-cedar	1		
Ponderosa Pine	1		
Port-Orford-cedar	8		
White Fir	27		
Unit Totals	**425**		

Unit 26-1A **16 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	215		
Incense-cedar	1		
Port-Orford-cedar	5		
White Fir	17		
Unit Totals	**238**		

Unit 26-1B **33 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	537		
Incense-cedar	2		
Port-Orford-cedar	11		
White Fir	44		
Unit Totals	**594**		

Unit 3-17A **14 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	86		
White Fir	83		
Unit Totals	**169**		

Unit **3-17B** **21 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	143		
White Fir	93		
Unit Totals	**236**		

Unit **TR-1** **1 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	19		
Port-Orford-cedar			
White Fir			
Unit Totals	**19**		

Unit **TR-2** **1 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	9		
Port-Orford-cedar			
Unit Totals	**9**		

Unit **TR-3** **1 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	9		
Port-Orford-cedar			
White Fir			
Unit Totals	**9**		

Unit **TR-4** **1 Acres** **Value per Acre : $0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	7		
Port-Orford-cedar	1		
White Fir			
Unit Totals	**8**		

Unit **TR-5** **1 Acres** **Value per Acre : $0.00**

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

Sale Volume Totals

154 **Acres** 0 **Regen** 149 **Partial** 5 **R/W** 13 **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	12,426	46,683	943	2,023	2,130	2,147	1,633	1,720	1,737	3,865	4,055	4,089
White Fir	2,371	8,216	176	313	336	339	250	269	272	610	650	658
Port-Orford-cedar	711	1,458	58	38	44	45	27	30	31	78	89	92
Incense-cedar	89	141	0	6	6	6	5	5	5	13	13	13
Ponderosa Pine	7	21	2	1	1	1	1	1	1	2	2	2
Totals	**15,604**	**56,519**	**1,179**	**2,381**	**2,517**	**2,538**	**1,916**	**2,025**	**2,046**	**4,568**	**4,809**	**4,854**

Unit Totals

Unit : 1-4 **6 Acres** **0 Regen** **6 Partial** **0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	475	1,872	10	86	86	82
White Fir	58	193	1	7	7	7
Port-Orford-cedar	34	71	3	2	2	2
Incense-cedar	6	13				
Unit Totals	**573**	**2,149**	**14**	**95**	**95**	**91**

Unit : 3-17A **14 Acres** **0 Regen** **14 Partial** **0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	858	2,298	300	99	94	86
White Fir	575	2,086	63	91	90	83
Unit Totals	**1,433**	**4,384**	**363**	**190**	**184**	**169**

Unit : 3-17B **21 Acres** **0 Regen** **21 Partial** **0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,318	3,674	439	162	154	143
White Fir	589	2,153	92	102	100	93
Unit Totals	**1,907**	**5,827**	**531**	**264**	**254**	**236**

Unit : 12-3 **22 Acres** **0 Regen** **22 Partial** **0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,819	7,253	40	334	334	318

White Fir	231	787	4	30	30	28
Port-Orford-cedar	131	271	10	8	8	7
Incense-cedar	17	26		1	1	1
Ponderosa Pine	1	4				
Unit Totals	**2,199**	**8,341**	**54**	**373**	**373**	**354**

Unit : 23-4 **12 Acres** **0 Regen** **12 Partial** **0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,182	4,565	21	212	212	202
White Fir	134	421	5	15	15	14
Port-Orford-cedar	69	142	5	4	4	4
Incense-cedar	9	14		1	1	1
Unit Totals	**1,394**	**5,142**	**31**	**232**	**232**	**221**

Unit : 25-13 **25 Acres** **0 Regen** **25 Partial** **0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	2,170	8,820	46	408	407	388
White Fir	240	797	3	29	29	27
Port-Orford-cedar	151	313	12	10	10	8
Incense-cedar	19	30		1	1	1
Ponderosa Pine	4	13	1	1	1	1
Unit Totals	**2,584**	**9,973**	**62**	**449**	**448**	**425**

Unit : 26-1A **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	1,274	4,937	29	227	226	215
White Fir	153	503	1	18	18	17
Port-Orford-cedar	102	208	8	6	6	5
Incense-cedar	12	19		1	1	1
Unit Totals	**1,541**	**5,667**	**38**	**252**	**251**	**238**

Unit : 26-1B **33 Acres** **0 Regen** **33 Partial** **0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	3,049	12,169	58	567	565	537
White Fir	384	1,261	7	47	47	44
Port-Orford-cedar	212	431	17	14	13	11
Incense-cedar	25	38		2	2	2
Unit Totals	**3,670**	**13,899**	**82**	**630**	**627**	**594**

Unit : TR-1 **1 Acres** **0 Regen** **0 Partial** **1 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	107	398		19	19	19
White Fir	3	6				
Port-Orford-cedar	5	10				
Unit Totals	**115**	**414**		**19**	**19**	**19**

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

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	47	186		9	9	9
Port-Orford-cedar	2	3	1			
Unit Totals	**49**	**189**	**1**	**9**	**9**	**9**

Unit : TR-3 **1 Acres** **0 Regen** **0 Partial** **1 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	45	194		9	9	9
Port-Orford-cedar	1	1				
White Fir	2	5				
Unit Totals	**48**	**200**		**9**	**9**	**9**

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

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	50	150		7	7	7
Port-Orford-cedar	4	8	2	1	1	1
White Fir	2	4				
Unit Totals	**56**	**162**	**2**	**8**	**8**	**8**

Unit : TR-5 **1 Acres** **0 Regen** **0 Partial** **1 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	32	167		8	8	8
Ponderosa Pine	2	4	1			
Incense-cedar	1	1				
Unit Totals	**35**	**172**	**1**	**8**	**8**	**8**

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Stump to Truck Costs

Total (16' MBF)

Total Stump to Truck Costs	Net Volume	Cost / Net Volume
$ 362,901.27	2,381	$ 152.42

Detail

Yarding & Loading

Yarding System	Unit Of Measure	Units	Cost / Unit	Total Cost
Short Twr<40	GM MBF	1,404	$ 141.68	$ 198,918.72
Short Twr<40	GM MBF	254	$ 191.45	$ 48,628.30
Track Skidder	GM MBF	675	$ 109.97	$ 74,229.75
Track Skidder	GM MBF	184	$ 137.46	$ 25,292.64
Subtotal				**$ 347,069.41**

Other Costs

Explanation	Unit Of Measure	Units	Cost / Unit	Total Cost
Directional Falling	MBF	238	$ 15.47	$ 3,681.86
Subtotal				**$ 3,681.86**

Additional Move-Ins

Equipment	# Move-In	Cost / Move In	Total Cost
Yarder / Loader	17	$ 150.00	$ 2,550.00
Yarder / Loader	31	$ 150.00	$ 4,650.00
Dozer	17	$ 110.00	$ 1,870.00
Skidder	28	$ 110.00	$ 3,080.00
Subtotal			**$ 12,150.00**

Other Allowances Costs

Total (16' MBF)

Total Other Allowances Costs	Net Volume	Cost / Net Volume *	Total Buy Out Cost
$58,249.28	2,381	$24.46	$0.00

Fuels Treatment

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Hand Pile, Cvr - Level 2	$ 28,200.00	$ 11.84	N	$ 0.00
Lop and Scatter-Lvl 2	$ 3,108.00	$ 1.31	N	$ 0.00
Subtotal	**$ 31,308.00**	**$ 13.15**		**$ 0.00**

Misc

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Waterbar cable corridors	$ 328.14	$ 0.14	N	$ 0.00
Cover Landing Decks	$ 56.00	$ 0.02	N	$ 0.00
Marking	$ 10,244.00	$ 4.30	N	$ 0.00
Subtotal	**$ 10,628.14**	**$ 4.46**		**$ 0.00**

Other Costs

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Skid Location	$ 328.14	$ 0.14	N	$ 0.00
Hand Seeding @ 17 lb seed per hour	$ 660.00	$ 0.28	N	$ 0.00
Mulching (2 hours/5 bales)	$ 1,800.00	$ 0.76	N	$ 0.00
Ripping	$ 2,490.00	$ 1.05	N	$ 0.00
Landing Clean up	$ 3,000.00	$ 1.26	N	$ 0.00
Additional Tractor Time	$ 150.00	$ 0.06	N	$ 0.00
Intermediate Support	$ 1,000.00	$ 0.42	N	$ 0.00
Lift Tree	$ 2,100.00	$ 0.88	N	$ 0.00
Waterbar Skids	$ 675.00	$ 0.28	N	$ 0.00
Equipment Washing	$ 1,110.00	$ 0.47	N	$ 0.00
Equipment Washing	$ 750.00	$ 0.31	N	$ 0.00
Landing Construction	$ 2,250.00	$ 0.94	N	$ 0.00
Subtotal	**$ 16,313.14**	**$ 6.85**		**$ 0.00**

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

General

Yarding & Loading

Stump to Truck:
Short Twr<40: 1404 GM MBF @ $141.68/MBF: All cable portions of sale EXCEPT 3-17B
Short Twr<40: 254 GM MBF @ $191.45/MBF: Unit 3-17B
Track Skidder: 675 GM MBF @ $109.97/MBF: All tractor portions of sale EXCEPT 3-17A
Track Skidder: 184 GM MBF @ $137.46/MBF: Unit 3-17A
Other Yard & Loading Costs:
Directional Falling: Estimate no more than 238 MBF of directional falling
Additional Move-Ins:
Yarder/Loader: Yarder (Cable)- Estimate no more than 17 hours of move time at $150/hour
Yarder/Loader: Loader (Tractor and Cable) - Estimate no more than 31 hours of move time at $150/hour
Dozer: Landing cat for Cable side - Estimate no more than 17 hours of move time at $110/hour
Skidder: Two track skidders for tractor side, estimate no more than 14 hours/skidder for a total of 28 hours of move time for both pieces of equipment at $110/hour

Road Costs

(see Engineering Appraisal for details).

Transportation

Average 61 miles one-way to delivery point

(see Transportation appendix for details).

Other Allowances

Other Costs:
Skid Location: Estimate no more than 18 hours for skid location
Hand Seeding: Estimate no more than 3 acres of hand seeding
Mulching: Estimate no more than 3 acres of mulching
Ripping: Estimate no more than 6 acres of ripping (skid roads and landings)
Landing Clean up: Estimate no more than 30 hours of landing clean up
Additional Tractor Time: Estimate no more than 2 hours of additional tractor time for blocking skid roads
Intermediate Support: Estimate no more than 4 intermediate supports
Lift Trees: Estimate no more than 14 lift (tail >30') trees
Waterbar Skids: Estimate no more than 9 hours to waterbar skids
Equipment Washing: $370/piece for tower and loader (loader for cable side and loader for tractor side)
Equipment Washing: $250/piece for landing cat and 2 track skidders
Landing Construction: Estimate no more than 30 hours for landing construction
MISC:
Waterbar cable corridors: Hand waterbar cable corridors, estimate no more than 18 hours
Marking: Estimate no more than 130 acres of marking
FUELS TREATMENT:
Hand Pile, Cvr - Level 2: 21-40 piles/acre, see fuels appraisal for breakout of acerage
Lop and Scatter - Lvl 2: See fuels appraisal for breakout of acerage
Misc: Cover Landing Decks: Estimate no more than 2 acres of covering landing decks

Prospectus

Scale for Payment Sale

Sale: Williams Thin TS
Sale Date: 07/2013
Prep. By : E. Freeman
Tract No: 13-06

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ROAD MAINTENANCE AND ROAD USE APPRAISAL WORK SHEET

Summary of Costs

1) Road Use - Amortization: (1) $26.18 / 2381 MBF = $0.01/MBF 1/
(R-3b) (Tot Sale Vol)

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2) Road Maintenance Obligation:

$5740.41 (2.1)	+	$0.00 (3.1)	+	$0.00 (3.2)	+	$1049.26 (5.1)	=	$6789.67 (R-2)

3) Other Maintenance Payments:

$0.00 (4.1)

4). Purchaser Maintenance Allowances:

(5.2A) Move In	$1161.05
(5.2B) Culverts, Catch Basins, Downspouts	$2460.16
(5.2C) Grading, Ditching	$6689.58
(5.2D) Slide Removal and Slump Repair	$132.10
(5.2E) Dust Palliative (Water)	$3378.96
(5.2F) Surface Repair (Aggregate)	$0.00
(5.2G) Other	$0.00

Total (5.2) = $13821.84 (R-2 & Ex. D)

2)+3)+4) Total = $20,611.51/2381 MBF = $8.66/MBF 1/
(Total Sale Vol)

Costs are estimates only and do not include Profit and Risk.
1/ Enter on Timber Sale Summary Form OSO 5420-1.

OR110-9113-1

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1) Road Use Fees - Amortization

R/W Number	Road Number	Rd Use Fee	x	Vol MBF	=	Road Use Obligation
M-660	39-6-2.1 (A)	0.14		187		$26.18

(1.1) Subtotal $26.18

2) BLM Maintenance - Timber Haul 1/ 2/

Road Number and Segment	A N	Surf Type	Mi	x	Maint Fee	x	Vol MBF	=	Total Maint
39-5-6.0 (A)	A	BST	0.95		0.65		850		$524.88
39-5-18.1 (A)	A	BST	0.50		0.65		1531		$497.58
39-5-6.0 (B)	A	BST	1.79		0.65		850		$988.98
39-5-6.0 (C)	A	BST	1.20		0.65		850		$663.00
39-5-6.0 (D1)	A	BST	0.57		0.65		850		$314.93
39-5-6.0 (D2)	A	BST	0.30		0.65		405		$78.98
39-5-6.0 (D3)	A	BST	1.38		0.65		158		$141.73
39-5-18.1 (B1)	A	BST	1.76		0.65		1531		$1751.46
39-5-18.1 (B2)	A	BST	0.24		0.65		949		$148.04
39-5-18.1 (C1)	A	BST	0.79		0.65		949		$487.31
39-5-18.1 (C2)	A	BST	0.31		0.65		433		$87.25
39-5-18.1 (D)	A	BST	0.20		0.65		433		$56.29

(2.1) Subtotal $5740.41

1/ Rockwear is included in fee as a maintenance cost for BLM maintained roads.
2/ Include lump sum logging damage repair

3) Third Party Maintenance and Rockwear

		MAINTENANCE (3.1)					ROCKWEAR (3.2) 1/ 2/			
Agrmnt Number	Road Number	Mi	x	Fee	x	MBF = Maint	Fee	x	MBF =	Rkwear
M-1166	39-6-25.4 (D)	0.07					0.00		74	$0.00
M-1166	39-6-25.4 (B)	0.30					0.00		317	$0.00
M-1166	39-6-26.2	0.10					0.00		198	$0.00
M-1166	39-6-26.1	0.25					0.00		199	$0.00
M-660	39-6-2.0 (B)	0.17					0.00		50	$0.00
M-660	39-6-2.0 (A)	0.20					0.00		247	$0.00
M-660	39-6-2.1 (A)	0.21					0.00		197	$0.00
M-JoCo	39-6-36.2 (A)	0.06					0.00		225	$0.00
M-JoCo	39-6-36.1	0.07					0.00		208	$0.00
M-JoCo	39-6-26.0 (A)	0.44					0.00		151	$0.00

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

1/ Rockwear is included in fee as a maintenance cost for BLM maintained roads.
2/ Include lump sum logging damage repair

4) Other Maintenance Payments - USFS or Others Perform Maintenance

Agency	Road Number	Fee MBF/Mi	x	Mi =	Fee /MBF	x	Vol Hauled	=	Maint Cost

(4.1) Subtotal $0.00

5) Purchaser Maintenance - Rock Wear

TIMBER HAUL (5.1)/1/2

Road No 1/ and Segment	A N	Mi	RkWear Fee	Vol MBF	Total RkWear
39-5-18.1 (E)	A	0.27	0.51	433	$59.62
39-6-2.2	A	0.54	0.51	158	$43.51
39-2-11.0 (A)	A	0.20	0.51	247	$25.19
39-6-11.0 (D3)	A	0.89	0.51	221	$100.31
39-6-11.1 (A1)	A	0.34	0.51	247	$42.83
39-6-12.1	A	0.22	0.51	274	$30.74
39-6-12.5	A	0.08	0.51	137	$5.59
39-6-23.3	A	0.16	0.51	147	$12.00
39-6-11.0 (D2)	A	0.09	0.51	372	$17.07
39-6-11.0 (D1)	A	2.26	0.51	582	$670.81
39-6-11.1 (A2)	A	0.33	0.51	247	$41.57

(5.1) Subtotal $1049.26

1/ All surfaced roads have a rockwear fee which includes an allowance for rock haul
2/ Include lump sum logging damage repair

Purchaser Operational Maintenance

Cost allowances must be limited to work required under timber sale Exhibit D.
If purchaser maint. such as dust control/damage repair is performed on BLM maint. roads, add appropriate mandatory Ex. D provisions. Note in prospectus.

Move In

Equipment 1/	No Units	Move in	Cost/ 50 Mi	Dist Factor	Sub-total
Motor Grader:	1	1	$356.00	1.0035	$357.25
Back Hoe:	1	1	$356.00	1.0035	$357.25
Loader:			$356.00	0.59	$0.00
Water Truck:	1	1	$217.00	1.0035	$217.76
Dump Truck 2/:	1	1	$228.00	1.0035	$228.80

(5.2A) Total $1161.05

1/ Equipment limited to that allowed in Exhibit D.

Culvert Maintenance - Including Catchbasins and Downpipes 1/

Miles	Cost/Mi	Subtotal
9.11	270.05	$2460.16

(5.2B) Total $2460.16

1/ Does not include purchase or installation of culvert pipe.

Grading (Includes Ditches and Shoulders) 1/

	Miles	Cost/Mi	Freq	Subtotal
Blade Road:	5.67	519.72	2	$5893.62
Blade Ditch:	5.67	140.38	1	$795.95

(5.2C) Total $6689.58

1/ Watch for double allowance on roadway preparation for dust palliative application.

Slide and Slough removal, Slump Repair (15 sta-yds. ea.) 1/

Type Equipment	No Slides /Slumps	x	Hours Each	x	Equip Cost	=	Subtotal
Grader:	0		0		139.10		$0.00
Loader:	0		0		91.63		$0.00
Backhoe:	2		1		66.05		$132.10

(5.2D) Total $132.10

1/ Maximum haul is 15 sta. yds. Use grader or front end loader only.

Dust Palliative (Water) 1/

Spreading Hours

	Miles	/	MPH	=	Hours	x	No Days	x	Freq /Day	=	Truck Hours
	9.11		15		0.6		15		1		9
Load & Haul =					1.0		15		1		15
Return trip =					1.0		15		1		15
								Total Hours =			39

Truck Cost: $86.64/Hr. x 39.0 Hours = $3378.96

(5.2E) Total $3378.96

1/ Allow water for all BLM maintaintained non-oiled roads.

Surface Repair (Aggregate)

Production Cost:	0 C.Y. x $0.00/C.Y.			=	$0.00
Haul to Stockpile:	0 C.Y. x $3.72/C.Y. x	0.00	Mi	=	$0.00
Stockpile:	0 C.Y. x $1.26/C.Y.			=	$0.00
Load from Stockpile:	0 C.Y. x $1.39/C.Y.			=	$0.00
Haul from Stockpile:	0 C.Y. x $3.72/C.Y. x	0.00	Mi	=	$0.00
Process with Grader:	0 C.Y. x $1.40/C.Y.			=	$0.00

(5.2F) Total $0.00

Other

Fallen Timber Cutting: 1/	0.0 Hours x $0.00/Hour = $0.00
Brush Cutting/Tree Trimming: 2/	0.0 Hours x $0.00/Hour = $0.00
Oil/Asphalt Materials: 3/	Lump Sum = $0.00
Signing for Dust Palliatives: 4/	Lump Sum = $0.00
	Lump Sum = $0.00
	Lump Sum = $0.00
	Lump Sum = $0.00

(5.2G) Total $0.00

1/ Exhibit D Subsection 3104.
2/ Exhibit D Subsection 3107.
3/ Exhibit D Subsection 3401.
4/ Exhibit D Subsection 3405b.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Summary of All Roads and Projects Updated: 5/1/2013

T.S. Contract Name: Williams Thin TS Tract No: 13-06 Sale Date: 07/2013
Prepared by: E. Freeman Ph: 471-6601 Print Date: 5/30/2013 3:18:24 PM
Construction: 0.00 sta
Improve: 0.00 sta Renov: 482.60 sta Decom: 0.00 sta Temp: 19.00 sta

200 Clearing and Grubbing: 4.2 acres $10,798.73
Clearing: 98.7 sta Grubbing: 4.2 acres
Slash Treatment: 4.2 acres

300 Excavation: 2,856 cy $6,922.76
Haul: 11,807 sta-yds

400 Drainage: $11,911.10
Culvert: 410 lf wt = 6,262 lbs factor = 1.1
DownSpout: 60 lf
PolyPipe: 0 lf

500 Renovation: $15,479.77
Blading 9.14 mi

Surfacing: $6,399.12
700 Quarry Name: Commercial Source I 24 cy
1200 Quarry Name: Commercial Source II 120 cy

1300 Geotextiles: $0.00

1400 Slope Protection: $0.00

1800 Soil Stabilization: 1.3 acres $764.84
Includes Small Quantity Factor of 1.60

1900 Cattleguards: $0.00

2100 RoadSide Brushing: 8.5 acres $4,676.11

2300 Engineering: 0.00 sta. $0.00

2400 Minor Concrete: $0.00

2500 Gabions: $0.00

8000 Miscellaneous: $13,549.04

Mobilization: Const. $8,880.00 Surf. $0.00..... $8,880.00

Quarry Development: $0.00

Total: 2,381 mbf @ $33.340/mbf = $79,381.46

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities are COMPACTED in place cubic yards.

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ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-5-18.1 (E) Road Name: Low Divide Road
Road Renovation: 0.27 mi 20 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$986.92
Culvert: 40 lf wt = 600 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$696.65
Blading 0.27 mi	
Surfacing:	$546.24
Quarry Name: Commercial Source II 12 cy	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.3 acres	$167.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $301.89 Surf. $0.00	$301.89
Quarry Development:	$0.00
Total:	$2,698.71

Notes:
- Quantities shown are estimates only and not pay items.
- Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-5-18.1 (E) Road Name: Low Divide Road

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Aluminized 18 inch 16 ga 40 lf x $22.43/lf x 1.1 = $986.92

Subtotal: $986.92

Section 500 Renovation:

Comment: Watering for ASC compaction estimated in T&E

Blading: $519.72/mi x 0.27 mi = $140.32

Pull Ditches: $140.38/mi x 0.27 mi = $37.90

Compaction: $1329.15/mi x 0.27 mi = $358.87

Clean Culverts: $270.05/mi x 0.27 mi = $72.91

Water Roads for Compaction

Water Truck 3000 Gal 1 hr x $86.64/hr = $86.64

Subtotal: $696.65

Section 1200 Crushed under 1 1/2 Quarry Name: Commercial Source II

Comment: 12 CYs of 1"-0 ASC placed at each culvert replacement site

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									12cy

Rock Volume = 12cy

Production: $9.09/cy x 12cy = $109.08

Processing: $1.40/cy x 12cy = $16.80

Compaction: $0.79/cy x 12cy = $9.48

Basic Rock Haul cost: $0.93/cy x 12cy = $11.16

Rock Haul -15% grades: $1.39/cy-mi x 12cy x 10.00 mi= $166.80

Rock Haul St& Co Roads: $0.62/cy-mi x 12cy x 25.00 mi= $186.00

Basic Water Haul cost: $0.61/cy x 12cy = $7.32

Water Haul -15% grades: $0.13/cy-mi x 12cy x 10.00 mi= $15.60

Water Haul St&Co Roads: $0.08/cy-mi x 12cy x 25.00 mi= $24.00

Subtotal: $546.24

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:

RoadSide Brushing Medium: $556.68/acre x 0.30 acres = $167.00

Subtotal: $167.00

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Road Number: 39-5-18.1 (E) Low Divide Road Continued

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 3.40% of total Costs = $301.89
  Surfacing - 8.33% by rock volume = $0.00

Subtotal: $301.89

Quarry Development:
  Based on 8.33% of total rock volume

Subtotal: $0.00

Total: $2,698.71

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-02.0 (A-C) Road Name: Elk B SP Bear Wall
Road Renovation: 0.59 mi 17 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$635.41
Blading 0.59 mi	
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.6 acres	$334.01
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $122.10 Surf. $0.00	$122.10
Quarry Development:	$0.00
Total:	$1,091.52

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-02.0 (A-C) Road Name: Elk B SP Bear Wall

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $519.72/mi x 0.59 mi = $306.63
  Scarification: $866.20/mi x 0.10 mi = $86.62
  Pull Ditches: $140.38/mi x 0.59 mi = $82.82
  Clean Culverts: $270.05/mi x 0.59 mi = $159.33

Subtotal: $635.41

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
  RoadSide Brushing Medium: $556.68/acre x 0.60 acres = $334.01

Subtotal: $334.01

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 1.38% of total Costs = $122.10
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $122.10

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $1,091.52

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-02.1 (A) Road Name: Elk SP B - Prvt Seg
Road Renovation: 0.21 mi 12 ft Subgrade 0 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$109.14
Blading 0.21 mi	
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.0 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$375.00
Mobilization: Const. $60.98 Surf. $0.00	$60.98
Quarry Development:	$0.00
Total:	$545.12

Notes:
- Quantities shown are estimates only and not pay items.
- Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-02.1 (A) Road Name: Elk SP B - Prvt Seg

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $519.72/mi x 0.21 mi = $109.14

Subtotal: $109.14

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:

Subtotal: $0.00

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:
  Reconstruct Waterbars
   Tractor: D6 with winch 3 EA x $125.00/EA = $375.00

Subtotal: $375.00

Mobilization:
  Construction - 0.69% of total Costs = $60.98
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $60.98

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $545.12

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-02.1 (B) Road Name: Elk SP B - BLM Seg
Road Renovation: 0.51 mi 12 ft Subgrade 0 ft ditch 5/1/2013

200 Clearing and Grubbing: 1.2 acres	$2,695.11
Clearing:26.9 sta Grubbing:1.2 acres	
Slash Treatment:1.2 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$265.06
Blading 0.51 mi	
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.5 acres	$556.68
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$125.00
Mobilization: Const. $458.71 Surf. $0.00	$458.71
Quarry Development:	$0.00
Total:	$4,100.55

Notes:
- Quantities shown are estimates only and not pay items.
- Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-02.1 (B) Road Name: Elk SP B - BLM Seg

Section 200 Clearing and Grubbing:
  Clearing - Medium: $30.57/sta x 26.93 sta = $823.25
  Grubbing - Medium: $822.91/acre x 1.21 acres = $995.72
  Scatter: $724.08/acre x 1.21 acres = $876.14

Subtotal: $2,695.11

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $519.72/mi x 0.51 mi = $265.06

Subtotal: $265.06

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
  RoadSide Brushing Heavy: $1113.36/acre x 0.50 acres = $556.68

Subtotal: $556.68

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:
  Reconstruct Waterbars
   Tractor: D6 with winch 1 EA x $125.00/EA = $125.00

Subtotal: $125.00

Mobilization:
  Construction - 5.17% of total Costs = $458.71
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $458.71

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Road Number: 39-6-02.1 (B) Elk SP B - BLM Seg Continued

Total: $4,100.55

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-02.2 Road Name:
Road Renovation: 0.54 mi 17 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$502.28
Blading 0.54 mi	
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.5 acres	$278.34
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$250.00
Mobilization: Const. $129.81 Surf. $0.00	$129.81
Quarry Development:	$0.00
Total:	$1,160.43

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-02.2 Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $519.72/mi x 0.54 mi = $280.65
  Pull Ditches: $140.38/mi x 0.54 mi = $75.81
  Clean Culverts: $270.05/mi x 0.54 mi = $145.83

Subtotal: $502.28

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
  RoadSide Brushing Medium: $556.68/acre x 0.50 acres = $278.34

Subtotal: $278.34

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:
  Reshape Existing Waterdips
   Motor Grader 14G 1 EA x $250.00/EA = $250.00

Subtotal: $250.00

Mobilization:
  Construction - 1.46% of total Costs = $129.81
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $129.81

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $1,160.43

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-11.0 (A) Road Name: Bear Wallow
Road Renovation: 0.20 mi 18 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$538.50
Blading 0.20 mi	
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.2 acres	$111.34
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $81.85 Surf. $0.00	$81.85
Quarry Development:	$0.00
Total:	$731.69

Notes:
- Quantities shown are estimates only and not pay items.
- Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-11.0 (A) Road Name: Bear Wallow

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
Comment: Watering for ASC compaction estimated in T&E
Blading: $519.72/mi x 0.20 mi = $103.94
Pull Ditches: $140.38/mi x 0.20 mi = $28.08
Compaction: $1329.15/mi x 0.20 mi = $265.83
Clean Culverts: $270.05/mi x 0.20 mi = $54.01
Water road for compaction
Water Truck 3000 Gal 1 hr x $86.64/hr = $86.64

Subtotal: $538.50

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
RoadSide Brushing Medium: $556.68/acre x 0.20 acres = $111.34

Subtotal: $111.34

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
Construction - 0.92% of total Costs = $81.85
Surfacing - 0.00% by rock volume = $0.00

Subtotal: $81.85

Road Number: 39-6-11.0 (A) Bear Wallow Continued

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal:	$0.00
Total:	$731.69

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-11.0 (D) Road Name: Bear Wallow
Road Renovation: 3.24 mi 18 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$8,703.61
Culvert: 280 lf wt = 4,312 lbs factor = 1.1	
DownSpout: 60 lf	
PolyPipe: 0 lf	
500 Renovation:	$8,533.07
Blading 3.24 mi	
Surfacing:	$4,369.92
Quarry Name: Commercial Source II 96 cy	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 3.1 acres	$862.85
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $2,830.14 Surf. $0.00	$2,830.14
Quarry Development:	$0.00
Total:	$25,299.59

Notes:
- Quantities shown are estimates only and not pay items.
- Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-11.0 (D) Road Name: Bear Wallow

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Aluminized MP 0.22	18 inch 16 ga 32 lf x $22.43/lf x 1.1 =	$789.54
Aluminized MP 0.26	18 inch 16 ga 32 lf x $22.43/lf x 1.1 =	$789.54
Aluminized MP 0.37	18 inch 16 ga 36 lf x $22.43/lf x 1.1 =	$888.23
Aluminized MP 0.53	24 inch 16 ga 32 lf x $28.67/lf x 1.1 =	$1,009.18
Aluminized MP 0.60	18 inch 16 ga 32 lf x $22.43/lf x 1.1 =	$789.54
Aluminized MP 0.77	24 inch 16 ga 38 lf x $28.67/lf x 1.1 =	$1,198.41
Aluminized MP 1.16	18 inch 16 ga 36 lf x $22.43/lf x 1.1 =	$888.23
Aluminized MP 1.30	24 inch 16 ga 42 lf x $28.67/lf x 1.1 =	$1,324.55
Half Round MP 0.22	18 inch 10 ea x $14.85/ea =	$148.50
Half Round MP 0.26	18 inch 10 ea x $14.85/ea =	$148.50
Half Round MP 0.37	18 inch 10 ea x $14.85/ea =	$148.50
Half Round MP 0.77	24 inch 10 ea x $21.62/ea =	$216.20
Half Round MP 0.85	18 inch 10 ea x $14.85/ea =	$148.50
Half Round MP 1.30	24 inch 10 ea x $21.62/ea =	$216.20

Subtotal: $8,703.61

Section 500 Renovation:

Comment: Watering for ASC compaction estimated in T&E

Blading: $519.72/mi x 3.24 mi = $1,683.89
Scarification: $866.20/mi x 0.10 mi = $86.62
Pull Ditches: $140.38/mi x 3.24 mi = $454.83
Compaction: $1329.15/mi x 3.24 mi = $4,306.45
Clean Culverts: $270.05/mi x 3.24 mi = $874.96
Water road for compaction
Water Truck 3000 Gal 13 hr x $86.64/hr = $1,126.32

Subtotal: $8,533.07

Section 1200 Crushed under 1 1/2 Quarry Name: Commercial Source II

Comment: 12 CYs of 1"-0 ASC placed at each culvert replacement site

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									96cy

Rock Volume = 96cy
Production: $9.09/cy x 96cy = $872.64
Processing: $1.40/cy x 96cy = $134.40
Compaction: $0.79/cy x 96cy = $75.84
Basic Rock Haul cost: $0.93/cy x 96cy = $89.28
Rock Haul -15% grades: $1.39/cy-mi x 96cy x 10.00 mi= $1,334.40
Rock Haul St& Co Roads: $0.62/cy-mi x 96cy x 25.00 mi= $1,488.00
Basic Water Haul cost: $0.61/cy x 96cy = $58.56
Water Haul -15% grades: $0.13/cy-mi x 96cy x 10.00 mi= $124.80
Water Haul St&Co Roads: $0.08/cy-mi x 96cy x 25.00 mi= $192.00

Subtotal: $4,369.92

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Road Number: 39-6-11.0 (D) Bear Wallow Continued

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
  Brushing width Left: 4ft. Right: 4ft.
  RoadSide Brushing Light: $278.34/acre x 3.10 acres = $862.85

Subtotal: $862.85

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 31.87% of total Costs = $2,830.14
  Surfacing - 66.67% by rock volume = $0.00

Subtotal: $2,830.14

Quarry Development:
  Based on 66.67% of total rock volume

Subtotal: $0.00

Total: $25,299.59

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-11.1 (A1) Road Name: Cedar Flat Spur
Road Renovation: 0.31 mi 17 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$830.33
Blading 0.31 mi	
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.3 acres	$167.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $125.62 Surf. $0.00	$125.62
Quarry Development:	$0.00
Total:	$1,122.96

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-11.1 (A1) Road Name: Cedar Flat Spur

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
Comment: Watering for ASC compaction estimated in T&E
Blading: $519.72/mi x 0.31 mi = $161.11
Scarification: $866.20/mi x 0.05 mi = $43.31
Pull Ditches: $140.38/mi x 0.31 mi = $43.52
Compaction: $1329.15/mi x 0.31 mi = $412.04
Clean Culverts: $270.05/mi x 0.31 mi = $83.72
Water roads for compaction
Water Truck 3000 Gal 1 hr x $86.64/hr = $86.64

Subtotal: $830.33

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
RoadSide Brushing Medium: $556.68/acre x 0.30 acres = $167.00

Subtotal: $167.00

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
Construction - 1.41% of total Costs = $125.62
Surfacing - 0.00% by rock volume = $0.00

Subtotal: $125.62

Road Number: 39-6-11.1 (A1) Cedar Flat Spur Continued

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal:	$0.00
Total:	$1,122.96

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-11.1 (A2) Road Name: Cedar Flat Spur
Road Renovation: 0.36 mi 14 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$1,480.38
Culvert: 60 lf wt = 900 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$899.99
Blading 0.36 mi	
Surfacing:	$546.24
Quarry Name: Commercial Source II 12 cy	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.3 acres	$167.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $389.66 Surf. $0.00	$389.66
Quarry Development:	$0.00
Total:	$3,483.27

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-11.1 (A2) Road Name: Cedar Flat Spur

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Aluminized MP 0.64 18 inch 16 ga 60 lf x $22.43/lf x 1.1 = $1,480.38

Subtotal: $1,480.38

Section 500 Renovation:

Comment: Watering for ASC compaction estimated in T&E

Blading: $519.72/mi x 0.36 mi = $187.10

Pull Ditches: $140.38/mi x 0.36 mi = $50.54

Compaction: $1329.15/mi x 0.36 mi = $478.49

Clean Culverts: $270.05/mi x 0.36 mi = $97.22

Water roads for compaction

Water Truck 3000 Gal 1 hr x $86.64/hr = $86.64

Subtotal: $899.99

Section 1200 Crushed under 1 1/2 Quarry Name: Commercial Source II

Comment: 12 CYs of 1"-0 ASC placed at each culvert replacement site

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									12cy

Rock Volume = 12cy

Production: $9.09/cy x 12cy = $109.08

Processing: $1.40/cy x 12cy = $16.80

Compaction: $0.79/cy x 12cy = $9.48

Basic Rock Haul cost: $0.93/cy x 12cy = $11.16

Rock Haul -15% grades: $1.39/cy-mi x 12cy x 10.00 mi= $166.80

Rock Haul St& Co Roads: $0.62/cy-mi x 12cy x 25.00 mi= $186.00

Basic Water Haul cost: $0.61/cy x 12cy = $7.32

Water Haul -15% grades: $0.13/cy-mi x 12cy x 10.00 mi= $15.60

Water Haul St&Co Roads: $0.08/cy-mi x 12cy x 25.00 mi= $24.00

Subtotal: $546.24

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:

RoadSide Brushing Medium: $556.68/acre x 0.30 acres = $167.00

Subtotal: $167.00

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Road Number: 39-6-11.1 A2 Cedar Flat Spur Continued

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 4.39% of total Costs = $389.66
  Surfacing - 8.33% by rock volume = $0.00

Subtotal: $389.66

Quarry Development:
  Based on 8.33% of total rock volume

Subtotal: $0.00

Total: $3,483.27

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-12.1 Road Name: Cedar Flat Spur
Road Renovation: 0.22 mi 14 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$583.69
Blading 0.22 mi	
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.2 acres	$55.67
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $80.53 Surf. $0.00	$80.53
Quarry Development:	$0.00
Total:	$719.88

Notes:
- Quantities shown are estimates only and not pay items.
- Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-12.1 Road Name: Cedar Flat Spur

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
Comment: Watering for ASC compation estimated in T&E
Blading: $519.72/mi x 0.22 mi = $114.34
Pull Ditches: $140.38/mi x 0.22 mi = $30.88
Compaction: $1329.15/mi x 0.22 mi = $292.41
Clean Culverts: $270.05/mi x 0.22 mi = $59.41
Water road for compaction
Water Truck 3000 Gal 1 hr x $86.64/hr = $86.64

Subtotal: $583.69

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Brushing width Left: 4ft. Right: 4ft.
RoadSide Brushing Light: $278.34/acre x 0.20 acres = $55.67

Subtotal: $55.67

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
Construction - 0.91% of total Costs = $80.53
Surfacing - 0.00% by rock volume = $0.00

Subtotal: $80.53

Road Number: 39-6-12.1 Cedar Flat Spur Continued

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal:	$0.00
Total:	$719.88

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-12.5 Road Name: Cedar Wallow Spur
Road Renovation: 0.08 mi 14 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$267.38
Blading 0.08 mi	
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.1 acres	$27.83
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $37.18 Surf. $0.00	$37.18
Quarry Development:	$0.00
Total:	$332.40

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-12.5 Road Name: Cedar Wallow Spur

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
Comment: Watering for ASC compaction estimated in T&E
Blading: $519.72/mi x 0.08 mi = $41.58
Pull Ditches: $140.38/mi x 0.08 mi = $11.23
Compaction: $1329.15/mi x 0.08 mi = $106.33
Clean Culverts: $270.05/mi x 0.08 mi = $21.60
Water road for compaction
Water Truck 3000 Gal 1 hr x $86.64/hr = $86.64

Subtotal: $267.38

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Brushing width Left: 4ft. Right: 4ft.
RoadSide Brushing Light: $278.34/acre x 0.10 acres = $27.83

Subtotal: $27.83

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
Construction - 0.42% of total Costs = $37.18
Surfacing - 0.00% by rock volume = $0.00

Subtotal: $37.18

Road Number: 39-6-12.5 Cedar Wallow Spur Continued

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal:	$0.00
Total:	$332.40

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-23.3 Road Name: Low Divide Spur
Road Renovation: 0.16 mi 14 ft Subgrade 0 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$83.16
Blading 0.16 mi	
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.2 acres	$111.34
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $24.50 Surf. $0.00	$24.50
Quarry Development:	$0.00
Total:	$218.99

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-23.3 Road Name: Low Divide Spur

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $519.72/mi x 0.16 mi = $83.16

Subtotal: $83.16

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
  RoadSide Brushing Medium: $556.68/acre x 0.20 acres = $111.34

Subtotal: $111.34

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 0.28% of total Costs = $24.50
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $24.50

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $218.99

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-25.4 (A) Road Name:
Road Renovation: 0.29 mi 14 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$212.28
Blading 0.29 mi	
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.3 acres	$167.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$1,650.00
Mobilization: Const. $255.60 Surf. $0.00	$255.60
Quarry Development:	$0.00
Total:	$2,284.89

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-25.4 (A) Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $519.72/mi x 0.29 mi = $150.72
  Pull Ditches: $140.38/mi x 0.15 mi = $21.06
  Clean Culverts: $270.05/mi x 0.15 mi = $40.51

Subtotal: $212.28

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
  RoadSide Brushing Medium: $556.68/acre x 0.30 acres = $167.00

Subtotal: $167.00

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:
  Remove/Reconstruct Barricade
   Tractor: D6 with winch 1 EA x $400.00/EA = $400.00
  Reconstruct Waterbars
   Tractor: D6 with winch 10 EA x $125.00/EA = $1,250.00

Subtotal: $1,650.00

Mobilization:
  Construction - 2.88% of total Costs = $255.60
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $255.60

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal:	$0.00
Total:	$2,284.89

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-25.4 (B-E) Road Name:
Road Renovation: 0.83 mi 14 ft Subgrade 0 ft ditch 5/1/2013

200 Clearing and Grubbing: 1.3 acres	$3,319.72
Clearing:43.8 sta Grubbing:1.3 acres	
Slash Treatment:1.3 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$431.37
Blading 0.83 mi	
Surfacing:	$468.36
Quarry Name: Commercial Source I 12 cy	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.8 acres	$445.34
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$2,900.00
Mobilization: Const. $952.82 Surf. $0.00	$952.82
Quarry Development:	$0.00
Total:	$8,517.62

Notes:
- Quantities shown are estimates only and not pay items.
- Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-25.4 (B-E) Road Name:

Section 200 Clearing and Grubbing:
  Clearing - Medium: $30.57/sta x 43.82 sta = $1,339.58
  Grubbing - Medium: $822.91/acre x 1.28 acres = $1,053.32
  Scatter: $724.08/acre x 1.28 acres = $926.82

Subtotal: $3,319.72

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $519.72/mi x 0.83 mi = $431.37

Subtotal: $431.37

Section 700 Pitrun Quarry Name: Commercial Source I
 Comment: Pit Run material for AWD

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.01mi	14ft	14ft	6in						

  Rock Volume = 12cy
  Production: $2.60/cy x 12cy = $31.20
  Processing: $1.40/cy x 12cy = $16.80
  Compaction: $0.79/cy x 12cy = $9.48
  Basic Rock Haul cost: $0.93/cy x 12cy = $11.16
  Rock Haul -15% grades: $1.39/cy-mi x 12cy x 10.00 mi= $166.80
  Rock Haul St& Co Roads: $0.62/cy-mi x 12cy x 25.00 mi= $186.00
  Basic Water Haul cost: $0.61/cy x 12cy = $7.32
  Water Haul -15% grades: $0.13/cy-mi x 12cy x 10.00 mi= $15.60
  Water Haul St&Co Roads: $0.08/cy-mi x 12cy x 25.00 mi= $24.00

Subtotal: $468.36

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
  RoadSide Brushing Medium: $556.68/acre x 0.80 acres = $445.34

Subtotal: $445.34

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:
  Reshape Existing Waterdip
   Motor Grader 14G 2 EA x $250.00/EA = $500.00
  Reconstruct waterbars
   Tractor: D6 with winch 16 EA x $125.00/EA = $2,000.00
  Remove & Reconstruct Barricade
   Tractor: D6 with winch 1 EA x $400.00/EA = $400.00

Subtotal: $2,900.00

Mobilization:
  Construction - 10.73% of total Costs = $952.82
  Surfacing - 8.33% by rock volume = $0.00

Subtotal: $952.82

Quarry Development:
  Based on 8.33% of total rock volume

Subtotal: $0.00

Total: $8,517.62

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-26.0 (A-B) Road Name:
Road Renovation: 0.70 mi 14 ft Subgrade 0 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$372.01
Blading 0.70 mi	
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.7 acres	$779.35
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$1,525.00
Mobilization: Const. $337.10 Surf. $0.00	$337.10
Quarry Development:	$0.00
Total:	$3,013.47

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-26.0 (A-B) Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $519.72/mi x 0.70 mi = $363.80
  Pull Ditches: $140.38/mi x 0.02 mi = $2.81
  Clean Culverts: $270.05/mi x 0.02 mi = $5.40

Subtotal: $372.01

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
  RoadSide Brushing Heavy: $1113.36/acre x 0.70 acres = $779.35

Subtotal: $779.35

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:
  Reshape Existing Waterdip
   Motor Grader 14G 1 EA x $250.00/EA = $250.00
  Reconstruct Waterbars
   Tractor: D6 with winch 7 EA x $125.00/EA = $875.00
  Remove & Replace Barricade
   Tractor: D6 with winch 1 EA x $400.00/EA = $400.00

Subtotal: $1,525.00

Mobilization:
  Construction - 3.80% of total Costs = $337.10
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $337.10

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal:	$0.00
Total:	$3,013.47

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-26.1 Road Name:
Road Renovation: 0.25 mi 14 ft Subgrade 0 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$740.19
Culvert: 30 lf wt = 450 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$321.96
Blading 0.25 mi	
Surfacing:	$468.36
Quarry Name: Commercial Source I 12 cy	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.0 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$1,875.00
Mobilization: Const. $428.94 Surf. $0.00	$428.94
Quarry Development:	$0.00
Total:	$3,834.45

Notes:
- Quantities shown are estimates only and not pay items.
- Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-26.1 Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:
Aluminized MP 0.16 18 inch 16 ga 30 lf x $22.43/lf x 1.1 = $740.19

Subtotal: $740.19

Section 500 Renovation:
Blading: $519.72/mi x 0.25 mi = $129.93
Pull Ditches: $140.38/mi x 0.02 mi = $2.81
Construct Lead-in Ditches
Excavator 225 (1.5 CY) 2 hr x $94.61/hr = $189.22

Subtotal: $321.96

Section 700 Pitrun Quarry Name: Commercial Source I
Comment: Pit Run material for AWD

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.01mi	14ft	14ft	6in						

Rock Volume = 12cy
Production: $2.60/cy x 12cy = $31.20
Processing: $1.40/cy x 12cy = $16.80
Compaction: $0.79/cy x 12cy = $9.48
Basic Rock Haul cost: $0.93/cy x 12cy = $11.16
Rock Haul -15% grades: $1.39/cy-mi x 12cy x 10.00 mi= $166.80
Rock Haul St& Co Roads: $0.62/cy-mi x 12cy x 25.00 mi= $186.00
Basic Water Haul cost: $0.61/cy x 12cy = $7.32
Water Haul -15% grades: $0.13/cy-mi x 12cy x 10.00 mi= $15.60
Water Haul St&Co Roads: $0.08/cy-mi x 12cy x 25.00 mi= $24.00

Subtotal: $468.36

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:

Subtotal: $0.00

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:
  Reshape Existing Waterdip
   Motor Grader 14G 1 EA x $250.00/EA = $250.00
  Reconstruct Waterbars
   Tractor: D6 with winch 13 EA x $125.00/EA = $1,625.00

Subtotal: $1,875.00

Mobilization:
  Construction - 4.83% of total Costs = $428.94
  Surfacing - 8.33% by rock volume = $0.00

Subtotal: $428.94

Quarry Development:
  Based on 8.33% of total rock volume

Subtotal: $0.00

Total: $3,834.45

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-26.2 Road Name:
Road Renovation: 0.10 mi 14 ft Subgrade 0 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.2 acres	$532.69
Clearing:5.3 sta Grubbing:0.2 acres	
Slash Treatment:0.2 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$51.97
Blading 0.10 mi	
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.1 acres	$111.34
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$250.00
Mobilization: Const. $119.15 Surf. $0.00	$119.15
Quarry Development:	$0.00
Total:	$1,065.15

Notes:
- Quantities shown are estimates only and not pay items.
- Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-26.2 Road Name:

Section 200 Clearing and Grubbing:
  Clearing - Medium: $30.57/sta x 5.28 sta = $161.41
  Grubbing - Medium: $822.91/acre x 0.24 acres = $197.50
  Scatter: $724.08/acre x 0.24 acres = $173.78

Subtotal: $532.69

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $519.72/mi x 0.10 mi = $51.97

Subtotal: $51.97

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
  RoadSide Brushing Heavy: $1113.36/acre x 0.10 acres = $111.34

Subtotal: $111.34

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:
  Reconstruct Waterbars
   Tractor: D6 with winch 2 EA x $125.00/EA = $250.00

Subtotal: $250.00

Mobilization:
  Construction - 1.34% of total Costs = $119.15
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $119.15

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $1,065.15

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-36.1 Road Name:
Road Renovation: 0.07 mi 14 ft Subgrade 0 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.2 acres	$376.10
Clearing:3.7 sta Grubbing:0.2 acres	
Slash Treatment:0.2 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$36.38
Blading 0.07 mi	
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.1 acres	$111.34
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $65.98 Surf. $0.00	$65.98
Quarry Development:	$0.00
Total:	$589.79

Notes:
- Quantities shown are estimates only and not pay items.
- Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-36.1 Road Name:

Section 200 Clearing and Grubbing:
  Clearing - Medium: $30.57/sta x 3.70 sta = $113.11
  Grubbing - Medium: $822.91/acre x 0.17 acres = $139.89
  Scatter: $724.08/acre x 0.17 acres = $123.09

Subtotal: $376.10

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $519.72/mi x 0.07 mi = $36.38

Subtotal: $36.38

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
  RoadSide Brushing Heavy: $1113.36/acre x 0.10 acres = $111.34

Subtotal: $111.34

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 0.74% of total Costs = $65.98
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $65.98

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $589.79

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: 39-6-36.2 (A-B) Road Name:
Road Renovation: 0.21 mi 14 ft Subgrade 0 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$109.14
Blading 0.21 mi	
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.2 acres	$222.67
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$250.00
Mobilization: Const. $73.28 Surf. $0.00	$73.28
Quarry Development:	$0.00
Total:	$655.10

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: 39-6-36.2 (A-B) Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $519.72/mi x 0.21 mi = $109.14

Subtotal: $109.14

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
  RoadSide Brushing Heavy: $1113.36/acre x 0.20 acres = $222.67

Subtotal: $222.67

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:
  Reshape Existing Waterdip
   Motor Grader 14G 1 EA x $250.00/EA = $250.00

Subtotal: $250.00

Mobilization:
  Construction - 0.83% of total Costs = $73.28
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $73.28

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $655.10

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: Temp Route 1 Road Name: Off end of -26.1 Rd
Temporary Road: 0.09 mi 12 ft Subgrade 0 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.3 acres	$910.72
Clearing:4.8 sta Grubbing:0.3 acres	
Slash Treatment:0.3 acres	
300 Excavation: 740 cy	$1,908.87
Haul: 3,515 sta-yds	
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$0.00
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.3 acres	$176.50
Includes Small Quantity Factor of 1.60	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.0 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$988.73
Mobilization: Const. $501.91 Surf. $0.00	$501.91
Quarry Development:	$0.00
Total:	$4,486.73

Notes:
- Quantities shown are estimates only and not pay items.
- Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: Temp Route 1 Road Name: Off end of -26.1 Rd

Section 200 Clearing and Grubbing:
  Clearing - Heavy: $45.05/sta x 4.75 sta = $213.99
  Grubbing - Heavy: $1598.35/acre x 0.30 acres = $479.51
  Scatter: $724.08/acre x 0.30 acres = $217.22
Subtotal: $910.72

Section 300 Excavation:
  Excavation - Common: $1.72/cy x 740 cy = $1,272.80
  Subgrade Compaction: 4 Sta/hr $18.88/sta. x 4.8 sta = $89.68
  End Hauling - 100 to 500 ft: $0.14/sta-yd x 3,515 sta-yd = $492.10
  Blading: $11.43/station x 4.75 stations = $54.29
Subtotal: $1,908.87

Section 400 Drainage:
Subtotal: $0.00

Section 500 Renovation:
Subtotal: $0.00

Surfacing:
Subtotal: $0.00

Section 1300 Geotextiles:
Subtotal: $0.00

Section 1400 Slope Protection:
Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $588.34/acre x 0.30 acres = $176.50
        Includes Small Quantity Factor of 1.60
Subtotal: $176.50

Section 1900 Cattleguards:
Subtotal: $0.00

Section 2100 Roadside Brushing:
Subtotal: $0.00

Section 2300 Engineering:
Subtotal: $0.00

Section 2400 Minor Concrete:
Subtotal: $0.00

Section 2500 Gabions:
Subtotal: $0.00

Section 8000 Miscellaneous:
  Construct Barricade
   Tractor: D6 with winch 1 EA x $300.00/EA = $300.00
  Decommission Temp Route
   Tractor: D6 with winch 1 hr x $124.51/hr = $124.51
   Excavator 225 (1.5 CY) 2 hr x $94.61/hr = $189.22
  Construct Waterbars
   Tractor: D6 with winch 3 EA x $125.00/EA = $375.00
Subtotal: $988.73

Road Number: Temp Route 1 Off end of -26.1 Rd Continued

Mobilization:
  Construction - 5.65% of total Costs = $501.91
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $501.91

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $4,486.73

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: Temp Route 2 Road Name: Off end of -26.2 Rd
Temporary Road: 0.04 mi 12 ft Subgrade 0 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.1 acres	$327.30
Clearing:2.1 sta Grubbing:0.1 acres	
Slash Treatment:0.1 acres	
300 Excavation: 211 cy	$489.17
Haul: 445 sta-yds	
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$0.00
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.1 acres	$58.83
Includes Small Quantity Factor of 1.60	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.0 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$644.12
Mobilization: Const. $191.38 Surf. $0.00	$191.38
Quarry Development:	$0.00
Total:	$1,710.81

Notes:
- Quantities shown are estimates only and not pay items.
- Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: Temp Route 2 Road Name: Off end of -26.2 Rd

Section 200 Clearing and Grubbing:
  Clearing - Heavy: $45.05/sta x 2.11 sta = $95.06
  Grubbing - Heavy: $1598.35/acre x 0.10 acres = $159.84
  Scatter: $724.08/acre x 0.10 acres = $72.41
Subtotal: $327.30

Section 300 Excavation:
  Excavation - Common: $1.72/cy x 211 cy = $362.92
  Subgrade Compaction: 4 Sta/hr $18.88/sta. x 2.1 sta = $39.84
  End Hauling - 100 to 500 ft: $0.14/sta-yd x 445 sta-yd = $62.30
  Blading: $11.43/station x 2.11 stations = $24.12
Subtotal: $489.17

Section 400 Drainage:
Subtotal: $0.00

Section 500 Renovation:
Subtotal: $0.00

Surfacing:
Subtotal: $0.00

Section 1300 Geotextiles:
Subtotal: $0.00

Section 1400 Slope Protection:
Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $588.34/acre x 0.10 acres = $58.83
        Includes Small Quantity Factor of 1.60
Subtotal: $58.83

Section 1900 Cattleguards:
Subtotal: $0.00

Section 2100 Roadside Brushing:
Subtotal: $0.00

Section 2300 Engineering:
Subtotal: $0.00

Section 2400 Minor Concrete:
Subtotal: $0.00

Section 2500 Gabions:
Subtotal: $0.00

Section 8000 Miscellaneous:
  Construct Barricade
   Tractor: D6 with winch 1 EA x $300.00/EA = $300.00
  Decommission Temp Route
   Tractor: D6 with winch 1 hr x $124.51/hr = $124.51
   Excavator 225 (1.5 CY) 1 hr x $94.61/hr = $94.61
  Construct Waterbars
   Tractor: D6 with winch 1 EA x $125.00/EA = $125.00
Subtotal: $644.12

Road Number: Temp Route 2 Off end of -26.2 Rd Continued

Mobilization:
  Construction - 2.16% of total Costs = $191.38
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $191.38

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $1,710.81

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: Temp Route 3 Road Name: Off Temp #2
Temporary Road: 0.08 mi 12 ft Subgrade 0 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.3 acres	$886.84
Clearing:4.2 sta Grubbing:0.3 acres	
Slash Treatment:0.3 acres	
300 Excavation: 1,535 cy	$3,626.79
Haul: 6,478 sta-yds	
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$0.00
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.3 acres	$176.50
Includes Small Quantity Factor of 1.60	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.0 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$863.73
Mobilization: Const. $699.54 Surf. $0.00	$699.54
Quarry Development:	$0.00
Total:	$6,253.40

Notes:
- Quantities shown are estimates only and not pay items.
- Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: Temp Route 3 Road Name: Off Temp #2

Section 200 Clearing and Grubbing:
  Clearing - Heavy: $45.05/sta x 4.22 sta = $190.11
  Grubbing - Heavy: $1598.35/acre x 0.30 acres = $479.51
  Scatter: $724.08/acre x 0.30 acres = $217.22
Subtotal: $886.84

Section 300 Excavation:
  Excavation - Common: $1.72/cy x 1,535 cy = $2,640.20
  Subgrade Compaction: 4 Sta/hr $18.88/sta. x 4.2 sta = $79.67
  End Hauling - 100 to 500 ft: $0.14/sta-yd x 6,478 sta-yd = $906.92
Subtotal: $3,626.79

Section 400 Drainage:
Subtotal: $0.00

Section 500 Renovation:
Subtotal: $0.00

Surfacing:
Subtotal: $0.00

Section 1300 Geotextiles:
Subtotal: $0.00

Section 1400 Slope Protection:
Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $588.34/acre x 0.30 acres = $176.50
        Includes Small Quantity Factor of 1.60
Subtotal: $176.50

Section 1900 Cattleguards:
Subtotal: $0.00

Section 2100 Roadside Brushing:
Subtotal: $0.00

Section 2300 Engineering:
Subtotal: $0.00

Section 2400 Minor Concrete:
Subtotal: $0.00

Section 2500 Gabions:
Subtotal: $0.00

Section 8000 Miscellaneous:
  Decommission Temp Route
   Tractor: D6 with winch 1 hr x $124.51/hr = $124.51
   Excavator 225 (1.5 CY) 2 hr x $94.61/hr = $189.22
  Construct Waterbars
   Tractor: D6 with winch 2 EA x $125.00/EA = $250.00
  Construct Barricade
   Tractor: D6 with winch 1 EA x $300.00/EA = $300.00
Subtotal: $863.73

Road Number: Temp Route 3 Off Temp #2 Continued

Mobilization:
  Construction - 7.88% of total Costs = $699.54
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $699.54

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $6,253.40

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: Temp Route 4 Road Name: Off of -26.3 Rd
Temporary Road: 0.08 mi 12 ft Subgrade 0 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.3 acres	$886.84
Clearing:4.2 sta Grubbing:0.3 acres	
Slash Treatment:0.3 acres	
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$0.00
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.3 acres	$176.50
Includes Small Quantity Factor of 1.60	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.0 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$988.73
Mobilization: Const. $258.47 Surf. $0.00	$258.47
Quarry Development:	$0.00
Total:	$2,310.54

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: Temp Route 4 Road Name: Off of -26.3 Rd

Section 200 Clearing and Grubbing:
  Clearing - Heavy: $45.05/sta x 4.22 sta = $190.11
  Grubbing - Heavy: $1598.35/acre x 0.30 acres = $479.51
  Scatter: $724.08/acre x 0.30 acres = $217.22

Subtotal: $886.84

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:

Subtotal: $0.00

Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $588.34/acre x 0.30 acres = $176.50
        Includes Small Quantity Factor of 1.60

Subtotal: $176.50

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:

Subtotal: $0.00

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:
  Decommission Temp Route
   Tractor: D6 with winch 1 hr x $124.51/hr = $124.51
   Excavator 225 (1.5 CY) 2 hr x $94.61/hr = $189.22
  Construct Waterbars
   Tractor: D6 with winch 3 EA x $125.00/EA = $375.00
  Construct Barricade
   Tractor: D6 with winch 1 EA x $300.00/EA = $300.00

Subtotal: $988.73

Road Number: Temp Route 4 Off of -26.3 Rd Continued

Mobilization:
  Construction - 2.91% of total Costs = $258.47
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $258.47

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $2,310.54

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013
Road Number: Temp Route 5 Road Name: Off end of -36.1 Rd
Temporary Road: 0.07 mi 12 ft Subgrade 0 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.3 acres	$863.41
Clearing:3.7 sta Grubbing:0.3 acres	
Slash Treatment:0.3 acres	
300 Excavation: 370 cy	$897.92
Haul: 1,369 sta-yds	
400 Drainage:	$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.1	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$0.00
Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.3 acres	$176.50
Includes Small Quantity Factor of 1.60	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing: 0.0 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$863.73
Mobilization: Const. $352.87 Surf. $0.00	$352.87
Quarry Development:	$0.00
Total:	$3,154.43

Notes:
- Quantities shown are estimates only and not pay items.
- Surfacing Quantities shown are COMPACTED in place cubic yards.

Road Construction Worksheet

Road Number: Temp Route 5 Road Name: Off end of -36.1 Rd

Section 200 Clearing and Grubbing:
  Clearing - Heavy: $45.05/sta x 3.70 sta = $166.69
  Grubbing - Heavy: $1598.35/acre x 0.30 acres = $479.51
  Scatter: $724.08/acre x 0.30 acres = $217.22
Subtotal: $863.41

Section 300 Excavation:
  Excavation - Common: $1.72/cy x 370 cy = $636.40
  Subgrade Compaction: 4 Sta/hr $18.88/sta. x 3.7 sta = $69.86
  End Hauling - 100 to 500 ft: $0.14/sta-yd x 1,369 sta-yd = $191.66
Subtotal: $897.92

Section 400 Drainage:
Subtotal: $0.00

Section 500 Renovation:
Subtotal: $0.00

Surfacing:
Subtotal: $0.00

Section 1300 Geotextiles:
Subtotal: $0.00

Section 1400 Slope Protection:
Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $588.34/acre x 0.30 acres = $176.50
        Includes Small Quantity Factor of 1.60
Subtotal: $176.50

Section 1900 Cattleguards:
Subtotal: $0.00

Section 2100 Roadside Brushing:
Subtotal: $0.00

Section 2300 Engineering:
Subtotal: $0.00

Section 2400 Minor Concrete:
Subtotal: $0.00

Section 2500 Gabions:
Subtotal: $0.00

Section 8000 Miscellaneous:
  Decommission Temp Route
   Tractor: D6 with winch 1 hr x $124.51/hr = $124.51
   Excavator 225 (1.5 CY) 2 hr x $94.61/hr = $189.22
  Construct Waterbars
   Tractor: D6 with winch 2 EA x $125.00/EA = $250.00
  Construct Barricade
   Tractor: D6 with winch 1 EA x $300.00/EA = $300.00
Subtotal: $863.73

Road Number: Temp Route 5 Off end of -36.1 Rd Continued

Mobilization:
  Construction - 3.97% of total Costs = $352.87
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $352.87

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $3,154.43

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Mobilization Costs - Construction and Surfacing

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013

Average Mobilization distance = 50 miles Factor = 1.00

Mobilization: Construction

Fire Equipment:	1 ea x (1.00 x $132.00/ea + 50 mi x $3.51/mi)=	$307.50
Graders-all:	1 ea x (1.00 x $356.00/ea + 50 mi x $13.91/mi)=	$1,051.50
Brush Cutter:	1 ea x (1.00 x $356.00/ea) =	$356.00
Loaders < 3cy:	1 ea x (1.00 x $356.00/ea + 50 mi x $7.58/mi)=	$735.00
Rollers & Comp:	1 ea x (1.00 x $356.00/ea + 50 mi x $15.10/mi)=	$1,111.00
Excavators:	1 ea x (1.00 x $688.00/ea + 50 mi x $22.59/mi)=	$1,817.50
RTBackhoes 24/30:	1 ea x (1.00 x $356.00/ea + 50 mi x $4.93/mi)=	$602.50
Tractors <= D7:	1 ea x (1.00 x $522.00/ea + 50 mi x $29.75/mi)=	$2,009.50
Dump Truck >10cy:	1 ea x (1.00 x $228.00/ea + 50 mi x $4.56/mi)=	$456.00
Water Truck:	1 ea x (1.00 x $217.00/ea + 50 mi x $4.33/mi)=	$433.50
	Subtotal:	$8,880.00

Mobilization: Surfacing

Subtotal: $0.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Summary of Construction Quantities

T.S. Contract Name: Williams Thin TS Sale Date: 07/2013

Road Number	Const	Improv	Renov	Decomm	Temp
39-5-18.1 E			14.26		
39-6-02.0 A-C			31.15		
39-6-02.1 A			11.09		
39-6-02.1 B			26.93		
39-6-02.2			28.51		
39-6-11.0 A			10.56		
39-6-11.0 D			171.07		
39-6-11.1 A1			16.37		
39-6-11.1 A2			19.01		
39-6-12.1			11.62		
39-6-12.5			4.22		
39-6-23.3			8.45		
39-6-25.4 A			15.31		
39-6-25.4 B-E			43.82		
39-6-26.0 A-B			36.96		
39-6-26.1			13.20		
39-6-26.2			5.28		
39-6-36.1			3.70		
39-6-36.2 A-B			11.09		
Temp Route 1					4.75
Temp Route 2					2.11
Temp Route 3					4.22
Temp Route 4					4.22
Temp Route 5					3.70
Total Sta:			482.60		19.00

200 Clearing and Grubbing

	Clearing stations	Grubbing acres	Slash acres
39-6-02.1 B	26.93	1.2	1.2
39-6-25.4 B-E	43.82	1.3	1.3
39-6-26.2	5.28	0.2	0.2
39-6-36.1	3.70	0.2	0.2
Temp Route 1	4.75	0.3	0.3
Temp Route 2	2.11	0.1	0.1
Temp Route 3	4.22	0.3	0.3
Temp Route 4	4.22	0.3	0.3
Temp Route 5	3.70	0.3	0.3
Totals:	98.73	4.2	4.2

300 Excavation

	Excav C.Y.s	Haul sta-yds
Temp Route 1	740	3,515
Temp Route 2	211	445
Temp Route 3	1,535	6,478
Temp Route 5	370	1,369
Totals:	2,856	11,807

400 Drainage

39-5-18.1 E		Aluminized	18	inch	16 ga	40 lf
39-6-11.0 D	MP 0.22	Aluminized	18	inch	16 ga	32 lf
39-6-11.0 D	MP 0.26	Aluminized	18	inch	16 ga	32 lf
39-6-11.0 D	MP 0.37	Aluminized	18	inch	16 ga	36 lf
39-6-11.0 D	MP 0.53	Aluminized	24	inch	16 ga	32 lf
39-6-11.0 D	MP 0.60	Aluminized	18	inch	16 ga	32 lf
39-6-11.0 D	MP 0.77	Aluminized	24	inch	16 ga	38 lf
39-6-11.0 D	MP 1.16	Aluminized	18	inch	16 ga	36 lf
39-6-11.0 D	MP 1.30	Aluminized	24	inch	16 ga	42 lf
39-6-11.1 A2	MP 0.64	Aluminized	18	inch	16 ga	60 lf
39-6-26.1	MP 0.16	Aluminized	18	inch	16 ga	30 lf
39-6-11.0 D	MP 0.22	Half Round	18	inch	10 lf	
39-6-11.0 D	MP 0.26	Half Round	18	inch	10 lf	
39-6-11.0 D	MP 0.37	Half Round	18	inch	10 lf	
39-6-11.0 D	MP 0.77	Half Round	24	inch	10 lf	
39-6-11.0 D	MP 0.85	Half Round	18	inch	10 lf	
39-6-11.0 D	MP 1.30	Half Round	24	inch	10 lf	

500 Renovation

	Miles	Slide cy
39-5-18.1 E	0.27	0
39-6-02.0 A-C	0.59	0
39-6-02.1 A	0.21	0
39-6-02.1 B	0.51	0
39-6-02.2	0.54	0
39-6-11.0 A	0.20	0
39-6-11.0 D	3.24	0
39-6-11.1 A1	0.31	0
39-6-11.1 A2	0.36	0
39-6-12.1	0.22	0
39-6-12.5	0.08	0
39-6-23.3	0.16	0
39-6-25.4 A	0.29	0
39-6-25.4 B-E	0.83	0
39-6-26.0 A-B	0.70	0
39-6-26.1	0.25	0
39-6-26.2	0.10	0

Continuation of Construction Quantities

39-6-36.1	0.07	0
39-6-36.2 A-B	0.21	0
Totals:	9.14	0

Construct Lead-in Ditches 39-6-26.1
Excavator 225 (1.5 CY) . . . . . 2 hr
Water road for compaction 39-6-12.5
Water Truck 3000 Gal . . . . . 1 hr
Water road for compaction 39-6-12.1
Water Truck 3000 Gal . . . . . 1 hr
Water road for compaction 39-6-11.0 D
Water Truck 3000 Gal . . . . . 13 hr
Water road for compaction 39-6-11.0 A
Water Truck 3000 Gal . . . . . 1 hr
Water roads for compaction 39-6-11.1 A2
Water Truck 3000 Gal . . . . . 1 hr
Water roads for compaction 39-6-11.1 A1
Water Truck 3000 Gal . . . . . 1 hr
Water Roads for Compaction 39-5-18.1 E
Water Truck 3000 Gal . . . . . 1 hr

Surfacing (Cubic Yards)

Quarry Name: Commercial Source I

700 Pitrun	Roadway	Turnouts	Other	
39-6-25.4 B-E	12	0	0	12
39-6-26.1	12	0	0	12
Totals:	24	0	0	24

Quarry Name: Commercial Source II

1200 Crushed under 1 1/2	Roadway	Turnouts	Other	
39-5-18.1 E	0	0	12	12
39-6-11.0 D	0	0	96	96
39-6-11.1 A2	0	0	12	12
Totals:	0	0	120	120

1300 Geotextiles

Totals: No Quantities

1400 Slope Protection

Totals:	0

1800 Soil stabilization - acres	Dry W/O Mulch	Dry/with Mulch	Hydro Mulch
Temp Route 1	0.0	0.3	
Temp Route 2	0.0	0.1	
Temp Route 3	0.0	0.3	
Temp Route 4	0.0	0.3	
Temp Route 5	0.0	0.3	
Totals:	0.0	1.3	0.0

1900 Cattleguards

	Totals:	No Quantities

2100 RoadSide Brushing	acres
39-5-18.1 E	0.3
39-6-02.0 A-C	0.6
39-6-02.1 B	0.5
39-6-02.2	0.5
39-6-11.0 A	0.2
39-6-11.0 D	3.1
39-6-11.1 A1	0.3
39-6-11.1 A2	0.3
39-6-12.1	0.2
39-6-12.5	0.1
39-6-23.3	0.2
39-6-25.4 A	0.3
39-6-25.4 B-E	0.8
39-6-26.0 A-B	0.7
39-6-26.2	0.1
39-6-36.1	0.1
39-6-36.2 A-B	0.2
Totals:	8.5

2300 Engineering	stations
Totals:	0.00

2400 Minor Concrete

Totals:	No Quantities

2500 Gabions

Totals:	No Quantities

8000 Miscellaneous

Construct Barricade Temp Route 2
Tractor: D6 with winch . . . . . 1 EA
Construct Barricade Temp Route 5
Tractor: D6 with winch . . . . . 1 EA
Construct Barricade Temp Route 4
Tractor: D6 with winch . . . . . 1 EA
Construct Barricade Temp Route 1
Tractor: D6 with winch . . . . . 1 EA
Construct Barricade Temp Route 3
Tractor: D6 with winch . . . . . 1 EA

Construct Waterbars Temp Route 1
Tractor: D6 with winch . . . . . 3 EA
Construct Waterbars Temp Route 2
Tractor: D6 with winch . . . . . 1 EA
Construct Waterbars Temp Route 5
Tractor: D6 with winch . . . . . 2 EA
Construct Waterbars Temp Route 4
Tractor: D6 with winch . . . . . 3 EA
Construct Waterbars Temp Route 3
Tractor: D6 with winch . . . . . 2 EA

Continuation of Construction Quantities

Decommission Temp Route Temp Route 3
    Tractor: D6 with winch . . . . . 1 hr
    Excavator 225 (1.5 CY) . . . . . 2 hr
Decommission Temp Route Temp Route 4
    Tractor: D6 with winch . . . . . 1 hr
    Excavator 225 (1.5 CY) . . . . . 2 hr
Decommission Temp Route Temp Route 5
    Tractor: D6 with winch . . . . . 1 hr
    Excavator 225 (1.5 CY) . . . . . 2 hr
Decommission Temp Route Temp Route 1
    Tractor: D6 with winch . . . . . 1 hr
    Excavator 225 (1.5 CY) . . . . . 2 hr
Decommission Temp Route Temp Route 2
    Tractor: D6 with winch . . . . . 1 hr
    Excavator 225 (1.5 CY) . . . . . 1 hr

Reconstruct Waterbars 39-6-02.1 B
    Tractor: D6 with winch . . . . . 1 EA
Reconstruct Waterbars 39-6-26.1
    Tractor: D6 with winch . . . . . 13 EA
Reconstruct Waterbars 39-6-26.2
    Tractor: D6 with winch . . . . . 2 EA
Reconstruct Waterbars 39-6-02.1 A
    Tractor: D6 with winch . . . . . 3 EA
Reconstruct Waterbars 39-6-26.0 A-B
    Tractor: D6 with winch . . . . . 7 EA
Reconstruct waterbars 39-6-25.4 B-E
    Tractor: D6 with winch . . . . . 16 EA
Reconstruct Waterbars 39-6-25.4 A
    Tractor: D6 with winch . . . . . 10 EA

Remove & Reconstruct Barricade 39-6-25.4 B-E
    Tractor: D6 with winch . . . . . 1 EA
Remove & Replace Barricade 39-6-26.0 A-B
    Tractor: D6 with winch . . . . . 1 EA
Remove/Reconstruct Barricade 39-6-25.4 A
    Tractor: D6 with winch . . . . . 1 EA

Reshape Existing Waterdip 39-6-26.1
    Motor Grader 14G . . . . . 1 EA
Reshape Existing Waterdip 39-6-26.0 A-B
    Motor Grader 14G . . . . . 1 EA
Reshape Existing Waterdip 39-6-25.4 B-E
    Motor Grader 14G . . . . . 2 EA
Reshape Existing Waterdip 39-6-36.2 A-B
    Motor Grader 14G . . . . . 1 EA
Reshape Existing Waterdip 39-6-02.2
    Motor Grader 14G . . . . . 1 EA

Form 5440-9
(December 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SCALE SALE

Name of Bidder	
Tract Number	ORM07-TS-13-06
Sale Name	Williams Thin
Sale Notice *(dated)*	6/26/2013
BLM District	Medford

		Sealed Bid for Sealed Bid Sale	X	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 **$45,000.00** and is enclosed in the form of ☐ cash ☐ money order ☐ bank draft ☐ cashier's check ☐ certified check ☐ bid bond of corporate surety on approved list of the United States Treasury ☐ guaranteed remittance approved by the authorized officer.

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

BID SCHEDULE – LUMP SUM SALE

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

		BID SUBMITTED			**ORAL BID MADE**	
PRODUCT SPECIES	UNIT	ESTIMATED VOLUME OR QUANTITY	UNIT PRICE	TOTAL VALUE	UNIT PRICE	TOTAL VALUE
Douglas-fir	MBF	2,023	X	=	X	=
White Fir	MBF	313				
Port Orford Cedar	MBF	38	X			
Incense Cedar	MBF	6	X			
Ponderosa Pine	MBF	1	X			
Total		**2,381**	X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
TOTAL PURCHASE PRICE						

(Continued on reverse)

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

Bid submitted on *(date)*

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

☐ Signature, if firm is individually owned	Name of firm *(type or print)*
☐ ☐ Signatures, if firm is a partnership or L.L.C.	Business address, include zip code *(type or print)*
☐ Corporation organized under the state laws of	*(To be completed following oral bidding)*
Signature of Authorized Corporate Signing Officer	I HEREBY confirm the above oral bid By *(signature)*
Title	Date

Submit bid, in *duplicate*, to qualify for either an oral auction or sealed bid sale together with the required bid deposit made payable to the Department of the Interior – BLM. Oral Auction – Submit to Sales Supervisor prior to closing of qualifying period for tract.	Sealed Bid – Send to District Manager, who issued the sale notice, in a sealed envelope marked on the outside: (1) "Bid for Timber" (2) Vegetative Resource Other Than Timber (3) Time bids are to be opened (4) Legal description

NOTICE

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

AUTHORITY: 38 FR 6280 and 43 CFR 5442.1

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

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

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

INSTRUCTIONS TO BIDDERS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

10. *PERFORMANCE BOND* -

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

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

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

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

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

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

**Applies to Timber Only*

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

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

17. *LOG EXPORT* – All timber offered for sale except as noted in the *Timber Sale Notice* is restricted from export from the United States in the form of unprocessed timber and cannot be used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as: (1) any logs except those of utility grade or below, such as sawlogs, peeler logs, and pulp logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three quarters (8-3/4) inches in thickness; (3) split or round bolts or other roundwood not processed to standards and specifications suitable for end product use; or (4) western red cedar lumber which does not meet lumber of American Lumber Standards Grades of Number 3 dimension or better, or Pacific Lumber Inspection Bureau R-List Grades of Number 3 common or better. Timber manufactured into the following will be considered processed: (1) lumber and construction timbers, regardless of size, manufactured to standards and specifications suitable for end product uses; (2) chips, pulp and pulp products; (3) green or dry veneer and plywood; (4) poles and piling cut or treated for use as such; (5) cants, squares, and lumber cut for remanufacture of eight and three quarters (8-3/4) inches in thickness or less; or (6) shakes and shingles. In event purchaser wishes to sell any or all of timber restricted from export in the form of unprocessed timber, the buyer, exchanges, or recipient shall be required to comply with contractual provisions relating to *"unprocessed timber"*. Special reporting, branding and painting of logs may be included in contract provisions.*

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

*U.S. GOVERNMENT PRINTING OFFICE: 1993-839-310