COOS BAY SALE NO. ORC04-TS-2023.0030
Elk Creek Ridge CT

COOS BAY DISTRICT OFFICE
MYRTLEWOOD FIELD OFFICE

SALE DATE: October 28, 2022
SALE TIME: 10:00 a.m.

SALE NO.: ORC04-TS-2023.0030, Elk Creek Ridge CT

Designation by Prescription (DxP)
SCALED SALE

COOS COUNTY: OREGON: CBWR: ORAL AUCTION: Bid deposit required: $12,200.00
All timber designated for cutting on: T. 28 S., R. 11 W., Sec. 29, Lots 8, 9, SW ¼ SE1/4, Sec. 32, SE1/4 NE1/4, NE1/4 SE1/4, Sec. 33, S1/2 NE1/4, S1/2 NW1/4, N1/2 SW1/4, NW1/4 SE1/4, Sec. 34, E1/2 SE1/4, & T. 29 S., R. 11 W., Sec. 3, Lots 5, 6, 7, 9, Will. Mer.

Approx. No. Merch. Trees	Est. Vol. MBF 32' Log	Species	Est. Vol. MBF 16' Log	Appraised Price Per MBF	Estimated Vol. Times Appraised Price
12,042	1305.6	Douglas-fir	1,632.0	$71.50	$116,688.00
163	31.2	grand fir	39.0	$43.50*	$1,696.50
535	32.8	red alder	41.0	$54.80*	$2,246.80
239	24.0	western hemlock	30.0	$42.70*	$1,281.00
66	2.4	misc. hardwoods	3.0	$28.10*	$84.30
13,045	**1,396**	**Total**	**1,745.0**		**$121,996.60**

Product	Unit of Measure	Estimated Number of Units	Appraised Price Per Green Ton	Estimated Volume Times Appraised Price
Biomass	Green Tons	45.0	$0.05	$2.25

Total Appraised Value:	**$121,998.85**

THIS TIMBER SALE HAS BEEN CRUISED, APPRAISED, AND ADVERTISED BASED UPON SCRIBNER BOARD FOOT MEASURE (16 FOOT LOG). THE MINIMUM BID FIGURES SHOWN BY SPECIES ARE DOLLARS PER THOUSAND BOARD FEET (MBF). THE MINIMUM BID INCREMENT WILL BE $0.50 PER MBF. SCRIBNER BOARD FOOT VOLUMES (32 FOOT LOG) BY SPECIES ARE DISPLAYED FOR INFORMATIONAL PURPOSES.

*Surplus value species have been reduced to compensate for species below the minimum price of 10% of pond value. See Adjusted Stumpage Computation.

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

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

CRUISE INFORMATION: With respect to merchantable trees of all species in all cruise strata: the average DBHOB is 12.5 inches: the average gross merchantable log contains 42 bd. ft.; the total gross volume is approximately 1,883 thousand bd. ft.; and 93 % recovery is expected. The average DBHOB for Douglas-fir is 12.5 inches; and the average gross merchantable log contains 41 bd. ft.; and 93% recovery is expected. None of the total sale volume is salvage material. Adjusted Appraised DF Prices to compensate for Negative pricing for other species (WH, GF, RA, and Other Hardwoods). The following cruise method was used for volume determination:

VARIABLE PLOT: Timber volumes in all harvest units were based on a variable plot cruise. Using a 20 basal area factor (BAF), 80 plots were measured, and 48 trees were randomly selected to be sampled. The sample trees have been cruised and their volumes computed using form class tables for estimating board foot volumes of trees in 16-foot logs. The volumes are then expanded to a total sale volume.

CUTTING AREA: Four units totaling approximately 132 acres must be partial cut. Acres shown on Exhibit A have been computed using a Trimble Geo 7X Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

ACCESS: Access to the sale area is provided via: Oregon State highways, Coos County roads, privately controlled roads, and Government controlled roads.

DIRECTIONS TO SALE AREA: From Coquille, OR, travel east on Hwy 42 about 5 miles. Turn left onto Lee Valley Road. Proceed approximately 4 miles and turn right onto Gravelford Road. Proceed to Fox Bridge. Turn left onto Dora-Sitkum Lane, proceed approximately 3 miles. Turn right onto the Elk Creek Road (28-11-29.0) and proceed approximately0.5 miles. Turn right onto the Elk Creek Ridge Road (28-11-29.2). Proceed 400 feet to Unit 4.

ROAD USE & MAINTENANCE: Refer to Exhibit E Summary attached. Operator maintenance required on 3.14 miles of road.

Rockwear and Maintenance Fees Payable to BLM:	$6,001.76
Rockwear Fees Payable to Private Company:	$22.64

ROAD CONSTRUCTION:

Road Construction estimates include the following:

New Construction:

7.55 stations

Road Renovation:

157.76 stations

Aggregate:

Base/Landing Rock, 6" minus hardrock:	580 C.Y. (Truck Measure)
Base/Landing Rock, 3" minus hardrock:	601 C.Y. (Truck Measure)
Bedding/Surfacing Rock, 1 ½" minus hardrock:	1,723 C.Y. (Truck Measure)
Riprap:	20 C.Y. (Truck Measure)
Maintenance Rock, 1 ½" minus hardrock:	250 C.Y. (Truck Measure)
Maintenance Rock, 3" minus hardrock:	50 C.Y. (Truck Measure)

Drainage:

18" Corrugated Polyethylene Pipe: 216 Lineal Feet
36" Corrugated Polyethylene Pipe: 50 Lineal Feet

Soil Stabilization:

Dry Seed, fertilizer, & mulch: 7.7 acres (Pre Haul)
Dry Seed, fertilizer, & mulch: 3.5 acres (Post Haul)

Roadside Brushing:

7.2 acres

Road Decommissioning:

Class C Asphalt: 100 Tons
Earthen Barriers: 5
Normal Decommissioning: 3.14 miles

DURATION OF CONTRACT: Shall be 36 months for cutting and removal of timber. The contract will contain special stipulations regarding logging, road construction, road use and maintenance, fire prevention, hazard reduction and logging residue reduction, log export and substitution, optional scale check of lump sum sales,

equal opportunity in employment, cultural resource protection, and sensitive, threatened, or endangered plants or animals.

SPECIAL PROVISIONS: This list is not comprehensive. Please review the entire contract.

1. A license agreement is required with Roseburg Resources Co., a performance bond in the amount of $10,000 and comprehensive liability insurance will be required for this license agreement.
2. All equipment must be washed prior to entering and exiting the contract area to control the spread of noxious weeds and Port-Orford-cedar root disease.
3. No trees shall be felled into the Reserve Area, shown on the Exhibit A. Line pulling, jacking, or other mechanical devices shall be used, as necessary.
4. Seasonal Timing Restriction (NSO & MM) apply to all Units: Heavy equipment, yarding, and chainsaw operations are prohibited from March 1 through August 5th. Daily timing restrictions apply between August 6th and September 15th.
5. Damage shall affect less than 5% of reserve trees.
6. Lift trees and intermediate support trees may be necessary.
7. One-end suspension required in cable and ground-based yarding areas.
8. Full suspension required over any stream channels. Trees cut for yarding corridors within the Reserve Area adjacent to Stream Channels shall be felled toward the channel and left on site.
9. A forwarder, log loader, tractor, or rubber tire skidder may be used to yard logs within the ground-based yarding areas. Ground-based equipment shall not operate within one hundred-twenty feet of any Stream Channel and are restricted to areas with slopes less than 35%.
10. Log lengths shall not exceed 41 feet.
11. Shape and restore all landings to a natural contour to prevent erosion.
12. Seed and fertilize all landings, road cuts and fills, and waste areas.
13. Soil stabilization, water bar construction, road decommissioning, and road barrier construction shall be conducted after the completion of harvest activities but no later than October 15th.
14. BLM will assume supervisory responsibility for disposal of logging slash.
15. Machine piling of logging slash is required at all landing areas.
16. Within 1 year following the completion of yarding operations, create 840 snags as shown on the Exhibit I and as directed by the Authorized Officer.
17. The Purchaser shall provide signage and flaggers to control traffic when conducting operations adjacent to any road.
18. To minimize the risk of attracting predators to activity areas, all garbage (especially food products) will be contained or removed daily from the contract area pursuant to Section 27 of this contract.

Seasonal Restriction Matrix ORC04-TS-2023.0030 ELK CREEK RIDGE CT Timber Sale Prospectus

***Restricted periods are Shaded; Conditional periods are hatched; See Exhibit A for portions of units affected.**

Sale Area	Activity	Jan		Feb		Mar		Apr		May		June		July		Aug		Sept		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
General All Units	Falling and bucking[2]																								
	Cable yarding[2]																								
	Road Construction, Renovation, or Improvement Work[1]																								
	Hauling[1]																								
	Hauling on approved rocked roads[4]																								
	Ground based yarding[3]											25 %													
Units 1&2	Seasonal Restriction Area (NSO & MM)[5]																								
Units 3&4	Seasonal Restriction Area (MM)[6]															5th									

[1] Wet season restrictions may be shortened or extended depending on weather conditions.
[2] Bark slip seasonal restrictions may be conditionally waived upon written request and Authorized Officer approval. Strict compliance with damage provision required for continued operations.
[3] Ground based yarding restricted to periods when soil moisture levels are below 25% as determined by the Authorized Officer.
[4] Wet season haul on rocked roads may be suspended during periods of heavy rain.
[5] In the Seasonal Restriction Area (NSO & MM), shown on Exhibit A, heavy equipment, yarding, and chainsaw operations are prohibited in the period between March 1 and August 5. In addition, a daily timing restriction confines operations to the period from two hours after sunrise to two hours before sunset between August 6 and September 15 of the same calendar year, both days inclusive.
[6] In the Seasonal Restriction Area (MM) shown on Exhibit A, falling, yarding, heavy equipment operation and new road construction operations are prohibited in the period between April 1 and August 5. In addition, a daily timing restriction confines operations to the period from two hours after sunrise to two hours before sunset between August 6 and September 15 of the same calendar year, both days inclusive.

SCHEDULE I

Sec 41. TIMBER RESERVED FROM CUTTING. The following timber in the Contract Area, shown on Exhibit A, which is attached hereto and made a part hereof, is hereby reserved from cutting and removal under the terms of this contract and is retained as the property of the Government:

a. All timber in the Reserve Area, shown on Exhibit A, and all blazed, orange painted and/or posted trees which are on or mark the boundaries of the Reserve Area;

b. All timber marked, by the Government, with orange paint above and below stump height within the Partial Cut Units, shown on the Exhibit A;

c. All existing standing dead trees, except those snags that must be felled to permit safe working operation provided that all snags felled must be retained on site;

d. All existing downed wood in decay classes 3-5 and all existing downed wood 20 inches or larger in diameter measured on the large end regardless of decay class;

e. All Bearing Trees with metal tags that mark property corners;

f. All trees required to meet residual tree requirements set forth in Exhibit G Designation by Prescription, which is attached hereto and made a part hereof;

g. All trees greater than forty (40) inches DBH within the Partial Cut Units.

h. All hardwoods greater than sixteen (16) inches DBH within the Partial Cut Units.

i. All western red cedar greater than twelve (12) inches DBH within the Partial Cut Units.

Sec 42. SPECIAL PROVISIONS. Purchaser shall comply with the special provisions which are attached hereto and made a part hereof unless otherwise authorized, in writing, by the Authorized Officer:

a. Periodic Payment and First Installment Adjustment

(1) Notwithstanding the provisions of Sec. 3(b), the amount of the first installment may be reduced by the Government when the Contracting Officer requests the Purchaser to interrupt or delay operations for a period expected to last more than 30 days during the operating season. Such interruption or delay must be beyond the Purchaser's control. Operating Season shall be defined, for this purpose, as the time of year in which operations of the type required are normally conducted and not specifically restricted under the contract. The first installment may be reduced to 5% of the installment amount listed in Sec. 3(b), during the delay period. The Purchaser must request such a reduction in writing. When the Contracting Officer notifies the Purchaser that operations may proceed, the purchaser shall have 15 days after such notification to return the first installment to the full value specified in Sec. 3(b). Failure to return the first installment to the full value within the allotted time will be considered a material breach of contract. No timber shall be cut or removed from the contract area

until the first installment is restored to the full amount.

(2) Notwithstanding the provisions of Sec. 3(b), adjustments in the due dates for periodic payments may be made by the Government if the Contracting Officer interrupts or delays contract operations for a period expected to last at least 30 days, and the interruption or delay is beyond the Purchaser's control. Any adjustment made shall provide the Purchaser with an equal amount of operating time as would have been available without the delay. The Purchaser shall request such adjustment in writing before the due date for a periodic payment contained in Sec. 3(b).

b. Logging

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

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

(3) This is a Scale for Payment Sale; please refer to the Exhibit B of the contract for specific requirements such as log branding on all logs, hauling restrictions, and merchantability specifications.

(4) All felling/cutting operations will be done in accordance with the Exhibit G Designation by Prescription (DxP).

(5) All trees designated for cutting shall be cut so that the resulting stumps shall not be higher than twelve (12) inches measured from the ground on the uphill side of the tress unless otherwise approved by the Authorized Officer.

(6) Due to bark slippage, falling or yarding may be restricted by the Authorized Officer within the contract area between March 1 and June 30 of each calendar year, both days inclusive.

(7) No trees may be felled into the Reserve Area. Line pulling, jacking, or other mechanical devices shall be used as necessary to prevent trees from falling into these areas.

(8) Damage to residual trees shall affect less than 5% of reserve trees. Bark removed to cambium three (3) inches wide or wider, top broken at three (3) inches diameter or greater, root sprung trees, or any root collar damage shall constitute damage. Damage levels will be determined by a government sample of an affected area. Failure to resolve excess damage to reserve trees may result in suspension of operations and recovery of the value of the damaged timber in accordance with Sec. 13.

(9) In the Seasonal Timing Restriction Area (NSO & MM) in Units 1, 2, 3 and 4, shown on Exhibit A,

heavy equipment, yarding, and chainsaw operations are prohibited in the period between March 1 and August 5. In addition, a daily timing restriction confines operations to the period from two hours after sunrise to two hours before sunset between August 6 and September 15 of the same calendar year, both days inclusive. In the Seasonal Timing Restriction Area (MM) in Unit 3, shown on Exhibit A, heavy equipment, yarding, and chainsaw operations are prohibited in the period between April 1 and August 5. In addition, a daily timing restriction confines operations to the period from two hours after sunrise to two hours before sunset between August 6 and September 15 of the same calendar year, both days inclusive.

(10) Trees shall be felled, limbed, topped into lengths not to exceed 41 feet prior to yarding within the Partial Cut Units as shown on Exhibit A. Hardwood trees shall be whole tree yarded wherever possible.

(11) In the Partial Cut Units, yarding (except for road rights-of-way and ground-based areas, shown on Exhibit A) shall be done with a skyline cable system according to the following:

(a) The skyline cable system shall be capable of being rigged in a multi-span configuration utilizing a carriage capable of yarding 75 feet laterally from the skyline. Skyline roads shall not be spaced closer than 150 feet apart, unless approved by the Authorized Officer.

(b) One-end log suspension is required during yarding operations. Intermediate supports and/or lift trees may be required to obtain the required suspension. Full suspension is required when yarding over Stream Channels shown on the Exhibit A.

(c) If the placement of a yarding corridor requires the cutting of a tree within the Reserve Area adjacent to a Stream Channel, the tree shall remain on-site and felled toward the direction of the channel in a manner to protect the stream bank from disturbance during yarding. Yarding corridors shall cross stream channels perpendicular where possible to minimize cutting of trees within the Reserve Area. Yarding corridor location within the Reserve Area shall be approved by the Authorized Officer prior to cutting.

(d) Where road locations allow, yarding will be done so that corridors run parallel to each other rather than radiate from a central landing.

(12) In the Ground-Based Yarding Areas, shown on Exhibit A and within road right-of-ways, cutting and yarding shall be done according to the following:

(a) In addition to the requirements set forth in Sec. 26 of this contract, ground-based operations shall be restricted to the dry season which is typically June through October. Unseasonably dry or wet weather may shorten or extend the operating season.

(b) Ground-based operations shall be conducted when soil moisture content is below 25%, as determined by the Authorized Officer; unseasonably dry or wet weather may shorten or extend the operating season. The Purchaser shall be notified in writing when weather conditions extend the operating season. The Purchaser shall cease operations during periods of rain and shall be notified, after a soil-moisture assessment by the Authorized Officer, when operations may resume.

(c) The yarding machine must be approved by the Authorized Officer. It must be equipped with a grapple or an extendable and retractable arch and fairlead that is an integral part of the machine that is capable of lifting the leading end of the turn clear of the ground. All logs in the Ground-Based Yarding

Area shall be yarded with their leading end clear of the ground. A forwarder or tracked log loader may also be used to yard logs.

(d) Primary skid trails shall use existing trails wherever possible, be spaced at generally 95 feet apart, and be no wider than 12 feet as measured between reserve trees.

(e) Primary skid trails shall be blocked with cull material after completion of harvest where the Authorized Officer determines vehicle access is possible.

(f) All ground-based equipment shall be restricted to operating on slopes less than 35%, except when using previously constructed trails or accessing isolated ground-based harvest areas requiring short trails over steeper pitches. Also, limit the use of this equipment when surface displacement creates trenches, depressions, excessive removal of organic horizons, or when disturbance would channel water and sediment as overland flow.

(g) Primary skid trails with a slope greater than 15% and/or are left with more than 100 feet of continuous bare ground shall have water bars installed and/or be covered with slash for erosion control prior to October 31 as directed by the Authorized Officer.

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

(a) The Purchaser may immediately cut and remove additional timber to provide tailhold, tieback, guyline, lift, and intermediate support trees; and clear danger trees when the trees have been marked with blue paint above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer.

(14) Prior to attaching any logging equipment to any tree within the Reserve Area the Purchaser shall obtain written approval from the Authorized Officer and shall take precautions to protect the trees from damage, as directed in writing by the Authorized Officer.

(15) During logging operations, the Purchaser shall keep BLM Road Nos. 28-11-29.1 and 28-11-29.0, where they pass through the contract area, clear of trees, rock, dirt, and other debris so far as is practicable. These roads shall not be blocked by such operations for more than twenty (20) minutes.

(16) The Purchaser shall provide signage to control traffic when conducting operations adjacent to any road or as directed by the Authorized Officer and in accordance with Sec. 29 of the timber sale contract.

(17) To control the spread of noxious weeds and 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 F, which is attached hereto and made a part hereof. All road building and

logging equipment shall be washed prior to moving in and moving out of the Contract Area to control the spread of noxious weeds and Port-Orford-cedar root disease.

(18) To minimize the risk of attracting predators to activity areas, all garbage (especially food products) will be contained or removed daily from the contract area pursuant to Section 27 of this contract.

(19) A spill containment kit is required to be on-site during operations.

c. Snag Creation:

(1) The Purchaser shall, within one (1) year following the completion of yarding operations, create 840 snags. 420 snags shall be created between 10-20 inches in diameter and 420 snags shall be created greater than 20 inches in diameter, if insufficient trees are available in the size class specified, use trees from the next largest size class available, as directed by the Authorized Officer and in accordance with Exhibit I the following stipulations:

(a) The Purchaser shall create 488 snags in the Partial Cutting Area, locations and quantities indicated on the Exhibit I map, and as directed by the Authorized Officer.

(b) The Purchaser shall create 163 snags dispersed within the Snag Creation Area, locations and quantities indicated on the Exhibit I map, and as directed by the Authorized Officer. Snags shall be created in the size class specified above (a); shall be no closer than two hundred (200) feet slope distance from streams.

(c) The Purchaser shall create 189 snags dispersed in the Riparian Reserve Snag Creation Area, locations and quantities indicated on the Exhibit I map. The Riparian Reserve Snag Creation Area is the distance between fifty (50) feet and two hundred (200) feet slope distance from the stream. Snags shall be created in the size class specified above (1) and shall be no closer than two (2) live green trees apart.

(d) The purchaser shall create a variety arrangement across the timber sale area of scattered single snags and groups of snags.

(e) The Purchaser may meet snag creation requirements with trees of any species, except western redcedar (Thùja plicàta).

(f) Snags shall generally be created by girdling live, green trees at three and one-half (3½) feet above the root collar, girdling will consist of severing the cambial tissue at least ¾ of the circumference around the bole of the tree, without cutting into the sapwood more than one and one-half (1½) inches and removing a four (4) inch band of bark. Alternatively, girdling may be achieved through use of three (3) parallel cuts into the cambial tissue around the tree as specified within Exhibit I.

(g) The Purchaser shall not girdle trees for snag creation within the 100 feet (minimum slope

distance) of any open or unblocked roads, unless approved by the Authorized Officer.

(h) The Purchaser shall number each snag created; the number shall be painted on the bole of the snag using high visibility paint such that the number is visible.

(i) The Purchaser shall submit created snag location registers in the form of legible and complete maps and/or submit GPS coordinates (</= 20-meter accuracy) representing snag group and individual scattered tree locations. Electronic GPS files shall be submitted in ".gpx" format unless an alternative format is approved by the Authorized Officer. Girdled trees shall have a number painted at breast height with fluorescent paint such that they are visible from at least 100 feet. Number and location of treated trees shall be depicted on a map by the Purchaser such that they may be easily verified.

(j) Any tree with the following characteristics shall be avoided for snag creation treatment:

i. Existing broken tops (live or dead trees), multiple-top, or dead-top trees.
ii. Trees exhibiting severe mechanical damage, fire-scars, obvious disease, or decay (Example: root rot fungi at base or large mistletoe platforms);
iii. Any tagged tree (bearing tree or designated genetic/research tree).

d. Road Construction

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

(2) Any required construction, improvement, or renovation of structures and roads shall be completed and accepted prior to the removal of any timber, except right-of-way timber, over that road.

(3) In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall complete erosion control and soil stabilization measures on all cuts, fills, waste areas, and scarified areas, as designated by the Authorized Officer, along all sections of roadway disturbed during the year typically prior to October 15th of each year. The Authorized Officer may set time limits for the beginning and completion of erosion control and soil stabilization measures and modify seasonal dates to conform to existing weather conditions and changes in the construction schedule. Such work shall be accomplished in accordance with Erosion Control and Soil Stabilization, 1700 and 1800 Series, contained in Exhibit C, which is attached hereto and made a part hereof.

(4) The Purchaser, prior to construction of landings, shall stake all landing locations in accordance with the requirements set forth in Exhibit C. Concurrently with, or at the termination of logging operations, the Purchaser shall pull back and shape onto the landings all overhanging materials to prevent erosion in accordance with the requirements set forth in Exhibit C.

e. Road Use and Maintenance

(1) The Purchaser shall be required to secure written approval to use or haul equipment over Government

owned or controlled structures when that equipment exceeds the maximum allowable weights or dimensions established by the State for vehicles operating without a permit.

(2) Tracked type equipment shall not be allowed to cross over concrete bridge decks, other concrete surfaced structures or asphalt surfaced roads without the proper protection of that surface. Prior approval shall be obtained from the Authorized Officer when crossing with protective devices. Details of such equipment shall be furnished to the Authorized Officer for evaluation of load characteristics, at least 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; and,
(h) Special features (e.g. running tracks, overhang loads, etc.).

The Purchaser shall be responsible for repair of any damage to 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.

(3) The Purchaser is authorized to use the roads shown on Exhibit E, attached hereto and made a part hereof, for the removal of Government timber sold under the terms of this contract and for haul of mineral material required under the terms of this contract; provided, that the Purchaser shall pay a maintenance obligation totaling $6,001.76, shown on Exhibit E. Unless the total maintenance and rockwear fees due BLM are paid prior to commencement of operations on the contract area, payments shall be made in installments payable in the same manner as and together with payments required by Sec. 3 of this contract. Timber volume added by modification will be assessed at a rate of $3.44/MBF for removal of timber over Government controlled roads.

(4) The Purchaser shall perform maintenance and repair of such roads shown on Exhibit D in accordance with the maintenance specifications listed in Exhibit D, attached hereto and made a part hereof.

(5) At all times during the period of his operations on the contract area, and upon completion of said operations, the Purchaser shall be liable for maintenance and repair of such roads shown on Exhibit D resulting from wear or damage in accordance with the maintenance specifications as shown on Exhibit D.

(6) With the prior written approval of the Authorized Officer, the Purchaser may arrange for cooperative maintenance with other users of any BLM controlled road included in Sec. 42.d.(1) and 41.d.(2) of this contract; provided, that such cooperative arrangement shall not relieve the Purchaser of his liability for the maintenance and repair of such roads resulting from wear or damage, in accordance with this contract. The Purchaser shall furnish the Authorized Officer a copy of any cooperative maintenance agreements entered into with other users

on these roads.

(7) The Authorized Officer may at any time, by written notice, terminate the Purchaser's operator road maintenance obligations and require instead payment of current Bureau of Land Management road maintenance fees for the particular surface type of the road(s) involved. These fees will be applied to the remaining contract volume on the sale area, as determined by the Authorized Officer, to be transported over the roads listed in Sec. 42.d.(1) and 42.d.(2). If the total road maintenance fee does not exceed $500.00, the Purchaser shall pay such amount in full prior to use of such roads. If the total road maintenance fee exceeds $500.00, the Authorized Officer shall establish an installment schedule of payments of the maintenance obligation.

(8) In the use of required company roads shown on the Exhibit E, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreements between the United States and Roseburg Resources Co., LLC, RWA-C-344. The purchaser shall pay a Rockwear Fee of $22.64 to Roseburg Resources Co. pursuant to RWA-C-344. The Agreements are available for inspection at the Bureau of Land Management, Coos Bay, Oregon. A performance bond in the amount of $10,000.00 and comprehensive liability insurance will be required by Licensor.

Prior to commencement of operations, the Purchaser shall furnish to the Authorized Officer a copy of the executed License Agreements issued under the terms of the Right-of-Way Agreements. Default by the Purchaser of said Right-of-Way and Road Use Agreements, of any License Agreements executed pursuant thereto, for failure to pay appropriate road use fees or road maintenance fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision. Road maintenance fees may change during the course of the contract as determined by the Licensor. It is the responsibility of the Purchaser to pay fees current at time of haul.

If a Licensor is the purchaser, allowances have been made for amortization of capital investment of the roads covered by the Licensor's Agreement in accordance with 43 CFR 2812.6- 2(a)(5); it is understood that the purchase price stated in Sec. 2 of this contract is the net price and that no deduction will be made from the contract price because of such allowance.

f. Fire Prevention, Hazard Reduction and Logging Residue Reduction

(1) BLM will assume supervisory responsibility for disposal of logging slash. The assumption by the Government of all obligations for the disposal or reduction of fire hazard under state law does not relieve the Purchaser of the obligations to perform the fire prevention hazard reduction and logging residue reduction measures required by this contract.

(2) Fire Prevention and Hazard Reduction: Primarily for purposes of fire prevention and fire hazard reduction, the purchaser shall comply with the following provisions:

At least three (3) days prior to the operation of power-driven equipment during any operations under this contract during the closed fire season or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the Authorized Officer.

Provide and maintain in the contract area in good working order, and immediately available, the following equipment for use during the closed fire season or periods of fire danger:

Firefighting tools shall be kept at each landing or at such other place as the Authorized Officer shall designate whenever employees are working on the contract area. All firefighting 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 (2) landings not over six hundred (600) feet apart. When filled, the box shall not weigh over two hundred (200) pounds. The fire tools shall be in good condition, be tight on strong handles, and have sharp cutting edges. There shall be not less than four (4) tools in each box nor less than one (1) tool for each employee working on the contract area. Three-fourths (3/4) of all fire tools shall be shovels, hazel hoes, or other scraping tools. The fire tools shall be used only for fighting fire. Operations with four or less workers are not required to provide a fire toolbox as long as each worker is equipped with a shovel suitable for fire suppression.

At each landing during periods of operation one (1) tank truck of two thousand (2,000) gallons or more capacity with enough one and a half inch (1 ½") hose to reach from the water supply to any location in the operation area affected by power driven machinery, or 1000 feet, whichever is greater. Two (2) nozzles and one (1) gated wye are required to support this hoselay. Two (2) one thousand (1,000) gallon tank trucks or portable tanks may be substituted for each required two thousand (2,000) gallon tank truck, provided that the total capability to pump and deliver water remains unchanged. Each tank truck shall be equipped with a pump capable of delivering a minimum of twenty (20) gallons per minute (gpm) water flow at one hundred ten (110) pounds per square inch (psi) engine pressure through fifty (50) feet of one and one half (1 ½") inch fire hose. The pump may be either power take off driven or truck-mounted auxiliary engine driven, or portable. All equipment shall be acceptable to and approved by the Authorized Officer and shall conform to the standards set forth in Oregon Revised Statutes 477.645 through 477.670. All hose couplings shall have the standard thread adopted by the BLM (1 ½" inches National Hose Thread (NH), 1" inch National Pipe Straight Hose Thread (NPSH) or be provided with suitable adapters use. All tank trucks shall be filled with water and made available for immediate use.

(3) Logging Residue Reduction. In addition to the requirements of Sections 15 and 25 of this contract and for hazardous fuel reduction, watershed protection, and silvicultural purposes, the Purchaser shall be responsible for logging residue reduction at all landing sites in the sale area as shown on the Exhibit A.

(a) In lieu of burning, the Purchaser may remove landing residue for off-site utilization. If the utilization method is selected, the Purchaser shall provide information on the total tonnage of landing residue being removed from the sale area in accordance with the Exhibit B.

(b) Prior to commencement of landing residue removal, the Purchaser shall provide advanced notification to the Authorized Officer in order to arrange for on-site inspections of the removal operations. Upon completion of landing residue removal, the Purchaser shall notify the Authorized Officer to arrange for a final inspection of the landing sites.

(4) Specifications for Landing Piling:

Unless otherwise approved in advance by the Authorized Officer, landing piling shall be completed at each yarding location (setting) concurrently with the conclusion of yarding operations while logging equipment is still on site.

Logging residue within the immediate vicinity of the landing, and any residue that overhangs the landing sites that can be reached by logging equipment, shall be pulled completely back up onto the landing surface and either piled for burning or segregated for other uses.

Logging residue at landings shall be accumulated into the fewest number of piles possible. Landing piles shall be constructed as upright as possible and have a solid base to prevent toppling. All piles with pointed, jagged tops shall be flattened or trimmed to ensure a smooth surface for the polyethylene covering. Unless directed by the Authorized Officer, no landing piles shall be constructed within twenty (20) feet of any reserve tree.

(5) Specifications for Landing Covering:

All piles shall be covered no later than September 30 of the same year of piling.

The purchaser shall place four (4) MIL, black polyethylene sheeting (PE) over the pile to provide maximum protection from fall/winter rains. Unless otherwise directed, the size of the plastic shall be a minimum of one-hundred (100) square feet (10’ X 10’).

To meet ignition and combustion needs, larger piles may require additional PE sheeting. The Purchaser shall contact the Authorized Officer before any pile covering begins. At that time, the Authorized Officer will identify all piles that are approved for covering in excess of the one-hundred (100) square foot maximum size.

Piles with material extending more than two (2) feet beyond the general contour of the pile shall be flattened or trimmed to create a uniform surface and to prevent the PE sheeting from tearing during wind events. Pile trimming or flattening shall be done prior to pile covering.

To ensure the center of the pile remains dry, all PE sheeting shall be weighted down with slash or logging debris in order to prevent sheeting from tearing and blowing or sliding off of the pile. An adequate amount of anchoring material should be used, but no more than twenty (20) percent of the material to be piled may be placed on top of the sheeting. Sheeting shall be tied down with twine on all four corners.

At landing sites with excessive logging residue below the landing that is out of reach of the equipment on site, the Purchaser shall place additional PE sheeting over the residue concentrations as directed by the Authorized Officer.

Piles of residue identified by the Authorized Officer for other uses shall not be covered with PE sheeting.

g. Log Export and Substitution

(1) All timber sold to the Purchaser under the terms of this contract 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 round wood 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 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 remanufacturing of eight and three-quarters (8-3/4) inches in thickness or less; (6) shakes and shingles.

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

(3) 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 24 months from the date of last export sale;
(d) volume of Federal timber purchased in the past 24 months from the date of last export sale;
(e) volume of timber exported in succeeding 24 months from date of last export sale; and,
(f) volume of Federal timber purchased in succeeding 24 months from date of last export sale.

(4) 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 Non-substitution and the Domestic Processing of Timber" (Form 5460-16). The original of such certification shall be filed with the Authorized Officer. Additionally, when the other party is an affiliate of the Purchaser, the Purchaser will be required to update information under item (2) of Form 5450-17 (Export Determination) and file the form with the Authorized Officer.

(5) In the event an affiliate of the Purchaser has exported private timber within 24 months prior to purchasing or otherwise acquiring Federal timber sold under this contract, the Purchaser shall, upon request, obtain from the affiliate information in a form specified by the Authorized Officer and furnish the information.

(6) Prior to the termination of this contract, the Purchaser shall submit to the Authorized Officer a "Log Scale and Disposition of Timber Removed Report" (Form 5460-15) 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.

(7) Unless otherwise authorized in writing by the Contracting Officer, the Purchaser shall brand clearly and legibly one end of all logs, prior to the removal of timber from the contract area. One end of all branded logs to be processed domestically will be marked with a three-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. The Purchaser shall be required to brand and paint all logs. Any increased costs for log branding and painting shall be the responsibility of the Purchaser.

(8) In the event of the Purchaser's noncompliance with this subsection of the contract, the Authorized Officer may take appropriate action as set forth in Sec. 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.

h. Cultural Resource Protection

(1) If in connection with operations under this contract, the Purchaser, his contractors, sub-contractors, or the employees of any of them, discovers, encounters or becomes aware of any objects or sites of cultural value on the contract area such as historical or prehistorical ruins, fossils, or artifacts, the Purchaser shall immediately suspend all operations in the vicinity of the cultural value and notify the Authorized Officer of the findings. Operations may resume at the discovery site upon receipt of written instructions and authorization by the Authorized Officer.

(2) Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the Authorized Officer, by telephone, with written confirmation, immediately upon discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the Authorized Officer.

i. Sensitive, Threatened, or Endangered Plants or Animals

The Purchaser shall immediately discontinue specified construction or timber harvesting operations upon written notice from the Contracting Officer that:

(a) threatened or endangered plants or animals protected under the Endangered Species Act of 1973, as amended, may be affected by the operation, and a determination is made that consultation or reinitiation of consultation is required concerning the species prior to continuing operation, or;

(b) when, in order to comply with the Endangered Species Act or to protect occupied marbled murrelet sites in accordance with the Standards and Guidelines of the Coos Bay District Record of Decision (ROD) and Resource Management Plan (RMP), the Contracting Officer determines it may be necessary to modify or terminate the contract, or;

(c) federal proposed, federal candidate, Bureau sensitive or State listed species protected under BLM Manual 6840 - Special Status Species Management - have been identified, and a determination is made that continued operations would affect the species or its habitat, or;

(d) 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

(i) 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 Sec. 3.b. of the contract. Any First Installment amount temporarily reduced may be refunded or transferred to another BLM contract at the request of the Purchaser. However, if the Purchaser has outstanding debt owing the United States, the Contracting Officer must first apply the amount of First Installment that could be refunded to the debt owed in accordance with the Debt Collection Improvement Act, as amended (31 USC 3710, *et seq.*). Upon Purchaser's receipt of a bill for collection and written notice from the Contracting Officer lifting the suspension, the Purchaser shall restore the First Installment to the full amount shown in Sec. 3.b. of the contract within 15 days after the bill for collection is issued, subject to Sec. 3.h. of the contract. The Purchaser shall not resume contract operations until the First Installment amount is fully restored.

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

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

The Contracting Officer may determine that it is necessary to terminate the cutting and removal rights under the contract in order to comply with the Endangered Species Act, protect occupied marbled murrelet sites in accordance with the ROD and RMP, 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, marbled murrelet occupied site protection in accordance with the ROD and RMP, 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.

j. Safety

Purchaser’s operations shall facilitate BLM’s safe and practical inspection of Purchaser’s operations and BLM’s conduct of other official duties on Contract Area. Purchaser has all responsibility for compliance with safety requirements for Purchaser’s employees, contractors and subcontractors.

In the event that the Authorized Officer identifies a conflict between the requirements of this contract or agreed upon methods of proceeding hereunder and State or Federal safety requirements, the contract may be modified. If the cost of such contract modification is of a substantial nature ($2,000.00 or more), the Purchaser may

request, in writing, an adjustment in the total contract purchaser price specified in Section 2 of the timber sale contract, as amended, to compensate for the changed conditions.

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

Exhibit F
Sheet 1 of 1

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

Vehicle and Equipment Cleaning

1. Cleaning shall consist of the removal of soil and debris by washing with a high-pressure hose or steam cleaning. Cleaning and inspection sites will be agreed to by Purchaser and BLM. All petroleum product residues shall be contained at wash sites and dealt with in accordance to DEQ standards. Contractor shall provide an approved plan for the cleaning station that demonstrates that the station meets all DEQ and water quality regulations. All necessary permits shall be obtained by the contractor.

2. All equipment parts shall be cleaned as designated by the Authorized Officer, including removal of tractor belly plates, in accordance with Sec.1 above.

All construction, logging and slash disposal equipment shall be cleaned prior to entering and exiting the contract area. The Authorized Officer will determine if log trucks and vehicles used for transportation of personnel shall be cleaned, based upon the location of use immediately prior to current timber sale. If the vehicles have been in a weed-infested area, they shall be washed before entering Contract Area, as shown on Exhibit A.

EXHIBIT G
Designation by Prescription (DxP)
Scale Timber Sale Requirements

I. Cutting Operations

1. Prior to any cutting operations in the DxP Cutting Areas, the Purchaser shall provide the Authorized Officer a list of timber fallers and/or mechanical harvester operators who will be conducting the cutting operations.

2. The Purchaser shall notify the Authorized Officer at least forty-eight (48) hours in advance of replacement or addition of a timber faller and/or mechanical harvester operator.

3. Prior to any harvesting operations in a DxP Cutting Area, the Authorized Officer will designate test mark areas. Any timber faller and/or mechanical harvester operator designated to conduct falling operations within a DxP Cutting Area will be required to mark (with paint or flagging) a two (2) acre test mark area to demonstrate their ability to meet the Selection Criteria stated below. The test mark area marking must be approved by the Authorized Officer prior to any falling in the DxP Cutting Area.

4. Cutting operations will proceed no more than twenty (20) acres ahead of the total acreage that has been approved by the Authorized Officer.

5. No yarding of cut timber will be allowed in the DxP Cutting Areas until the cutting operations have been approved by the Authorized Officer.

6. In the event the Purchaser elects to pre-mark (paint) the DxP Cutting Areas prior to falling timber, the Authorized Officer shall approve such marking prior to the start of falling operations.

II. Prescription by Unit

Thinning Units

Unit Number	Residual trees per acre	Average Spacing of residual trees (feet)
1-2	90	22
2-3	90	22
3-3	90	22
4-2	90	22

III. Selection Criteria

1. Retain all trees greater than forty (40) inches diameter at breast height (DBH) regardless of species, form, health and spacing.
2. Retain all snags greater than twenty (20) inches DBH, unless it is considered a safety hazard.
3. Retain all hardwoods greater than sixteen (16) inches DBH.
4. Retain all western red cedar greater than twelve (12) inches DBH.
5. Remove all Port Orford Cedar within 50 feet slope distance from all roads.

6. Dominant Tree Retention (DTR) Areas (1-1, 2-1, 3-1, and 4-1):
    - Retain dominant wildlife trees marked with an orange painted "W" and horizontal marked band at DBH, otherwise cut all trees less than forty (40) inches DBH within 60-feet (slope distance) from dominant wildlife trees.

7. Group Selection Areas (2-2 and 3-2):
    - Cut all trees within the group select areas except orange painted trees.

8. Reserve Tree Selection Criteria for Thinning Units (1-2, 2-3, 3-3 and 4-2):

    - Thin from below favoring the largest and healthiest trees to remain. Acceptable residual trees are dominant and co-dominant trees with large live crown (>30% crown ratio).
    - Trees on road cut banks that have undermined roots or are leaning toward the road shall be cut.
    - Avoid leaving individual conifers with one-sided crowns, cut or leave all trees with intermingled crowns in order to meet the residual trees per acre.
    - Trees less than seven (7) inches DBH shall not be counted when calculating the residual trees per acre.
    - All hardwoods (excluding red alder) less than sixteen (16) inches DBH shall not be counted when calculating the residual trees per acre.

IV. Compliance Inspection

a. Compliance inspection by the government will consist of visual observation of on-going cutting operations and collecting plot data after the trees have been cut. Non-compliance with the Selection Criteria shall constitute a contract violation which may result in a suspension of operations as provided in Section 10 of the contract. Plot records may include:

1. Diameter and species of both cut trees (stumps) and residual trees to determine contract compliance.

2. The selection of residual trees (i.e. canopy position, crown ratio and form).

b. The approval level for the residual trees per acre per plot target for each unit shall be considered met if the average residual trees per acre per plot of all plots measured during one inspection is within following retention specifications. If this requirement falls below the approval level, a written warning will immediately be issued to the Purchaser.

• Commercial thin units: Residual plots should be within 10% of the desired trees per acre (+/-) target number listed in Section II.

c. If the Purchaser does not comply with the DxP "Selection Criteria" of this Exhibit to the satisfaction of the Authorized Officer after a written warning has been issued, the Authorized Officer may suspend harvest operations until corrective measures, as specified in writing by the Authorized Officer, have been taken by the Purchaser. It will be the responsibility of the Purchaser to pay any costs incurred during the implementation of the corrective measures required by the Authorized Officer.

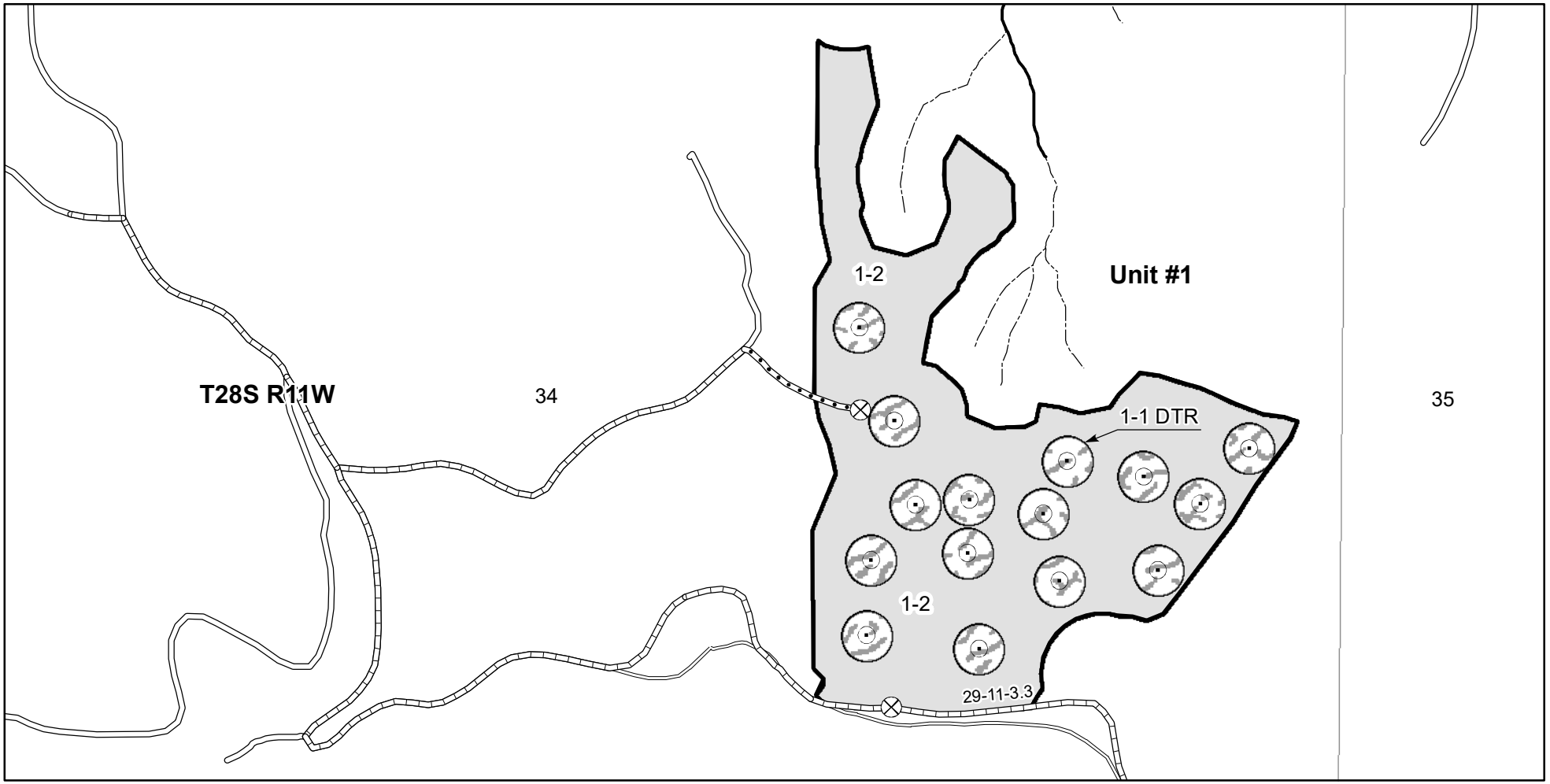
Such corrective measures may include but are not limited to:

1. Replacement of timber faller(s) and/or mechanical harvester operator(s) by the Purchaser.
2. Approval of timber faller(s) and/or mechanical harvester operator(s) by the Authorized Officer based on the timber faller(s) and/or mechanical harvester operator(s) satisfactory completion of a BLM test plot.

TIMBER SALE CONTRACT MAP
USDI-BLM COOS BAY DISTRICT
T.28 S., R. 11 W., Secs. 29, 33 & 34,
T.29 S., R. 11 W., Sec. 3, Will. Mer.
Cutting Prescription Map

SALE NO. ORC04-TS-2023.0030
EXHIBIT G

Elk Creek Ridge CT



Acreage data was collected using a Trimble Geo R1 Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

N

1 inch = 375 feet

375 187.5 0 375

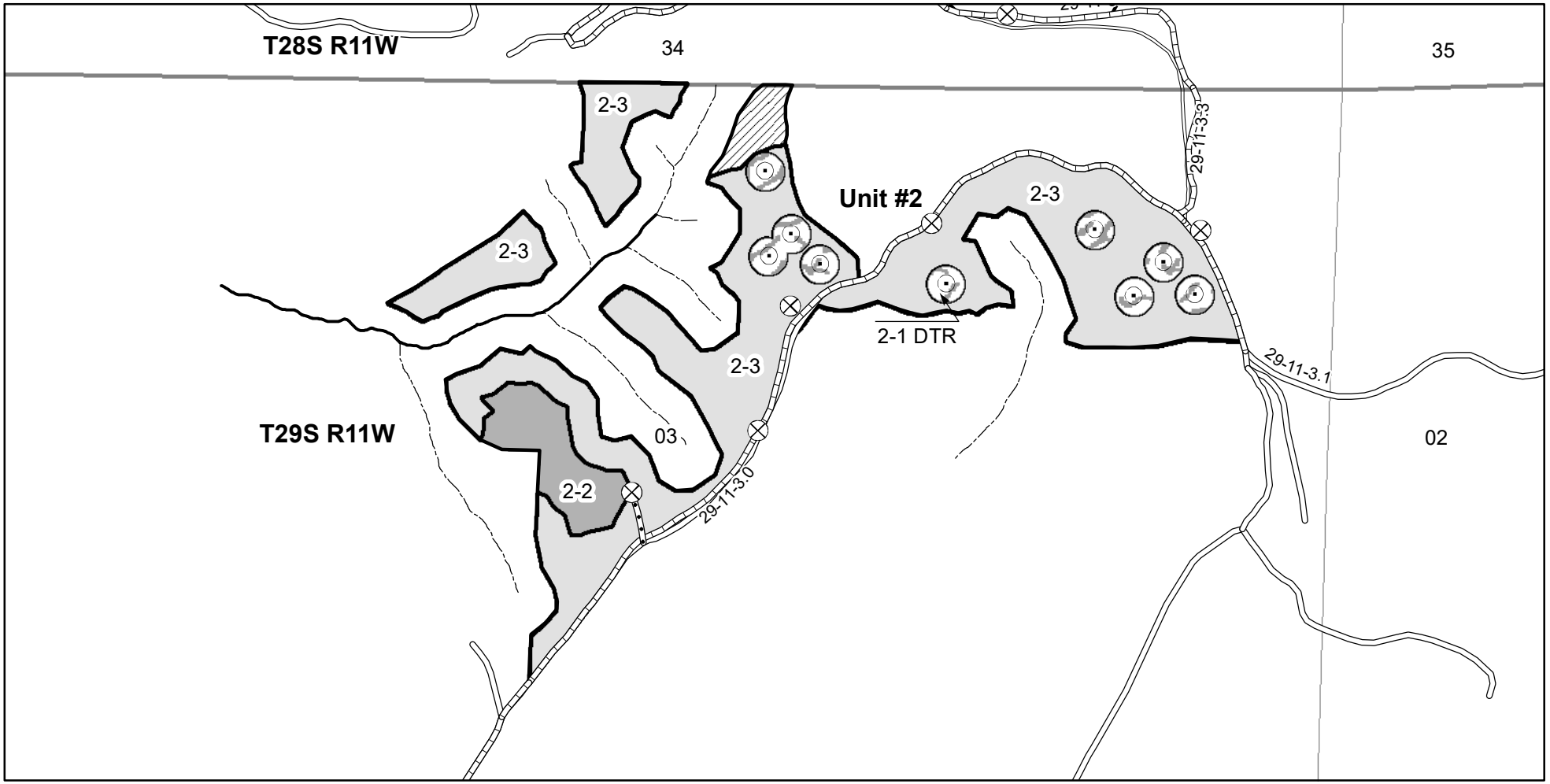
Feet

- Dominant Wildlife Tree
- Proposed Landing
- Boundary of Cutting Area
- 1-1: DTR
- 1-2: Residual 90 TPA
- Snag Creation Only Area
- Road to be Constructed
- Road to be Renovated
- Existing Road

TIMBER SALE CONTRACT MAP
USDI-BLM COOS BAY DISTRICT
T.28 S., R. 11 W., Secs. 29, 33 & 34,
T.29 S., R. 11 W., Sec. 3, Will. Mer.
Cutting Prescription Map

SALE NO. ORC04-TS-2023.0030
EXHIBIT G

Elk Creek Ridge CT



Acreage data was collected using a Trimble Geo R1 Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

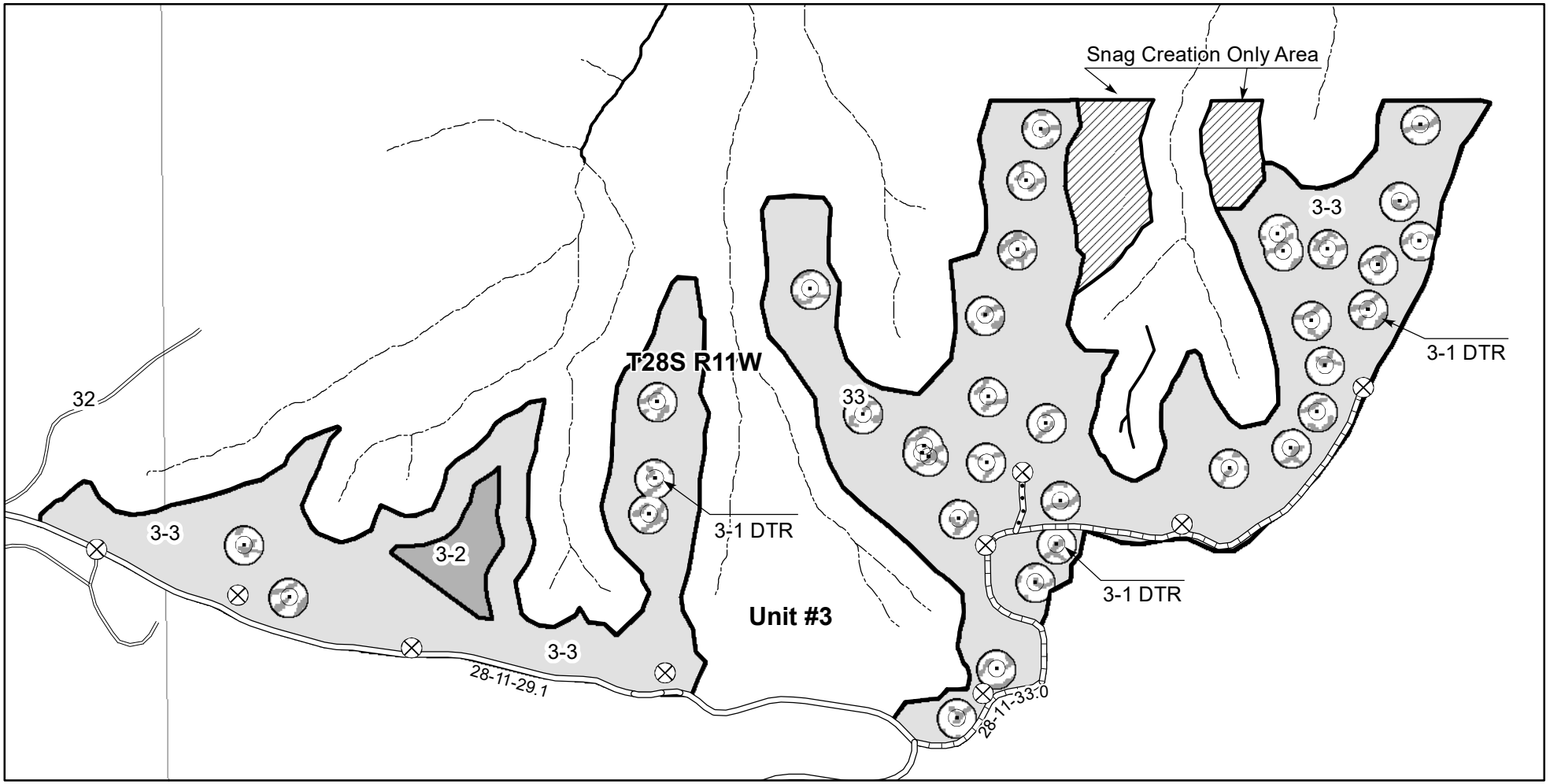
1 inch = 500 feet
375 187.5 0 375
Feet

- Dominant Wildlife Tree
- Proposed Landing
- Boundary of Cutting Area
- 2-1: DTR
- 2-2: Group Selection Area
- 2-3: Residual 90 TPA
- Snag Creation Only Area
- Road to be Constructed
- Road to be Renovated
- Existing Road

TIMBER SALE CONTRACT MAP
USDI-BLM COOS BAY DISTRICT
T.28 S., R. 11 W., Secs. 29, 33 & 34,
T.29 S., R. 11 W., Sec. 3, Will. Mer.
Cutting Prescription Map

SALE NO. ORC04-TS-2023.0030
EXHIBIT G

Elk Creek Ridge CT



Acreage data was collected using a Trimble Geo R1 Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

N

1 inch = 500 feet

375 187.5 0 375

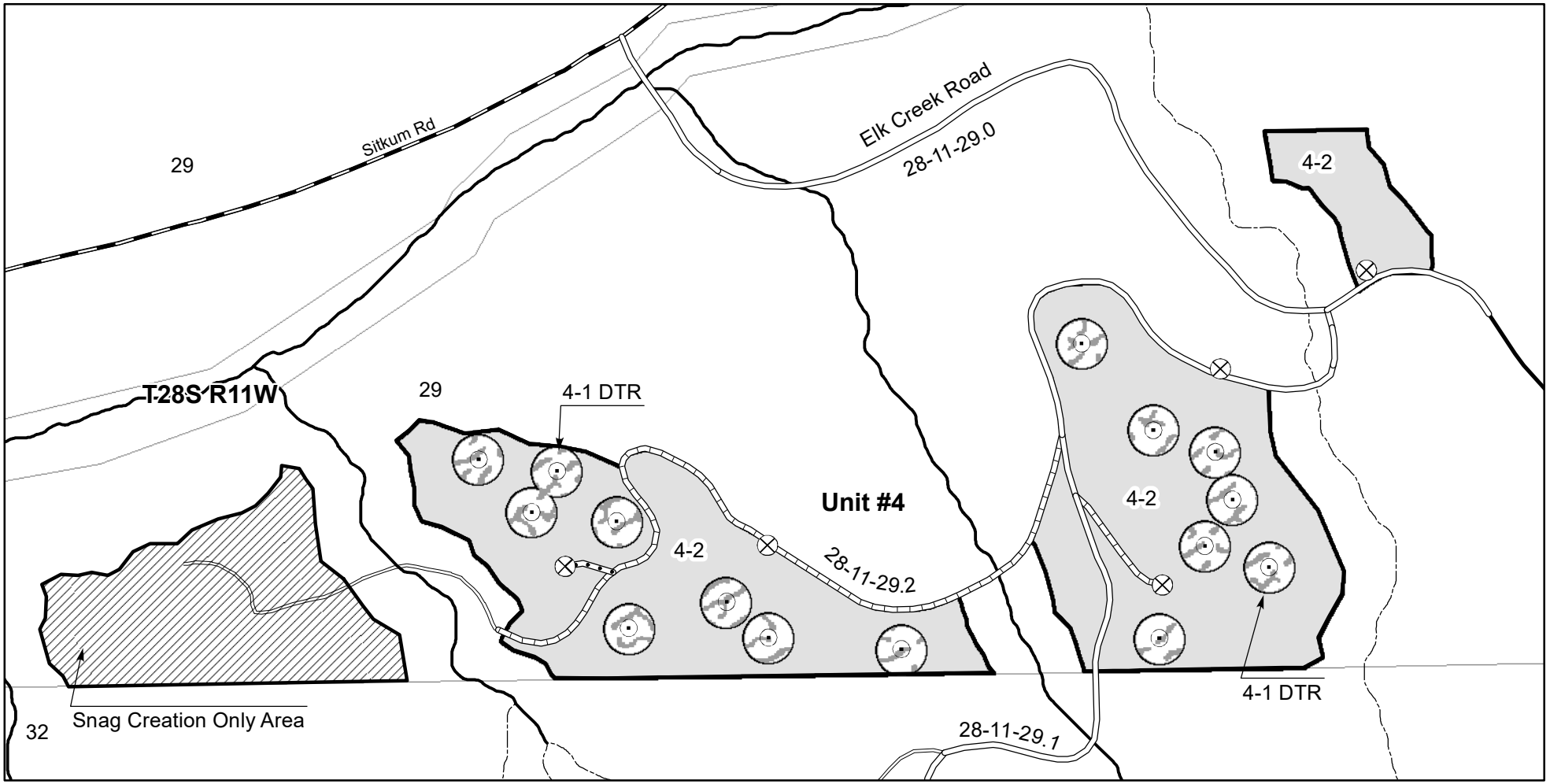
Feet

- Dominant Wildlife Tree
- Proposed Landing
- Boundary of Cutting Area
- 3-1: DTR
- 3-2: Group Selection Area
- 3-3: Residual 90 TPA
- Snag Creation Only Area
- Road to be Constructed
- Road to be Renovated
- Existing Road

TIMBER SALE CONTRACT MAP
USDI-BLM COOS BAY DISTRICT
T.28 S., R. 11 W., Secs. 29, 33 & 34,
T.29 S., R. 11 W., Sec. 3, Will. Mer.
Cutting Prescription Map

SALE NO. ORC04-TS-2023.0030
EXHIBIT G

Elk Creek Ridge CT



Acreage data was collected using a Trimble Geo R1 Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

N

1 inch = 375 feet

375 187.5 0 375

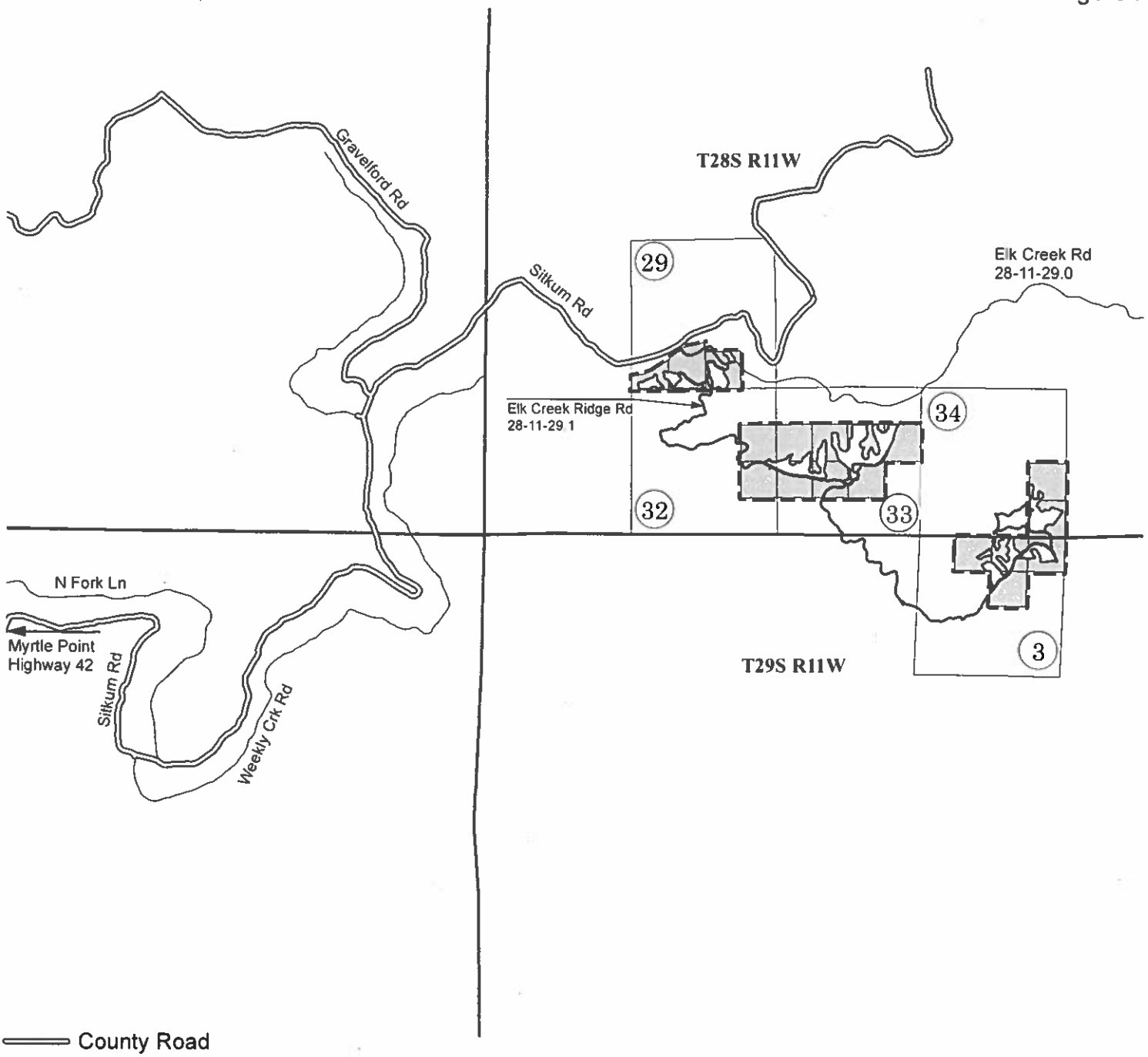
Feet

- Dominant Wildlife Tree
- Proposed Landing
- Boundary of Cutting Area
- 4-1: DTR
- 4-2: Residual 90 TPA
- Snag Creation Only Area
- Road to be Constructed
- Road to be Renovated
- Existing Road

TIMBER SALE CONTRACT MAP
USDI-BLM COOS BAY DISTRICT
T. 28 S., R. 11 W., Secs. 29, 32, 33 & 34 Will. Mer.
T. 29 S., R. 11 W., Sec. 3 Will. Mer.

SALE NO. ORC04-TS-2022.0031
EXHIBIT A-1

Elk Creek Ridge CT



County Road
Existing Roads
Haul Route
Partial Cutting Area
Contract Area
Reserve Area

Miles
0 0.5 1 2
Scale 1 inch = 1 mile

N

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.

TIMBER SALE CONTRACT MAP
USDI-BLM COOS BAY DISTRICT
T. 28 S., R. 11 W., Secs. 29, 32, 33 & 34 Will. Mer.
T. 29 S., R. 11 W., Sec. 3 Will. Mer.

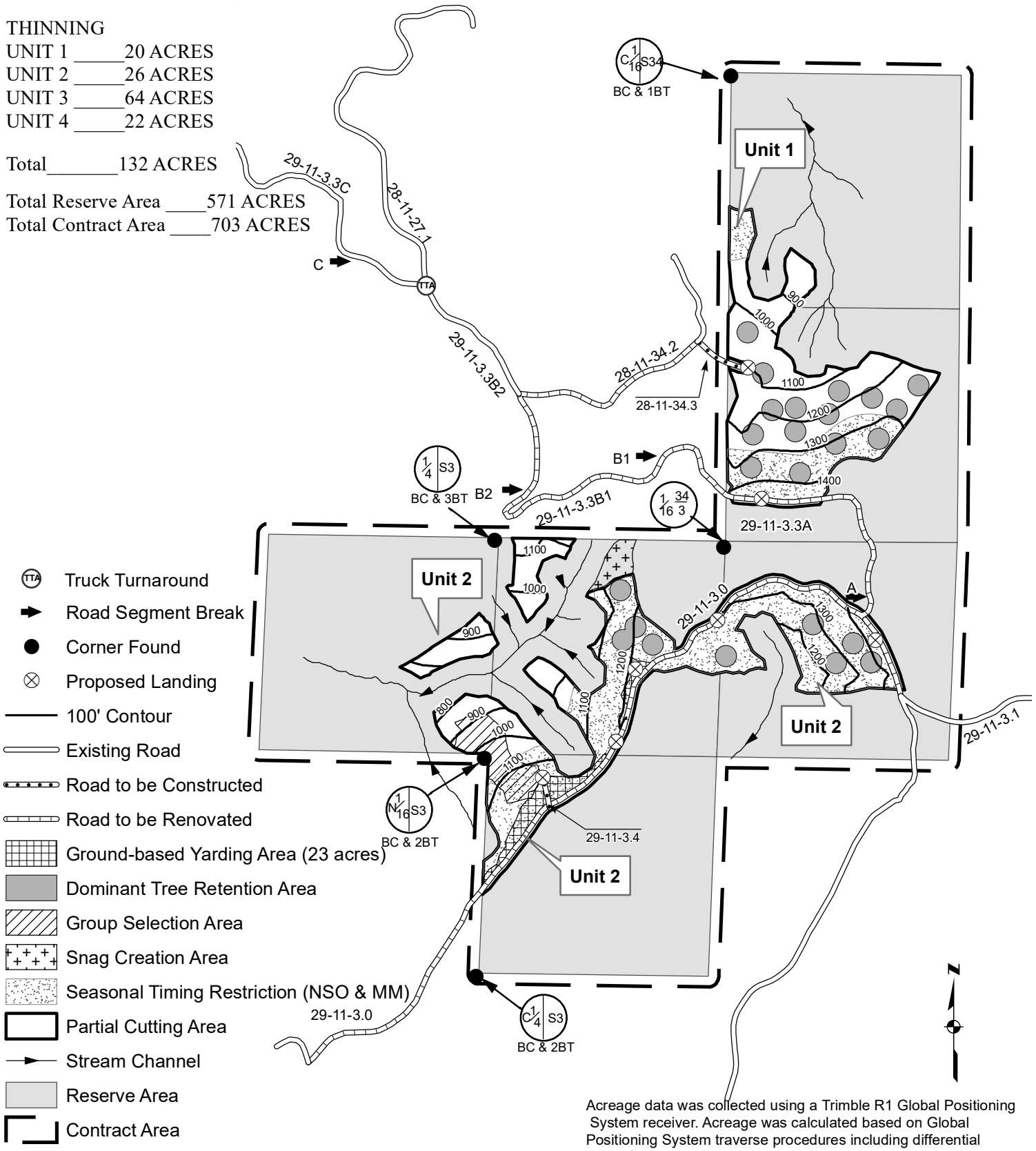
SALE NO. ORC04-TS-2023.0030
EXHIBIT A

Elk Creek Ridge CT

THINNING
UNIT 1 _____20 ACRES
UNIT 2 _____26 ACRES
UNIT 3 _____64 ACRES
UNIT 4 _____22 ACRES

Total_____132 ACRES

Total Reserve Area ____571 ACRES
Total Contract Area ____703 ACRES



feet
0 375 750 1,500

Scale 1 inch = 750 feet

Acreage data was collected using a Trimble R1 Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

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.

TIMBER SALE CONTRACT MAP
USDI-BLM COOS BAY DISTRICT
T. 28 S., R. 11 W., Secs. 29, 32, 33 & 34 Will. Mer.
T. 29 S., R. 11 W., Sec. 3 Will. Mer.

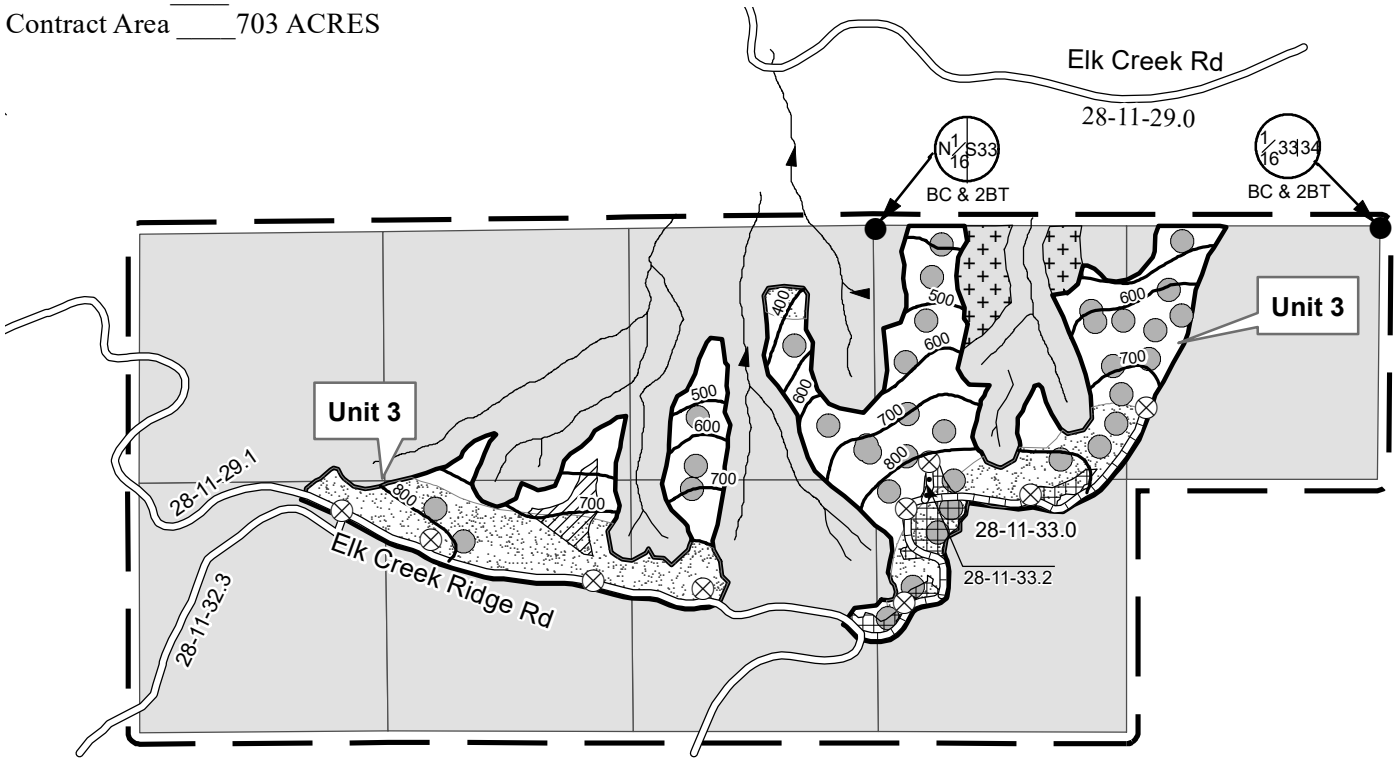
SALE NO. ORC04-TS-2023.0030
EXHIBIT A

Elk Creek Ridge CT

THINNING
UNIT 1 _____20 ACRES
UNIT 2 _____26 ACRES
UNIT 3 _____64 ACRES
UNIT 4 _____22 ACRES

Total_____132 ACRES

Total Reserve Area ____571 ACRES
Total Contract Area ____703 ACRES



- ⊗ Proposed Landing
- 100' Contour
- Existing Road
- Road to be Constructed
- Road to be Renovated
- Ground-based Yarding Area (23 acres)
- Dominant Tree Retention Area
- Group Selection Area
- Snag Creation Area
- Seasonal Timing Restriction (MM)
- Partial Cutting Area
- Stream Channel
- Reserve Area
- Contract Area
- ● Corner Found

N

feet
0 500 1,000 2,000

Scale 1 inch = 1,000 feet

Acreage data was collected using a Trimble R1 Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

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.

TIMBER SALE CONTRACT MAP
USDI-BLM COOS BAY DISTRICT
T. 28 S., R. 11 W., Secs. 29, 32, 33 & 34 Will. Mer.
T. 29 S., R. 11 W., Sec. 3 Will. Mer.

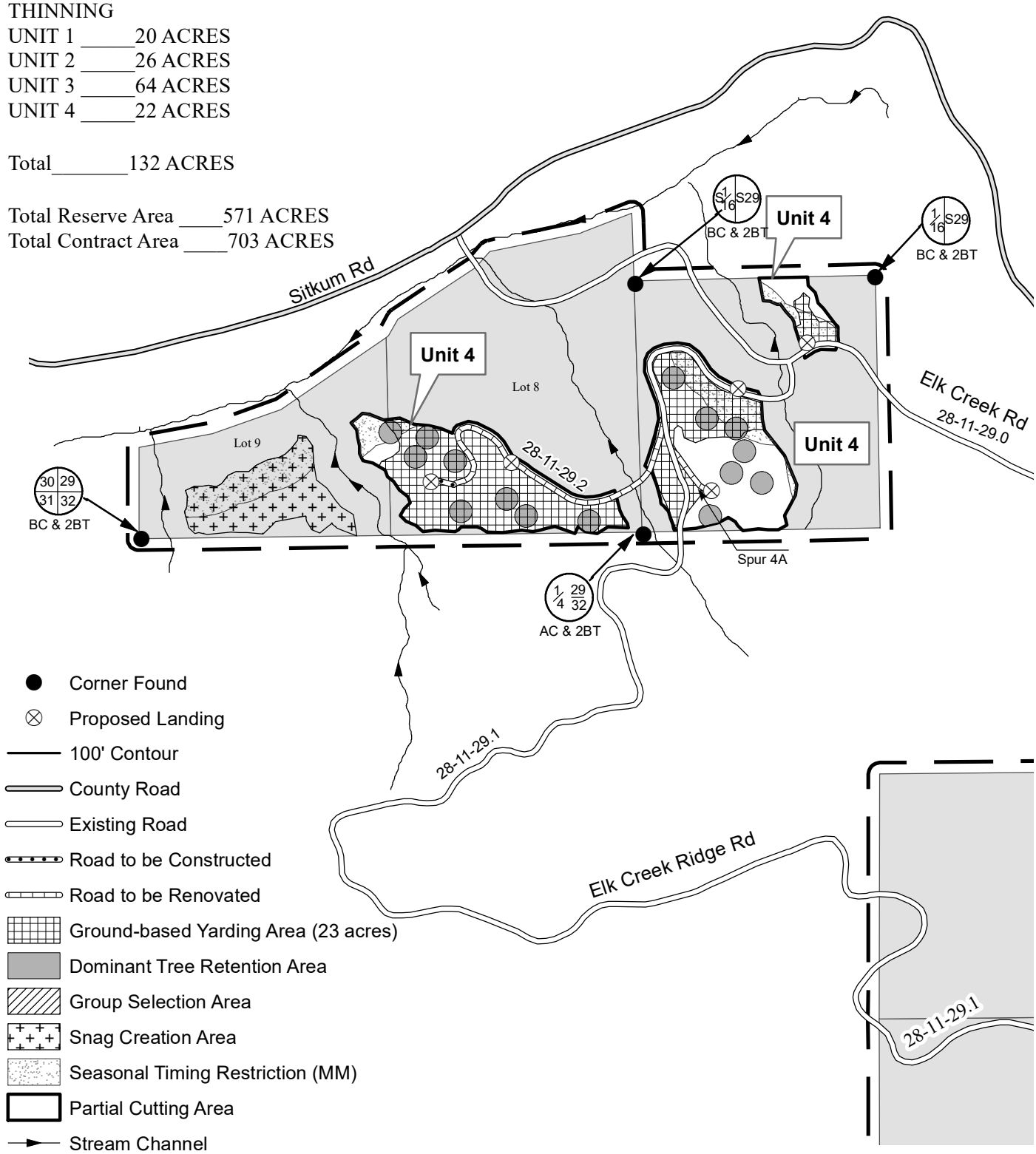
SALE NO. ORC04-TS-2023.0030
EXHIBIT A

Elk Creek Ridge CT

THINNING
UNIT 1 _____20 ACRES
UNIT 2 _____26 ACRES
UNIT 3 _____64 ACRES
UNIT 4 _____22 ACRES

Total_____132 ACRES

Total Reserve Area ____571 ACRES
Total Contract Area ____703 ACRES



- Corner Found
- Proposed Landing
- 100' Contour
- County Road
- Existing Road
- Road to be Constructed
- Road to be Renovated
- Ground-based Yarding Area (23 acres)
- Dominant Tree Retention Area
- Group Selection Area
- Snag Creation Area
- Seasonal Timing Restriction (MM)
- Partial Cutting Area
- Stream Channel
- Reserve Area
- Contract Area

feet
0 375 750 1,500

Scale 1 inch = 750 feet

Acreage data was collected using a Trimble R1 Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

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.

TIMBER SALE CONTRACT MAP
USDI-BLM COOS BAY DISTRICT
T. 28 S., R. 11 W., Secs. 29, 32, 33 & 34 Will. Mer.
T. 29 S., R. 11 W., Sec. 3 Will. Mer.

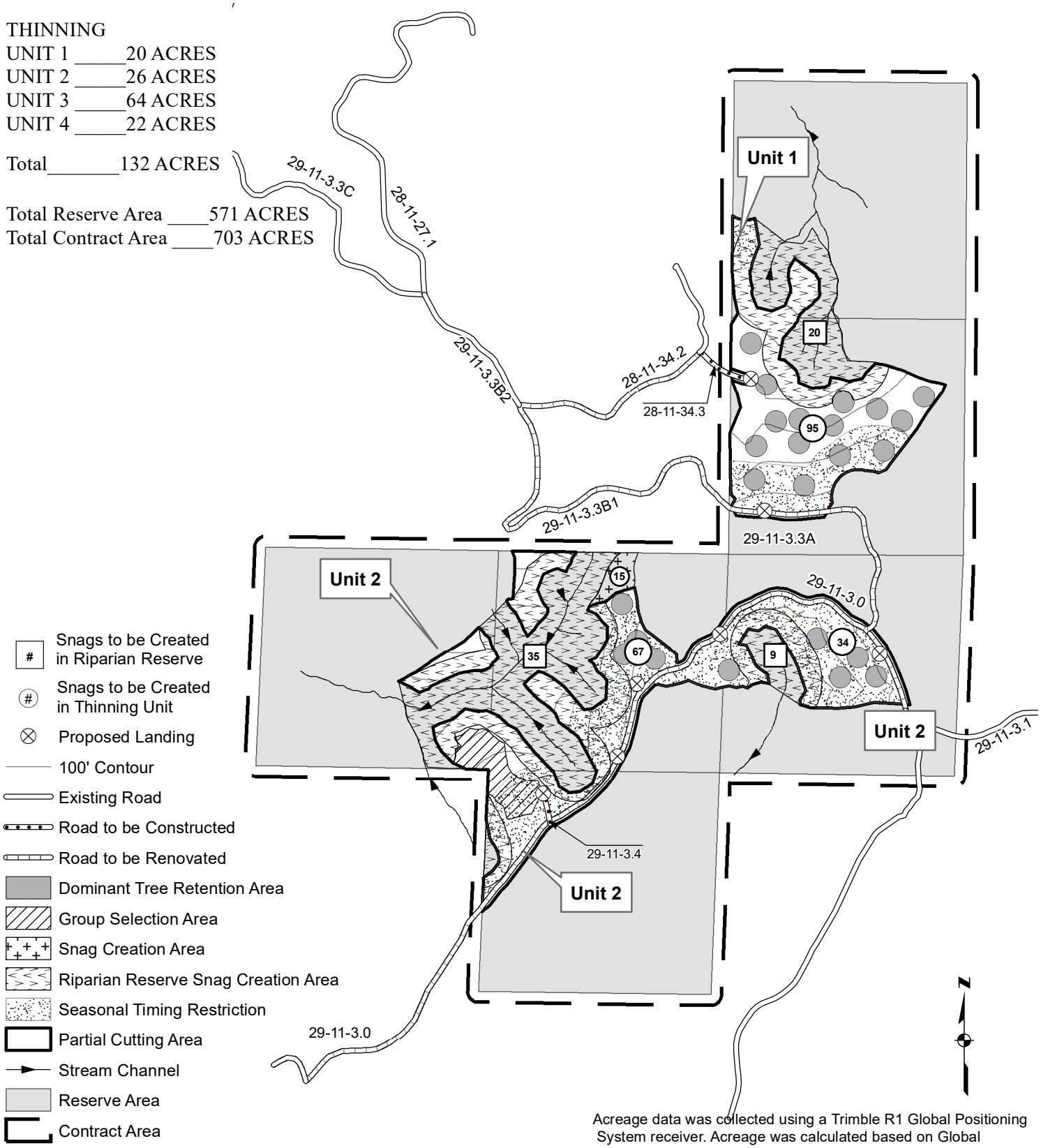
SALE NO. ORC04-TS-2022.0030
EXHIBIT I

Elk Creek Ridge CT

THINNING
UNIT 1 _____20 ACRES
UNIT 2 _____26 ACRES
UNIT 3 _____64 ACRES
UNIT 4 _____22 ACRES

Total_____132 ACRES

Total Reserve Area ____571 ACRES
Total Contract Area ____703 ACRES



Acreage data was collected using a Trimble R1 Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

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.

TIMBER SALE CONTRACT MAP
USDI-BLM COOS BAY DISTRICT
T. 28 S., R. 11 W., Secs. 29, 32, 33 & 34 Will. Mer.
T. 29 S., R. 11 W., Sec. 3 Will. Mer.

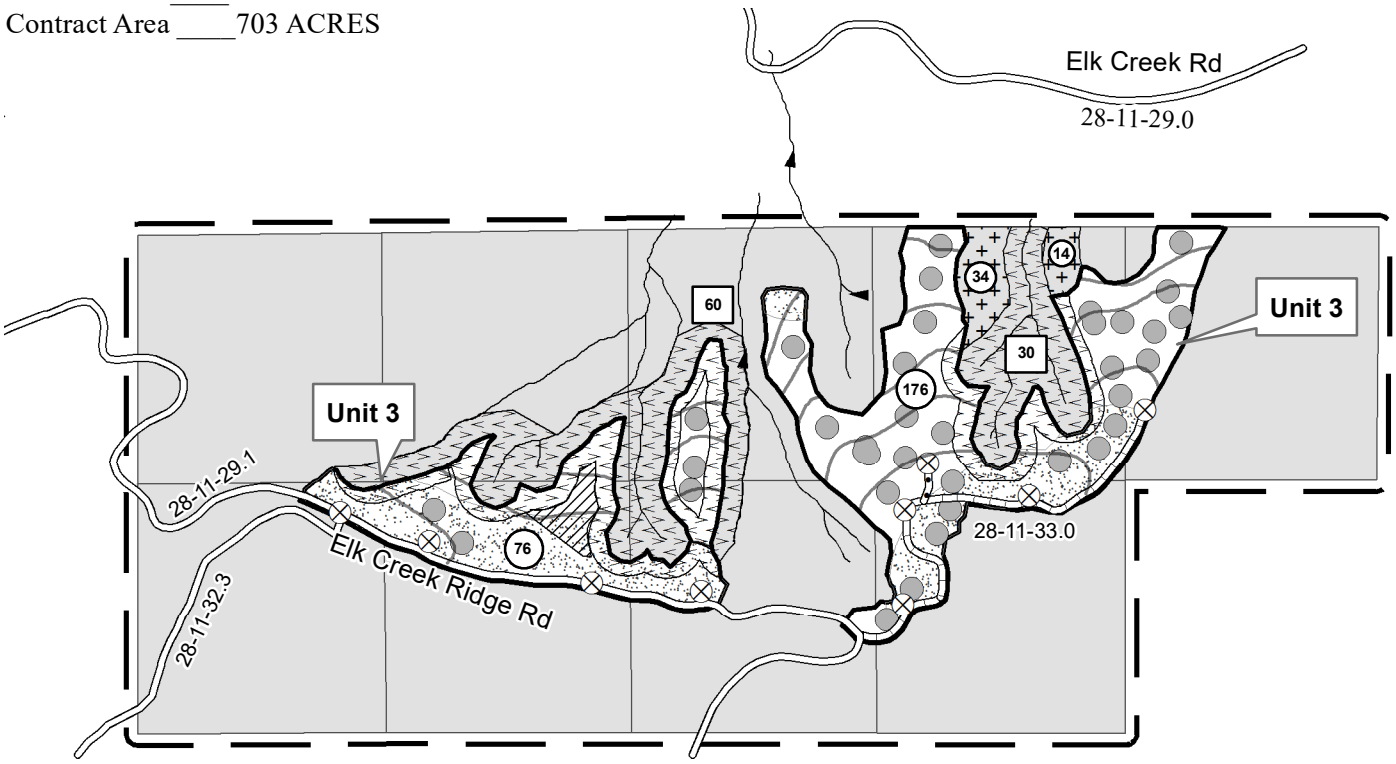
SALE NO. ORC04-TS-2022.0030
EXHIBIT I

Elk Creek Ridge CT

THINNING
UNIT 1 _____20 ACRES
UNIT 2 _____26 ACRES
UNIT 3 _____64 ACRES
UNIT 4 _____22 ACRES

Total_____132 ACRES

Total Reserve Area ____571 ACRES
Total Contract Area ____703 ACRES



- # Snags to be Created in Riparian Reserve
- (#) Snags to be Created in Thinning Unit
- Corner Found
- Proposed Landing
- 100' Contour
- Existing Road
- Road to be Constructed
- Road to be Renovated
- Riparian Reserve Snag Creation Area
- Dominant Tree Retention Area
- Group Selection Area
- Snag Creation Area
- Seasonal Timing Restriction
- Partial Cutting Area
- Stream Channel
- Reserve Area
- Contract Area

0 500 1,000 2,000 feet

Scale 1 inch = 1,000 feet

N

Acreage data was collected using a Trimble R1 Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

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.

TIMBER SALE CONTRACT MAP
USDI-BLM COOS BAY DISTRICT
T. 28 S., R. 11 W., Secs. 29, 32, 33 & 34 Will. Mer.
T. 29 S., R. 11 W., Sec. 3 Will. Mer.

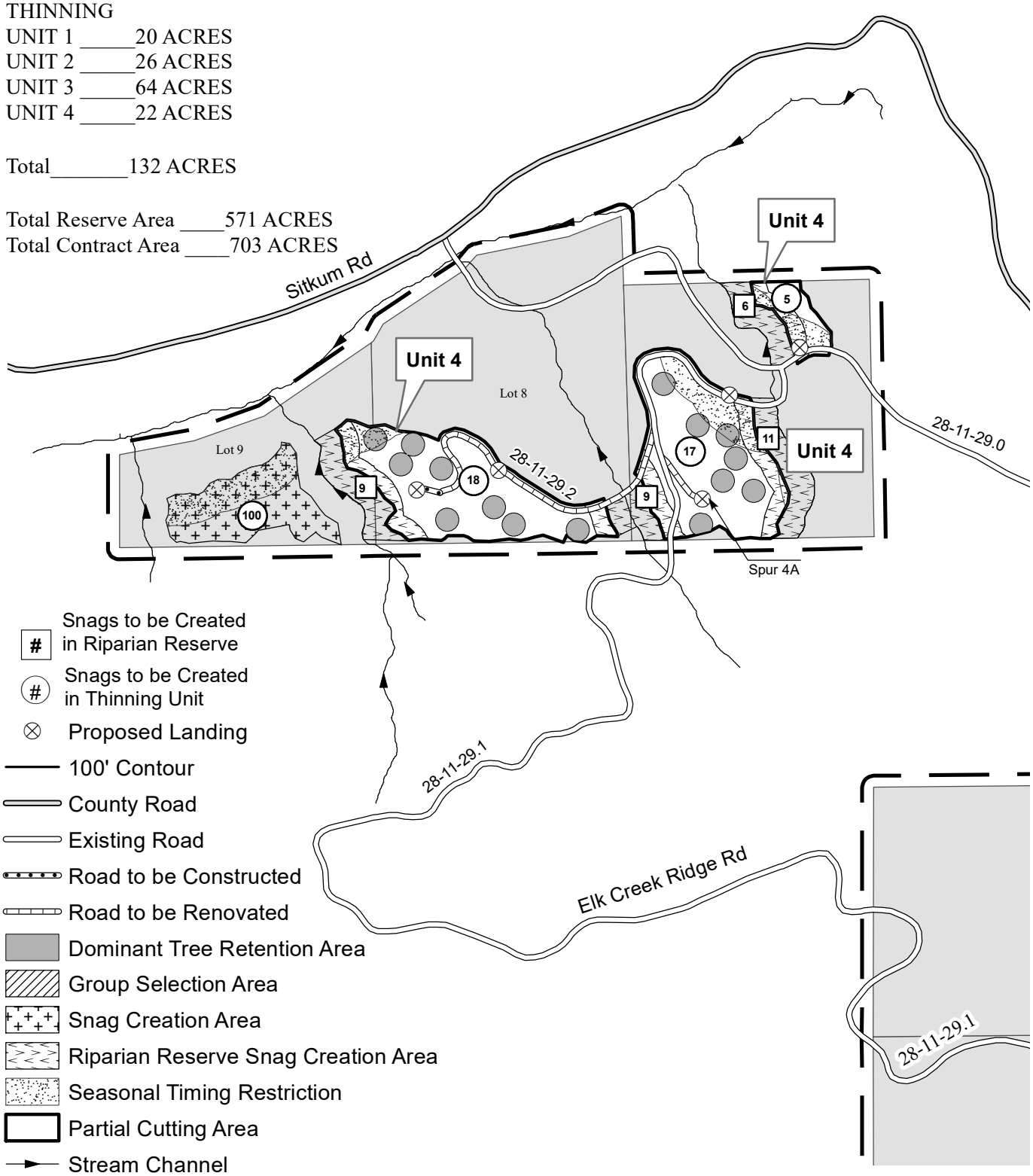
SALE NO. ORC04-TS-2022.0030
EXHIBIT I

Elk Creek Ridge CT

THINNING
UNIT 1 _____20 ACRES
UNIT 2 _____26 ACRES
UNIT 3 _____64 ACRES
UNIT 4 _____22 ACRES

Total_____132 ACRES

Total Reserve Area ____571 ACRES
Total Contract Area ____703 ACRES



[#] Snags to be Created in Riparian Reserve
(#) Snags to be Created in Thinning Unit
⊗ Proposed Landing
100' Contour
County Road
Existing Road
Road to be Constructed
Road to be Renovated
Dominant Tree Retention Area
Group Selection Area
Snag Creation Area
Riparian Reserve Snag Creation Area
Seasonal Timing Restriction
Partial Cutting Area
Stream Channel
Reserve Area
Contract Area

feet
0 375 750 1,500
Scale 1 inch = 750 feet

Acreage data was collected using a Trimble R1 Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

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.

EXHIBIT I

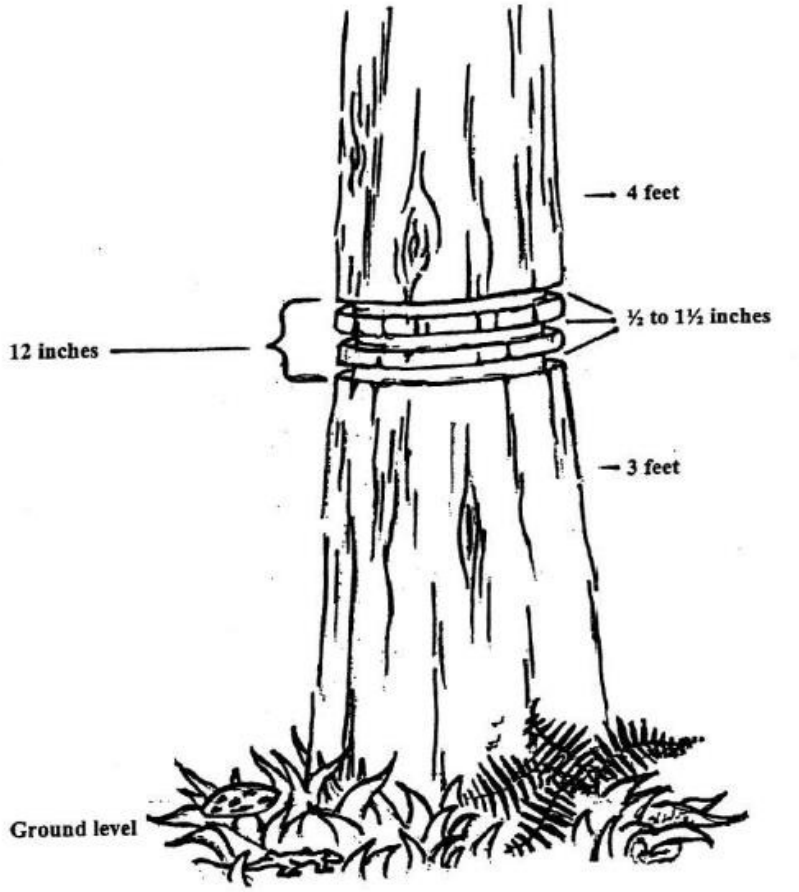
SPECIFICATIONS FOR BASAL GIRDLING

GENERAL:

(1) Cut around the tree. Each cut must connect, or extend at least ¾ of the circumference, around the tree and penetrate through the cambium layer into the wood at least ½ inch, but not more than 1 ½ inch. The distance between the top cut and the bottom cut shall not exceed twelve (12) inches. Trees shall be girdled between three (3) and four (4) feet above ground level measured from the uphill side of the tree.

Illustration 1- Basal girdling

Basal-Girdling example: make three (3) parallel unbroken cuts around the tree. The distance between the top and bottom of the cut shall not exceed twelve inches. Cuts must penetrate at least 1/2 inch, but not more than 1 1/2 inches into the wood of the tree. Trees shall be girdled between 3 and 4 feet from the ground.



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

EXHIBIT B
SCALE SALE PURCHASE PRICE SCHEDULE AND MEASUREMENT SPECIFICATIONS

I. Total Actual Purchase Price – In accordance with Sections 2 and 3 of the contract, the Purchaser agrees to pay the Government for the forest products sold under the contract in accordance with the following schedule and measurement requirements. Forest products sold are comprised of *Merchantable Timber*, *Other Timber*, *Other Forest Products*, *Remaining Volume*, and *Defect Caused by Abnormal Delay* as defined in this Exhibit. 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 Products, Species, Measurement Units, and Prices		
Species	**Measurement Units**	**Price Per Measurement Unit**
Merchantable Timber:		
Douglas-fir	MBF	$71.50
Red Alder	MBF	$54.80
Grand-fir	MBF	$43.50
Western Hemlock	MBF	$42.70
Hardwoods	MBF	$28.10
Other Wood Products:		
Biomass	Tons	$0.05

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 Section 3 of the contract at the prices per measurement unit shown in Section I of this Exhibit.

Schedule of Minimum Merchantable Log Specifications			
Species and Products	**Length**	**Diameter (inside bark at small end)**	**Net Scale**
All	12 Feet	6 inches	33 1/3 Of Gross Volume Of any log Segment

III. Other Timber – If Purchaser elects to remove any logs which do not meet the above minimum merchantable log specifications in Section II of this Exhibit, are not designated as other forest products in Section I of this Exhibit, and have not been reserved to the Government in Section 41 of the contract, such logs shall be scaled for their merchantable content as provided herein and be paid for in accordance with Sections 2 and 3 of the contract and the prices per measurement unit in Section I of this Exhibit. 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 BLM prescribed procedures.

IV. Deterioration Caused by Abnormal Delay – Scaling deductions made for rot, checks, or other deterioration resulting from abnormal delay in scaling caused by Purchaser shall be recorded separately and charged to the Purchaser in accordance with Section 3.(g). of the contract.

V. Remaining Volume – *Remaining volume* is defined in Section 3.(g). of the contract. The remaining volume of any forest products sold under the contract, and any deterioration due to abnormal delay shall be determined as provided in Section 3.(g). of the contract. Purchaser shall pay for same in accordance with Section 3 of the contract at the prices per measurement unit shown in Section I of this Exhibit. To maximize utilization, the Purchaser shall buck logs to variable merchantable lengths. If the Purchaser fails to buck logs to variable merchantable lengths, the Authorized Officer may measure unyarded log segments and bill the Purchaser for their value.

The Authorized Officer may determine during operations that the amount of remaining volume found is excessive and/or preventing the attainment of BLM treatment objectives. Upon such determination as directed in writing by the Authorized Officer, the Purchaser shall restring cable yarding lines, re-traverse ground-based yarding areas, and/or re-fly aerial yarding areas; and yard, remove, and present for scaling the material which would otherwise be designated as remaining volume.

VI. Scaling

A. **Scaling Service –** Log scaling services shall be provided and performed by Government scalers or parties under contract to BLM, as determined by the Authorized Officer. Purchaser shall notify the Authorized Officer three (3) days prior to commencing any hauling, including any hauling shutdowns longer than two (2) days, and at the earliest opportunity when ceasing hauling operations performed under the contract.

A Scaling Authorization must be completed and approved by the Authorized Officer prior to beginning operations. A Yard Scaling Agreement must be completed for each utilization facility that will receive logs from the sale, which must be scaled, and executed by the Purchaser, Scale Site Owner, and Authorized Officer prior to the delivery of any logs to that facility. Government scalers or contract scalers are authorized to collect scale data from all loads.

B. **Log Rule and Measurement**

All logs shall be scaled according to the Eastside Scribner Log Rules found in the Northwest Log Rules Eastside and Westside Log Scaling Handbook in the Official Rules for Log Scaling and Grading Bureaus developed by the Northwest Log Rules Advisory Group dated July 1, 2003 (reprinted June 1, 2006). The Contracting Officer may elect to utilize sample scaling in lieu of 100 percent scaling of log loads. The sample log scaling procedures, including sample design and number of log sorts, will be determined by the Authorized Officer in accordance with BLM prescribed procedures.

C. **Log Presentation** – Purchaser shall present logs so that they may be scaled in an economical and safe manner in accordance with the Yard Scaling Agreement(s) required in Section VI.A. of this Exhibit.

D. **Check Scale** – Government scalers will conduct check scales as set forth below:

1. Check scale shall include at least 200 logs or at least 50 MBF.

2. Utilize a sample that will accurately represent the species and defect associated with the sale.

3. For complex scaling situations, conduct the appropriate analysis to determine sample size. Increase the number of logs check scaled if sample size analysis deems it necessary.

4. Use the following standards to determine the proficiency of individual Government scalers or scalers under contract to BLM:

a. Gross Scale. A variance of one point five percent (1.5%) in gross scale is the standard unless otherwise justified.

b. Net scale. The allowable variance is as follows:

Check Scaler's Percent Defect in Logs	Scalers Allowable Variance
0-10 percent	2 percent
over 10 percent	.2 x percent defect to a maximum of 5 percent

5. 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 Government scalers 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, 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 Government check scales and the original scale during the period covered by the unsatisfactory check scales. Unless otherwise approved in writing by the Contracting 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.

E. Accountability

1. All logs will be painted and branded at the landing and accounted for in accordance with Section 42.g5 of the contract. 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. All log/load tickets will be marked with the Exhibit A unit number using a permanent marker or indelible stamp as directed by the Authorized Officer. 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, or as directed by the Authorized Officer in the case of other forest products. All forest products on each load shall be delivered to the destination listed on the load receipt. The BLM scaler receipt shall be surrendered at the location of BLM scaling, the unloading location, or as requested by BLM.

2. The Purchaser shall not haul forest products 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 am to 8:00 pm daily, unless otherwise approved in writing by the Authorized Officer or designated in the Approved Logging Plan.

3. The Purchaser shall furnish BLM a map showing the route which shall be used to haul forest products from the forest product sale area to the scaling location(s). 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 the Authorized Officer and approval by BLM. The haul route map shall be attached to the Scaling Authorization.

4. All log loads will be scaled at scale locations listed on the Scaling Authorization as approved by the Authorized Officer. The Purchaser shall ensure that all scale site owners listed on the Scaling Authorization enter into a Yard Scaling Agreement 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 Yard Scaling Agreement.

5. Any removal of logs from loaded trucks prior to their arrival at the delivery point 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 the amount due because of trespass.

F. **Scaling Lost Forest Products –** The value of forest product loads represented by missing load tickets 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.

(VII.) Estimated Volumes and Values – The following volume estimates and calculations of value of forest products sold are made solely as an administrative aid for determining payment amounts, when payments are due, the value of forest products 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. **Forest Product Volume Removed from Contract Area –** The total volume of removed forest products shall be determined using the Government's records of scaled volumes of forest products 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.

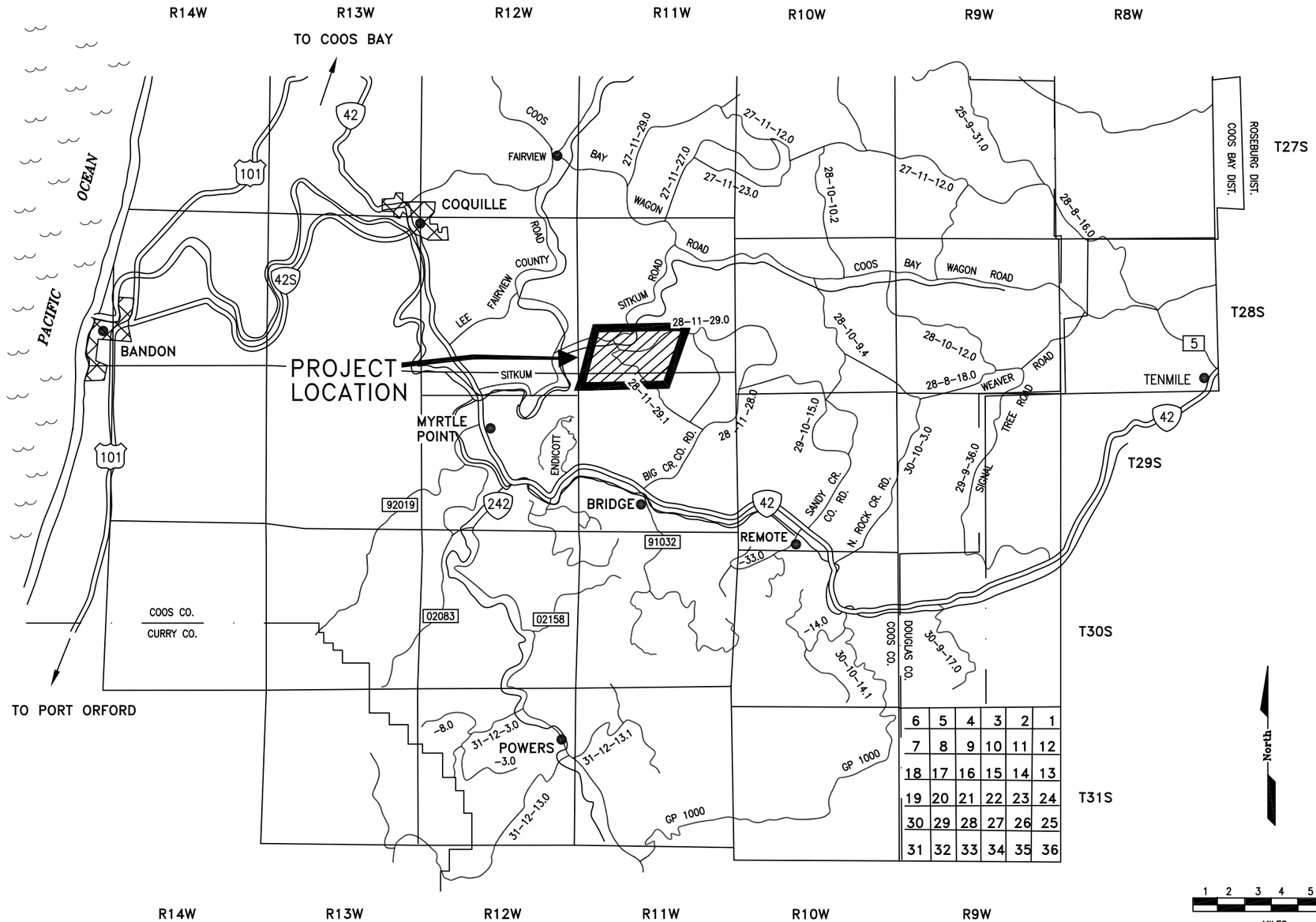
B. **Forest Products Not Yet Removed from Contract Area** – The value of forest products which have not been removed will be determined by multiplying the value per acre as shown below times the amount of acreage subject to the purpose of the value determination, as determined by the Authorized Officer. The estimated volume and value per acre used for determining payment amounts may be modified by the Authorized Officer based upon scale report data on forest product volume removed from the contract area.

Total Estimated Purchase Price and/or Schedule of Volumes and Values for Forest Products Not Yet Removed from Contract Area

Cutting Area		Total Estimated Volume (MBF)		Total Estimated Purchase Price	
Cutting Area Number	**Exhibit A Acres**	**Volume per Acre**	**Total Volume**	**Value per Acre**	**Total Value**
Unit 1	20	13.2	263	$921.76	$18,435.15
Unit 2	26	13.3	345	$926.68	$24,093.70
Unit 3	64	13.2	846	$924.18	$59,147.60
Unit 4	22	13.2	290	$923.64	$20,320.15
Sale Total	132				$121,996.60

EXHIBIT C
TIMBER SALE NO. ORC04-TS-2023.0030
TIMBER SALE NAME: ELK CREEK RIDGE CT

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OFFICE
MYRTLEWOOD FIELD OFFICE



SHEET NO.	CONTENTS
1	TITLE SHEET
2-3	WORK LOCATION MAP
4-5	TYPICAL CROSS SECTION DETAIL
6-7	ESTIMATE OF QUANTITIES
8	CULVERT INSTALLATION DETAIL
9	ROADSIDE BRUSHING DETAIL
10-12	SPECIAL PROVISIONS
13-25	ROADS WORKLIST
26-31	CONSTRUCTION DETAILS
32-74	TIMBER SALE ROAD SPECIFICATIONS

ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT - OREGON

TITLE SHEET

DESIGNED J. AGUILAR
REVIEWED INTERNAL
APPROVED T. SUE

DRAWN JAA | SCALE NONE
DATE 01/2022 | SHEET 1 OF 74

T
28 R 11 W
S

SITKUM ROAD

JUNCTION
MP 10.75=
MP 0.00

28-11-29.0

29

PRIVATE

BLM

MP 0.46

JUNCTION
MP 0.44=
MP 0.00

-29.1

MP 0.08

JUNCTION
MP 0.26=
STA 0+00

28-11-29.2

JUNCTION
MP 0.29=
STA 0+00

SPUR 4A
STA 3+60

STA 11+00

STA 17+80
END RENO.

28-11-29.0

PRIVATE

BLM

28

BLM

27

PRIVATE

LEGEND

NEW CONSTRUCTION	
RENOVATION	
IMPROVEMENT	
EXISTING ROAD	
PAVED ROAD	
LANDING	
BRIDGE	
GATE	
BORROW SITE	B
WASTE SITE	W
ROAD SEGEMENT	
MILEPOST	MP
STATION	STA

N

28-11-29.1

PRIVATE

BLM

PRIVATE

PRIVATE

BLM

32

33

34

MP 2.11

MP 2.20

MP 2.37

MP 2.49

JUNCTION
MP 2.66=
STA 0+00

JUNCTION
STA 11+75=
STA 0+00

28-11-33.2
STA 2+50

28-11-33.0

STA 26+60

STA 11+00

STA 17+50

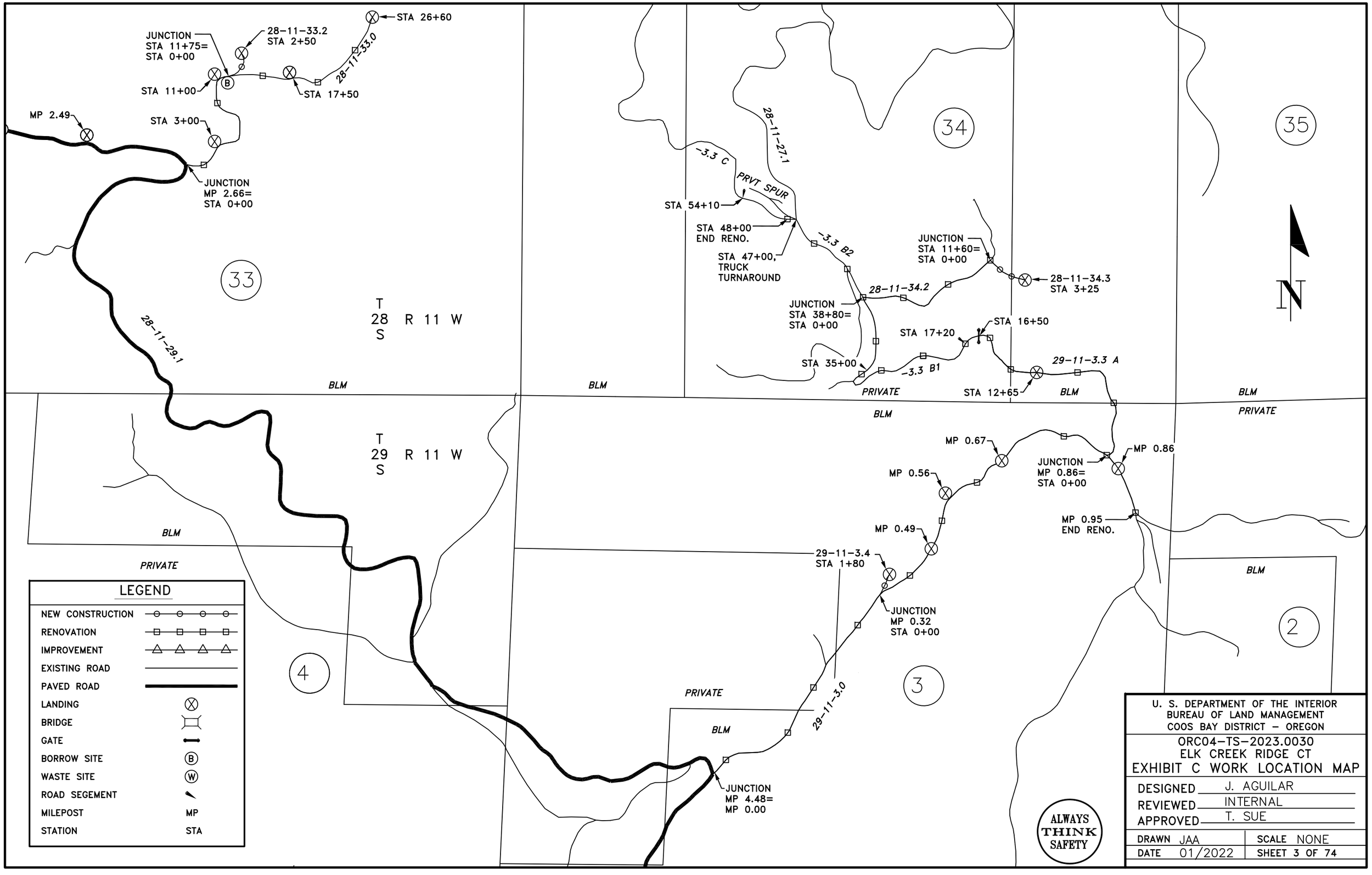
STA 3+00

ALWAYS
THINK
SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT – OREGON

ORC04-TS-2023.0030
ELK CREEK RIDGE CT
EXHIBIT C WORK LOCATION MAP

DESIGNED	J. AGUILAR
REVIEWED	INTERNAL
APPROVED	T. SUE
DRAWN JAA	SCALE NONE
DATE 01/2022	SHEET 2 OF 74



LEGEND

NEW CONSTRUCTION	
RENOVATION	
IMPROVEMENT	
EXISTING ROAD	
PAVED ROAD	
LANDING	
BRIDGE	
GATE	
BORROW SITE	B
WASTE SITE	W
ROAD SEGEMENT	
MILEPOST	MP
STATION	STA

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT – OREGON

ORC04-TS-2023.0030
ELK CREEK RIDGE CT
EXHIBIT C WORK LOCATION MAP

DESIGNED J. AGUILAR
REVIEWED INTERNAL
APPROVED T. SUE

DRAWN JAA | SCALE NONE
DATE 01/2022 | SHEET 3 OF 74

ALWAYS THINK SAFETY

ROAD NUMBER **	FROM MILEPOST/STATION	TO MILEPOST/STATION	LENGTH MILES/ STATIONS	TYPICAL SECTION TYPE	ROAD WIDTH (*1 & 5)		CLEARING WIDTH		BRUSHING WIDTH		SURFACING (*3)									REMARKS
					SUBGRADE	DITCH	BEYOND		EXISTING ROADS		BASE COURSE					SURFACE COURSE				
							TOP CUT	TOE FILL	L	R	Min Top Width	Comp. Depth	Type (*2)	Grading		Min Top Width	Comp. Depth	Type (*2)	Grading	
28-11-29.0	SPECIFIED SITE																			LANDING CONSTRUCTION
28-11-29.1	SPECIFIED SITES																			LANDING CONSTRUCTION
28-11-29.2 R	0+00	17+80	17.80	5	14'	2'			10'	10'										3% CROWNED W/ DITCH
28-11-33.0 R	0+00	26+60	26.60	4	14'	2'			10'	10'						12'	3"	D	1.5-0"	3% CROWNED W/ DITCH
28-11-33.2 C	0+00	2+50	2.50	4	16'	2'	10'	5'			13	9"	D	3-0"						3% CROWNED W/ DITCH
28-11-34.2 R	0+00	11+60	11.60	5	16'	2'			10'	10'										3% CROWNED W/ DITCH
28-11-34.3 C	0+00	3+25	3.25	1	16'	0'	10'	5'								SURFACE 100' APRON				3% OUTSLOPED W/ NO DITCH
29-11-3.0 R	0.00	0.95	0.95	4	14'	2'			10'	10'						12'	3"	D	1.5-0"	3% CROWNED W/ DITCH

** RENOVATION = R
IMPROVEMENT = I
CONSTRUCTION = C

*NOTES

1. EXTRA SUBGRADE WIDTHS

FILL WIDENING:
- ADD 1 FT. TO EACH SHOULDER FOR FILLS OF 1–6 FT. IN HEIGHT
- ADD 2 FT. TO EACH SHOULDER FOR FILLS OF 6–10 FT. IN HEIGHT

CURVE WIDENING: WIDEN THE INSIDE SHOULDER OF ALL CURVES AS SHOWN ON THE PLANS OR AS FOLLOWS:
- ADD 4 FT. FOR CURVES WITH 90'–120' RADIUS
- ADD 5 FT. FOR CURVES WITH 60'–90' RADIUS

CUT SLOPES AND FILL SLOPES AS FOLLOWS OR AS SHOWN ON PLANS:

MATERIALS	CUT SLOPES	FILL SLOPES
COMMON	3/4:1	1 1/2:1
SOFT ROCK & SHALE	1/2:1	1 1/2:1
SOLID ROCK	1/4:1	REPOSE

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

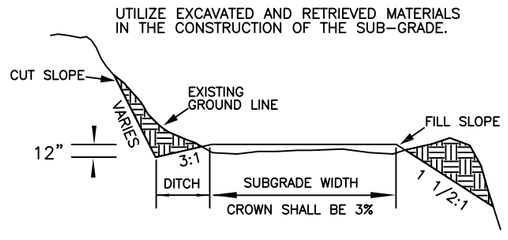
2. SURFACING TYPE
   A. PIT RUN ROCK MATERIAL.
   B. GRID ROLLED ROCK MATERIAL
   C. SCREENED ROCK MATERIAL.
   D. CRUSHED ROCK MATERIAL.
   E. CLASS 'C' ASPHALT MIX.

3. SURFACING
   A. TURNOUTS, CURVE WIDENING, AND ROAD APPROACH APRONS SHALL BE SURFACED. SURFACE ALL ROAD STATIONING REQUIRING SURFACING AS LISTED OR AS SHOWN ON PLANS.

4. DITCHES
   A. 2:1 INSLOPE FROM SUBGRADE. DITCH OUTSLOPE WILL BE AS SPECIFIED IN NOTE 1 ABOVE. DEPTH MAY BE EXCEEDED TO OBTAIN REQUIRED DRAINAGE.

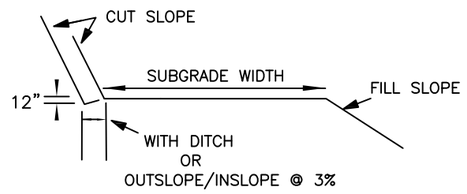
5. TURNOUTS
   A. WIDTH 10 FT. IN ADDITION TO SUBGRADE WIDTH, OR AS SHOWN ON THE PLANS.
   B. INTERVISIBLE OR LOCATED APPROXIMATELY AS SHOWN ON THE ROAD PLANS AND/OR NARRATIVE.

TYPICAL GRADING SECTION



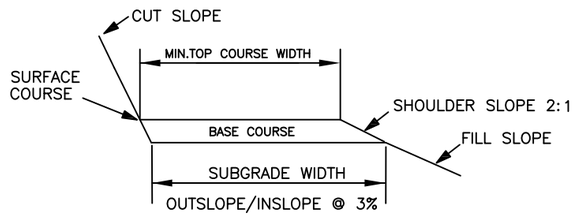
TYPICAL DIRT SECTION

TYPE 1



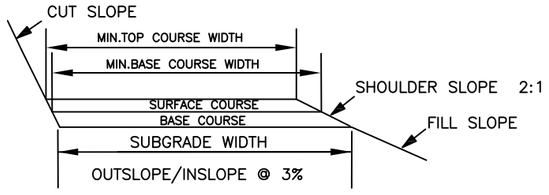
TYPICAL SURFACING SECTION

TYPE 2



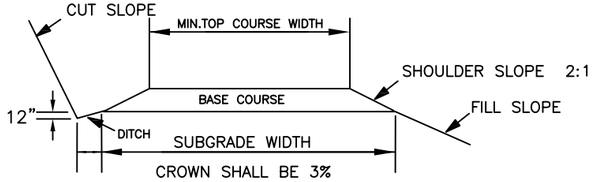
TYPICAL SURFACING SECTION

TYPE 3



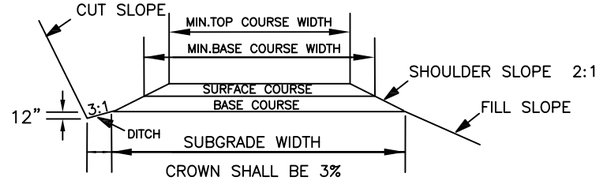
TYPICAL SURFACING SECTION

TYPE 4



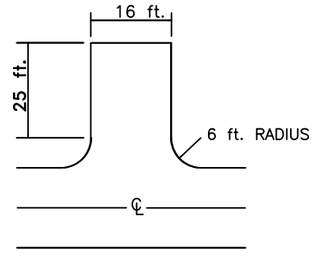
TYPICAL SURFACING SECTION

TYPE 5

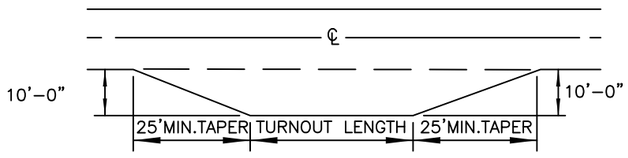


NOTE: FOR TYPE 1–3 TYPICAL SECTIONS, OUTSLOPING NOT TO BE USED WHERE GRADE EXCEEDS 6%

PLAN – TYPICAL TRUCK TURNAROUND



PLAN – TYPICAL TURNOUT



ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT – OREGON

ORC04–TS–2023.0030
ELK CREEK RIDGE CT

TYPICAL CROSS SECTION DETAILS

DESIGNED	J. AGUILAR
REVIEWED	INTERNAL
APPROVED	T. SUE
DRAWN	JAA
SCALE	NONE
DATE	03/2022
SHEET	4 OF 74

ROAD NUMBER **	FROM MILEPOST/STATION	TO MILEPOST/STATION	LENGTH MILES/ STATIONS	TYPICAL SECTION TYPE	ROAD WIDTH (*1 & 5)		CLEARING WIDTH		BRUSHING WIDTH		SURFACING (*3)									REMARKS
					SUBGRADE	DITCH	BEYOND		EXISTING ROADS		BASE COURSE					SURFACE COURSE				
							TOP CUT	TOE FILL	L	R	Min Top Width	Comp. Depth	Type (*2)	Grading		Min Top Width	Comp. Depth	Type (*2)	Grading	
29-11-3.3A R	0+00	17+20	17.20	5	14'	2'			10'	10'						12'	3"	D	1.5-0"	3% CROWNED W/ DITCH
29-11-3.3B1 R	17+20	35+00	17.80	5	14'	2'			10'	10'										3% CROWNED W/ DITCH
29-11-3.3B2 R	35+00	48+00	13.00	5	14'	2'			10'	10'										3% CROWNED W/ DITCH
29-11-3.4 C	0+00	1+80	1.80	4	16'	2'	10'	5'			13	9"	D	3-0"						3% CROWNED W/ DITCH
SPUR 4A R	0+00	3+60	3.60	4	16'	0'			10'	10'										3% OUTSLOPED W/ NO DITCH

** RENOVATION = R
IMPROVEMENT = I
CONSTRUCTION = C

*NOTES

1. EXTRA SUBGRADE WIDTHS

   FILL WIDENING:
   - ADD 1 FT. TO EACH SHOULDER FOR FILLS OF 1–6 FT. IN HEIGHT
   - ADD 2 FT. TO EACH SHOULDER FOR FILLS OF 6–10 FT. IN HEIGHT

   CURVE WIDENING: WIDEN THE INSIDE SHOULDER OF ALL CURVES AS SHOWN ON THE PLANS OR AS FOLLOWS:
   - ADD 4 FT. FOR CURVES WITH 90'–120' RADIUS
   - ADD 5 FT. FOR CURVES WITH 60'–90' RADIUS

CUT SLOPES AND FILL SLOPES AS FOLLOWS OR AS SHOWN ON PLANS:

MATERIALS	CUT SLOPES	FILL SLOPES
COMMON	3/4:1	1 1/2:1
SOFT ROCK & SHALE	1/2:1	1 1/2:1
SOLID ROCK	1/4:1	REPOSE

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

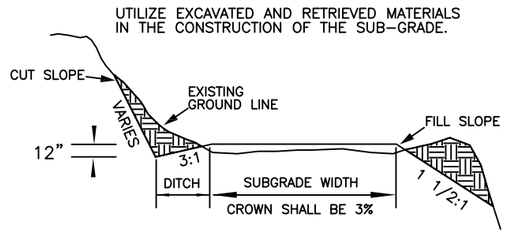
2. SURFACING TYPE
   A. PIT RUN ROCK MATERIAL.
   B. GRID ROLLED ROCK MATERIAL
   C. SCREENED ROCK MATERIAL.
   D. CRUSHED ROCK MATERIAL.
   E. CLASS 'C' ASPHALT MIX.

3. SURFACING
   A. TURNOUTS, CURVE WIDENING, AND ROAD APPROACH APRONS SHALL BE SURFACED. SURFACE ALL ROAD STATIONING REQUIRING SURFACING AS LISTED OR AS SHOWN ON PLANS.

4. DITCHES
   A. 2:1 INSLOPE FROM SUBGRADE. DITCH OUTSLOPE WILL BE AS SPECIFIED IN NOTE 1 ABOVE. DEPTH MAY BE EXCEEDED TO OBTAIN REQUIRED DRAINAGE.

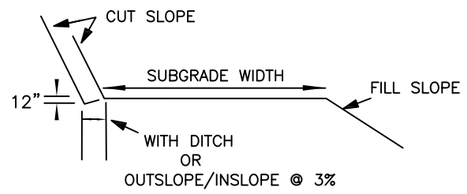
5. TURNOUTS
   A. WIDTH 10 FT. IN ADDITION TO SUBGRADE WIDTH, OR AS SHOWN ON THE PLANS.
   B. INTERVISIBLE OR LOCATED APPROXIMATELY AS SHOWN ON THE ROAD PLANS AND/OR NARRATIVE.

TYPICAL GRADING SECTION



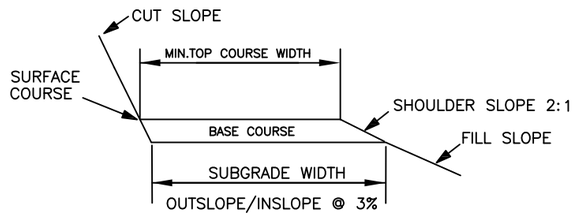
TYPICAL DIRT SECTION

TYPE 1



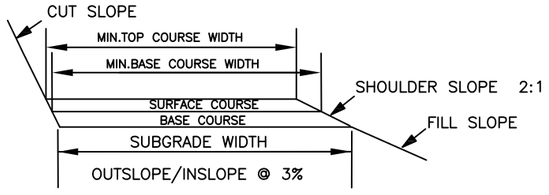
TYPICAL SURFACING SECTION

TYPE 2



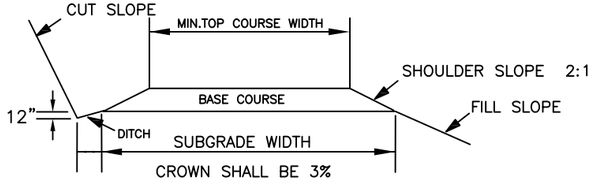
TYPICAL SURFACING SECTION

TYPE 3



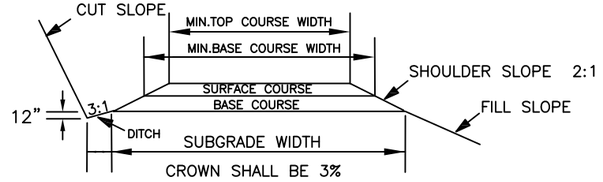
TYPICAL SURFACING SECTION

TYPE 4



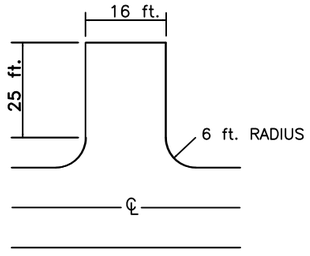
TYPICAL SURFACING SECTION

TYPE 5

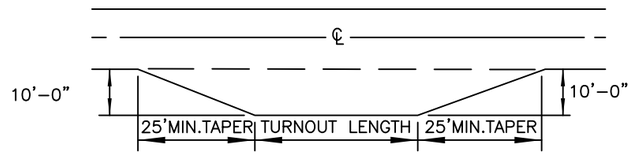


NOTE: FOR TYPE 1–3 TYPICAL SECTIONS, OUTSLOPING NOT TO BE USED WHERE GRADE EXCEEDS 6%

PLAN – TYPICAL TRUCK TURNAROUND



PLAN – TYPICAL TURNOUT



ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT – OREGON

ORC04–TS–2023.0030
ELK CREEK RIDGE CT
TYPICAL CROSS SECTION DETAILS

DESIGNED	J. AGUILAR
REVIEWED	INTERNAL
APPROVED	T. SUE
DRAWN	JAA
SCALE	NONE
DATE	03/2022
SHEET	5 OF 74

ROAD NUMBER	NEW CONSTRUCTION	RENOVATION	IMPROVEMENT	NEW FEATURE CONSTRUCTION	SLASH TREATMENT (*4)	GRUBBING (*4)	ROADSIDE BRUSHING	SLOPE STAKING	EARTHWORK (DESIGNED) (*5)						CPP (*1, 3)			CMP	DOWNSPOUTS (*3)				DOWNSPOUT ANCHORS
									COMMON	RIPPABLE ROCK	ROCK CUT	FILL	SHORT HAUL 100–500'	LONG HAUL 500'+	18"	24"	36"	24"	FULL ROUND				
																			CPP		CMP		
																			18"	24"	18"	24"	
SECTION NO.	300	500	500	300	200	200	2100	2300	300	300	300	300	300	300	400	400	400	400	400	400	400	400	400
UNITS	STA.	STA.	STA.	EA.	AC.	AC.	AC.	STA.	C.Y.	C.Y.	C.Y.	YDS.	STA.YDS.	YD.MI.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	EA.
28–11–29.0				1	0.1	0.1																	
28–11–29.1				3	0.5	0.5																	
28–11–29.2		17.80		2	1.0	1.0	0.8								40		50						
28–11–33.0		26.60		3	0.9	0.9	1.2								36								
28–11–33.2	2.50				0.4	0.4																	
28–11–34.2		11.60					0.5																
28–11–34.3	3.25				0.5	0.5																	
29–11–3.0		50.16		2	1.5	1.5	2.3								68								
29–11–3.3A		17.20			0.4	0.4	0.8								36								
29–11–3.3B1		17.80					0.8																
29–11–3.3B2		13.00					0.6																
29–11–3.4	1.80				0.3	0.3																	
SPUR 4A		3.60					0.2								36								
Totals:	7.55	157.76		11	5.6	5.6	7.2								216		50						

*1 CPP – CORRUGATED POLYETHYLENE PIPE
*2 CMP – CORRUGATED METAL PIPE
*3 SEE CULVERT INSTALLATION DETAIL SHEET
*4 IF NOT SHOWN, MAY BE INCLUDED IN EXCAVATION AS TIME & EQUIPMENT. GRUBBING AND SLASH TREATMENT MAY BE ASSOCIATED WITH NEW FEATURE CONSTRUCTION AND/OR TREE REMOVAL FROM EXISTING ROAD PRISM DURING HEAVY RENO.
*5 VOLUMES ARE ADJUSTED EMBANKMENT CUBIC YARDS

ESTIMATE OF QUANTITIES *

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

ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT – OREGON

ORC04–TS–2023.0030
ELK CREEK RIDGE CT
ESTIMATE OF QUANTITIES

DESIGNED J. AGUILAR
REVIEWED INTERNAL
APPROVED T. SUE

DRAWN JAA | SCALE NONE
DATE 03/2022 | SHEET 6 OF 74

ROAD NUMBER	SURFACING					OTHER			SOIL STABILIZATION		
	6-0" ROCK (*2)	3-0" ROCK (*1)	3.0-0" LDNG ROCK (*1)	1.5-0" SURFACE ROCK (*3)	1.5-0" SPOT ROCK (*3)	0.75-0" CULVERT BEDDING (*4)	CLASS 3 RIP RAP (*5)	CLASS 4 RIP RAP (*6)	SEED AND MULCH		OTHER (SEDIMENT CONTROL DEVICES)
									DRY	HYDRO	
SECTION NO.	1000	1000	1000	1200	1200	1200	1400	1400	1800	1800	
UNITS	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	ACRES	ACRES	EACH
28-11-29.0									0.1		
28-11-29.1			300		25				0.3		
28-11-29.2					80				1.0		
28-11-33.0	320			430	150				1.4		
28-11-33.2	80	141	30						0.2		
28-11-34.2									0.1		
28-11-34.3		34							0.2		
29-11-3.0	100			734	60		20		2.6		
29-11-3.3A				199	30				0.8		
29-11-3.3B1									0.3		
29-11-3.3B2									0.3		
29-11-3.4	80	96							0.2		
SPUR 4A					15				0.2		
TOTALS	580	271	330	1363	360	0	20	0	7.7		

*NOTE			
✳	SECTION	GRADE	SIZE
1	1000	A	3-0"
2	1000	I	6-0"
3	1200	C	1.5-0"
4	1200	E1	0.75-0"
5	1400	CLASS3	27-8"
6	1400	CLASS4	33-9"

ESTIMATE OF QUANTITIES**

** FOR INFORMATIONAL USE ONLY. QUANTITIES SHOWN ARE NOT PAY ITEMS.
ALL ROCK QUANTITIES ARE TRUCK (LOOSE) CUBIC YARDS.

ALWAYS THINK SAFETY

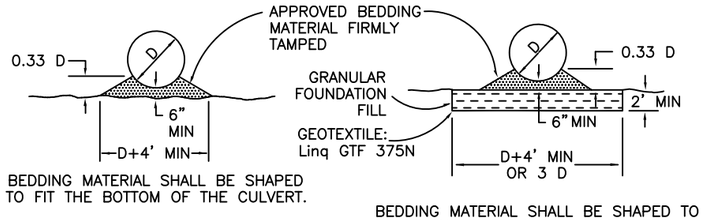
U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT – OREGON

ORC04-TS-2023.0030
ELK CREEK RIDGE CT
ESTIMATE OF QUANTITIES

DESIGNED J. AGUILAR
REVIEWED INTERNAL
APPROVED T. SUE

DRAWN JAA | SCALE NONE
DATE 03/2022 | SHEET 7 OF 74

BEDDING OF CULVERTS

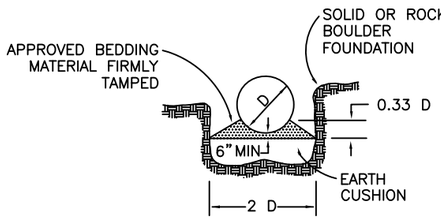


BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT.

BEDDING OF CULVERTS ON STABLE NATURAL GROUND FOUNDATION OR COMPACTED EMBANKMENT

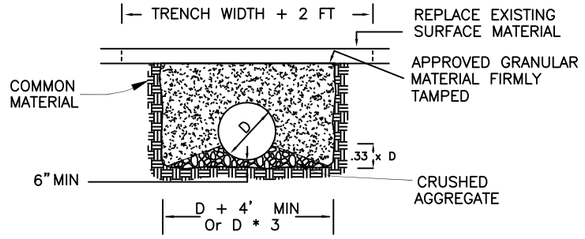
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT.

BEDDING OF CULVERTS ON SOFT SPONGY OR UNSTABLE SOIL FOUNDATION



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

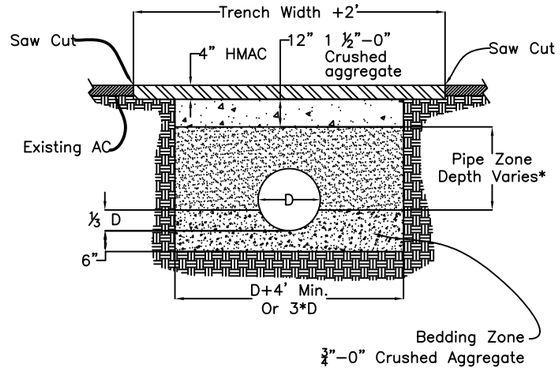
BEDDING OF CULVERT IN SOLID ROCK OR BOULDER FOUNDATION



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

BEDDING OF CULVERTS ON EXISTING AGGREGATE SURFACED ROADS

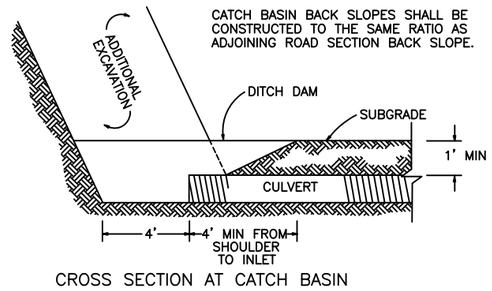
PAVED ROAD TRENCH DETAIL



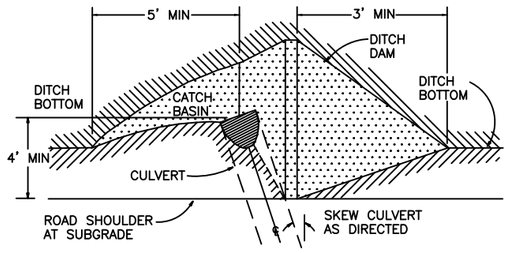
*Pipe zone bedding shall be select common material (4–0").

HMAC = Hot Mix Asphalt Concrete

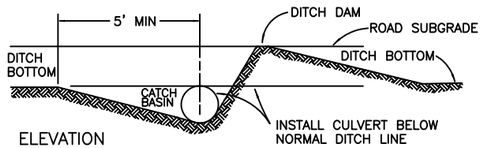
AC = Asphalt Concrete



CROSS SECTION AT CATCH BASIN

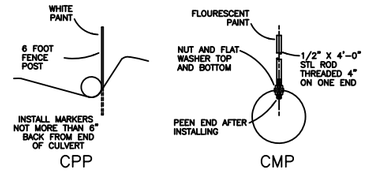


PLAN VIEW

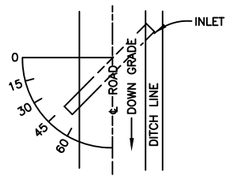


ELEVATION

CATCH BASIN



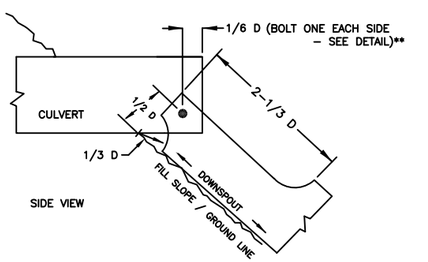
CULVERT MARKERS



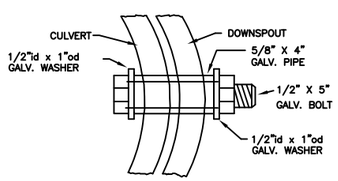
SKEW DIAGRAM

HORIZONTAL SKEW SHALL BE AS SHOWN, OR PERPINDICULAR TO DITCH LINE IN GRADE DIPS.
THE GRADE OF CROSSDRAINS SHALL BE AT LEAST 2% GREATER THAN THE GRADE OF THE DITCH.

USE "ADJUSTABLE ELBOW" FOR CPP AND CMP DOWNSPOUTS

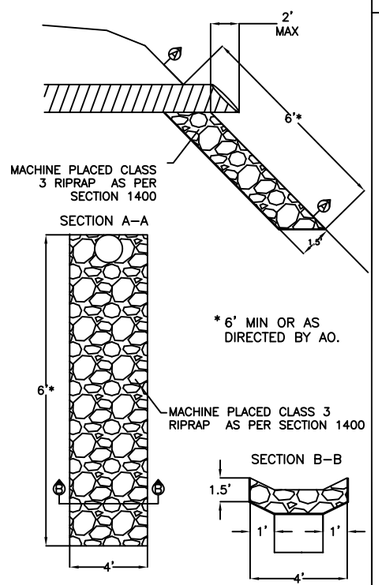


BOLT ASSEMBLY DETAIL**



★ NOTE: ANCHOR DOWNSPOUTS ACCORDING TO SECTION 407b OF THE ROAD CONSTRUCTION SPECIFICATIONS

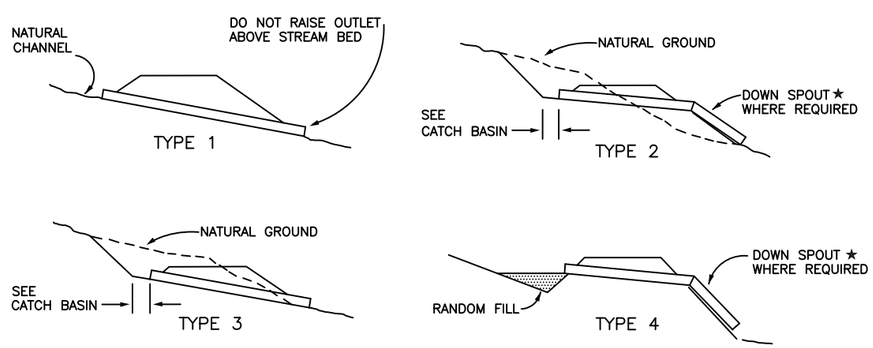
CROSS DRAIN OUTLET PROTECTION DETAIL

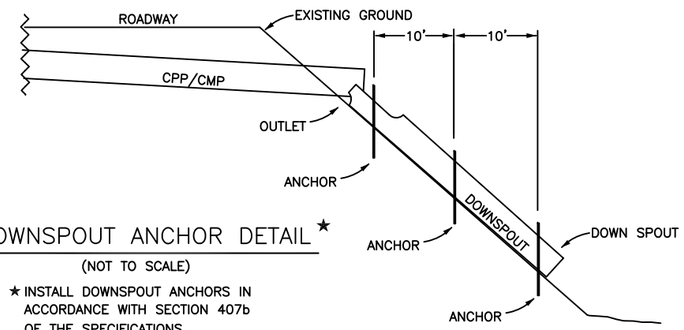


* 6' MIN OR AS DIRECTED BY AO.

BANDS SHALL MEET MANUFACTURER'S SPECIFICATIONS

CULVERT INSTALLATION TYPES





DOWNSPOUT ANCHOR DETAIL ★

(NOT TO SCALE)

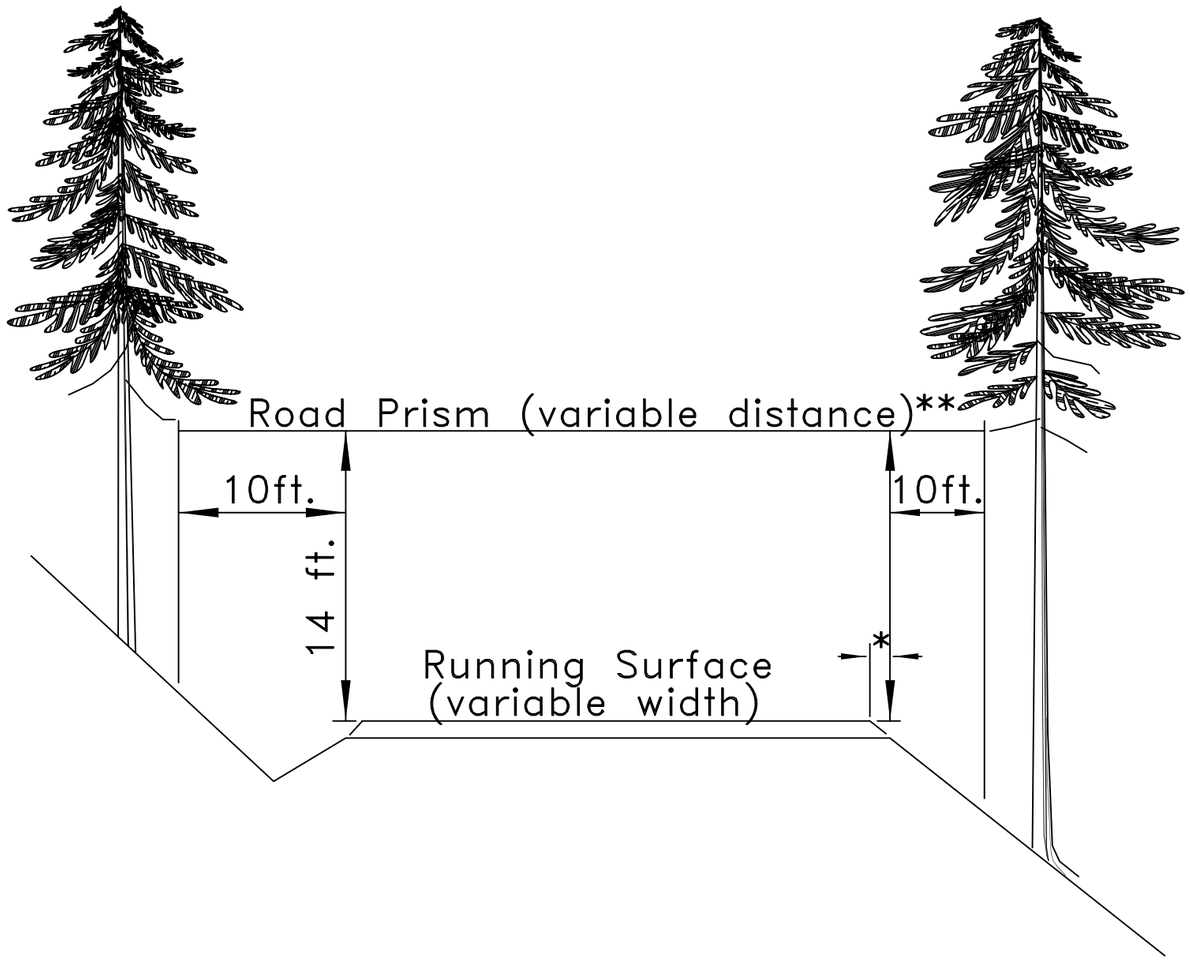
★ INSTALL DOWNSPOUT ANCHORS IN ACCORDANCE WITH SECTION 407b OF THE SPECIFICATIONS.

ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT – OREGON

ORC04–TS–2023.0030
ELK CREEK RIDGE CT
CULVERT INSTALLATION DETAILS

DESIGNED	J. AGUILAR
REVIEWED	INTERNAL
APPROVED	T. SUE
DRAWN JAA	SCALE NONE
DATE 03/2022	SHEET 8 OF 74

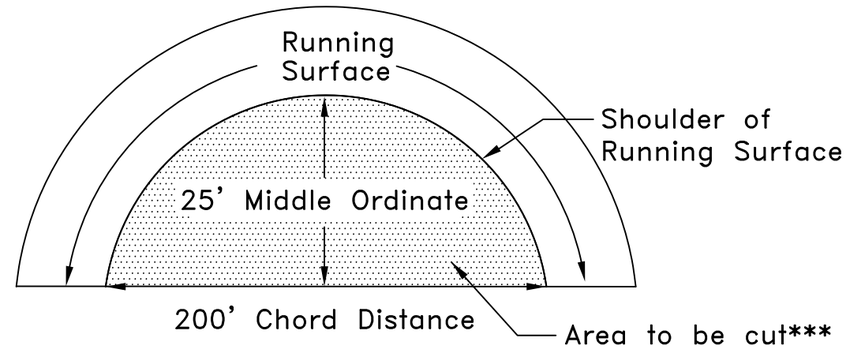


* Variable distance between running surface and start of fill slope.

** All areas within the variable distance shall be free of all vegetation capable of growing one (1) foot in height or higher, and free of all over-hanging limbs and branches 14 feet in elevation above the running surface.

Roadside Brushing – Inside Corner

Sight Distance Diagram



*** Inside curves, upon BLM lands or in coordination with private landowners, 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 height, shall be cut within this area.

ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT – OREGON

ORC04-TS-2023.0030
ELK CREEK RIDGE CT
ROADSIDE BRUSHING DETAILS

DESIGNED	J. AGUILAR
REVIEWED	INTERNAL
APPROVED	T. SUE
DRAWN JAA	SCALE NONE
DATE 03/2022	SHEET 9 OF 74

SPECIAL PROVISIONS

Purchaser Responsibility

The Purchaser shall avoid damaging any bituminous and/or aggregate surfaced roads. The Purchaser will be responsible for the repair or the cost of repair of any road damaged as a result of the activity. Bituminous and aggregate roads shall be left in the same condition that they were prior to road construction, maintenance, and logging activity.

Prior to any road construction, improvement, renovation of structures or roads, contact Oregon Utility Notifications Center (800-332-2344 or 811) for locations of buried lines or cables. The Purchaser shall be responsible for repair or replacement of any damage or destruction to structures, utilities, and cables.

The Purchaser shall be required to secure written approval (BLM haul authorization) to use or haul equipment over Government owned or controlled structures when that equipment exceeds the maximum allowable weights or dimensions established by the State for vehicles over 80,000 lbs gross. Contact: Marc Van Camp, P.E., Coos Bay District Engineer, (541) 751-4469, mvancamp@blm.gov. Allow up to 60 days processing time in advance of bridge use.

When operations are in progress adjacent to or on roads and/or trails in the harvest unit area, Purchaser shall furnish, install, and maintain all temporary traffic controls that provide the road or trail user with adequate warning of and protection from hazardous or potentially hazardous conditions associated with its operations. Purchaser shall prepare a Traffic Control Plan, which the Purchaser has determined is compliant with state and local OSHA and Transportation standards no later than the pre-work meeting and prior to commencing operations.

Seasonal Restrictions

All road construction, renovation, and decommissioning work shall be done during the dry construction season, avoiding precipitation periods, between June 1 and October 15.

Seasonal restrictions shall apply to segments of BLM Road Nos. 28-11-29.0, 28-11-29.1, 28-11-33.0, 28-11-33.2, 29-11-3.0, 29-11-3.3, and 29-11-3.4 (see Exhibit A map pages 1-3). No work shall be performed between April 1 through August 5 of the same calendar year, both days inclusive. Daily timing restrictions will apply from August 6 through September 15 of the same calendar year, both days inclusive. During daily timing restriction period, roadwork is limited to the hours between two (2) hours after sunrise to two (2) hours before sunset.

Oregon Department of Fish and Wildlife (ODFW) guidelines for timing of in-water work limits stream culvert installation to the period between July 1 and September 15. A waiver process through the Oregon Department of Fish and Wildlife is available and subject to their discretion.

Bituminous surfacing replacement – segments on BLM Road Nos. 28-11-29.0 and -29.1

200' of roadway asphalt surfacing (estimated 100 tons of asphalt) shall be replaced as part of Exhibit D roadwork in accordance with Sections 300, 500, 600, 1200, 1800, and 2600 of the Timber Sale Road Specifications and as shown on plans.

Purpose for asphalt surface replacement is to repair predicted damage to road surfacing incurred with logging operations using nearby landings.

Purchaser shall maintain safe conditions for all road users including measures as required by Authorized Officer.

The location, length, and width of replacement asphalt surfacing will be determined by Authorized Officer upon completion of use of associated landings.

Existing asphalt pavement shall be removed, becoming property of the Purchaser to legally dispose from off BLM and private lands.

Matching edges of pavement shall be cut with parallel, straight line.

Underlying course shall be scarified, improved with additional course material, graded, shaped, and compacted prior to installation of compacted 4" depth of asphalt paving. **Underlying course shall be approved in writing by Authorized Officer prior to laying new asphalt pavement.**

Final compacted 4" depth of new pavement shall be achieved by placing 2 compacted layers in 2" lifts.

Traffic delays shall be limited to 20 minutes (when safely possible).

Within timber sale equipment mobilization using lowboy

Excavator and D7 tractor shall be mobilized (transported) with lowboy when moving between timber sale units, using Elk Creek Road or Elk Creek Ridge Road. Additional mobilization costs are accounted.

In-place Density and Relative Compaction Field Testing

Final subgrade, finished grading, and surfacing layers (Subsections 306, 306e, 504, 504a, 1012, and 1212) shall be observed by the Authorized Officer, as a truck with H-20 loading, loaded to GVW, travel over the entire length of compacted surface. Testing vehicle shall complete four (4) passes, traveling at a rate of 350'/minute (4 MPH). There shall be no movement, indentation, or vertical displacement of the compacted surface. Compaction shall be approved in writing by the Authorized Officer. Purchaser shall give Authorized Officer 3 days' notice prior to inspection of compaction.

Culvert Installation

Culvert lengths listed in Roads Worklist and Estimate of Quantity sheets are estimated culvert lengths. Final culvert lengths shall be installed to fit the actual ground & site conditions of proposed work locations. “Shotgun” pipes, or short lengths with a trench, shall not be accepted.

Keep the excavation site dewatered so that the installation of culverts is completed under dry conditions.

Culvert side-fill material, meeting Timber Sale Road Specification, will be brought up evenly and simultaneously on both sides of pipe, in layers not exceeding 6” in depth with each layer compacted using approved tamper (appraised using 19.7” plate compactor). Each layer shall be moistened or dried to a uniform moisture content suitable for maximum compaction. Acceptable moisture content may be determined by hand clump test i.e., where a soil sample forms a firm ball by hand that does not crumble, free moisture is not visible on the surface, and material does not squeeze between fingers.

All culverts removed under the contract become the property of the Purchaser and shall be legally disposed off BLM and private lands.

Over-wintering

All natural-surfaced new construction shall not over-winter without either completing roadwork listed in Subsection 3420 specified by Authorized Officer or winterized in accordance with Section 1700 (Erosion Control). This work shall be completed prior to the first rains of the wet season, but no later than October 15 of the year of construction.

Waste Areas

Waste areas, designated in plans or created at time of active operations, shall be sloped, shaped to drain, seeded, and mulched upon completion of use, in accordance with Sections 1700 and 1800 of the Timber Sale Road Specifications.

Spill Containment

Spill containment kit is required on-site during work.

Equipment Washing

The Purchaser is responsible for vehicle/equipment entrance cleaning in accordance with the Exhibit F.

Native Seed

The Government will furnish native seed mix for soil stabilization and if necessary, erosion control.

ROADS WORKLIST

BLM ROAD NO. 28-11-29.0 (Elk Creek Road)
Roadwork limited to construction of one (1) new roadside landing at milepost 0.46

MP.	Remarks
0.00	Junction with Sitkum Road at milepost (MP) 10.75.
NOTE:	Elk Creek Road is maintained by BLM Road Department. Timber sale roadwork limited to construction of one (1) new roadside landing.
0.44	Junction, BLM Road No. 28-11-29.1 (Elk Creek Ridge Road) right.
0.46	Construct 50' diameter roadside landing left in accordance with Sections 200, 300, 600, 1700, and 1800 of the Timber Sale Road Specifications and plans. Landing will remain native surface.

BLM ROAD NO. 28-11-29.1 (Elk Creek Ridge Road)
Roadwork limited to individual locations between Milepost 0.00 to Milepost 4.48

MP.	Remarks
0.00	Junction with Elk Creek Road at milepost 0.44.
NOTE:	Elk Creek Ridge Road is maintained by BLM Road Department. Timber sale roadwork limited to construction of 3 roadside landings, 1 truck turnaround, and renovating junction for uses as on-road landing.
0.08	Construct 50' diameter roadside landing left in accordance with Sections 200, 300, 600, 1700, and 1800 of the Timber Sale Road Specifications and plans. Maintain ditch. Landing will remain native surface.
0.26	Junction, renovate BLM Road No. 28-11-29.2 right.
0.29	Junction, renovate Spur 4A left.
2.11	Junction, BLM Road No. 28-11-32.3 right. Renovate junction to be used as on-road landing. Surface with 25 CY 1.5-0" crushed aggregate at a compacted depth of 8". Work shall be completed in accordance with Sections 500, 600, 1200, 1700, and 1800 of the Timber Sale Road Specifications and plans.

MP.	Remarks
2.20	Construct 60’ wide x 250’ long roadside landing left in accordance with Sections 200, 300, 600, 1000, and 1800 of the Timber Sale Road Specifications and plans. Surface with 200 CY of 3-0” crushed aggregate to a compacted depth of 8”.
2.37	Proposed on-road landing location.
2.44	Improve existing truck turnout left for use as a truck turnaround. Improvement to be completed in accordance with Sections 200, 300, 600, 1000, and 1800 of the Timber Sale Road Specifications and plans. Surface with 30 CY of 3-0” crushed aggregate to a compacted depth of 8”.
2.49	Construct 30’ wide x 70’ long roadside landing left in accordance with Sections 200, 300, 600, 1000, and 1800 of the Timber Sale Road Specifications and plans. Surface with 70 CY of 3-0” crushed aggregate to a compacted depth of 8”.
2.66	Junction, renovate BLM Road No. 28-11-33.0 left.
4.48	Junction, renovate BLM Road No. 29-11-3.0 left.
	End timber sale roadwork.

RENOVATION OF BLM ROAD NO. 28-11-29.2
Station 0+00 to Station 17+80

STA.	Remarks
0+00	Junction with Elk Creek Ridge Road at milepost 0.26.
	Remove existing rip rap barrier. Stage rip rap adjacent to road to use for re-installation of barrier at completion of road use.
	Begin clearing and grubbing, excavation, culvert work, slough and slide repair/removal, ditch cleaning/shaping, heavy road renovation, watering, erosion control, soil stabilization, and roadside brushing in accordance with Sections 200, 300, 400, 500, 600, 1700, 1800, and 2100 of the Timber Sale Road Specifications, Typical Cross Section Details, Culvert Installation Details, Roadside Brushing Details, and Roads Worklist.

STA.	Remarks

NOTE: Merchantable trees within clearing limits of road, defined as 10 feet back from top of cut slope and 5 feet out from toe of fill slope, have been identified with green (teal) paint. Treatment of this material including effects to roadway, shall be in accordance with Section 200 and 300 of the Timber Sale Road Specifications. Disposal of logs shall consist of decking at location designated by BLM Authorized Officer. Stumps in roadway (includes shoulders and ditch) and fill slope shall be removed and piled adjacent to landing at station 11+00. 50 CY of 1.5-0" crushed aggregate allocated as imported fill material for absent fill created by stump removal in roadway.

NOTE: Road drainage ditch will be bladed and shaped in accordance Typical Cross Section Details – Type 5 (with existing 12" depth of surfacing). Bottom of ditch will be 4'(horizontal) and 2'(vertical) from edge of road's existing rocked travelway. All excavated material generated from reconditioning of drainage ditches shall be bunched, end hauled, and suitable material incorporated in construction of landing at station 11+00. Estimated 360 CY of material to be end hauled.

NOTE: Outside road shoulder shall be bladed and shaped in accordance with the Typical Cross Section Details – Type 5 (with existing 12" depth of surfacing). Daylight outside road shoulder to break of fill slope, removing berms and providing smooth unobstructed path for road surface sheet flow to migrate onto vegetated fill/hill slope.

3+00 Existing decommissioned stream crossing. Install temporary 36" x 50' CPP culvert. 15 CY of 1.5-0" crushed aggregate allocated for culvert side fill and road surfacing.

5+50 Existing decommissioned swale crossing. Install temporary 18" x 40' CPP culvert. 15 CY of 1.5-0" crushed aggregate allocated for culvert side fill and road surfacing.

10+50 Renovate existing ditch out left.

11+00 Construct 40' wide x 100' long roadside landing. Landing will remain native surface.

14+50 Existing rock surfacing ends. Native surface begins.

Begin reconstructing ditch at 3'(horizontal) to 1' (vertical). Suitable material excavated permitted to be incorporated in renovation of roadbed.

17+10 Remove existing (nonfunctioning) 18" x 36' CMP cross drain culvert. Culvert will not be replaced. Continue reconstruction of ditch at 3' : 1'.

17+80 Construct 30' long ditch out left (ending ditch reconstruction). Invert grade of ditch out shall be outsloped at a minimum of 3-5% for 30'.

Construct 60' diameter landing w/ 70' approach right.

End renovation.

RENOVATION OF BLM ROAD NO. 28-11-33.0
Station 0+00 to Station 26+60

STA.	Remarks

0+00 Junction with Elk Creek Ridge Road at milepost 2.66.

Begin clearing and grubbing, excavation, culvert work, slough and slide repair/removal, extensive ditch cleaning/shaping, heavy road renovation, watering, surfacing, erosion control, soil stabilization, and roadside brushing in accordance with Sections 200, 300, 400, 500, 600, 1200, 1700, 1800, and 2100 of the Timber Sale Road Specifications, Typical Cross Section Details, Culvert Installation Details, Roadside Brushing Details, and Roads Worklist.

NOTE: Merchantable trees within clearing limits of road, defined as 10 feet back from top of cut slope and 5 feet out from toe of fill slope, have been identified with green (teal) paint. Treatment of this material including effects to roadway, shall be in accordance with Section 200 and 300 of the Timber Sale Road Specifications. Disposal of logs shall consist of decking at location designated by BLM Authorized Officer. Stumps in roadway (includes shoulders and ditch), in fill slope, or undermined by cut slope shall be removed and piled adjacent to landing at station 3+00. 120 CY of 1.5-0” crushed aggregate allocated as imported fill material for absent fill created by stump removal in roadway.

NOTE: The existing road surface shall be scarified to its full width and to a depth to eliminate surface irregularities and bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans.

NOTE: Road drainage ditch will be bladed and shaped in accordance Typical Cross Section Details – Type 4 (with existing 8” depth of surfacing). Bottom of ditch will be 3’(horizontal) and 1’(vertical) from edge of road’s existing rocked travelway. This work includes renovating catch basins and ditchouts. All excavated material generated from reconditioning of drainage ditches shall be bunched, end hauled, and suitable material shall be incorporated in construction of landing at station 3+00, truck turnaround at station 8+50, or landing at station 17+50. Estimated 540 CY of material to be end hauled.

NOTE: Outside road shoulder shall be bladed and shaped in accordance with the Typical Cross Section Details – Type 4 (with existing 8” depth of surfacing). Daylight outside road shoulder to break of fill slope, removing berms and providing smooth unobstructed path for road surface sheet flow to migrate onto vegetated fill/hill slope.

NOTE: From station 0+00 to 26+60, install new 3” lift of compacted 1.5-0” crushed aggregate surfacing.

STA.	Remarks

3+00 Construct ditch out left.

Construct 40’ wide x 50’ long roadside landing left. Embank suitable material removed from extensive ditch cleaning/shaping and slide removal to level landing. Surface with 70 CY of 6-0” crushed aggregate at a compacted depth of 8”.

Clear flat area outside of constructed roadside landing. Cleared area to be used to pile stumps removed from renovation -33.0 roadway.

5+00 Renovate existing truck turnout right. 20 CY of 1.5-0” crushed aggregate allocated for surfacing.

8+50 Construct ditch out left.

Construct truck turnaround left. Embank suitable material removed from extensive ditch cleaning/shaping and slide removal to level truck turnaround. Surface with 30 CY of 6-0” crushed aggregate at a compacted depth of 8”.

11+00 Proposed on-road landing location with existing additional operational area left.

11+75 Junction, construct BLM Road No. 28-11-33.2 left.

Realign existing road centerline 5’-10’ right by cutting into existing cut slope. Realignment assists with construction the-33.2 road, incorporating short segment of existing fill slope as approach and utilizing suitable material excavated from existing cut slope in the formation of embankment subgrade. 30 CY 6-0” crushed aggregate allocated for realignment base course.

12+58 Remove existing (nonfunctioning) 18” x 30’ corrugated metal pipe (CMP) cross drain culvert.

13+00 Install new 18” x 36’ corrugated polyethylene pipe (CPP) cross drain culvert. 10 CY of 1.5-0” crushed aggregate allocated for culvert side fill and road surfacing.

16+00 Renovate existing ditch out right.

17+50 Construct 40’ wide x 50’ long roadside landing left. Embank suitable material removed from extensive ditch cleaning/shaping and slide removal to level landing. Surface with 70 CY of 6-0” crushed aggregate at a compacted depth of 8”.

22+00 Existing road segment with that is currently insloped with 2’ ditch. Road’s template likely changed with last harvest entry to address existing fill failure. Past repair is fully functioning. Maintain road segments current template (inslope with 2’ ditch).

24+00 End existing insloped and ditch road segment.

STA.	Remarks

26+00 Renovate existing ditch out left.

Surface truck turnaround left with 30 CY of 6-0" crushed aggregate at compacted depth of 8".

26+60 Existing end landing. Surface 60' diameter landing with 90 CY of 6-0 crushed aggregate at a compacted depth of 8".

End renovation.

RENOVATION OF BLM ROAD NO. 28-11-34.2 (Private own/control)
Station 0+00 to Station 11+60

STA.	Remarks

0+00 Junction with BLM Road No. 29-11-3.3 B2 at STA 38+80.
Existing 18" x 36' CPP cross drain culvert. Clean culvert inlet and outlet.

Begin culvert work, renovation, watering, erosion control, soil stabilization, and roadside brushing in accordance with Sections 500, 600, 1700, 1800, and 2100 of the Timber Sale Road Specifications, Typical Cross Section Details, Culvert Installation Details, Roadside Brushing Details, and Roads Worklist.

5+25 Existing 18" x 36' CPP cross drain culvert. Clean culvert inlet, outlet, and barrel.

7+25 Existing roadside landing left.

11+60 Junction, construct BLM Road No. 28-11-34.3 right.

End renovation.

RENOVATION OF BLM ROAD NO. 29-11-3.0
Milepost 0.00 to Milepost 0.95

MP.	Remarks

0.00 Junction with Elk Creek Ridge Road at milepost 4.48.

Existing in-line ditch culvert. Clean inlet and outlet.

Begin clearing and grubbing, excavation, culvert work, slough and slide repair/removal, extensive ditch cleaning/shaping, road renovation, watering, surfacing, slope protection, erosion control, soil stabilization, and roadside brushing in accordance with Sections 200, 300, 400, 500, 600, 1000, 1400, 1700, 1800, and 2100 of the Timber Sale Road Specifications, Typical Cross Section Details, Culvert Installation Details, Roadside Brushing Details, and Roads Worklist.

NOTE: Merchantable trees within clearing limits of road, defined as 10 feet back from top of cut slope and 5 feet out from toe of fill slope, have been identified with green (teal) paint. Treatment of this material including effects to roadway, shall be in accordance with Section 200 and 300 of the Timber Sale Road Specifications. Disposal of logs shall consist of decking at location designated by BLM Authorized Officer. Stumps in roadway (includes shoulders and ditch), in fill slope, or undermined by cut slope shall be removed and piled adjacent to landing at MP 0.34. 20 CY of 1.5-0" crushed aggregate allocated as imported fill material for absent fill created by stump removal in roadway.

NOTE: The existing road surface shall be scarified to its full width and to a depth to eliminate surface irregularities and bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans.

NOTE: Road drainage ditch will be bladed and shaped in accordance Typical Cross Section Details – Type 5 (with existing 8" depth of surfacing). Bottom of ditch will be 3'(horizontal) and 1'(vertical) from edge of road's existing rocked travelway. This work includes renovating catch basins and ditchouts. All excavated material generated from reconditioning of drainage ditches shall be bunched, end hauled, and suitable material shall be incorporated in construction of additional operational area at milepost 0.49, landing at 0.56, or construction of 29-11-3.4 road. Estimated 1000 CY of material to be end hauled.

NOTE: Outside road shoulder shall be bladed and shaped in accordance with the Typical Cross Section Details – Type 5 (with existing 8" depth of surfacing). Daylight outside road shoulder to break of fill slope, removing berms and providing smooth unobstructed path for road surface sheet flow to migrate onto vegetated fill/hill slope.

NOTE: From milepost 0.00 to 0.86 install new 3" lift of compacted 1.5-0" crushed aggregate surfacing.

0.06 Renovate existing ditch out left.

MP.	Remarks
0.29	Renovate existing ditch out left.
0.32	Junction, construct BLM Road No. 29-11-3.4 left.
0.48	Renovate existing truck turnout right. 10 CY 1.5-0" crushed aggregate allocated for surfacing
0.49	On-road landing location. Construct 20' wide x 50' long additional operational area left. 20 CY 65.44-0" crushed aggregate allocated for surfacing additional operational area.
0.56	Construct 50' wide x 60' long roadside landing left. 80 CY 6-0" crushed aggregate allocated for surfacing at a compacted depth of 8".
0.59	Install new 18" x 34' CPP cross drain culvert. 10 CY of 1.5-0" crushed aggregate allocated for road surfacing.
0.67	On-road landing location.
0.75	Existing fill slope failure (road shoulder) measuring 20' long x 5' wide x 6' high. Failure attributed to uncontrolled ditch flow associated with failing culvert at MP 0.77. Approximately 3' roadway width has been lost. To regain roadway width, construct 4' wide bench at toe of fill, excavate fill failure at backslope of ¾ :1, and place 20 CY of Class 3 rip rap keyed to newly excavated backslope. New rip rap fill slope (road shoulder) shall be 1:1. 10 CY 1.5-0" crushed aggregate allocated for surfacing.
0.76	Install new 18" x 34' CPP cross drain culvert. New culvert replaces failing culvert at MP 0.77. 10 CY of 1.5-0" crushed aggregate allocated for side fill and surfacing.
0.77	Remove existing (failing) 16" x 34' CMP cross drain culvert.
0.86	Junction, renovate BLM Road No. 29-11-3.3A left.
	On-road landing location.
0.95	Junction.
	End renovation.

RENOVATION OF BLM ROAD NO. 29-11-3.3 Segment A (BLM own/control)
Station 0+00 to Station 17+20

STA.	Remarks

0+00 Junction with BLM Road No. 29-11-3.0 at MP 0.86.
Road segment A begins, BLM owned and controlled.

Begin culvert work, slough and slide repair/removal, extensive ditch cleaning/shaping, renovation, watering, surfacing, erosion control, soil stabilization, and roadside brushing in accordance with Sections 400, 500, 600, 1000, 1200, 1700, 1800, and 2100 of the Timber Sale Road Specifications, Typical Cross Section Details, Culvert Installation Details, Roadside Brushing Details, and Roads Worklist.

NOTE: Merchantable trees within clearing limits of road, defined as 10 feet back from top of cut slope and 5 feet out from toe of fill slope, have been identified with green (teal) paint. Treatment of this material including effects to roadway, shall be in accordance with Section 200 and 300 of the Timber Sale Road Specifications. Disposal of logs shall consist of decking at location designated by BLM Authorized Officer. Stumps in roadway (includes shoulders and ditch), in fill slope, or undermined by cut slope shall be removed and piled adjacent to landing at MP 0.34 of the -3.0 road. 20 CY of 1.5-0” crushed aggregate allocated as imported fill material for absent fill created by stump removal in roadway.

NOTE: The existing road surface shall be scarified to its full width and to a depth to eliminate surface irregularities and bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans.

NOTE: Road drainage ditch will be bladed and shaped in accordance Typical Cross Section Details – Type 5 (with existing 12” depth of surfacing). Bottom of ditch will be 4’(horizontal) and 2’(vertical) from edge of road’s existing rocked travelway. This work includes renovating catch basins. All excavated material generated from reconditioning of drainage ditches shall be bunched, end hauled and incorporated in construction of landing at milepost 0.56 of BLM Road No. 29-11-3.0 or construction of subgrade of BLM Road No. 29-11-3.4. Estimated 340 CY of material to be end hauled.

NOTE: Outside road shoulder shall be bladed and shaped in accordance with the Typical Cross Section Details – Type 5 (with existing 12” depth of surfacing). Daylight outside road shoulder to break of fill slope, removing berms and providing smooth unobstructed path for road surface sheet flow to migrate onto vegetated fill/hill slope.

NOTE: From station 0+00 to 12+80 install new 3” lift of compacted 1.5-0” crushed aggregate surfacing.

3+20 Existing 18” x 40’ CMP cross drain culvert. Clean culvert inlet, outlet, and barrel.

7+35 Remove bank slide (estimate 10 CY). End haul excavated material.

STA.	Remarks

12+65 Install new 18" x 36' CPP cross drain culvert. 10 CY of 1.5-0" crushed aggregate allocated for road surfacing.

12+80 Proposed on-road landing location.

13+80 Remove 2 bank slides (estimate 300 CY). End haul excavated material and incorporated suitable material in construction of landing at milepost 0.56 of BLM Road No. 29-11-3.0 or construction of subgrade of BLM Road No. 29-11-3.4.

14+50 Property line crosses road.

15+10 Remove bank slide (estimate total 40 CY). End haul excavated material and incorporated suitable material in construction of landing at milepost 0.56 of BLM Road No. 29-11-3.0 or construction of subgrade of BLM Road No. 29-11-3.4.

15+10 Existing private, locked, metal, cattle gate. No BLM lock present.

17+20 Road segment A ends.
Renovations continues on road segment B1.

RENOVATION OF ROAD NO. 29-11-3.3 Segment B1 (Private own/BLM control improve.)
Station 17+20 to Station 35+00

STA.	Remarks

17+20 Road segment B1 begins. Road privately owned and BLM controlled.

Begin culvert work, slough and slide repair/removal, ditch cleaning/shaping, renovation, watering, erosion control, soil stabilization, and roadside brushing in accordance with Sections 400, 500, 600, 1700, 1800, and 2100 of the Timber Sale Road Specifications, Typical Cross Section Details, Culvert Installation Details, Roadside Brushing Details, and Roads Worklist.

NOTE: The existing road surface shall be scarified to its full width and to a depth to eliminate surface irregularities and bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans.

NOTE: Road drainage ditch will be bladed and shaped in accordance Typical Cross Section Details – Type 5 (with existing 12" depth of surfacing). Bottom of ditch will be 4'(horizontal) and 2'(vertical) from edge of road's existing rocked travelway. This work includes renovating catch basins. All excavated material generated from reconditioning of drainage ditches shall be bunched, end hauled, and suitable material incorporated in construction of landing at milepost 0.56 of BLM Road No. 29-11-3.0 or construction of subgrade of BLM Road No. 29-11-3.4. Estimated 360 CY of material to be end hauled.

STA.	Remarks

NOTE: Outside road shoulder shall be bladed and shaped in accordance with the Typical Cross Section Details – Type 5 (with existing 12" depth of surfacing). Daylight outside road shoulder to break of fill slope, removing berms and providing smooth unobstructed path for road surface sheet flow to migrate onto vegetated fill/hill slope.

20+80 Existing roadside landing left.

23+60 Existing landing w/ approach right.

30+00 Existing 18" x 40' CMP cross drain culvert. Clean culvert inlet, outlet, and barrel.

30+80 Existing landing w/ approach and associated truck turnout left.

35+00 Road segment B1 ends.
Renovations continues on road segment B2.

RENOVATION OF BLM ROAD NO. 29-11-3.3 Segment B2 (Private own/control)
Station 35+00 to Station 48+00

STA.	Remarks

35+00 Road segment B2 begins. Road privately owned and controlled.

Begin ditch cleaning/shaping, renovation, watering, erosion control, soil stabilization, and roadside brushing in accordance with Sections 500, 600, 1700, 1800, and 2100 of the Timber Sale Road Specifications, Typical Cross Section Details, Culvert Installation Details, Roadside Brushing Details, and Roads Worklist.

NOTE: The existing road surface shall be scarified to its full width and to a depth to eliminate surface irregularities and bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans.

NOTE: Road drainage ditch will be bladed and shaped in accordance Typical Cross Section Details – Type 5 (with existing 12" depth of surfacing). Bottom of ditch will be 4'(horizontal) and 2'(vertical) from edge of road's existing rocked travelway. This work includes renovating catch basins. All excavated material generated from reconditioning of drainage ditches shall be bunched, end hauled, and suitable material incorporated in construction of landing at milepost 0.56 of BLM Road No. 29-11-3.0 or construction of subgrade of BLM Road No. 29-11-3.4. Estimated 100 CY of material to be end hauled.

STA.	Remarks

NOTE: Outside road shoulder shall be bladed and shaped in accordance with the Typical Cross Section Details – Type 5 (with existing 12" depth of surfacing). Daylight outside road shoulder to break of fill slope, removing berms and providing smooth unobstructed path for road surface sheet flow to migrate onto vegetated fill/hill slope.

NOTE: Loaded log trucks will utilize 3-way junction at 47+00 to reverse haul direction.

38+80 Junction. Renovate BLM Road No. 28-11-34.2 right.

41+60 Junction. Private road left. Not proposed for use.
Existing roadside landing right.

47+00 3-way junction, BLM Road No. 28-11-27.1 right, Private Spur center, and -3.3 B2 left. Junction will be used as loaded truck turn around. Log truck will nose-in on the -27.1 road then back-up on the -3.3 B2 for approximately 60' at which point, log truck will be facing the direction it just came from. To improve existing junction for use as truck turnaround, additional road width will be created by excavating into cut slope of the -3.3 B2 road. This will affect the approach of the Private Spur. Excavated material from both cut slope and spur approach will be embanked upon -3.3 B2 road toward 47+60. Embanked material will assist with leveling the truck turn around. Additional road width will be constructed in accordance with Timber Sale Road Specifications, Section 300, 600, and 1800. Upon completion of logging activities, previously embanked material will be used to reconstruct approach of Private Spur. Spur's approach and junction will be resurfaced (60 CY of 1.5-0" crushed aggregate).

48+00 End renovation.

54+10 Not pertinent to timber sale. Noted for future reference as segment break between -3.3 B2 and -3.3 C.

RENOVATION OF SPUR 4A
Station 0+00 to Station 3+60

STA.	Remarks

0+00 Junction with BLM Road No. 28-11-29.1 (Elk Creek Ridge) at MP 0.29.

Begin culvert work, renovation, watering, erosion control, soil stabilization, and roadside brushing in accordance with Sections 400, 500, 600, 1700, 1800, and 2100 of the Timber Sale Road Specifications, Typical Cross Section Details, Culvert Installation Details, Roadside Brushing Details, and Roads Worklist.

0+40 Remove existing (failing) 18" x 30' CMP cross drain culvert. Inlet has been damaged and cut back sometime in the past, currently reducing road width.

STA.	Remarks
0+50	Install new 18” x 36’ CPP cross drain culvert and catch basin including ditch dam. Fill in ditch back to station 0+40. 15 CY 1.5-0” crushed aggregate allocated for culvert fill, surfacing, and ditch dam.
3+60	Renovate existing end landing.
	End renovation.

CONSTRUCTION DETAIL SHEET
ROAD NO. 28-11-33.2
CONTROL POINT

GENERAL

Purchaser shall construct Road No. 28-11-33.2 from Sta. 0+00 to Sta. 2+50 as shown on the location map. This work shall be accomplished in accordance with details and Timber Sale Road Specification which follow:

SHAPING

The roadway shall be constructed and shaped to conform to standards shown on Typical Cross Section Details. Cut slopes shall be ¾:1 (horizontal: vertical) and fill slopes shall be 1½ :1 or as shown on plans.

TURNOUTS

None

SUBGRADE

The subgrade shall be excavated and compacted in accordance with the Sections 200 and 300 of the Timber Sale Road Specifications.

Estimated 800 CY of suitable material for subgrade embankment shall come from -33.0 road realignment at Sta. 11+75.

Estimated 1500 CY of excavation (includes 800 CY from -33.0 realign @ 11+75) associated with construction of subgrade, truck turnaround, and landing.

DRAINAGE FEATURES

Crowned at 3% with 2’ ditch to achieve drainage. Double ditch any cut section. Install ditchouts when feasible. Carry ditch above entire length of end landing, out letting at end.

SURFACING

Apply a 9” lift of compacted 3-0” crushed aggregate in accordance with Section 1000 of the Timber Sale Road Specifications and Typical Cross Section Details.

30 CY of 3-0” crushed aggregate allocated for truck turnaround surfacing.

80 CY of 6-0” crushed aggregate allocated for end landing surfacing.

ALIGNMENT

Roadway shall be constructed within posted or painted right-of-way boundaries.

Minimum curve radius shall be sixty (60) feet.

Sta. 0+00 Junction with BLM Road No. 28-11-33.0 at Sta. 11+60. Approach will incorporate short segment of -33.0 road existing fill slope.

GRADE

Grade shall not exceed 10% adverse.

TRUCK TURNAROUND

Construct truck turnaround at Sta. 1+80.

LANDINGS

Construct 60’ diameter end landing at Sta. 2+50.

Grade of landings and approaches shall not exceed 5%.

SOIL STABILIZATION

Apply seed and mulch in accordance with Section 1800 of the Road Construction specifications.

CONSTRUCTION DETAIL SHEET
ROAD NO. 28-11-34.3
CONTROL POINT

GENERAL
Purchaser shall construct Road No. 28-11-34.3 from Sta. 0+00 to Sta. 3+25 as shown on the location map. This work shall be accomplished in accordance with details and Timber Sale Road Specification which follow:

SHAPING
The roadway shall be constructed and shaped to conform to standards shown on Typical Cross Section Details. Cut slopes shall be ¾:1 (horizontal:vertical) and fill slopes shall be 1½ :1 or as shown on plans.

TURNOUTS
None

SUBGRADE
The subgrade shall be excavated and compacted in accordance with the Sections 200 and 300 of the Timber Sale Road Specifications.

DRAINAGE FEATURES
Out slope at 3% with no ditch to achieve drainage.

SURFACING
Rock approach apron for 100’ with 6” lift of 3-0” crushed aggregate in accordance with Section 1000 of the Timber Sale Road Specifications and Typical Cross Section Details.

ALIGNMENT
Roadway shall be constructed within posted or painted right-of-way boundaries.

Minimum curve radius shall be sixty (60) feet.

Sta. 0+00 Junction with BLM Road No. 28-11-34.2 at Sta. 11+60.

Sta. 2+15 Property line. Leaving Private, entering BLM.

GRADE
Grade shall not exceed 10% favorable and 7% adverse.

TRUCK TURNAROUND
None. Utilize junction with 28-11-34.2 road.

LANDINGS
Construct 50’ diameter end landing at Sta. 3+25.

Grade of landings and approaches shall not exceed 5%.

SOIL STABILIZATION

Apply seed and mulch in accordance with Section 1800 of the Road Construction specifications.

CONSTRUCTION DETAIL SHEET
ROAD NO. 29-11-3.4
CONTROL POINT

GENERAL
Purchaser shall construct Road No. 29-11-3.4 from Sta. 0+00 to Sta. 1+80 as shown on the location map. This work shall be accomplished in accordance with details and Timber Sale Road Specification which follow:

SHAPING
The roadway shall be constructed and shaped to conform to standards shown on Typical Cross Section Details. Cut slopes shall be ¾:1 (horizontal: vertical) and fill slopes shall be 1½ :1 or as shown on plans.

TURNOUTS
None

SUBGRADE
The subgrade shall be excavated and compacted in accordance with the Sections 200 and 300 of the Timber Sale Road Specifications.

Suitable material for embankment subgrade shall come from renovation work associated with 29-11-3.0 and 3.3 roads.

DRAINAGE FEATURES
Crowned at 3% with 2' ditch to achieve drainage. Double ditch through any cut section. Install ditchouts when feasible. Carry ditch above entire length of end landing, out letting at end.

SURFACING
Apply a 9" lift of compacted 3-0" crushed aggregate in accordance with Section 1000 of the Timber Sale Road Specifications and Typical Cross Section Details.

80 CY of 6-0" crushed aggregate allocated for end landing surfacing.

ALIGNMENT
Roadway shall be constructed within posted or painted right-of-way boundaries.

Minimum curve radius shall be sixty (60) feet.

Sta. 0+00 Junction with BLM Road No. 29-11-3.0 at milepost 0.32.

GRADE
Grade shall not exceed 10% adverse.

TRUCK TURNAROUND
None, use junction with 29-11-3.0 road.

LANDINGS

Construct 60’ diameter end landing at Sta. 1+80.

Grade of landings and approaches shall not exceed 5%.

SOIL STABILIZATION

Apply seed and mulch in accordance with Section 1800 of the Road Construction specifications.

TIMBER SALE ROAD SPECIFICATIONS

TABLE OF CONTENTS

Asterisks (*) on following pages, indicate those Subsections always included for Sections.

Please note, while the Timber Road Specifications is tailored to individual projects, some Subsections are included for the purpose of addressing latent conditions and situations encountered during active operations.

TIMBER SALE ROAD SPECIFICATIONS

GENERAL – 100

101* - Prework Conference(s):

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

102* - Definitions:

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

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

ACI - American Concrete Institute

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

ASTM - American Society for Testing and Materials.

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

BLM - Bureau of Land Management

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

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

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.

TIMBER SALE ROAD SPECIFICATIONS

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.

TIMBER SALE ROAD SPECIFICATIONS

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.

TIMBER SALE ROAD SPECIFICATIONS

Slope ratio notation (horizontal: vertical) – Slope ratios for constructed cut and fill slopes are expressed as a ratio of horizontal units to vertical units.

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.

TIMBER SALE ROAD SPECIFICATIONS

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

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

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

102a* - Tests Used in These Specifications:

AASHTO T 11	Quantity of rock finer than No. 200 sieve.
AASHTO T 27	Sieve analysis of fine and coarse aggregate using sieves with square openings; gradation.
AASHTO T 89	Liquid limit of material passing the No. 40 sieve. Water content at which the soil passes from a plastic to a liquid state.
AASHTO T 90	Plastic limits and plasticity index of soil. a.) Plastic limit - lowest water content at which the soil remains plastic. b.) Plasticity index - range of water content, within which the material is in a plastic state. Numerical difference between the liquid and plastic limits of the soil.
AASHTO T 96	Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.
AASHTO T 99	Relationship between soil moisture and density of soil. Method A - 4" mold, soil passing a No. 4 sieve 25 blows/layer & 3 layers. Method C - 4" mold, soil passing a 3/4 inch sieve 25 blows/layer & 3 layers. Method D - 6" mold, soil passing a 3/4 inch sieve. 56 blows/layer & 3 layers.
AASHTO T 119	Slump of hydraulic cement concrete.
AASHTO T 152	Air content of freshly mixed concrete.
AASHTO T 166	Specific Gravity of compacted Bituminous Mixtures.
AASHTO T 176	Shows relative portions of fine dust or claylike materials in soil or graded aggregate.

TIMBER SALE ROAD SPECIFICATIONS

AASHTO T 180 (OSHD 106-71) moisture density relationship of soil same as AASHTO T 99 proctor but uses a 10-lb rammer & 18-in drop height.

AASHTO T 191 Sand Cone. Density of soil in place: For subgrade use 6-inch or 12-inch cone. For rock surfacing for 1-1/2-inch minus to 3-inch minus use 12-inch cone.

AASHTO T 205 Rubber balloon. Density of soil in place. Use for compacted or firmly bonded soil.

AASHTO T 209 Maximum Specific Gravity of Bituminous Paving Mixtures.

AASHTO T 210 Durability of aggregates based on resistance to produce fines.

AASHTO T 224 Correction for coarse particles in the soil.

AASHTO T 238 Density of Soil and Soil-Aggregate in place by nuclear methods.

AASHTO T 248 Reducing field samples of aggregate to testing size by mechanical splitter, quartering, or miniature stockpile sampling.

ASTM D 4564 Determination of relative density of cohensionless soils.

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

103* - Compaction equipment shall meet the following requirements:

103a - Padded Drum Rollers. The unit shall consist of a drum with pads, be either self-propelled or towed by a tractor, and capable of operating at a speed of 6 mph. The drum shall be no less than 48 inches in diameter over the pads and not less than 60 inches in width. The pads shall have a minimum height of 3 inches, and a face area of not less than 14 square inches. The weight at drum shall be no less than 8000 lb.

103b - Sheepfoot rollers. A tamping roller unit shall consist of two watertight metal drums mounted in frames in such manner as to be fully oscillating, together with a tractor having sufficient weight and power under actual working conditions to pull the roller drums at a minimum speed of 2.5 miles per hour. The drums shall be no less than 60 inches in diameter and no less than 54 inches in length, measured at the drum's surface, and shall be studded with tamping feet projecting not less than 7 inches from the face of the drums.

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

TIMBER SALE ROAD SPECIFICATIONS

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

103c - Smooth-wheel power rollers. Smooth-wheel power rollers shall either be of the 3-wheel type, weighing not less than 10 tons, or of the tandem type, 2-wheel or 3-wheel, weighing not less than 8 tons. Smooth-wheel roller shall provide compression of 325 pounds per linear inch of width of rear wheels or drum.

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

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

103e - Grid roller. A grid roller shall consist of two or more cylindrical drums independently mounted on a common shaft in a rigid frame. Each drum shall have a minimum outside diameter of 5 feet and a minimum width of 2 feet 6 inches. The overall width of the roller exclusive of frame shall be not less than 5 feet 6 inches of which not more than 6 inches shall be used for center spacing between two roller drums. The face of the drums shall have the appearance of woven open-mesh made by interlacing bars of not less than 1-1/4 inches nor more than 1-3/4 inches diameter space spaced on 4-1/2 inches to 5-1/2 inches center. Net opening between the bars shall be not less than 3 inches nor more than 4 inches. The roller shall be so constructed that counterweights can be used to adjust the gross weight of the roller to not less than 27,000 pounds. The grid roller shall be drawn by a power unit capable of propelling the fully loaded roller through 6 inches of loose embankment material at a speed of at least 4 miles per hour.

TIMBER SALE ROAD SPECIFICATIONS

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

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

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

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

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

TIMBER SALE ROAD SPECIFICATIONS

CLEARING AND GRUBBING - 200

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

201a - This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions from borrow pits, quarries, channel changes, stockpile sites, etc., in accordance with these specifications.

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

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 Subsection 202, as shown on the plans, and as posted.

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

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

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

204a - Stumps, including those overhanging cut banks, shall be removed within the required excavation limits.

204b - Stumps and other protruding objects shall be completely removed within the limits of required embankments having heights of less than 4 feet. When authorized, stumps and other nonperishable objects may be left provided they do not extend more than 6 inches above the existing ground line.

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

TIMBER SALE ROAD SPECIFICATIONS

204d - On areas to be occupied by embankments having heights greater than 4 feet, no stump or portion thereof shall remain within 3 feet of embankment subgrades or slope surfaces after grubbing is completed.

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

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

210 - Disposal of clearing and grubbing debris shall be by piling or scattering over government owned lands outside of established clearing limits in a manner acceptable to the Authorized Officer. **The areas for such piling or scattering shall have the prior approval of the Authorized Officer.** Piled slash may be used as mulch during road decommissioning.

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.

TIMBER SALE ROAD SPECIFICATIONS

EXCAVATION AND EMBANKMENT - 300

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

302* - Excavation shall also consist of the excavation of road and landing cut sections, borrow sites, backfilling, leveling, ditching, grading, compaction, and other earth moving work necessary for the construction of the roadway in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.

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.

303a - Excavated material shall not be wasted as sidecast or perched. All material perched or sidecast as waste shall be retrieved and disposed of at the Purchaser's expense and at the direction of the Authorized Officer.

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

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

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

TIMBER SALE ROAD SPECIFICATIONS

305c - Embankments formed of material containing less than 25 percent rock not larger than 8 inches in the greatest dimension shall be placed in 12-inch layers. Material containing more than 25 percent rock not larger than 12 inches in the greatest dimension shall be placed in successive layers not exceeding 2 feet in thickness. Individual rocks and boulders greater than 12 inches in diameter may be used to construct 2-foot embankment layers, provided they are carefully distributed, with interstices filled with fine material to form a dense and compact mass.

305d - Where embankments are constructed predominantly of blasted rock material, depth of layers shall not exceed 4 feet. Rock fragments having dimensions greater than 4 feet will be permitted provided that they have no dimensions greater than 6 feet and that clearance between adjacent fragments is adequate for the placing and compacting of material in horizontal layers as specified, and that no part of the larger fragments comes within 4 feet of subgrade.

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

306a - Minimum compaction for each layer of embankment, selected borrow, and selected roadway excavation material placed at optimum moisture shall be 1 hour of continuous compacting for each 4 stations of road or fraction thereof. Acceptable moisture content, as field tested, shall be determined by hand clump test i.e., where a soil sample forms a firm ball by hand that does not crumble, free moisture is not visible on the surface, and material does not squeeze between fingers.

TIMBER SALE ROAD SPECIFICATIONS

306e - The final subgrade including landings, truck turnouts, and truck turnarounds shall be compacted to full width with compacting equipment conforming to the requirements of Subsections 103f and 103i. Minimum compaction shall be 1 hour of continuous compacting for each 4 stations of road or a fraction of as measured along the center line of the constructed road.

NOTE: SPECIAL PROVISIONS – In-place Density and Relative Compaction Testing shall apply to Subsection 306e.

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

311 - In solid rock cuts where pockets that will not drain are formed by blasting below the subgrade elevation, drainage shall be provided by ditching to the edge of the subgrade and backfilling to grade and compacting the pockets and the ditch with rock fragments, gravel, or other suitable porous material.

312 - When material, except solid rock, encountered in cuts at subgrade, is suitable for use in forming the finished roadbed, the top 6-inch layer of the subgrade shall be thoroughly scarified for the full width of the roadbed. Roots, sod, and other deleterious material or stones that will not pass a 6-inch square opening shall be removed. The scarified material shall be processed to the optimum moisture content suitable for maximum density and compacted in accordance with Subsection 306.

313 - In cut areas where solid rock is encountered at, or near subgrade, the rock shall be excavated to a minimum depth of 6 inches below subgrade elevation and the excavated area backfilled with suitable material. The backfill material shall be processed to the optimum moisture content suitable for maximum density and compacted to full width in accordance with the requirements of Subsection 306.

TIMBER SALE ROAD SPECIFICATIONS

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

NOTE: Additional material excavated in accordance with Subsections 313 and/or 314 should not be viewed as a design change.

315 - Borrow material required for the construction of embankment or for other portions of the work shall be obtained from sources as shown on the plans.

316 - Borrow material from sources selected at the Purchaser's option shall be inspected and approved in writing by the Authorized Officer prior to placement.

317 - Selected borrow shall consist of talus material, finely broken rock, gravel, or other material of granular or favorable characteristics from sources shown on the plans.

317a - Where indicated on the plans, the Purchaser shall conserve excavation material consisting of talus material, gravel, finely broken rock or other material of granular or favorable characteristics for placement on the top portions of the roadbed as shown on the plans and as directed by the Authorized Officer.

318 - Selected borrow or selected roadway excavation material shall be uniformly spread on the roadbed in lifts not to exceed (6) inches in depth until the required thickness shown on the plans is attained.

Each layer shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width in accordance with the requirements of Subsection 306.

320 - Ditches shall conform to the slope, grade, dimensions, and shape of the required cross section shown on the plans. Roots, stumps, rocks, and other projections shall be removed to form smooth, even slopes.

TIMBER SALE ROAD SPECIFICATIONS

321 - Excess excavated, unsuitable, or slide materials shall not be disposed of on areas where the material will encroach on a stream course or other body of water. Such materials shall be disposed of in accordance with Subsections 321a and/or 321c. Materials not disposed of in this manner shall be retrieved and disposed of at the Purchaser's expense and at the direction of the Authorized Officer.

NOTE: Any material being hauled over gravel or bituminous surfaced roads will be transported in vehicles which meet legal highway weight requirements while hauling.

321a - Excess construction materials specified under Subsection 321 shall be loaded, hauled, and disposed of at a designated disposal site or placed as embankment for designated roadbeds as shown on plans.

321c - End-dumping will be permitted for the placement of excess materials under Subsection 321 in designated disposal areas or within areas approved by the Authorized Officer. 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.

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

TIMBER SALE ROAD SPECIFICATIONS

PIPE CULVERTS - 400

401* - This work shall consist of furnishing and installing pipe culverts, full round downspouts, and other erosion control devices in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Individual lengths and locations are approximate; final lengths and locations will be determined by the Authorized Officer. Additional pipe and erosion control devices may be required at the option of the Authorized Officer, in which case a reduction in the total purchase price shall be made to offset the cost of furnishing and installing such items. Costs will be based upon the unit prices set forth in the current BLM Timber Appraisal Production Cost Schedule.

403 - Grade culverts shall have a gradient of from 2 percent to 4 percent greater than the adjacent road grade. Grade culverts shall be skewed down grade 45 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 metallic coated steel-welded pipe culverts and pipe-arch culverts and special sections shall conform to the requirements of AASHTO M 36 and AASHTO M 218, AASHTO M 274 as specified on the plans.

405e - Corrugated-polyethylene pipe for culverts 18-inch through 36-inch diameter shall meet the requirements of AASHTO M 294, Type S.

Corrugated-polyethylene pipe for culverts to be used for downspouts 18-inch through 24-inch diameter shall meet the requirements of AASHTO M 294, Type C. Installation will be subject to the same specification as other pipe materials.

406* - Coupling bands shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274 with the exception of band widths and the "Hugger"-type band which shall conform to the details, dimensions, and typical diagram shown on the plans.

TIMBER SALE ROAD SPECIFICATIONS

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

407 - Special sections, such as elbows, branch connections, and flared-end sections, shall be of the same gauge as the pipe to which they are joined, and shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274.

407b - Full round culvert downspouts conforming to the material and construction requirements shall be anchored in accordance with details, dimensions, and typical diagrams as shown on plans. Downspouts will be anchored with two six-foot steel fence posts (one on each side of the pipe) wired together with No. 12 galvanized wire. These anchors will be placed every ten feet along the pipe beginning at outlet of culvert.

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

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

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

412 - Where ledge rock or boulders are encountered, they shall be excavated a minimum of 10 inches below the invert grade for a width of at least 2 feet on each side of the pipe and shall be backfilled, as directed by the Authorized Officer, with selected granular or fine readily compactable soil material or crushed rock material in accordance with Section 1200 gradation.

TIMBER SALE ROAD SPECIFICATIONS

412a - Where 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, as directed by the Authorized Officer, with selected granular or fine readily compactable soil material or crushed rock material in accordance with Section 1200 gradation.

413* - Pipe culverts and pipe-arch culverts shall be bedded on a selected granular, crushed rock material in accordance with Section 1200 gradation (E-1), or fine readily compactable soil material, as directed by Authorized Officer, having a depth of not less than 6 inches as shown on plans. Foundation material shall be of uniform density throughout the length of the structure and shall be shaped to fit the pipe.

414a - The invert grade of the bedding shall be cambered at the middle ordinate a minimum of (1) percent of the total length of the drainage structure. Camber shall be developed on a parabolic curve.

415 - Inspection of pipe culverts having a diameter of 48 inches or larger shall be made before backfill is placed. Culverts found to be out of alignment or damaged shall be replaced, reinstalled or repaired as directed by the Authorized Officer at the Purchaser's expense.

416* - Side-fill material for pipe culverts shall be placed within 1 pipe diameter, or a minimum of 2 feet, of the sides of the pipe barrel, and to 1 foot over the pipe with fine, readily compactable soil, or crushed rock material in accordance with Section 1200 gradation (E-1), 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, or a minimum of 2 feet in width each side of, and adjacent to, the full length of the pipe barrel. Each layer shall be moistened or dried to a uniform moisture content suitable for maximum compaction and immediately compacted by approved hand or pneumatic tampers until a uniform density of 85 percent of the maximum density, is attained as determined by AASHTO T 99, Method C. Acceptable moisture content shall be determined by hand clump test i.e., where a soil sample forms a firm ball by hand

TIMBER SALE ROAD SPECIFICATIONS

that does not crumble, free moisture is not visible on the surface, and material does not squeeze between fingers.

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 and ditch dams conforming to lines, grades, dimensions and typical diagrams shown on the plans, shall be required for culverts.

424 - Construction of energy dissipaters (splash pads) conforming to lines, grades, dimensions and typical diagram shown on the plans, shall be required for culverts as indicated on Roads Worklist.

425 - Where pervious materials are used for backfill and bedding, collars consisting of selected impervious material shall be placed at the inlet and at various intervals along the pipe barrel as shown on the plans and as directed by the Authorized Officer.

426 - Culvert markers consisting of 1/2-inch round steel bars 4 feet in length bolted to the culvert at the inlet or 6 foot steel fence posts painted white, shall be furnished, fabricated, and installed by the Purchaser at culverts as shown on the plans and as directed by the Authorized Officer.

428 - Remove and dispose of old culverts in a legal manner, and for any fees required. The Purchaser shall remove the old culverts from the work site prior to road acceptance.

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

TIMBER SALE ROAD SPECIFICATIONS

RENOVATION AND IMPROVEMENT OF EXISTING ROADS - 500

*501 - This work shall consist of reconditioning and preparing the roadbed and shoulders, minor excavation and/or embankment, cleaning and shaping drainage ditches, installing culverts and energy dissipators, brushing vegetation from cut and embankment slopes, and cleaning and repairing drainage structures of existing roads in accordance with these specifications and as shown on the plans.

501a - This work shall include the removal and disposal of slides in accordance with these specifications.

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

Road No.	From Sta./M.P.	To Sta./M.P.
28-11-29.2	0+00	17+80
28-11-33.0	0+00	26+60
28-11-34.2	0+00	11+60
29-11-3.0	0.00	0.95
29-11-3.3	0+00	48+00
SPUR 4A	0+00	3+60

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

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

503 - Debris from slides shall be disposed of as specified in Roads Worklist or as directed by the Authorized Officer.

TIMBER SALE ROAD SPECIFICATIONS

504 - Scarified material and 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 and 103i.

504a - Minimum compaction required shall be 1 hour of continuous rolling for each 4 stations of road, or fraction thereof, as measured along the centerline.

NOTE: SPECIAL PROVISIONS – In-place Density and Relative Compaction Testing shall apply to Subsection 504a.

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

507 - Existing and new drainage structures shall be replaced or placed with structures of the type, gauge, diameter, and length shown on the plans and in accordance with the placement requirements set forth under section 400 of these specifications.

508 - Vegetation encroaching on the roadbed and the drainage ditches of existing roads shall be removed by cutting and disposed of in accordance with Section 2100 of these specifications.

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

TIMBER SALE ROAD SPECIFICATIONS

WATERING - 600

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

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

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 roadbed.

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

TIMBER SALE ROAD SPECIFICATIONS

AGGREGATE BASE COURSE - 1000
CRUSHED ROCK MATERIAL

*1001 - This work shall consist of furnishing, hauling, and placing one or more lifts of crushed rock material on roadbeds and landings approved for placing crushed rock material, in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans. Material not conforming to these specifications will be rejected and shall be removed from the road at the purchaser's expense.

1002a - Crushed rock materials may be obtained from a commercial sources selected by the Purchaser at his option and expense providing that the rock materials selected comply with the specifications in this section.

*1003 - Crushed rock material produced from gravel shall have 3 manufactured fractured faces on 75 percent, by weight, of the material retained on the No. 4 sieve.

TIMBER SALE ROAD SPECIFICATIONS

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

TABLE 1004

AGGREGATE BASE COURSE
CRUSHED ROCK MATERIAL
Percentage by Weight Passing Square Mesh Sieves
(AASHTO T 11 & T 27)

GRADATION

Sieve Designation	A	I
(6) -inch	-	100
3-inch	100	45-65
2-inch	90-95	-
1 1/2-inch	-	-
1-inch	45-75	-
3/4-inch	-	-
1/2-inch	-	-
3/8-inch	-	-
No. 4	15-45	0-10
No. 8	-	-
No. 10	-	-
No. 30	-	-
No. 40	5-25	-
No. 200	2-15	-

TIMBER SALE ROAD SPECIFICATIONS

1005 - Crushed rock material shall not exceed (35) percent loss as determined by AASHTO T 96.

1006 - Crushed rock material shall show durability value of not less than 35, as determined by AASHTO T 210.

1007 - That portion of crushed rock material passing the No. 40 sieve, including blending filler, shall have liquid limits 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.

1007a - 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 equivalent of less than 35, the aggregate will be accepted if it complies with the additional requirement as follows:

TABLE 1007a

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

1008 - If additional binder or filler is necessary in order to meet the grading or plasticity requirements, or for satisfactory bonding of the material, it shall be uniformly blended with the crushed rock material at the crushing and screening plant prior to placing on the road, unless otherwise agreed. The material for such purposes shall be obtained from sources approved by the Authorized Officer and shall be free from stones, vegetative matter, and other deleterious materials.

TIMBER SALE ROAD SPECIFICATIONS

1008a - Each layer of crushed rock material shall be thoroughly mixed on the roadbed by alternately blading, to full depth, until a uniform mixture has been obtained. The mixture shall then be spread to full width. When completed, the spreading shall produce a surface which is smooth, presents uniform shoulder lines, and conforms to the specified cross section.

*1009 - The roadbed, as shaped and compacted under Sections 300 and 500 of these specifications, shall be approved in writing by the Authorized Officer prior to placement of crushed rock materials. Notification for final inspection prior to rocking shall be 3 days prior to that inspection and shall be 6 days prior to start of rocking operations.

*1010 - Crushed rock materials shall be placed and processed on the approved roadbed in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and compacted in layers not to exceed 4 inches in depth for 3-0” or not to exceed 6 inches in depth for 6-0” . When more than one layer is required, each shall be shaped, processed, compacted, before the succeeding layer is placed. Irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and adding or removing crushed rock material until the surface is smooth and uniform.

1010a - Crushed rock material used to repair or reinforce a soft, muddy, frozen, yielding, or rutted roadbed shall not be construed as surfacing under this specification unless approved as such by the Authorized Officer prior to placement.

1012 - Each layer of crushed rock material shall be placed, processed, shaped, moistened or dried to a uniform moisture content suitable for maximum compaction, and compacted to full width by compaction equipment conforming to the requirements of Subsection 103f and 103i. Minimum compaction shall be one 1 hour of continuous compacting for each 150 cubic yards, or fraction thereof, of crushed rock material placed per layer.

NOTE: SPECIAL PROVISIONS – In-place Density and Relative Compaction Testing shall apply to Subsection 1012.

TIMBER SALE ROAD SPECIFICATIONS

AGGREGATE SURFACE COURSE - 1200
CRUSHED ROCK MATERIAL

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

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

*1203 - When crushed rock material is produced from gravel, not less than 75 percent by weight of the particles retained on the No. 4 sieve will have 3 manufactured fractured faces.

TIMBER SALE ROAD SPECIFICATIONS

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

TABLE 1204

AGGREGATE SURFACE COURSE
CRUSHED ROCK MATERIAL
Percentage by weight passing square mesh sieves
AASHTO T 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 shall not exceed 35 percent loss 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.

1206a - The crushed rock material shall show a loss of not more than 20 percent by weight, when submerged in DMSO, dimethyl sulfoxide, for five days, according to Federal Highway Administration Region 10 Accelerated Weathering Test Procedure.

TIMBER SALE ROAD SPECIFICATIONS

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:

TABLE 1207a

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

1208 - If additional binder or filler material is necessary to meet the grading or plasticity requirements or for satisfactory bonding of the material, it shall be uniformly blended with the crushed rock material at the crushing and screening plant prior to placing on the road, unless otherwise agreed. The material for such purposes shall be obtained from sources approved by the Authorized Officer and shall be free from stones, vegetative matter, and other deleterious materials.

1208a - Each layer of crushed rock material shall be thoroughly mixed on the roadbed by alternately blading, to full depth, until a uniform mixture has been obtained. The mixture shall then be spread to full width. When completed, the spreading shall produce a surface which is smooth, presents uniform shoulder lines, and conforms to the specified cross section.

TIMBER SALE ROAD SPECIFICATIONS

*1209 - Shaping and compacting of roadbed shall be completed and approved in writing, prior to placing crushed rock material, in accordance with the requirements of Subsections 500 for placing on the roadbed and landings. Notification for final inspection prior to rocking shall be 3 days prior to the inspection and shall be 6 days prior to start of surfacing operations.

*1210 - Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed, and landings 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 Subsection103f. Minimum compaction shall be one (1) hour of continuous compacting for each 150 cubic yards of crushed rock material placed per layer, or fraction thereof.

NOTE: SPECIAL PROVISIONS – In-place Density and Relative Compaction Testing shall apply to Subsection 1212.

TIMBER SALE ROAD SPECIFICATIONS

SLOPE PROTECTION - 1400

*1401 - This work shall consist of furnishing, hauling, and placing stone materials (rip rap) for slope protection structures and energy dissipaters (splash pads) in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross-sections shown on the plans and Roads Worklist. Material not conforming to these specifications will be rejected and shall be removed from the slope protection structure at the purchaser's expense as directed by the Authorized Officer.

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

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

TIMBER SALE ROAD SPECIFICATIONS

1405 - Rip rap shall conform to the following gradations:

TABLE 1405[1]

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

[1]Gradation includes spalls and rock fragments to provide a stable, dense mass.
[2]The intermediate dimension is the longest straight-line distance across the rock that is perpendicular to the rock's longest axis on the rock face with the largest projection plane.
[3]Rock mass is based on a specific gravity of 2.65 (165#/cu.ft.) and 85 percent of the cubic volume as calculated using the intermediate dimension.

TIMBER SALE ROAD SPECIFICATIONS

1405a - Stone materials shall show a durability value of not less than 50 as determined by AASHTO T 210.

1405b Stone materials shall conform to a minimum apparent specific gravity of 2.50 and a maximum absorption of 4.2 percent as determined by AASHTO T 85.

1406 - The placement of slope protection stones by the end dumping method is not permitted.

1406a - The embankment shall be placed (with excavator) in successive horizontal layers of sufficient depth to contain the maximum size rock present in the material. Spalls and finer fragments of stone other than specified in Subsection 1405 shall be used to chock the larger stones solidly in position and to fill voids between the major stones as laid in the embankment. The exposed face of the embankment shall be reasonably smooth and uniform; material shall be prevented from escaping beyond the toe of the structure.

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

1408 - Trenches for slope protection structures shall be excavated to the lines, elevations, and typical diagram shown on the plans. They shall be of sufficient size to permit the placing of structure footing of the full widths and length shown. Trenches shall be approved by the Authorized Officer prior to placement of slope protection material.

1408a - Foundation trenches and other required excavation as shown on the plans and Roads Worklist shall be approved prior to placing the slope protection material.

1408b - The Purchaser shall excavate unsuitable roadway material as shown on the plans, details, Roads Worklist, or directed by the Authorized Officer prior to the placement of the required rock structures.

1409 - Slope protection material shall be placed so as to form the cross sections shown on the plans.

1410 - Specified embankment slopes shall be protected and/or stabilized by placement of rock materials to form a slope-protection structure conforming to the construction requirements and details of these specifications.

TIMBER SALE ROAD SPECIFICATIONS

EROSION CONTROL - 1700

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

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

1705 - The surface area of erodible earth material exposed at any one time by clearing and grubbing shall not exceed 25,000 square feet without prior approval by the Authorized Officer.

1706 - The surface area of erodible earth material exposed at one time by excavation, borrow, or fill within the right-of-way shall not exceed 25,000 square feet without prior approval by the Authorized Officer.

1707 - Completed and partially completed segments of roads carried over the winter and early spring periods shall be stabilized by mulching and/or as directed by Authorized Officer. Mulching shall be in accordance with Section 1800.

1708 - Newly constructed or graded roads to be carried over the winter period, shall be blocked to vehicular traffic.

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

TIMBER SALE ROAD SPECIFICATIONS

SOIL STABILIZATION – 1800

*1801 - This work shall consist of seeding and mulching on designated cut, fill, borrow, disposal, and special areas in accordance with these specifications and as shown on the plans. This work is not required for road acceptance under Section 18 of this contract.

1802a - Soil stabilization work consisting of seeding and mulching shall be performed on new road construction, road renovation, improvements, landings, disturbed areas, borrow sites, disposal sites, and specials areas in accordance with these specifications and as shown on the plans.

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

From: March 15	To: April 30
From: September 1	To: October 15

If soil stabilization of disturbed areas is not completed by the specified fall date, the Purchaser shall treat disturbed areas in accordance with Section 1700 and then complete the requirements of Section 1800 the next construction season.

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

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

1804 - The BLM shall provide native grass/forb seed or other plant materials (plugs, waddles, bulbs, etc.) for this project.

1806 - The Purchaser shall apply the seed mixtures specified under Subsection 1804 to the corresponding seeding projects as shown on Estimate of Quantities and Roads Worklist .

TIMBER SALE ROAD SPECIFICATIONS

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 Subsections 1808a shall be furnished by the Purchaser in the amounts specified under Subsection 1811 and applied in accordance with Subsection 1812.

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

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

1810 - Bulk mulching material required under these specifications shall be delivered to the work area bound either by twine, string or hemp rope. Wire binding will not be permitted.

1811 - The Purchaser shall furnish and apply to the areas designated for treatment as shown on the plans and as specified under Subsections 1802a and 1806, grass seed, fertilizer, and mulch material at the following rate of application:

b. Dry Application:

Grass & Legume Seed	20 lbs./acre
Mulch	4000 lbs./acre

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

TIMBER SALE ROAD SPECIFICATIONS

1812 - Mulches shall be spread/placed in treatment areas to a depth of 1 inch 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 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 to be applied in dry form.

1818 - The maximum horizontal distance to be seeded and mulched from the road centerline shall be 50 feet for the cut slopes and 50 feet for the fill slopes.

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 operation shall be picked up and disposed of to the satisfaction of the Authorized Officer.

TIMBER SALE ROAD SPECIFICATIONS

ROADSIDE BRUSHING - 2100

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

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

*2103 - Vegetation cut manually and/or mechanically less than 6 inches in diameter when measured at D.B.H.O.B. shall be cut to a maximum height of 2 inches above the ground surface or above obstructions such as rocks or stumps on cut and fill slopes and all limbs below the 2 inch area will be severed from the trunk.

2103a - Vegetation shall be cut and removed from the roadbed between the outside shoulders and the ditch centerline and such vegetation shall be cut to a maximum height of 2 inches above the ground and running surface. Limbs below the 2 inch area will be severed from the trunk. Sharp pointed ends will not be permitted. Cuts shall be parallel to the ground line or running surface.

2104 - Trees in excess of 6 inches in diameter at D.B.H.O.B 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 12 feet in elevation above the running surface shall be cut, to within 1 inch of the trunk to produce a smooth vertical face.

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

TIMBER SALE ROAD SPECIFICATIONS

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

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

2109 - Debris resulting from this operation shall be scattered downslope from the roadway. Debris shall not be allowed to accumulate in concentrations or be placed against trees. Debris in excess of 1 foot in length and ½ inch in diameter shall not be allowed to remain on cut slopes, ditches, roadways or water courses, or as directed by the Authorized Officer.

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

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

TIMBER SALE ROAD SPECIFICATIONS

HOT MIX ASPHALT CONCRETE PAVING – 2600

*2601 - This work shall consist of furnishing, applying and compacting Hot Mix Asphalt Concrete on prepared surfaces, in the depths, amounts and locations as shown on the plans.

2602 - Submit (2) copies of the bituminous job mix formula to be used on this project (3) weeks prior to placement of paving. The Purchaser shall have written approval of the formula by the Authorized Officer prior to placement of pavement.

*2603 - Vehicular traffic, including heavy equipment, will not be permitted on the pavement until all rolling and compacting operations have been completed.

*2604 - Place bituminous mixture only when air temperature is above 45°F, on surfaces that do not have standing water, and when it is not raining.

2605 - Asphalt paving shall conform to the Oregon Department of Transportation, Level III, ½" dense, PG 64-22 Asphalt Binder mix for use on roadways. Furnish aggregate that conform to the aggregate requirements for hot mix asphalt concrete by the Oregon Department of Transportation.

2606 - Aggregate shall be tested by AASHTO T 11 and T 27. The aggregate selected for use in the work shall have a gradation within the limits designated in Table 2606.

TABLE 2606

TOLERANCE GRADATION OF AGGREGATES
Total Percentage by Weight Passing Square Mesh Sieves
(AASHTO T 11 and AASHTO T 27)

Sieve Size	Percent
¾ inch	100
½ inch	90-100
No. 4	JMF +/- 5
No. 8	JMF +/- 4
No. 30	JMF +/- 4
No. 200	JMF +/- 2

JMF = Job Mix Formula

TIMBER SALE ROAD SPECIFICATIONS

2607 - Bituminous material shall meet the requirements of AASHTO M 320.

2608 - Water shall be clean and free from deleterious materials.

2609 - The asphalt spreader shall be capable of spreading hot bituminous mixtures without tearing, shoving, or gouging and produce a finished surface of the specified grade and smoothness.

2610 - The number, type and weight of rollers shall be sufficient to compact the mixture to the required density without detrimentally affecting the compacted material. All rollers shall be suitable for rolling hot-mix bituminous pavements and capable of being operated without turning on the mat and without loosening the surface being rolled. Rollers shall have suitable devices and apparatus to keep the rolling surfaces wet and prevent adherence of bituminous mixture.

2610a - Vibratory rollers shall be especially designed for bituminous concrete compacting and may be used provided the rollers do not impair stability of the pavement structure and any underlying layers. Depressions in pavement surfaces resulting from the use of vibratory rollers are not acceptable. Rollers shall be self-propelled, single or dual vibrating drums, and steel drive wheels, as applicable; equipped with variable amplitude and separate controls for energy and propulsion.

2611 - Make pavement cuts with parallel, straight lines, 1 foot wider than trench width on each side of trenches.

2612 - **Prior to laying the asphalt concrete pavement the Purchaser shall obtain written approval from the Authorized Officer** by showing satisfactory test results of the crushed aggregate base course that has been tested and meets the requirements of the specifications.

2613 - Prior to laying the asphalt concrete, remove unsuitable material from the underlying course.

2614 - Place string lines to identify the edge of pavement. Establish lines parallel to the centerline of the area to be paved, and place string lines coinciding with the established lines for the spreading machine to follow. The number and location of the lines will be as approved by the Authorized Officer.

2615 - Restore disturbed edges of existing bituminous pavements, matching existing edges.

2616 - The thickness of the asphalt concrete pavement shall be as shown on the plans.

2617 - Plants used for the preparation of bituminous mixtures shall conform to AASHTO M 156 and to Oregon Department of Transportation requirements.

TIMBER SALE ROAD SPECIFICATIONS

2618 - Transport bituminous material from the mixing plant to the paving site in trucks having tight, clean, smooth beds that have been coated with a minimum amount of concentrated solution of hydrated lime and water or other approved coating to prevent adhesion of the mixture to the truck bodies. Petroleum products will not be permitted for coating truck bodies. When the air temperature is less than 60°F or if haul time is greater than 30 minutes, cover each load with canvas or other approved material of ample size to protect the mixture from the loss of heat.

2619 - Compact each layer of Hot Mix Asphalt Concrete to a minimum density of 91 percent of the maximum specific gravity determined by AASHTO T 166 and T 209. Percent compaction will be determined from at least one production sample per day.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Version: 7.0.0.27

Summary of All Roads and Projects Updated: 6/29/2021

T.S. Contract Name: Elk Creek Ridge CT Tract No: ORC042023.0030 Sale Date: 10282022
Prepared by: JAA Ph: 5417514397 Print Date: 4/5/2022 7:47:51 AM
Construction: 7.55 sta
Improve: 0.00 sta Renov: 157.76 sta Decom: 0.00 sta Temp: 0.00 sta

200 Clearing and Grubbing*: 5.6 acres $24,860.53

300 Excavation: 5330 cy $24,178.41
Haul < 500 ft: 1300 sta-yds
Haul > 500 ft: 1550 yd-mi

400 Drainage: $14,466.66
Culvert: 0.00 lf DownSpout: 0.00 lf
PolyPipe: 266.00 lf

500 Renovation: $10,032.43
Blading 3.00 mi
Slide Removal 350.00 cy

700-1200 Surfacing: $76,151.63
Commercial Quarry Name: Hervey 1.5-0" 1,363.00 LCY
Commercial Quarry Name: Hervey 1.5-0" Spot 360.00 LCY
Commercial Quarry Name: Hervey 3-0" 271.00 LCY
Commercial Quarry Name: Hervey 3-0" LDNG 330.00 LCY
Commercial Quarry Name: Hervey 6-0" Jaw Run 580.00 LCY

1300 Geotextiles: $0.00

1400 Slope Protection: $883.28
Gradation Class 3: 20.00 cy

1800 Soil Stabilization: 7.70 acres $7,140.99
Includes Small Quantity Factor of 1.15

1900 Cattleguards: $0.00

2100 RoadSide Brushing: $4,174.45
Mechanical Brushing: 7.2 acres

2300 Engineering: 0.00 sta. $0.00

2400 Minor Concrete: $0.00

2500 Gabions: $0.00

8000 Miscellaneous: $0.00

Mobilization: Const. $9,307.80 Surf. $0.00..... $9,307.80

Quarry Development: $0.00

Total: = $171,196.17

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities are loose cubic yards.
*Clearing and grubbing costs may be accounted in Section 300 as time & equipment.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022
Road Number: 28-11-29.0 Road Name: Elk Creek Road
Road Construction: 0.00 mi 20 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: 0.10 acres	$403.49
300 Excavation: Standard cy	$210.38
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.06 acres	$57.76
Includes Small Quantity Factor of 1.15	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $38.62 Surf. $0.00	$38.62
Quarry Development:	$0.00
Total:	$710.24

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

Road Construction Worksheet

Road Number: 28-11-29.0 Road Name: Elk Creek Road

Section 200 Clearing and Grubbing:
Clearing - Heavy (Clearing): Adjustment Factor (2.54)
1-15% (Avg Side Slopes): Adjustment Factor (0)
Pile and Burn (Slash): Adjustment Factor (1.28)
greater than 40' (Avg Clearing Widths): Adjustment Factor (0)
Total Adjustment Factor:2.54 + 0 + 1.28 + 0 = 3.82
Base Cost/Acre: $1,056.25 x Adjustment Factor: 3.82 x Total Acres: .1 = $403.49
Subtotal: $403.49

Section 300 Excavation:
Comment: LDNG @ MP 0.46
Excavation - Common: $2.12/cy x 50.00 cy = $106.00
Subgrade Compaction: 4 Sta/hr $30.19/sta. x 2.0 sta = $60.38
Embankment Placement & Compaction 306.a - Common: $0.88/cy x 50.00 cy = $44.00
Subtotal: $210.38

Section 400 Drainage:
Subtotal: $0.00

Section 500 Renovation:
Subtotal: $0.00

Section 700-1200 Surfacing:
Surfacing:
Subtotal: $0.00

Section 1300 Geotextiles:
Subtotal: $0.00

Section 1400 Slope Protection:
Subtotal: $0.00

Section 1800 Soil Stabilization:
Comment: LDNG cut & fill slopes
Dry Method with Mulch: $510.69/acre x 0.06 acres = $30.64
Includes Small Quantity Factor of 1.15
+ Seed Cost: $132.00/acre x 0.06 acres = $7.92
+ Mulch Cost: $320.00/acre x 0.06 acres = $19.20
Subtotal: $57.76

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:
Subtotal: $0.00

Road Number: 28-11-29.0 Elk Creek Road Continued

Mobilization:
  Construction - 0.41% of total Costs = $38.62
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $38.62

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $710.24

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022
Road Number: 28-11-29.1 Road Name: Elk Creek Ridge Road
Road Construction: 0.00 mi 20 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: 0.46 acres	$1,904.63
300 Excavation: Standard cy	$1,066.52
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$25.99
700-1200 Surfacing:	$7,950.70
Quarry Name: Hervey 1.5-0" Spot 25.00 LCY	
Quarry Name: Hervey 3-0" LDNG 300.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.29 acres	$279.18
Includes Small Quantity Factor of 1.15	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $645.50 Surf. $0.00	$645.50
Quarry Development:	$0.00
Total:	$11,872.52

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

Road Construction Worksheet

Road Number: 28-11-29.1 Road Name: Elk Creek Ridge Road

Section 200 Clearing and Grubbing:
Clearing - Heavy (Clearing): Adjustment Factor (2.54)
16-30% (Avg Side Slopes): Adjustment Factor (0.1)
Pile and Burn (Slash): Adjustment Factor (1.28)
greater than 40' (Avg Clearing Widths): Adjustment Factor (0)
Total Adjustment Factor:2.54 + 0.1 + 1.28 + 0 = 3.92
Base Cost/Acre: $1,056.25 x Adjustment Factor: 3.92 x Total Acres: .46 = $1,904.63
Subtotal: $1,904.63

Section 300 Excavation:
Comment: 3 LDNG + 1 TTA
Excavation - Common: $2.12/cy x 275.00 cy = $583.00
Subgrade Compaction: 4 Sta/hr $30.19/sta. x 8.0 sta = $241.52
Embankment Placement & Compaction 306.a - Common: $0.88/cy x 275.00 cy = $242.00
Subtotal: $1,066.52

Section 400 Drainage:
Subtotal: $0.00

Section 500 Renovation:
Comment: Reno junction @ MP 2.11
Scarification: $937.38/mi x 0.02 mi = $18.75
Compaction: $362.25/mi x 0.02 mi = $7.25
Subtotal: $25.99

Section 700-1200 Surfacing:

Commercial Quarry Name: Hervey 1.5-0" Spot
Comment: Junction @ MP 2.11

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									25 LCY

Rock Volume = 25.00 LCY
Purchase Price / Royalty: $12.50/LCY x 25.00 LCY = $312.50
Processing: $1.01/LCY x 25.00 LCY = $25.25
Compaction: $1.21/LCY x 25.00 LCY = $30.25
Basic Rock Haul cost: $0.66/LCY x 25.00 LCY = $16.50
Rock Haul -15% grades: $1.00/LCY-mi x 25.00 LCY x 2.80 mi= $70.00
Rock Haul St& Co Roads: $0.44/LCY-mi x 25.00 LCY x 11.60 mi= $127.60
Basic Water Haul cost: $0.60/LCY x 25.00 LCY = $15.00
Water Haul -15% grades: $0.14/LCY-mi x 25.00 LCY x 2.80 mi= $9.80
Water Haul St&Co Roads: $0.08/LCY-mi x 25.00 LCY x 11.00 mi= $22.00

Commercial Quarry Name: Hervey 3-0" LDNG
Comment: LDNG @ MP 2.20 & 2.49 + TTA @ MP 2.44

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									300 LCY

Rock Volume = 300.00 LCY
Purchase Price / Royalty: $11.75/LCY x 300.00 LCY = $3,525.00
Processing: $1.01/LCY x 300.00 LCY = $303.00
Compaction: $1.21/LCY x 300.00 LCY = $363.00
Basic Rock Haul cost: $0.66/LCY x 300.00 LCY = $198.00
Rock Haul -15% grades: $1.00/LCY-mi x 300.00 LCY x 2.80 mi= $840.00
Rock Haul St& Co Roads: $0.44/LCY-mi x 300.00 LCY x 11.60 mi= $1,531.20
Basic Water Haul cost: $0.60/LCY x 300.00 LCY = $180.00
Water Haul -15% grades: $0.14/LCY-mi x 300.00 LCY x 2.80 mi= $117.60
Water Haul St&Co Roads: $0.08/LCY-mi x 300.00 LCY x 11.00 mi= $264.00
Subtotal: $7,950.70

Section 1300 Geotextiles:

Road Number: 28-11-29.1 Elk Creek Ridge Road Continued

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
Comment: LDNG + TTA cuts & fills
Dry Method with Mulch: $510.69/acre x 0.29 acres = $148.10
Includes Small Quantity Factor of 1.15
+ Seed Cost: $132.00/acre x 0.29 acres = $38.28
+ Mulch Cost: $320.00/acre x 0.29 acres = $92.80

Subtotal: $279.18

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:

Subtotal: $0.00

Mobilization:
Construction - 6.94% of total Costs = $645.50
Surfacing - 11.19% by rock volume = $0.00

Subtotal: $645.50

Quarry Development:
Based on 11.19% of total rock volume

Subtotal: $0.00

Total: $11,872.52

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022
Road Number: 28-11-29.2 R Road Name:
Road Renovation: 0.34 mi 14 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: 1.00 acres	$4,754.45
300 Excavation: Standard cy	$2,818.86
Haul > 500 ft: 230.00 yd-mi	
400 Drainage:	$6,086.50
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 90.00 lf	
500 Renovation:	$942.68
Blading 0.34 mi	
700-1200 Surfacing:	$1,848.32
Quarry Name: Hervey 1.5-0" Spot 80.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 1.00 acres	$962.69
Includes Small Quantity Factor of 1.15	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.82 acres	$571.82
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $1,034.07 Surf. $0.00	$1,034.07
Quarry Development:	$0.00
Total:	$19,019.39

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

Road Construction Worksheet

Road Number: 28-11-29.2 R Road Name:

Section 200 Clearing and Grubbing:
Clearing - Heavy (Clearing): Adjustment Factor (2.54)
16-30% (Avg Side Slopes): Adjustment Factor (0.1)
Pile and Burn (Slash): Adjustment Factor (1.28)
20-40' (Avg Clearing Widths): Adjustment Factor (0.1)
Total Adjustment Factor:2.54 + 0.1 + 1.28 + 0.1 = 4.02
Base Cost/Acre: $1,056.25 x Adjustment Factor: 4.02 x Total Acres: 1 = $4,246.13
Endhaul stumps - roadway
Dump Truck 10 cy 6 hr x $84.72/hr = $508.32

Subtotal: $4,754.45

Section 300 Excavation:
Comment: LDNGs, Approach, dtch reconst., dtch bunch/end, fill repair
Excavation - Common: $2.12/cy x 550.00 cy = $1,166.00
Subgrade Compaction: 4 Sta/hr $30.19/sta. x 4.0 sta = $120.76
Embankment Placement & Compaction 306.a - Common: $0.88/cy x 550.00 cy = $484.00
End Hauling > 500 ft and 20 mph: $1.17/yd-mi x 230.00 yd-mi = $269.10
End Hauling > 500 ft - Fixed Cost (CY): $3.12/cy x 230.00 cy = $717.60
Blading with ditch: $15.35/station x 4.00 stations = $61.40

Subtotal: $2,818.86

Section 400 Drainage:
Poly Pipe Sta. 3+00 Strm Xing 36 inch 50 lf x $83.17/lf = $4,158.50
Poly Pipe Sta. 5+50 Xdrain 18 inch 40 lf x $46.36/lf = $1,854.40
STA 17+10 - REMOVE CULVERT
Excavator - Large (3 CY) .5 hr x $147.20/hr = $73.60

Subtotal: $6,086.50

Section 500 Renovation:
Blading: $774.50/mi x 0.34 mi = $263.33
Scarification: $937.38/mi x 0.34 mi = $318.71
Compaction: $362.25/mi x 0.34 mi = $123.17
Barrier removal w/ staging
Excavator - Large (3 CY) .25 hr x $147.20/hr = $36.80
Ditch out 1reno/1construct
Excavator - Large (3 CY) .5 hr x $147.20/hr = $73.60
COMPACTION TEST - FINISH GRADE
Dump Truck 10 cy 1.5 hr x $84.72/hr = $127.08

Subtotal: $942.68

Section 700-1200 Surfacing:

Commercial Quarry Name: Hervey 1.5-0" Spot
Comment: Culvert fill, road replacement fill.

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									80 LCY

Rock Volume = 80.00 LCY
Purchase Price / Royalty: $12.50/LCY x 80.00 LCY = $1,000.00
Processing: $1.01/LCY x 80.00 LCY = $80.80
Compaction: $1.21/LCY x 80.00 LCY = $96.80
Basic Rock Haul cost: $0.66/LCY x 80.00 LCY = $52.80
Rock Haul -15% grades: $1.00/LCY-mi x 80.00 LCY x 1.00 mi= $80.00
Rock Haul St& Co Roads: $0.44/LCY-mi x 80.00 LCY x 11.60 mi= $408.32
Basic Water Haul cost: $0.60/LCY x 80.00 LCY = $48.00
Water Haul -15% grades: $0.14/LCY-mi x 80.00 LCY x 1.00 mi= $11.20
Water Haul St&Co Roads: $0.08/LCY-mi x 80.00 LCY x 11.00 mi= $70.40

Subtotal: $1,848.32

Road Number: 28-11-29.2 R Continued

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
Comment: Exposed soils for road renovation, construction, waste areas
Dry Method with Mulch: $510.69/acre x 1.00 acres = $510.69
Includes Small Quantity Factor of 1.15
+ Seed Cost: $132.00/acre x 1.00 acres = $132.00
+ Mulch Cost: $320.00/acre x 1.00 acres = $320.00

Subtotal: $962.69

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
RoadSide Brushing Heavy: $697.34/acre x 0.82 acres = $571.82

Subtotal: $571.82

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 - 11.11% of total Costs = $1,034.07
Surfacing - 2.75% by rock volume = $0.00

Subtotal: $1,034.07

Quarry Development:
Based on 2.75% of total rock volume

Subtotal: $0.00

Total: $19,019.39

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022
Road Number: 28-11-33.0 R Road Name:
Road Renovation: 0.5 mi 14 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: 0.90 acres	$4,234.77
300 Excavation: Standard cy	$3,731.15
Haul > 500 ft: 380.00 yd-mi	
400 Drainage:	$1,742.56
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 36.00 lf	
500 Renovation:	$1,842.91
Blading 0.50 mi	
700-1200 Surfacing:	$22,382.78
Quarry Name: Hervey 1.5-0" 430.00 LCY	
Quarry Name: Hervey 1.5-0" Spot 150.00 LCY	
Quarry Name: Hervey 6-0" Jaw Run 320.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 1.43 acres	$1,376.65
Includes Small Quantity Factor of 1.15	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):1.22 acres	$850.75
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $2,079.12 Surf. $0.00	$2,079.12
Quarry Development:	$0.00
Total:	$38,240.69

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

Road Construction Worksheet

Road Number: 28-11-33.0 R Road Name:

Section 200 Clearing and Grubbing:
Clearing - Heavy (Clearing): Adjustment Factor (2.54)
16-30% (Avg Side Slopes): Adjustment Factor (0.1)
Pile and Burn (Slash): Adjustment Factor (1.28)
greater than 40' (Avg Clearing Widths): Adjustment Factor (0)
Total Adjustment Factor:2.54 + 0.1 + 1.28 + 0 = 3.92
Base Cost/Acre: $1,056.25 x Adjustment Factor: 3.92 x Total Acres: .9 = $3,726.45
Endhaul - reno stumps
Dump Truck 10 cy 6 hr x $84.72/hr = $508.32
Subtotal: $4,234.77

Section 300 Excavation:
Comment: LDNGs, TTA, Fill Repair, ditch bunch endhaul
Excavation - Common: $2.12/cy x 650.00 cy = $1,378.00
Subgrade Compaction: 4 Sta/hr $30.19/sta. x 5.0 sta = $150.95
Embankment Placement & Compaction 306.a - Common: $0.88/cy x 650.00 cy = $572.00
End Hauling > 500 ft and 20 mph: $1.17/yd-mi x 380.00 yd-mi = $444.60
End Hauling > 500 ft - Fixed Cost (CY): $3.12/cy x 380.00 cy = $1,185.60
Subtotal: $3,731.15

Section 400 Drainage:
Poly Pipe STA 13+00 Xdrain 18 inch 36 lf x $46.36/lf = $1,668.96
STA 12+58 - REMOVE CULVERT
Excavator - Large (3 CY) .5 hr x $147.20/hr = $73.60
Subtotal: $1,742.56

Section 500 Renovation:
Blading: $774.50/mi x 0.50 mi = $387.25
Scarification: $937.38/mi x 0.50 mi = $468.69
Compaction: $362.25/mi x 0.50 mi = $181.13
Clean Culverts: $446.25/mi x 0.50 mi = $223.13
STA 11+75 road realignment
Motor Grader 14M 2 hr x $154.22/hr = $308.44
Ditch out reno/construct
Excavator - Large (3 CY) 1 hr x $147.20/hr = $147.20
COMPACT TEST - FINISH GRADE
Dump Truck 10 cy 1.5 hr x $84.72/hr = $127.08
Subtotal: $1,842.91

Section 700-1200 Surfacing:

Commercial Quarry Name: Hervey 1.5-0"
Comment: New 3" lift of surfacing

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.50mi	12ft	13ft	3in	5%					

Rock Volume = 430.00 LCY
Purchase Price / Royalty: $12.50/LCY x 430.00 LCY = $5,375.00
Processing: $1.01/LCY x 430.00 LCY = $434.30
Compaction: $1.21/LCY x 430.00 LCY = $520.30
Basic Rock Haul cost: $0.66/LCY x 430.00 LCY = $283.80
Rock Haul -15% grades: $1.00/LCY-mi x 430.00 LCY x 3.25 mi= $1,397.50
Rock Haul St& Co Roads: $0.44/LCY-mi x 430.00 LCY x 11.60 mi= $2,194.72
Basic Water Haul cost: $0.60/LCY x 430.00 LCY = $258.00
Water Haul -15% grades: $0.14/LCY-mi x 430.00 LCY x 3.25 mi= $195.65
Water Haul St&Co Roads: $0.08/LCY-mi x 430.00 LCY x 11.00 mi= $378.40

Commercial Quarry Name: Hervey 1.5-0" Spot
Comment: Roadway stump removal replacement fill.

Road Number: 28-11-33.0 R Continued

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									120 LCY

Rock Volume = 120.00 LCY
Purchase Price / Royalty: $12.50/LCY x 120.00 LCY = $1,500.00
Processing: $1.01/LCY x 120.00 LCY = $121.20
Compaction: $1.21/LCY x 120.00 LCY = $145.20
Basic Rock Haul cost: $0.66/LCY x 120.00 LCY = $79.20
Rock Haul -15% grades: $1.00/LCY-mi x 120.00 LCY x 3.25 mi= $390.00
Rock Haul St& Co Roads: $0.44/LCY-mi x 120.00 LCY x 11.60 mi= $612.48
Basic Water Haul cost: $0.60/LCY x 120.00 LCY = $72.00
Water Haul -15% grades: $0.14/LCY-mi x 120.00 LCY x 3.25 mi= $54.60
Water Haul St&Co Roads: $0.08/LCY-mi x 120.00 LCY x 11.00 mi= $105.60

Commercial Quarry Name: Hervey 1.5-0" Spot
Comment: Sta. 5+00 TOR

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									20 LCY

Rock Volume = 20.00 LCY
Purchase Price / Royalty: $12.50/LCY x 20.00 LCY = $250.00
Processing: $1.01/LCY x 20.00 LCY = $20.20
Compaction: $1.21/LCY x 20.00 LCY = $24.20
Basic Rock Haul cost: $0.66/LCY x 20.00 LCY = $13.20
Rock Haul -15% grades: $1.00/LCY-mi x 20.00 LCY x 3.25 mi= $65.00
Rock Haul St& Co Roads: $0.44/LCY-mi x 20.00 LCY x 11.60 mi= $102.08
Basic Water Haul cost: $0.60/LCY x 20.00 LCY = $12.00
Water Haul -15% grades: $0.14/LCY-mi x 20.00 LCY x 3.25 mi= $9.10
Water Haul St&Co Roads: $0.08/LCY-mi x 20.00 LCY x 11.00 mi= $17.60

Commercial Quarry Name: Hervey 1.5-0" Spot
Comment: Culvert side fill and surfacing

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									10 LCY

Rock Volume = 10.00 LCY
Purchase Price / Royalty: $12.50/LCY x 10.00 LCY = $125.00
Processing: $1.01/LCY x 10.00 LCY = $10.10
Compaction: $1.21/LCY x 10.00 LCY = $12.10
Basic Rock Haul cost: $0.66/LCY x 10.00 LCY = $6.60
Rock Haul -15% grades: $1.00/LCY-mi x 10.00 LCY x 3.25 mi= $32.50
Rock Haul St& Co Roads: $0.44/LCY-mi x 10.00 LCY x 11.60 mi= $51.04
Basic Water Haul cost: $0.60/LCY x 10.00 LCY = $6.00
Water Haul -15% grades: $0.14/LCY-mi x 10.00 LCY x 3.25 mi= $4.55
Water Haul St&Co Roads: $0.08/LCY-mi x 10.00 LCY x 13.00 mi= $10.40

Commercial Quarry Name: Hervey 6-0" Jaw Run
Comment: LDNGs, TTA, Realignment base

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									320 LCY

Rock Volume = 320.00 LCY
Purchase Price / Royalty: $9.85/LCY x 320.00 LCY = $3,152.00
Processing: $1.01/LCY x 320.00 LCY = $323.20
Compaction: $1.21/LCY x 320.00 LCY = $387.20
Basic Rock Haul cost: $0.66/LCY x 320.00 LCY = $211.20
Rock Haul -15% grades: $1.00/LCY-mi x 320.00 LCY x 3.25 mi= $1,040.00
Rock Haul St& Co Roads: $0.44/LCY-mi x 320.00 LCY x 11.60 mi= $1,633.28
Basic Water Haul cost: $0.60/LCY x 320.00 LCY = $192.00
Water Haul -15% grades: $0.14/LCY-mi x 320.00 LCY x 3.25 mi= $145.60
Water Haul St&Co Roads: $0.08/LCY-mi x 320.00 LCY x 11.00 mi= $281.60
COMPACT TEST - SURFACING LYR
Dump Truck 10 cy 1.5 hr x $84.72/hr = $127.08

Subtotal: $22,382.78

Section 1300 Geotextiles:

Subtotal: $0.00

Road Number: 28-11-33.0 R Continued

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
Comment: Exposed soil for renovation, construction, waste areas.
Dry Method with Mulch: $510.69/acre x 1.43 acres = $730.29
Includes Small Quantity Factor of 1.15
+ Seed Cost: $132.00/acre x 1.43 acres = $188.76
+ Mulch Cost: $320.00/acre x 1.43 acres = $457.60

Subtotal: $1,376.65

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
RoadSide Brushing Heavy: $697.34/acre x 1.22 acres = $850.75

Subtotal: $850.75

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 - 22.34% of total Costs = $2,079.12
Surfacing - 30.99% by rock volume = $0.00

Subtotal: $2,079.12

Quarry Development:
Based on 30.99% of total rock volume

Subtotal: $0.00

Total: $38,240.69

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022
Road Number: 28-11-33.2 C Road Name:
Road Construction: 0.05 mi 16 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: 0.36 acres	$1,490.58
300 Excavation: Standard cy	$4,886.46
Haul < 500 ft: 1,300.00 sta-yds	
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$6,224.03
Quarry Name: Hervey 3-0" 141.00 LCY	
Quarry Name: Hervey 3-0" LDNG 30.00 LCY	
Quarry Name: Hervey 6-0" Jaw Run 80.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.20 acres	$192.54
Includes Small Quantity Factor of 1.15	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $735.57 Surf. $0.00	$735.57
Quarry Development:	$0.00
Total:	$13,529.17

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

Road Construction Worksheet

Road Number: 28-11-33.2 C Road Name:

Section 200 Clearing and Grubbing:
Clearing - Heavy (Clearing): Adjustment Factor (2.54)
16-30% (Avg Side Slopes): Adjustment Factor (0.1)
Pile and Burn (Slash): Adjustment Factor (1.28)
greater than 40' (Avg Clearing Widths): Adjustment Factor (0)
Total Adjustment Factor:2.54 + 0.1 + 1.28 + 0 = 3.92
Base Cost/Acre: $1,056.25 x Adjustment Factor: 3.92 x Total Acres: .36 = $1,490.58

Subtotal: $1,490.58

Section 300 Excavation:
Excavation - Common: $2.12/cy x 1,500.00 cy = $3,180.00
Embankment Placement & Compaction 306.a - Common: $0.88/cy x 1,500.00 cy = $1,320.00
End Hauling - 100 to 500 ft: $0.17/sta-yd x 1,300.00 sta-yd = $221.00
Blading with ditch: $15.35/station x 2.50 stations = $38.38
COMPACT TEST - Subgrade
Dump Truck 10 cy 1.5 hr x $84.72/hr = $127.08

Subtotal: $4,886.46

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:

Subtotal: $0.00

Section 700-1200 Surfacing:

Commercial Quarry Name: Hervey 3-0"
Comment: 9" lift surfacing

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.05mi	13ft	16ft	9in	5%					

Rock Volume = 141.00 LCY
Purchase Price / Royalty: $11.75/LCY x 141.00 LCY = $1,656.75
Processing: $1.01/LCY x 141.00 LCY = $142.41
Compaction: $1.21/LCY x 141.00 LCY = $170.61
Basic Rock Haul cost: $0.66/LCY x 141.00 LCY = $93.06
Rock Haul -15% grades: $1.00/LCY-mi x 141.00 LCY x 3.23 mi= $455.43
Rock Haul St& Co Roads: $0.44/LCY-mi x 141.00 LCY x 11.60 mi= $719.66
Basic Water Haul cost: $0.60/LCY x 141.00 LCY = $84.60
Water Haul -15% grades: $0.14/LCY-mi x 141.00 LCY x 3.23 mi= $63.76
Water Haul St&Co Roads: $0.08/LCY-mi x 141.00 LCY x 11.00 mi= $124.08

Commercial Quarry Name: Hervey 3-0" LDNG
Comment: TTA surfacing

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									30 LCY

Rock Volume = 30.00 LCY
Purchase Price / Royalty: $11.75/LCY x 30.00 LCY = $352.50
Processing: $1.01/LCY x 30.00 LCY = $30.30
Compaction: $1.21/LCY x 30.00 LCY = $36.30
Basic Rock Haul cost: $0.66/LCY x 30.00 LCY = $19.80
Rock Haul -15% grades: $1.00/LCY-mi x 30.00 LCY x 3.23 mi= $96.90
Rock Haul St& Co Roads: $0.44/LCY-mi x 30.00 LCY x 11.60 mi= $153.12
Basic Water Haul cost: $0.60/LCY x 30.00 LCY = $18.00
Water Haul -15% grades: $0.14/LCY-mi x 30.00 LCY x 3.23 mi= $13.57
Water Haul St&Co Roads: $0.08/LCY-mi x 30.00 LCY x 11.00 mi= $26.40

Commercial Quarry Name: Hervey 6-0" Jaw Run
Comment: End LDNG surfacing

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									80 LCY

Road Number: 28-11-33.2 C Continued

Rock Volume = 80.00 LCY
Purchase Price / Royalty: $9.85/LCY x 80.00 LCY = $788.00
Processing: $1.01/LCY x 80.00 LCY = $80.80
Compaction: $1.21/LCY x 80.00 LCY = $96.80
Basic Rock Haul cost: $0.66/LCY x 80.00 LCY = $52.80
Rock Haul -15% grades: $1.00/LCY-mi x 80.00 LCY x 3.23 mi= $258.40
Rock Haul St& Co Roads: $0.44/LCY-mi x 80.00 LCY x 11.60 mi= $408.32
Basic Water Haul cost: $0.60/LCY x 80.00 LCY = $48.00
Water Haul -15% grades: $0.14/LCY-mi x 80.00 LCY x 3.23 mi= $36.18
Water Haul St&Co Roads: $0.08/LCY-mi x 80.00 LCY x 11.00 mi= $70.40
COMPACT TEST - Surface layer
Dump Truck 10 cy 1.5 hr x $84.72/hr = $127.08

Subtotal: $6,224.03

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
Dry Method with Mulch: $510.69/acre x 0.20 acres = $102.14
Includes Small Quantity Factor of 1.15
+ Seed Cost: $132.00/acre x 0.20 acres = $26.40
+ Mulch Cost: $320.00/acre x 0.20 acres = $64.00

Subtotal: $192.54

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:

Subtotal: $0.00

Mobilization:
Construction - 7.90% of total Costs = $735.57
Surfacing - 8.64% by rock volume = $0.00

Subtotal: $735.57

Quarry Development:
Based on 8.64% of total rock volume

Subtotal: $0.00

Total: $13,529.17

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022
Road Number: 28-11-34.2 R Road Name:
Road Renovation: 0.22 mi 16 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$554.48
Blading 0.22 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.10 acres	$83.07
Includes Small Quantity Factor of 1.15	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.53 acres	$138.60
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $44.62 Surf. $0.00	$44.62
Quarry Development:	$0.00
Total:	$820.77

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

Road Construction Worksheet

Road Number: 28-11-34.2 R 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: $774.50/mi x 0.22 mi = $170.39
  Scarification: $937.38/mi x 0.22 mi = $206.22
  Compaction: $362.25/mi x 0.22 mi = $79.70
  Clean Culverts: $446.25/mi x 0.22 mi = $98.18

Subtotal: $554.48

Section 700-1200 Surfacing:
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: $510.69/acre x 0.10 acres = $51.07
        Includes Small Quantity Factor of 1.15
        + Mulch Cost: $320.00/acre x 0.10 acres = $32.00

Subtotal: $83.07

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
  Brushing width Left: 10ft. Right: 10ft.
  RoadSide Brushing Light: $261.50/acre x 0.53 acres = $138.60

Subtotal: $138.60

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 - 0.48% of total Costs = $44.62
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $44.62

Road Number: 28-11-34.2 R Continued

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $820.77

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022
Road Number: 28-11-34.3 C Road Name:
Road Construction: 0.06 mi 16 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.50 acres	$2,070.25
300 Excavation: Standard cy	$2,029.77
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$982.91
Quarry Name: Hervey 3-0" 34.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.20 acres	$192.54
Includes Small Quantity Factor of 1.15	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $303.31 Surf. $0.00	$303.31
Quarry Development:	$0.00
Total:	$5,578.77

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

Road Construction Worksheet

Road Number: 28-11-34.3 C Road Name:

Section 200 Clearing and Grubbing:
Clearing - Heavy (Clearing): Adjustment Factor (2.54)
16-30% (Avg Side Slopes): Adjustment Factor (0.1)
Pile and Burn (Slash): Adjustment Factor (1.28)
greater than 40' (Avg Clearing Widths): Adjustment Factor (0)
Total Adjustment Factor:2.54 + 0.1 + 1.28 + 0 = 3.92
Base Cost/Acre: $1,056.25 x Adjustment Factor: 3.92 x Total Acres: .5 = $2,070.25

Subtotal: $2,070.25

Section 300 Excavation:
Excavation - Common: $2.12/cy x 580.00 cy = $1,229.60
Subgrade Compaction: 4 Sta/hr $30.19/sta. x 4.0 sta = $120.76
Embankment Placement & Compaction 306.a - Common: $0.88/cy x 580.00 cy = $510.40
Blading without ditch: $12.90/station x 3.25 stations = $41.93
COMPACT TEST - Subgrade
Dump Truck 10 cy 1.5 hr x $84.72/hr = $127.08

Subtotal: $2,029.77

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:

Subtotal: $0.00

Section 700-1200 Surfacing:

Commercial Quarry Name: Hervey 3-0"
Comment: Rock 100' apron at 6" depth.

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.02mi	12ft	16ft	6in						

Rock Volume = 34.00 LCY
Purchase Price / Royalty: $11.75/LCY x 34.00 LCY = $399.50
Processing: $1.01/LCY x 34.00 LCY = $34.34
Compaction: $1.21/LCY x 34.00 LCY = $41.14
Basic Rock Haul cost: $0.66/LCY x 34.00 LCY = $22.44
Rock Haul -15% grades: $1.00/LCY-mi x 34.00 LCY x 6.75 mi= $229.50
Rock Haul St& Co Roads: $0.44/LCY-mi x 34.00 LCY x 11.60 mi= $173.54
Basic Water Haul cost: $0.60/LCY x 34.00 LCY = $20.40
Water Haul -15% grades: $0.14/LCY-mi x 34.00 LCY x 6.75 mi= $32.13
Water Haul St&Co Roads: $0.08/LCY-mi x 34.00 LCY x 11.00 mi= $29.92

Subtotal: $982.91

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
Dry Method with Mulch: $510.69/acre x 0.20 acres = $102.14
Includes Small Quantity Factor of 1.15
+ Seed Cost: $132.00/acre x 0.20 acres = $26.40
+ Mulch Cost: $320.00/acre x 0.20 acres = $64.00

Subtotal: $192.54

Section 1900 Cattleguards:

Subtotal: $0.00

Road Number: 28-11-34.3 C Continued

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:

Subtotal: $0.00

Mobilization:
  Construction - 3.26% of total Costs = $303.31
  Surfacing - 1.17% by rock volume = $0.00

Subtotal: $303.31

Quarry Development:
  Based on 1.17% of total rock volume

Subtotal: $0.00

Total: $5,578.77

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022
Road Number: 29-11-3.0 R Road Name:
Road Renovation: 0.95 mi 14 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: 1.45 acres	$6,512.05
300 Excavation: Standard cy	$4,582.17
Haul > 500 ft: 540.00 yd-mi	
400 Drainage:	$3,226.08
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 68.00 lf	
500 Renovation:	$2,595.04
Blading 0.95 mi	
700-1200 Surfacing:	$24,957.93
Quarry Name: Hervey 1.5-0" 734.00 LCY	
Quarry Name: Hervey 1.5-0" Spot 60.00 LCY	
Quarry Name: Hervey 6-0" Jaw Run 100.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$883.28
Gradation Class 3: 20.00 cy	
1800 Soil Stabilization: 2.57 acres	$2,474.12
Includes Small Quantity Factor of 1.15	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):2.30 acres	$1,603.88
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $2,692.76 Surf. $0.00	$2,692.76
Quarry Development:	$0.00
Total:	$49,527.30

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

Road Construction Worksheet

Road Number: 29-11-3.0 R Road Name:

Section 200 Clearing and Grubbing:
Clearing - Heavy (Clearing): Adjustment Factor (2.54)
16-30% (Avg Side Slopes): Adjustment Factor (0.1)
Pile and Burn (Slash): Adjustment Factor (1.28)
greater than 40' (Avg Clearing Widths): Adjustment Factor (0)
Total Adjustment Factor:2.54 + 0.1 + 1.28 + 0 = 3.92
Base Cost/Acre: $1,056.25 x Adjustment Factor: 3.92 x Total Acres: 1.45 = $6,003.73
Enhaul - renovation stumps
Dump Truck 10 cy 6 hr x $84.72/hr = $508.32

Subtotal: $6,512.05

Section 300 Excavation:
Excavation - Common: $2.12/cy x 725.00 cy = $1,537.00
Subgrade Compaction: 4 Sta/hr $30.19/sta. x 3.0 sta = $90.57
Embankment Placement & Compaction 306.a - Common: $0.88/cy x 725.00 cy = $638.00
End Hauling > 500 ft and 20 mph: $1.17/yd-mi x 540.00 yd-mi = $631.80
End Hauling > 500 ft - Fixed Cost (CY): $3.12/cy x 540.00 cy = $1,684.80

Subtotal: $4,582.17

Section 400 Drainage:
Poly Pipe MP 0.59 Xdrain 18 inch 34 lf x $46.36/lf = $1,576.24
Poly Pipe MP 0.77 Xdrain 18 inch 34 lf x $46.36/lf = $1,576.24
MP 0.77 - REMOVE CULVERT
Excavator - Large (3 CY) .5 hr x $147.20/hr = $73.60

Subtotal: $3,226.08

Section 500 Renovation:
Blading: $774.50/mi x 0.95 mi = $735.78
Scarification: $937.38/mi x 0.95 mi = $890.51
Compaction: $362.25/mi x 0.95 mi = $344.14
Clean Culverts: $446.25/mi x 0.95 mi = $423.94
Ditch out reno/construct
Excavator - Large (3 CY) .5 hr x $147.20/hr = $73.60
COMPACT TEST - Finish grading
Dump Truck 10 cy 1.5 hr x $84.72/hr = $127.08

Subtotal: $2,595.04

Section 700-1200 Surfacing:

Commercial Quarry Name: Hervey 1.5-0"
Comment: New 3" lift

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.86mi	12ft	13ft	3in	5%					

Rock Volume = 734.00 LCY
Purchase Price / Royalty: $12.50/LCY x 734.00 LCY = $9,175.00
Processing: $1.01/LCY x 734.00 LCY = $741.34
Compaction: $1.21/LCY x 734.00 LCY = $888.14
Basic Rock Haul cost: $0.66/LCY x 734.00 LCY = $484.44
Rock Haul -15% grades: $1.00/LCY-mi x 734.00 LCY x 5.35 mi= $3,926.90
Rock Haul St& Co Roads: $0.44/LCY-mi x 734.00 LCY x 11.60 mi= $3,746.34
Basic Water Haul cost: $0.60/LCY x 734.00 LCY = $440.40
Water Haul -15% grades: $0.14/LCY-mi x 734.00 LCY x 5.35 mi= $549.77
Water Haul St&Co Roads: $0.08/LCY-mi x 734.00 LCY x 11.00 mi= $645.92

Commercial Quarry Name: Hervey 1.5-0" Spot
Comment: TO, Culverts, Road fill replacement

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									60 LCY

Rock Volume = 60.00 LCY

Road Number: 29-11-3.0 R Continued

Purchase Price / Royalty: $12.50/LCY x 60.00 LCY = $750.00
Processing: $1.01/LCY x 60.00 LCY = $60.60
Compaction: $1.21/LCY x 60.00 LCY = $72.60
Basic Rock Haul cost: $0.66/LCY x 60.00 LCY = $39.60
Rock Haul -15% grades: $1.00/LCY-mi x 60.00 LCY x 5.31 mi= $318.60
Rock Haul St& Co Roads: $0.44/LCY-mi x 60.00 LCY x 11.60 mi= $306.24
Basic Water Haul cost: $0.60/LCY x 60.00 LCY = $36.00
Water Haul -15% grades: $0.14/LCY-mi x 60.00 LCY x 5.31 mi= $44.60
Water Haul St&Co Roads: $0.08/LCY-mi x 60.00 LCY x 11.00 mi= $52.80

Commercial Quarry Name: Hervey 6-0" Jaw Run
Comment: LDNG and Op area

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									100 LCY

Rock Volume = 100.00 LCY
Purchase Price / Royalty: $9.85/LCY x 100.00 LCY = $985.00
Processing: $1.01/LCY x 100.00 LCY = $101.00
Compaction: $1.21/LCY x 100.00 LCY = $121.00
Basic Rock Haul cost: $0.66/LCY x 100.00 LCY = $66.00
Rock Haul -15% grades: $1.00/LCY-mi x 100.00 LCY x 5.44 mi= $544.00
Rock Haul St& Co Roads: $0.44/LCY-mi x 100.00 LCY x 11.60 mi= $510.40
Basic Water Haul cost: $0.60/LCY x 100.00 LCY = $60.00
Water Haul -15% grades: $0.14/LCY-mi x 100.00 LCY x 5.44 mi= $76.16
Water Haul St&Co Roads: $0.08/LCY-mi x 100.00 LCY x 11.00 mi= $88.00
COMPACT TEST - Surfacing layer
Dump Truck 10 cy 1.5 hr x $84.72/hr = $127.08

Subtotal: $24,957.93

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:
Comment: MP 0.75 Road shoulder repair
Rock Source: Hervey Rip Rap
Purchase Price / Royalty: $27.00/cy x 20.00cy = $540.00
Furnish Class 3 type rock
Basic Rock Haul cost: $1.17/cy x 20.00cy = $23.40
Rock Haul -15% grades: $1.17/cy-mi x 20.00cy x 5.67 mi= $132.68
Rock Haul St& Co Roads: $0.52/cy-mi x 20.00cy x 11.60 mi= $120.64
Placement of Buttress height < 10 ft: 20.00cy x ($3.20/cy x 1.04) = $66.56

Subtotal: $883.28

Section 1800 Soil Stabilization:
Dry Method with Mulch: $510.69/acre x 2.57 acres = $1,312.48
Includes Small Quantity Factor of 1.15
+ Seed Cost: $132.00/acre x 2.57 acres = $339.24
+ Mulch Cost: $320.00/acre x 2.57 acres = $822.40

Subtotal: $2,474.12

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
RoadSide Brushing Heavy: $697.34/acre x 2.30 acres = $1,603.88

Subtotal: $1,603.88

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Road Number: 29-11-3.0 R Continued

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 28.93% of total Costs = $2,692.76
  Surfacing - 30.79% by rock volume = $0.00

Subtotal: $2,692.76

Quarry Development:
  Based on 30.79% of total rock volume

Subtotal: $0.00

Total: $49,527.30

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022
Road Number: 29-11-3.3A R Road Name:
Road Renovation: 0.33 mi 14 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: 0.40 acres	$2,206.77
300 Excavation: Standard cy	$1,281.70
Haul > 500 ft: 170.00 yd-mi	
400 Drainage:	$1,668.96
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 36.00 lf	
500 Renovation:	$2,153.71
Blading 0.33 mi	
Slide Removal 350.00 cy	
700-1200 Surfacing:	$6,697.09
Quarry Name: Hervey 1.5-0" 199.00 LCY	
Quarry Name: Hervey 1.5-0" Spot 30.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.80 acres	$770.15
Includes Small Quantity Factor of 1.15	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.79 acres	$550.90
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $881.36 Surf. $0.00	$881.36
Quarry Development:	$0.00
Total:	$16,210.64

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

Road Construction Worksheet

Road Number: 29-11-3.3A R Road Name:

Section 200 Clearing and Grubbing:
Clearing - Heavy (Clearing): Adjustment Factor (2.54)
16-30% (Avg Side Slopes): Adjustment Factor (0.1)
Pile and Burn (Slash): Adjustment Factor (1.28)
20-40' (Avg Clearing Widths): Adjustment Factor (0.1)
Total Adjustment Factor:2.54 + 0.1 + 1.28 + 0.1 = 4.02
Base Cost/Acre: $1,056.25 x Adjustment Factor: 4.02 x Total Acres: .4 = $1,698.45
Endhaul - renovation stumps
Dump Truck 10 cy 6 hr x $84.72/hr = $508.32
Subtotal: $2,206.77

Section 300 Excavation:
Comment: Ditch renovation and fill replacement
Excavation - Common: $2.12/cy x 190.00 cy = $402.80
Embankment Placement & Compaction 306.a - Common: $0.88/cy x 170.00 cy = $149.60
End Hauling > 500 ft and 20 mph: $1.17/yd-mi x 170.00 yd-mi = $198.90
End Hauling > 500 ft - Fixed Cost (CY): $3.12/cy x 170.00 cy = $530.40
Subtotal: $1,281.70

Section 400 Drainage:
Poly Pipe STA 12+65 Xdrain 18 inch 36 lf x $46.36/lf = $1,668.96
Subtotal: $1,668.96

Section 500 Renovation:
Slide Removal 350.00 cy
Front End Loader $114.43/hr x 6.00 hr = $686.58
Dump Truck: $84.72/hr x 6.00 hr = $508.32
Blading: $774.50/mi x 0.33 mi = $255.59
Scarification: $937.38/mi x 0.33 mi = $309.34
Compaction: $362.25/mi x 0.33 mi = $119.54
Clean Culverts: $446.25/mi x 0.33 mi = $147.26
COMPACT TEST - Finish grade
Dump Truck 10 cy 1.5 hr x $84.72/hr = $127.08
Subtotal: $2,153.71

Section 700-1200 Surfacing:

Commercial Quarry Name: Hervey 1.5-0"
Comment: 3" lift surfacing

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.24mi	12ft	13ft	3in	1%					

Rock Volume = 199.00 LCY
Purchase Price / Royalty: $12.50/LCY x 199.00 LCY = $2,487.50
Processing: $1.01/LCY x 199.00 LCY = $200.99
Compaction: $1.21/LCY x 199.00 LCY = $240.79
Basic Rock Haul cost: $0.66/LCY x 199.00 LCY = $131.34
Rock Haul -15% grades: $1.00/LCY-mi x 199.00 LCY x 5.90 mi= $1,174.10
Rock Haul St& Co Roads: $0.44/LCY-mi x 199.00 LCY x 11.60 mi= $1,015.70
Basic Water Haul cost: $0.60/LCY x 199.00 LCY = $119.40
Water Haul -15% grades: $0.14/LCY-mi x 199.00 LCY x 5.90 mi= $164.37
Water Haul St&Co Roads: $0.08/LCY-mi x 199.00 LCY x 11.00 mi= $175.12

Commercial Quarry Name: Hervey 1.5-0" Spot
Comment: Culvert fill, replacement road fill

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									30 LCY

Rock Volume = 30.00 LCY
Purchase Price / Royalty: $12.50/LCY x 30.00 LCY = $375.00
Processing: $1.01/LCY x 30.00 LCY = $30.30

Road Number: 29-11-3.3A R Continued

Compaction: $1.21/LCY x 30.00 LCY = $36.30
Basic Rock Haul cost: $0.66/LCY x 30.00 LCY = $19.80
Rock Haul -15% grades: $1.00/LCY-mi x 30.00 LCY x 5.90 mi= $177.00
Rock Haul St& Co Roads: $0.44/LCY-mi x 30.00 LCY x 11.60 mi= $153.12
Basic Water Haul cost: $0.60/LCY x 30.00 LCY = $18.00
Water Haul -15% grades: $0.14/LCY-mi x 30.00 LCY x 5.90 mi= $24.78
Water Haul St&Co Roads: $0.08/LCY-mi x 30.00 LCY x 11.00 mi= $26.40
COMPACT TEST - Sufacing layer
Dump Truck 10 cy 1.5 hr x $84.72/hr = $127.08

Subtotal: $6,697.09

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
Comment: Exposed soil - renovation, construct., culvert, slide remove
Dry Method with Mulch: $510.69/acre x 0.80 acres = $408.55
Includes Small Quantity Factor of 1.15
+ Seed Cost: $132.00/acre x 0.80 acres = $105.60
+ Mulch Cost: $320.00/acre x 0.80 acres = $256.00

Subtotal: $770.15

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
RoadSide Brushing Heavy: $697.34/acre x 0.79 acres = $550.90

Subtotal: $550.90

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 - 9.47% of total Costs = $881.36
Surfacing - 7.89% by rock volume = $0.00

Subtotal: $881.36

Quarry Development:
Based on 7.89% of total rock volume

Subtotal: $0.00

Total: $16,210.64

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022
Road Number: 29-11-3.3B1 R Road Name:
Road Renovation: 0.34 mi 14 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation: Standard cy	$1,312.20
Haul > 500 ft: 180.00 yd-mi	
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$920.47
Blading 0.34 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.25 acres	$207.67
Includes Small Quantity Factor of 1.15	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.82 acres	$214.43
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $152.64 Surf. $0.00	$152.64
Quarry Development:	$0.00
Total:	$2,807.41

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

Road Construction Worksheet

Road Number: 29-11-3.3B1 R Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:
Comment: Ditch bunch/endhaul
Excavation - Common: $2.12/cy x 180.00 cy = $381.60
Embankment Placement & Compaction 306.a - Common: $0.88/cy x 180.00 cy = $158.40
End Hauling > 500 ft and 20 mph: $1.17/yd-mi x 180.00 yd-mi = $210.60
End Hauling > 500 ft - Fixed Cost (CY): $3.12/cy x 180.00 cy = $561.60

Subtotal: $1,312.20

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
Blading: $774.50/mi x 0.34 mi = $263.33
Scarification: $937.38/mi x 0.34 mi = $318.71
Compaction: $362.25/mi x 0.34 mi = $123.17
Clean Culverts: $446.25/mi x 0.34 mi = $151.73
COMPACT TEST - Finished grade
Dump Truck 10 cy .75 hr x $84.72/hr = $63.54

Subtotal: $920.47

Section 700-1200 Surfacing:
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: $510.69/acre x 0.25 acres = $127.67
Includes Small Quantity Factor of 1.15
+ Mulch Cost: $320.00/acre x 0.25 acres = $80.00

Subtotal: $207.67

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
Brushing width Left: 10ft. Right: 10ft.
RoadSide Brushing Light: $261.50/acre x 0.82 acres = $214.43

Subtotal: $214.43

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Road Number: 29-11-3.3B1 R Continued

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 1.64% of total Costs = $152.64
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $152.64

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $2,807.41

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022
Road Number: 29-11-3.3B2 R Road Name:
Road Renovation: 0.25 mi 14 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation: Standard cy Haul > 500 ft: 50.00 yd-mi	$514.50
400 Drainage: Culvert: 0.00 lf DownSpout: 0.00 lf PolyPipe: 0.00 lf	$0.00
500 Renovation: Blading 0.25 mi	$693.64
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.25 acres Includes Small Quantity Factor of 1.15	$207.67
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.60 acres	$156.90
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $90.42 Surf. $0.00	$90.42
Quarry Development:	$0.00
Total:	$1,663.13

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

Road Construction Worksheet

Road Number: 29-11-3.3B2 R Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:
Comment: Ditch bunch/end., Improve junction @ STA 47+00 (Loaded TTA)
Excavation - Common: $2.12/cy x 100.00 cy = $212.00
Embankment Placement & Compaction 306.a - Common: $0.88/cy x 100.00 cy = $88.00
End Hauling > 500 ft and 20 mph: $1.17/yd-mi x 50.00 yd-mi = $58.50
End Hauling > 500 ft - Fixed Cost (CY): $3.12/cy x 50.00 cy = $156.00

Subtotal: $514.50

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
Blading: $774.50/mi x 0.25 mi = $193.63
Scarification: $937.38/mi x 0.25 mi = $234.35
Compaction: $362.25/mi x 0.25 mi = $90.56
Clean Culverts: $446.25/mi x 0.25 mi = $111.56
COMPACT TEST - Finish grade
Dump Truck 10 cy .75 hr x $84.72/hr = $63.54

Subtotal: $693.64

Section 700-1200 Surfacing:
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: $510.69/acre x 0.25 acres = $127.67
Includes Small Quantity Factor of 1.15
+ Mulch Cost: $320.00/acre x 0.25 acres = $80.00

Subtotal: $207.67

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
Brushing width Left: 10ft. Right: 10ft.
RoadSide Brushing Light: $261.50/acre x 0.60 acres = $156.90

Subtotal: $156.90

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Road Number: 29-11-3.3B2 R Continued

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 0.97% of total Costs = $90.42
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $90.42

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $1,663.13

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022
Road Number: 29-11-3.4 C Road Name:
Road Construction: 0.03 mi 16 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: 0.31 acres	$1,283.56
300 Excavation: Standard cy	$1,744.71
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$4,765.93
Quarry Name: Hervey 3-0" 96.00 LCY	
Quarry Name: Hervey 6-0" Jaw Run 80.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.15 acres	$144.40
Includes Small Quantity Factor of 1.15	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $456.43 Surf. $0.00	$456.43
Quarry Development:	$0.00
Total:	$8,395.03

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

Road Construction Worksheet

Road Number: 29-11-3.4 C Road Name:

Section 200 Clearing and Grubbing:
Clearing - Heavy (Clearing): Adjustment Factor (2.54)
16-30% (Avg Side Slopes): Adjustment Factor (0.1)
Pile and Burn (Slash): Adjustment Factor (1.28)
greater than 40' (Avg Clearing Widths): Adjustment Factor (0)
Total Adjustment Factor:2.54 + 0.1 + 1.28 + 0 = 3.92
Base Cost/Acre: $1,056.25 x Adjustment Factor: 3.92 x Total Acres: .31 = $1,283.56

Subtotal: $1,283.56

Section 300 Excavation:
Excavation - Common: $2.12/cy x 530.00 cy = $1,123.60
Embankment Placement & Compaction 306.a - Common: $0.88/cy x 530.00 cy = $466.40
Blading with ditch: $15.35/station x 1.80 stations = $27.63
COMPACT TEST - Subgrade
Dump Truck 10 cy 1.5 hr x $84.72/hr = $127.08

Subtotal: $1,744.71

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:

Subtotal: $0.00

Section 700-1200 Surfacing:

Commercial Quarry Name: Hervey 3-0"
Comment: 9" lift of surfacing.

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.03mi	13ft	16ft	9in						

Rock Volume = 96.00 LCY
Purchase Price / Royalty: $11.75/LCY x 96.00 LCY = $1,128.00
Processing: $1.01/LCY x 96.00 LCY = $96.96
Compaction: $1.21/LCY x 96.00 LCY = $116.16
Basic Rock Haul cost: $0.66/LCY x 96.00 LCY = $63.36
Rock Haul -15% grades: $1.00/LCY-mi x 96.00 LCY x 5.26 mi= $504.96
Rock Haul St& Co Roads: $0.44/LCY-mi x 96.00 LCY x 11.60 mi= $489.98
Basic Water Haul cost: $0.60/LCY x 96.00 LCY = $57.60
Water Haul -15% grades: $0.14/LCY-mi x 96.00 LCY x 5.26 mi= $70.69
Water Haul St&Co Roads: $0.08/LCY-mi x 96.00 LCY x 11.00 mi= $84.48

Commercial Quarry Name: Hervey 6-0" Jaw Run
Comment: End LDNG surfacing

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									80 LCY

Rock Volume = 80.00 LCY
Purchase Price / Royalty: $9.85/LCY x 80.00 LCY = $788.00
Processing: $1.01/LCY x 80.00 LCY = $80.80
Compaction: $1.21/LCY x 80.00 LCY = $96.80
Basic Rock Haul cost: $0.66/LCY x 80.00 LCY = $52.80
Rock Haul -15% grades: $1.00/LCY-mi x 80.00 LCY x 5.28 mi= $422.40
Rock Haul St& Co Roads: $0.44/LCY-mi x 80.00 LCY x 11.60 mi= $408.32
Basic Water Haul cost: $0.60/LCY x 80.00 LCY = $48.00
Water Haul -15% grades: $0.14/LCY-mi x 80.00 LCY x 5.28 mi= $59.14
Water Haul St&Co Roads: $0.08/LCY-mi x 80.00 LCY x 11.00 mi= $70.40
COMPACT TEST - Surfacing layer
Dump Truck 10 cy 1.5 hr x $84.72/hr = $127.08

Subtotal: $4,765.93

Section 1300 Geotextiles:

Road Number: 29-11-3.4 C Continued

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $510.69/acre x 0.15 acres = $76.60
        Includes Small Quantity Factor of 1.15
        + Seed Cost: $132.00/acre x 0.15 acres = $19.80
        + Mulch Cost: $320.00/acre x 0.15 acres = $48.00

Subtotal: $144.40

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:

Subtotal: $0.00

Mobilization:
  Construction - 4.90% of total Costs = $456.43
  Surfacing - 6.06% by rock volume = $0.00

Subtotal: $456.43

Quarry Development:
  Based on 6.06% of total rock volume

Subtotal: $0.00

Total: $8,395.03

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022
Road Number: SPUR 4A R Road Name:
Road Renovation: 0.07 mi 16 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$1,742.56
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 36.00 lf	
500 Renovation:	$303.51
Blading 0.07 mi	
700-1200 Surfacing:	$341.94
Quarry Name: Hervey 1.5-0" Spot 15.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.20 acres	$192.54
Includes Small Quantity Factor of 1.15	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.20 acres	$87.17
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $153.38 Surf. $0.00	$153.38
Quarry Development:	$0.00
Total:	$2,821.10

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

Road Construction Worksheet

Road Number: SPUR 4A R Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:
Poly Pipe STA 0+50 Xdrain 18 inch 36 lf x $46.36/lf = $1,668.96
STA 0+40 remove CMP/fill ditch
Excavator - Large (3 CY) .5 hr x $147.20/hr = $73.60

Subtotal: $1,742.56

Section 500 Renovation:
Blading: $774.50/mi x 0.07 mi = $54.22
Scarification: $937.38/mi x 0.07 mi = $65.62
Compaction: $362.25/mi x 0.07 mi = $25.36
Clean Culverts: $446.25/mi x 0.07 mi = $31.24
COMPACT TEST - Finish grading
Dump Truck 10 cy 1.5 hr x $84.72/hr = $127.08

Subtotal: $303.51

Section 700-1200 Surfacing:

Commercial Quarry Name: Hervey 1.5-0" Spot
Comment: Culvert fill, surface, ditch dam

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									15 LCY

Rock Volume = 15.00 LCY
Purchase Price / Royalty: $12.50/LCY x 15.00 LCY = $187.50
Processing: $1.01/LCY x 15.00 LCY = $15.15
Compaction: $1.21/LCY x 15.00 LCY = $18.15
Basic Rock Haul cost: $0.66/LCY x 15.00 LCY = $9.90
Rock Haul -15% grades: $1.00/LCY-mi x 15.00 LCY x 0.73 mi= $10.95
Rock Haul St& Co Roads: $0.44/LCY-mi x 15.00 LCY x 11.60 mi= $76.56
Basic Water Haul cost: $0.60/LCY x 15.00 LCY = $9.00
Water Haul -15% grades: $0.14/LCY-mi x 15.00 LCY x 0.73 mi= $1.53
Water Haul St&Co Roads: $0.08/LCY-mi x 15.00 LCY x 11.00 mi= $13.20

Subtotal: $341.94

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
Dry Method with Mulch: $510.69/acre x 0.20 acres = $102.14
Includes Small Quantity Factor of 1.15
+ Seed Cost: $132.00/acre x 0.20 acres = $26.40
+ Mulch Cost: $320.00/acre x 0.20 acres = $64.00

Subtotal: $192.54

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
RoadSide Brushing Medium: $435.84/acre x 0.20 acres = $87.17

Road Number: SPUR 4A R Continued

Subtotal: $87.17

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 - 1.65% of total Costs = $153.38
  Surfacing - 0.52% by rock volume = $0.00

Subtotal: $153.38

Quarry Development:
  Based on 0.52% of total rock volume

Subtotal: $0.00

Total: $2,821.10

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Mobilization Costs - Construction and Surfacing

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022

Average Mobilization distance = 50 miles Factor = 1.00

Mobilization: Construction
Comment: LumpSum = $1500 equip washing Inter-sale lowboy mob Exc/D7
Fire Equipment: 1 ea x (1.00 x $86.00/ea + 0 mi x $4.77/mi)= $86.00
Graders-all: 1 ea x (1.00 x $450.00/ea + 5 mi x $15.42/mi)= $527.10
Loaders > 3cy: 1 ea x (1.00 x $728.00/ea + 5 mi x $14.79/mi)= $801.95
Rollers & Comp: 1 ea x (1.00 x $450.00/ea + 5 mi x $24.15/mi)= $570.75
Excavators: 3 ea x (1.00 x $1006.00/ea = $3,018.00
RTBackhoes 24/30: 1 ea x (1.00 x $335.00/ea + 5 mi x $6.51/mi)= $367.55
Tractors <= D7: 3 ea x (1.00 x $728.00/ea + 0 mi x $33.65/mi)= $2,184.00
Dump Truck<=15cy: 1 ea x (1.00 x $102.00/ea + 5 mi x $4.24/mi)= $123.20
Water Truck: 1 ea x (1.00 x $107.00/ea + 5 mi x $4.45/mi)= $129.25
Lump Sum: $1,500.00

Subtotal: $9,307.80*

*NOTE: INCLUDES WITHIN TIMBER SALE EQUIPMENT MOBILIZATION USING LOWBOY.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Summary of Construction Quantities

T.S. Contract Name: Elk Creek Ridge CT Sale Date: 10282022

Road Number	Const	Improv	Renov	Decomm	Temp
28-11-29.0					
28-11-29.1					
28-11-29.2 R			17.8		
28-11-33.0 R			26.6		
28-11-33.2 C	2.5				
28-11-34.2 R			11.6		
28-11-34.3 C	3.25				
29-11-3.0 R			50.16		
29-11-3.3A R			17.2		
29-11-3.3B1 R			17.8		
29-11-3.3B2 R			13		
29-11-3.4 C	1.8				
SPUR 4A R			3.6		
Total Sta:	7.55		157.76		

200 Clearing and Grubbing*	Clearing acres
28-11-29.0	0.1
28-11-29.1	0.5
28-11-29.2 R	1.0
28-11-33.0 R	0.9
28-11-33.2 C	0.4
28-11-34.2 R	0.0
28-11-34.3 C	0.5
29-11-3.0 R	1.5
29-11-3.3A R	0.4
29-11-3.3B1 R	0.0
29-11-3.3B2 R	0.0
29-11-3.4 C	0.3
SPUR 4A R	0.0
Totals:	5.6

Endhaul - reno stumps 28-11-33.0 R
Dump Truck 10 cy . . . . . 6 hr
Endhaul - renovation stumps 29-11-3.3A R
Dump Truck 10 cy . . . . . 6 hr
Endhaul stumps - roadway 28-11-29.2 R
Dump Truck 10 cy . . . . . 6 hr
Enhaul - renovation stumps 29-11-3.0 R
Dump Truck 10 cy . . . . . 6 hr

*Clearing and grubbing costs may be accounted in Section 300 as time & equipment.

300 Excavation	Excav LCY.s	Haul sta-yds	Haul yd-mi
28-11-29.0	50	0	0
28-11-29.1	275	0	0
28-11-29.2 R	550	0	230
28-11-33.0 R	650	0	380
28-11-33.2 C	1,500	1,300	0
28-11-34.3 C	580	0	0
29-11-3.0 R	725	0	540
29-11-3.3A R	190	0	170
29-11-3.3B1 R	180	0	180

29-11-3.3B2 R	100	0	50
29-11-3.4 C	530	0	0
Totals:	5,330	1,300	1,550

COMPACT TEST - Subgrade 28-11-34.3 C
Dump Truck 10 cy . . . . . 1.5 hr
COMPACT TEST - Subgrade 29-11-3.4 C
Dump Truck 10 cy . . . . . 1.5 hr
COMPACT TEST - Subgrade 28-11-33.2 C
Dump Truck 10 cy . . . . . 1.5 hr

400 Drainage

Road Number	CMP Culvert	Polypipes	Downspouts
28-11-29.2 R	0 lf	90 lf	0 lf
28-11-33.0 R	0 lf	36 lf	0 lf
29-11-3.0 R	0 lf	68 lf	0 lf
29-11-3.3A R	0 lf	36 lf	0 lf
SPUR 4A R	0 lf	36 lf	0 lf
Total Drainage:		266 lf	

Culvert Qty	Aluminized	Galvanized	Poly Pipe
12 inch	0 lf	0 lf	
18 inch	0 lf	0 lf	216 lf
24 inch	0 lf	0 lf	0 lf
30 inch	0 lf	0 lf	0 lf
36 inch	0 lf	0 lf	50 lf
42 inch	0 lf	0 lf	
48 inch	0 lf	0 lf	

Downspout Qty	Half Round	Full (poly)	Full (galv)
18 inch	0 lf	0 lf	0 lf
21 inch	0 lf		
24 inch	0 lf	0 lf	0 lf
30 inch		0 lf	

MP 0.77 - REMOVE CULVERT 29-11-3.0 R
Excavator - Large (3 CY) . . . . . .5 hr
STA 0+40 remove CMP/fill ditch SPUR 4A R
Excavator - Large (3 CY) . . . . . .5 hr
STA 12+58 - REMOVE CULVERT 28-11-33.0 R
Excavator - Large (3 CY) . . . . . .5 hr
STA 17+10 - REMOVE CULVERT 28-11-29.2 R
Excavator - Large (3 CY) . . . . . .5 hr

500 Renovation

	Blade Miles	Slide cy
28-11-29.2 R	0.34	0
28-11-33.0 R	0.50	0
28-11-34.2 R	0.22	0
29-11-3.0 R	0.95	0
29-11-3.3A R	0.33	350
29-11-3.3B1 R	0.34	0
29-11-3.3B2 R	0.25	0
SPUR 4A R	0.07	0
Totals:	3.00	350

Barrier removal w/ staging 28-11-29.2 R

Excavator - Large (3 CY) . . . . . .25 hr
COMPACT TEST - Finish grade 29-11-3.3B2 R
Dump Truck 10 cy . . . . . .75 hr
COMPACT TEST - Finish grade 29-11-3.3A R
Dump Truck 10 cy . . . . . 1.5 hr
COMPACT TEST - FINISH GRADE 28-11-33.0 R
Dump Truck 10 cy . . . . . 1.5 hr
COMPACT TEST - Finish grading SPUR 4A R
Dump Truck 10 cy . . . . . 1.5 hr
COMPACT TEST - Finish grading 29-11-3.0 R
Dump Truck 10 cy . . . . . 1.5 hr
COMPACT TEST - Finished grade 29-11-3.3B1 R
Dump Truck 10 cy . . . . . .75 hr
COMPACTION TEST - FINISH GRADE 28-11-29.2 R
Dump Truck 10 cy . . . . . 1.5 hr
Ditch out 1reno/1construct 28-11-29.2 R
Excavator - Large (3 CY) . . . . . .5 hr
Ditch out reno/construct 29-11-3.0 R
Excavator - Large (3 CY) . . . . . .5 hr
Ditch out reno/construct 28-11-33.0 R
Excavator - Large (3 CY) . . . . . 1 hr
STA 11+75 road realignment 28-11-33.0 R
Motor Grader 14M . . . . . 2 hr

Surfacing (Loose Cubic Yards)
Note: Due to slight rounding differences between total LCY vs. subtotaled LCY,
Totals shown here may not be exactly as shown in the road summaries and worksheets.

Quarry Name: Hervey 1.5-0"

Commercial	Roadway	Turnouts	Other	
28-11-33.0 R	430	0	0	430
29-11-3.0 R	734	0	0	734
29-11-3.3A R	199	0	0	199
Totals:	1,363	0	0	1,363

Quarry Name: Hervey 1.5-0" Spot

Commercial	Roadway	Turnouts	Other	
28-11-29.1	0	0	25	25
28-11-29.2 R	0	0	80	80
28-11-33.0 R	0	0	120	120
28-11-33.0 R	0	0	20	20
28-11-33.0 R	0	0	10	10
29-11-3.0 R	0	0	60	60
29-11-3.3A R	0	0	30	30
SPUR 4A R	0	0	15	15
Totals:	0	0	360	360

Quarry Name: Hervey 3-0"

Commercial	Roadway	Turnouts	Other	
28-11-34.3 C	34	0	0	34
29-11-3.4 C	96	0	0	96
28-11-33.2 C	141	0	0	141
Totals:	271	0	0	271

Quarry Name: Hervey 3-0" Spot

Commercial	Roadway	Turnouts	Other	
Totals:	0	0	0	0

Quarry Name: Hervey 3-0" LDNG

Commercial	Roadway	Turnouts	Other	
28-11-29.1	0	0	300	300
28-11-33.2 C	0	0	30	30
Totals:	0	0	330	330

Quarry Name: Hervey 6-0" Jaw Run

Commercial	Roadway	Turnouts	Other	
28-11-33.0 R	0	0	320	320
29-11-3.0 R	0	0	100	100
29-11-3.4 C	0	0	80	80
28-11-33.2 C	0	0	80	80
Totals:	0	0	580	580

Quarry Name: Hervey Rip Rap

Commercial	Roadway	Turnouts	Other	
Totals:	0	0	0	0

COMPACT TEST - Sufacing layer 29-11-3.3A R
Dump Truck 10 cy . . . . . 1.5 hr
COMPACT TEST - Surface layer 28-11-33.2 C
Dump Truck 10 cy . . . . . 1.5 hr
COMPACT TEST - Surfacing layer 29-11-3.4 C
Dump Truck 10 cy . . . . . 1.5 hr
COMPACT TEST - Surfacing layer 29-11-3.0 R
Dump Truck 10 cy . . . . . 1.5 hr
COMPACT TEST - SURFACING LYR 28-11-33.0 R
Dump Truck 10 cy . . . . . 1.5 hr

1300 Geotextiles

Totals: No Quantities

1400 Slope Protection

29-11-3.0 R	Gradation Class 3:	20 cy
Totals:		20 cy

1800 Soil stabilization - acres	Dry W/O Mulch	Dry/with Mulch	Hydro Mulch
28-11-29.0	0.0	0.0	0.0
28-11-29.1	0.0	0.0	0.0
28-11-29.2 R	0.0	0.0	0.0
28-11-33.0 R	0.0	0.0	0.0
28-11-33.2 C	0.0	0.0	0.0
28-11-34.2 R	0.0	0.0	0.0
28-11-34.3 C	0.0	0.0	0.0
29-11-3.0 R	0.0	0.0	0.0
29-11-3.3A R	0.0	0.0	0.0
29-11-3.3B1 R	0.0	0.0	0.0
29-11-3.3B2 R	0.0	0.0	0.0
29-11-3.4 C	0.0	0.0	0.0
SPUR 4A R	0.0	0.0	0.0
Totals:	0.00	7.70	0.00

Small Quantity Factor of 1.15 used

1900 Cattleguards

Totals:	No Quantities

2100 RoadSide Brushing

	acres
28-11-29.2 R - Mechanical Brushing	0.8
28-11-33.0 R - Mechanical Brushing	1.2
28-11-34.2 R - Mechanical Brushing	0.5
29-11-3.0 R - Mechanical Brushing	2.3
29-11-3.3A R - Mechanical Brushing	0.8
29-11-3.3B1 R - Mechanical Brushing	0.8
29-11-3.3B2 R - Mechanical Brushing	0.6
SPUR 4A R - Mechanical Brushing	0.2
Totals:	7.2

2300 Engineering

	stations
Totals:	0.00

2400 Minor Concrete

Totals:	No Quantities

2500 Gabions

Totals:	No Quantities

8000 Miscellaneous

Totals:	No Quantities

T
28 S R 11 W

EXHIBIT D

LEGEND

- OPERATOR MAINTAINED–BLM ROAD
- OPERATOR MAINTAINED–PRVT ROAD
- EXISTING ROAD
- PAVED ROAD
- LANDING
- BRIDGE
- GATE
- BORROW SITE (B)
- EARTHEN BARRIER
- ROAD SEGEMENT
- MILEPOST — MP
- STATION — STA

N

SITKUM ROAD

JUNCTION
MP 10.75=
MP 0.00

28–11–29.0

29

28

27

PRIVATE

BLM

–29.1

STA 0+25

28–11–29.2

STA 0+50

SPUR 4A

28–11–29.0

PRIVATE

BLM

PRIVATE

28–11–29.1

PRIVATE

PRIVATE

BLM

BLM

32

33

34

Maintenance Rock:
250 CY 1.5–0"Aggregate*
50 CY 3–0"Aggregate**
*1.5–0" Aggregate Surfaced Roads ONLY
**3–0" Aggregate Surfaced Roads ONLY

28–11–33.2
STA 0+25

28–11–33.0

ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT – OREGON

ORC04–TS–2023.0030
ELK CREEK RIDGE CT
EXHIBIT C WORK LOCATION MAP

DESIGNED	J. AGUILAR
REVIEWED	INTERNAL
APPROVED	T. SUE
DRAWN JAA	SCALE NONE
DATE 01/2022	SHEET 1 OF 12

28-11-33.2
STA 0+25

28-11-33.0

B

33

28-11-29.1

T
28 R 11 W
S

BLM

BLM

28-11-27.1

34

-3.3 C

PRVT SPUR

-3.3 B2

28-11-34.2

28-11-34.3
STA 2+15

-3.3 B1

29-11-3.3 A

PRIVATE

BLM

BLM

BLM

35

PRIVATE

N

T
29 R 11 W
S

BLM

Maintenance Rock:
250 CY 1.5-0"Aggregate*
50 CY 3-0"Aggregate**
*1.5-0" Aggregate Surfaced Roads ONLY
**3-0" Aggregate Surfaced Roads ONLY

29-11-3.4
STA 0+50

BLM

2

4

PRIVATE

BLM

29-11-3.0

3

EXHIBIT D

LEGEND

OPERATOR MAINTAINED-BLM ROAD	
OPERATOR MAINTAINED-PRVT ROAD	
EXISTING ROAD	
PAVED ROAD	
LANDING	⊗
BRIDGE	
GATE	
BORROW SITE	Ⓑ
EARTHEN BARRIER	
ROAD SEGEMENT	
MILEPOST	MP
STATION	STA

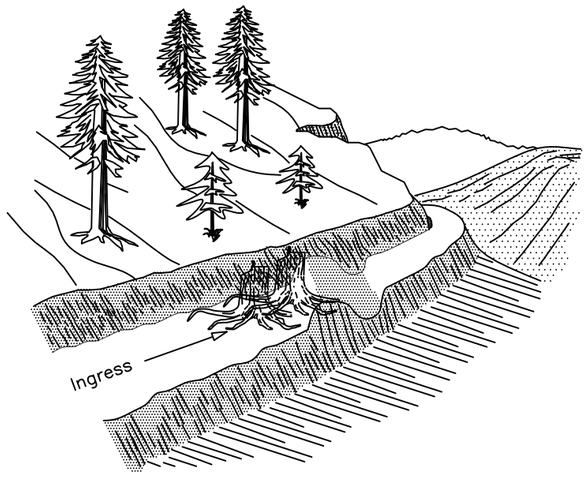
ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT - OREGON

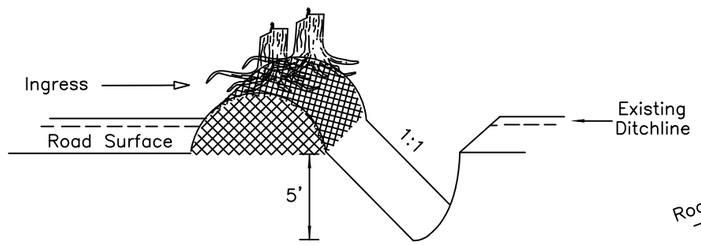
ORC04-TS-2023.0030
ELK CREEK RIDGE CT
EXHIBIT C WORK LOCATION MAP

DESIGNED	J. AGUILAR
REVIEWED	INTERNAL
APPROVED	T. SUE
DRAWN JAA	SCALE NONE
DATE 01/2022	SHEET 2 OF 12

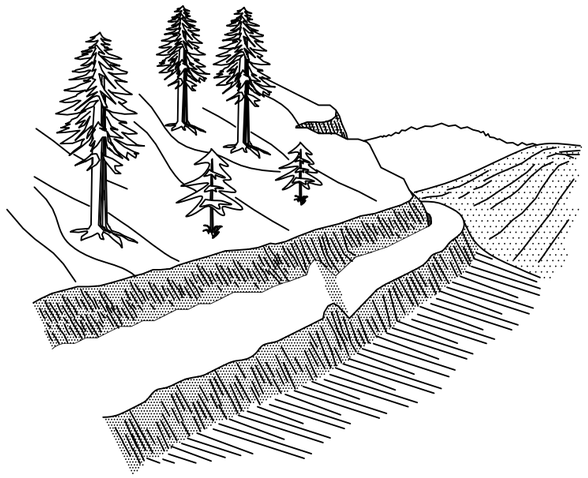
EXHIBIT D



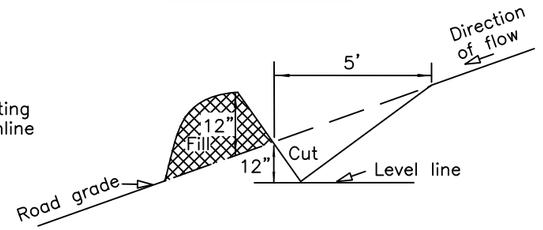
EARTHEN BERM BARRIER



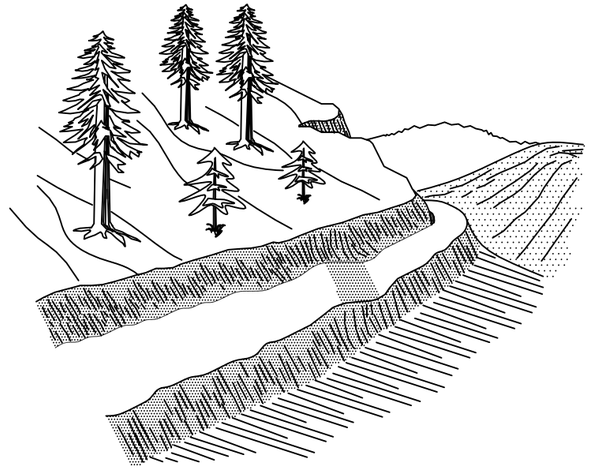
(NOT TO SCALE)



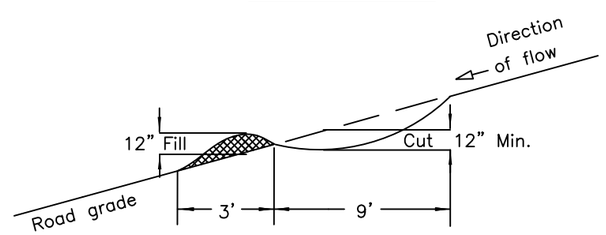
WATER BAR



(NOT TO SCALE)



WATER DIP

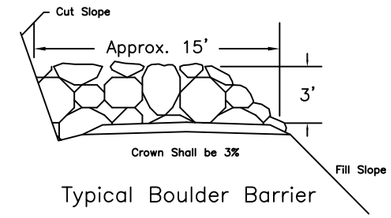


(NOT TO SCALE)

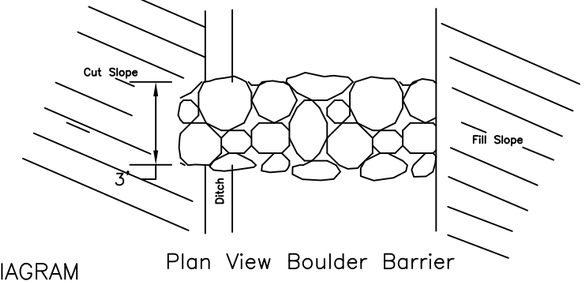
WATER DIP/BAR SPACING

ROAD GRADE	Road Class	
	Maximum Spacing (in feet)	
%	Natural	Rocked
3-5	200	400
6-10	150	300
11-15	100	200
16-20	75	150
21-35	50	100
36+	50	50

* ON GRADES IN EXCESS OF 14% CONSTRUCT WATER BARS.



Typical Boulder Barrier

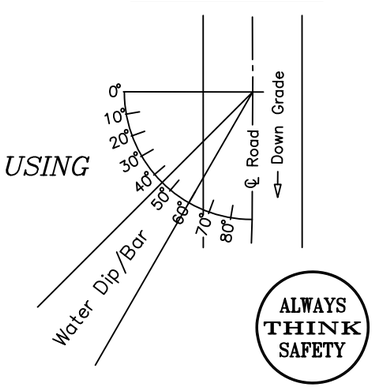


Plan View Boulder Barrier

NOTES

1. *ALL BARRIERS, WATER BARS, AND WATER DIPS AS REQUIRED SHALL BE CONSTRUCTED AS SHOWN.*
2. *LOCATIONS WILL BE AS DIRECTED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.*
3. *ALL WATER DIPS AND WATER BARS SHALL BE SKEWED 45° – 60°.*
4. *INVERT GRADE OF WATER DIPS AND WATER BARS SHALL BE OUTSLOPED A MINIMUM OF 2–5%.*
5. *ALL WATER BARS AND WATER DIPS SHALL BE CUT INTO THE ROADBED FROM THE DITCHLINE.*
6. *DITCHLINES SHALL BE BLOCKED WITH EXCAVATED MATERIAL (DITCH DAM) DOWNGRADE FROM ALL WATER BARS AND WATER DIPS.*
7. *EXCAVATED MATERIAL FROM BARRIER TRENCH (TANK TRAP) SHALL BE PLACED ON THE SIDE NEAREST THE BEGINNING OF THE ROAD.*
8. *ALL BERMS INCLUDING WATER BARS, WATER DIPS, AND EARTHEN BARRIERS SHALL BE COMPACTED TO 85% OF MAXIMUM DENSITY.*
9. *RIP RAP BARRIERS SHALL BE AT LEAST 3' HIGH, 3' DEEP, AND OF SUFFICIENT WIDTH TO COMPLETELY BLOCK THE ROADWAY AND ANY ADJACENT SHOULDERS THAT CAN BE TRAVELED WITH A VEHICLE.*
10. *RIP RAP BARRIERS SHALL BE CONSTRUCTED USING A MINIMUM OF 20 CY OF RIP RAP.*
11. *RIP RAP SHALL BE DURABLE (NOT LESS THAN 50 AS DETERMINED BY AASHTO T210), AND RANGE FROM 28"–34" IN DIAMETER.*

SKEW DIAGRAM



ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT – OREGON

ORC04–TS–2023.0030
ELK CREEK RIDGE CT
BARRIER & EROSION CONTROL DETAILS

DESIGNED	J. AGUILAR		
REVIEWED	INTERNAL		
APPROVED	T. SUE		
DRAWN	JAA	SCALE	NONE
DATE	01/2022	SHEET	3 OF 12

"EXHIBIT D" ESTIMATE OF QUANTITIES*

ROAD NUMBER	SURFACING				OTHER			SOIL STABILIZATION		OTHER	
	TOP **	AGG. MAINT. ROCK **	AGG. MAINT. ROCK **	WATER DIP ARMOR. **	EARTHEN BARRIER **	RIP RAP BARRIER **	CLASS C ASPHALT **	DRY	HYDRO-MULCH		
SPEC. NO.	1200	1200	1000	1000		1400		1800	1800		
UNITS	C.Y.	C.Y.	C.Y.	C.Y.	EA.	C.Y,	TONS	ACRES	ACRES		
28-11-29.0											
28-11-29.1											
28-11-29.2					1						
28-11-33.0		Ⓒ									
28-11-33.2			Ⓐ		1						
28-11-34.3					1						
29-11-3.0		Ⓒ									
29-11-3.3A		Ⓒ									
29-11-3.3B1		Ⓒ									
29-11-3.3B2		60 Ⓒ									
29-11-3.4			Ⓐ		1						
SPUR 4A					1						
TOTALS		250 Ⓒ	50 Ⓐ		5		100	3.5			

ITEM	SIZE	GRADE
1000	3"	Ⓐ
1200	1 ½"	Ⓒ
CLASS C ASPHALT	DENSE, ½", LEVEL III	

GRADE INDICATED IN CIRCLE ◯

ALWAYS THINK SAFETY

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

** ROCK QUANTITES ARE TRUCK MEASUREMENT.

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT – OREGON

ORC04-TS-2023.0030
ELK CREEK RIDGE CT
EXHIBIT D ESTIMATE OF QUANTITIES

DESIGNED J. AGUILAR
REVIEWED INTERNAL
APPROVED T. SUE

DRAWN JAA | SCALE NONE
DATE 04/2022 | SHEET 4 OF 12

ROAD MAINTENANCE SPECIFICATIONS

General road maintenance specifications are designated by numeric symbols according to the type of road work to be 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 as shown on the Exhibit D map of this contract in accordance with Sections 3000, 3100, 3200, 3300, and 3400 of this exhibit.

3002 The Purchaser shall maintain the cross section of existing dirt or graveled roads to the existing geometric standards. **Any roads required to be constructed, improved, or renovated under terms of this contract shall be maintained to the 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. 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 patrol 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.

3102 The Purchaser shall furnish and place **50 CY of 3-0"** crushed aggregate base course and **250 CY of 1.5-0"** crushed aggregate surfacing, conforming to the requirements in Sections 1000 and 1200 of Exhibit C of this contract, on the roadway at locations and in the amounts designated by the Authorized Officer.

This crushed aggregate shall be used to repair surface failures, and areas of depleted surface depth, excluding damages covered by Section 12 of this contract. The aggregate shall be furnished, hauled, placed, and spread by use of dump trucks, water trucks, motor patrol grader, and compacted by roller compactor.

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 patrol 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 suitable turnout or 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.

3104b The Purchaser shall be responsible for removal of all slides or slough, up to fifteen (15) 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 (15) 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 work, based on current BLM Timber Appraisal Production Cost Schedules. Adjustments in purchase price for completed work shall be made as necessary as and no less than once per year when actual work is ongoing.

** NOTE: One station yard is 1 cubic yard of material moved 100' i.e., 15 station yards is 15 CY moved 100' or 30 CY moved 50'.*

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 (15) station yards in quantity, at any one site. The 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 (15) 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 Timber Sale Appraisal Production Cost Schedules. 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 in accordance with Section 2100 and as directed by Authorized Officer.

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 by such skidding activity is not considered maintenance and shall be performed at the Purchaser's expense.

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

Purchaser shall complete a total 200' length of asphalt surface replacement, estimated to be 100 tons of prepared Class C - Dense ½" - Level lll asphalt. Width of asphalt replacement shall be 20' wide. Replace asphalt surface at locations and lengths as

directed by Authorized Officer, in accordance with Timber Sale Road Specifications and Special Provisions.

SEASONAL MAINTENANCE - 3200

3201 The Purchaser shall perform preventive 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 cross ditching, blockage, removing ruts or other surface irregularities, and all other requirements specified in Section 3100.

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

3203 The Purchaser shall complete road cleanup and maintenance, as specified in Section 3100, at the completion of logging operations on any road(s) 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 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 Section 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 Subsections 3108 and 3108a. This repair includes restoring the roadway to the designed standard and replacement of surfacing with approved surface material. This repair is not limited to use of equipment specified in Subsection 3104.

3402 The Purchaser shall be permitted to remove ice and snow from roads authorized for use under this contract only when prior written approval has been secured from the Authorized Officer. The Purchaser shall submit a written request for permission to remove ice and snow in advance of the date operations are to begin.

3420 The Purchaser shall perform the following work:

Road No.	Roadwork

NOTE: Rock tickets for utilized maintenance rock, shall be provided to Authorized Officer within 3 days of placement of rock.

NOTE: Any water bars, earthen berm barriers, and boulder barriers shall be constructed in accordance with Barrier and Erosion Control Detail Sheet No. 2.

28-11-29.0 **~** Replace asphalt surface at locations and lengths as directed by Authorized Officer. Surface replacement shall be completed in accordance with Road Maintenance Specifications, Timber Sale Road Specifications and Special Provisions.

~ Upon completion of all logging activities, decommission landings at the direction of the Authorized Officer.

28-11-29.1 **~** Replace asphalt surface at locations and lengths as directed by Authorized Officer. Surface replacement shall be completed in accordance with Road Maintenance Specifications, Timber Sale Road Specifications and Special Provisions.

~ Upon completion of all logging activities, decommission landings at the direction of the Authorized Officer.

28-11-29.2 **~** Upon completion of all logging activities the existing roadway shall be prepared in accordance with Section 500 of the Exhibit C.

~Install water bars at the direction of the Authorized Officer. No water bar will be installed closer than 50 feet to a draw crossing.

~Temporary stream crossing culvert at station 3+00 shall be removed in accordance with Exhibit C and D Timber Sale Road Specifications as follows.

- Pull culvert and create stream channel 6’.
- Create 6’ channel through entire road cross section.
- 6’ channel will match natural gradient of stream.
- Cutbanks of channel will be at 1:1 back slope.
- Road fill material excavated from channel construction and back sloping cutbanks will be pulled onto existing roadbed.

- Excavated fill material placed on road will be evenly banked on roadbed, in length and width.
- Excavated fill material will be shaped to drain, compacted, seeded, and mulched.

~Temporary cross drain culvert at station 5+50 shall be removed in accordance with Exhibit C and D Timber Sale Road Specifications.

~Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800, these specifications, as shown in the plans or at direction of the Authorized Officer.

~ Construct an earthen berm barrier or reinstall staged rip rap barrier as directed by the Authorized Officer. Seed and mulch earthen berm barrier in accordance with Section 1800 of the Exhibit C.

28-11-33.0 **~** Upon completion of all logging activities the existing roadway shall be prepared in accordance with Section 500 of the Exhibit C.

~ Utilize 1.5-0” maintenance rock, in accordance with Section 1200 of the Exhibit C. Quantities and locations will be determined by the Authorized Officer.

~Install water bars at the direction of the Authorized Officer. No water bar will be installed closer than 50 feet to a draw crossing.

~Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800, these specifications, as shown in the plans or at direction of the Authorized Officer.

28-11-33.2 **~** Upon completion of all logging activities the existing roadway shall be prepared in accordance with Section 500 of the Exhibit C.

~ Utilize 3-0” maintenance rock, in accordance with Section 1000 of the Exhibit C. Quantities and locations will be determined by the Authorized Officer.

~Install water bars at the direction of the Authorized Officer. No water bar will be installed closer than 50 feet to a draw crossing.

~Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800, these specifications, as shown in the plans or at direction of the Authorized Officer.

~ Construct an earthen berm barrier as directed by the Authorized Officer.
Seed and mulch earthen berm barrier in accordance with Section 1800 of the Exhibit C.

28-11-34.2 **~** Upon completion of all logging activities the existing roadway shall be prepared in accordance with Section 500 of the Exhibit C.

~ Utilize 1.5-0” maintenance rock (rock in lieu of rockwear fees), in accordance with Section 1200 of the Exhibit C. Quantities and locations will be determined by the Authorized Officer.

28-11-34.3 **~** Upon completion of all logging activities the existing roadway shall be prepared in

accordance with Section 500 of the Exhibit C.
~Install water bars at the direction of the Authorized Officer. No water bar will be installed closer than 50 feet to a draw crossing.

~Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800, these specifications, as shown in the plans or at direction of the Authorized Officer.

~ Construct an earthen berm barrier as directed by the Authorized Officer.
Seed and mulch earthen berm barrier in accordance with Section 1800 of the Exhibit C.

29-11-3.0 **~** Upon completion of all logging activities the existing roadway shall be prepared in accordance with Section 500 of the Exhibit C.

~ Utilize 1.5-0" maintenance rock, in accordance with Section 1200 of the Exhibit C. Quantities and locations will be determined by the Authorized Officer.

~Install water bars at the direction of the Authorized Officer. No water bar will be installed closer than 50 feet to a draw crossing.

~Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800, these specifications, as shown in the plans or at direction of the Authorized Officer.

29-11-3.3A **~** Upon completion of all logging activities the existing roadway shall be prepared in accordance with Section 500 of the Exhibit C.

~ Utilize 1.5-0" maintenance rock, in accordance with Section 1200 of the Exhibit C. Quantities and locations will be determined by the Authorized Officer.

~Install water bars at the direction of the Authorized Officer. No water bar will be installed closer than 50 feet to a draw crossing.

~Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800, these specifications, as shown in the plans or at direction of the Authorized Officer.

29-11-3.3B1 **~** Upon completion of all logging activities the existing roadway shall be prepared in accordance with Section 500 of the Exhibit C.

~ Utilize 1.5-0" maintenance rock, in accordance with Section 1200 of the Exhibit C. Quantities and locations will be determined by the Authorized Officer.

~Install water bars at the direction of the Authorized Officer. No water bar will be installed closer than 50 feet to a draw crossing.

~Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800, these specifications, as shown in the plans or at direction of the Authorized Officer.

29-11-3.3B2 **~** Upon completion of all logging activities the existing roadway shall be prepared in accordance with Section 500 of the Exhibit C.

~ At station 47+00, reconstruct approach to Private Spur. Utilize previously embanked material that was placed upon -3.3B1 roadway. Spur's approach and junction will be resurfaced (60 CY of 1.5-0" crushed aggregate).

~ Utilize 1.5-0" maintenance rock (rock in lieu of rockwear fees), in accordance with Section 1200 of the Exhibit C. Quantities and locations will be determined by the Authorized Officer.

~Install water bars at the direction of the Authorized Officer. No water bar will be installed closer than 50 feet to a draw crossing.

~Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800, these specifications, as shown in the plans or at direction of the Authorized Officer.

29-11-3.4 **~** Upon completion of all logging activities the existing roadway shall be prepared in accordance with Section 500 of the Exhibit C.

~ Utilize 3-0" maintenance rock, in accordance with Section 1000 of the Exhibit C. Quantities and locations will be determined by the Authorized Officer.

~Install water bars at the direction of the Authorized Officer. No water bar will be installed closer than 50 feet to a draw crossing.

~Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800, these specifications, as shown in the plans or at direction of the Authorized Officer.

~ Construct an earthen berm barrier as directed by the Authorized Officer.
Seed and mulch earthen berm barrier in accordance with Section 1800 of the Exhibit C.

SPUR 4A **~** Upon completion of all logging activities the existing roadway shall be prepared in accordance with Section 500 of the Exhibit C.

~Install water bars at the direction of the Authorized Officer. No water bar will be installed closer than 50 feet to a draw crossing.

~Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800, these specifications, as shown in the plans or at direction of the Authorized Officer.

~ Construct an earthen berm barrier as directed by the Authorized Officer.
Seed and mulch earthen berm barrier in accordance with Section 1800 of the Exhibit C

Sale: Elk Creek Ridge CT
Sale Date: 10282022
Prep. By : JAA
Tract No: ORC042023.0030

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ROAD MAINTENANCE AND ROAD USE APPRAISAL WORK SHEET

Purchaser Maintenance Allowances:

(5.2A) Move In	$2,794.00
(5.2B) Culverts, Catch Basins, Downspouts	$1,401.23
(5.2C) Grading, Ditching	$2,431.93
(5.2D) Slide Removal and Slump Repair	$0.00
(5.2E) Dust Palliative (Water)	$0.00
(5.2F) Surface Repair (Aggregate)	$7,805.70
(5.2G) Other	$33,238.00
(5.2H) Decommissioning	$5,312.43
Total Cost =	$$52,983.29

Purchaser Operational Maintenance

Move In

Equipment	No Units	Move x	Cost/ in x	Dist 50 Mi	Sub- x Factor =	total
Motor Grader:	1	1		450	1.00	$450.00
Back Hoe:	1	1		335	1.00	$335.00
Loader:	1	1		450	1.00	$450.00
Water Truck:	1	1		107	1.00	$107.00
Dump Truck:	1	1		102	1.00	$102.00
Excavator:	1	2		450	1.00	$900.00
Roller:	1	1		450	1.00	$450.00

(5.2A) Total $2,794.00

Culvert Maintenance - Including Catch basins and Downpipes

Miles	x Cost/Mi	= Subtotal
3.14	446.25	1401.23

(5.2B) Total 1401.23

Grading (Includes Ditches and Shoulders)

Miles	x Cost/Mi	x Freq = Subtotal		
Blade w/ Ditch:	3.14	774.5	1	$2,431.93
Blade w/o Ditch:	0.00	468.69	0	$0.00

(5.2C) Total $2,431.93

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

Type Equipment	No Slides /Slumps	x Hours Each	x Equip Cost	= Subtotal
Grader:	0	0	$154.22	$0.00
Loader:	0	0	$114.43	$0.00
Backhoe:	0	0	$99.10	$0.00

(5.2D) Total $0.00

Dust Palliative (Water)

Spreading Hours

No Miles	/ Freq MPH	= Truck Hours	x Days	x /Day	= Hours
0.00	0		0	0	0

Load & Haul =	0.0	0	0	0
Total Hours =	0			

Truck Cost: $89.04/Hr. x 0.0 Hours = $0.00

(5.2E) Total $0.00

Surface Repair (Aggregate)

Quarry / Source Name: Hervey 1.5-0" Spot			
Production Cost:	250.0 CY x $12.50/CY	=	$3,125.00
Haul to Stockpile:			
Grades > 15%	250.0 CY x (($1.99/CY x 0.00 Mi) + $0.66)	=	$0.00
Grades <= 15%	250.0 CY x (($1.00/CY x 5.00 Mi) + $0.66)	=	$1,415.00
State / Co Roads	250.0 CY x (($0.44/CY x 11.60 Mi) + $0.66)	=	$1,441.00
Process with Grader:	250.0 CY x $1.01/CY	=	$252.50
Compaction:	250.0 CY x $1.21/CY	=	$302.50
	SubTotal		$6,536.00

Quarry / Source Name: Hervey 3-0" Spot			
Production Cost:	50.0 CY x $11.75/CY	=	$587.50
Haul to Stockpile:			
Grades > 15%	50.0 CY x (($1.99/CY x 0.00 Mi) + $0.66)	=	$0.00
Grades <= 15%	50.0 CY x (($1.00/CY x 5.00 Mi) + $0.66)	=	$283.00
State / Co Roads	50.0 CY x (($0.44/CY x 11.60 Mi) + $0.66)	=	$288.20
Process with Grader:	50.0 CY x $1.01/CY	=	$50.50
Compaction:	50.0 CY x $1.21/CY	=	$60.50
	SubTotal		$1,269.70

(5.2F) Total $7,805.70

Other

200' asphalt replacement (est.100 tons): In-place cost includes Equipment mobilization, materials, haul, underlying course preparations, 200’ asphalt cutting (match edges), traffic control, and existing asphalt removal(excavation)& disposal. Lump Sum= $31,450.00

Sale soil stab. - 3.5 acres Lump Sum= $1,788.00

(5.2G) Total $33,238.00

Decommissioning

Pipe Removal

Road Number	Qty Ditch Pipes	Cyd < 15’ Fill	Cyd > 15’ Fill	Qty Hauling	= Total
28-11-29.2 R	(2x119.31)	+ (110x2.9)	+ (0x4.84)	+ (2x81.78)	= $721.18

(Pipe Removal) Total $721.18

Other Costs

Road Number	Cubic Yds Pullback Material		Qty Waterbars		Qty Earthen Barriers	= Total
28-11-29.2 R	(110x1.94)	+	(15x59.77)	+	(1x179.3)	= $1,289.25
28-11-33.0 R	(0x1.94)	+	(10x59.77)	+	(0x179.3)	= $597.70
28-11-33.2 C	(0x1.94)	+	(4x59.77)	+	(1x179.3)	= $418.38
28-11-34.3 C	(100x1.94)	+	(3x59.77)	+	(1x179.3)	= $552.61
29-11-3.0 R	(0x1.94)	+	(8x59.77)	+	(0x179.3)	= $478.16
29-11-3.3A R	(0x1.94)	+	(3x59.77)	+	(0x179.3)	= $179.31
29-11-3.3B1 R	(0x1.94)	+	(3x59.77)	+	(0x179.3)	= $179.31
29-11-3.3B2 R	(0x1.94)	+	(3x59.77)	+	(0x179.3)	= $179.31
29-11-3.4 C	(0x1.94)	+	(2x59.77)	+	(1x179.3)	= $298.84
SPUR 4A R	(0x1.94)	+	(4x59.77)	+	(1x179.3)	= $418.38

(Other Cost) Total $4,591.25

(5.2H) Decommissioning Total $5,312.43

=

EXHIBIT E

Sale Name **Elk Creek Ridge CT**

SALE VOLUME: 1745 NET MBF 1745 Sale Number **ORC4-TS-2023.0030**

A. ROAD USE FEES - Payable to Private Company:

COMPANY NAME	AGREEMENT NUMBER	ROAD NUMBER	NET MBF	USE FEE per MBF	TOTAL FEES
Roseburg Resources co.	C-344	28-11-3.3 B2	66	free use	$0.00
Roseburg Resources co.	C-344	28-11-3.3 B1	66	free use	$0.00
Roseburg Resources co.	C-344	28-11-34.2	66	free use	$0.00
				TOTAL USE FEE:	$0.00

B. MAINTENANCE FEES:

1. Maintenance and Rockwear Fees Payable to the U.S. (BLM Maintained Roads):

a. Timber Haul:

Surface Type	ROAD NUMBER	NET MBF	ROAD MILES	ROCKWEAR /MBF/Mile	Subtotal	MAINT+Rock $/MBF/Mile	Subtotal	TOTAL FEES
BST	28-11-29.1	608	1.82	0.00	$0.00	$0.92	$1,018.04	$1,018.04
BST	28-11-29.1	1106	0.17	0.00	$0.00	$0.92	$172.98	$172.98
BST	28-11-29.1	1185	0.12	0.00	$0.00	$0.92	$130.82	$130.82
BST	28-11-29.1	1291	0.17	0.00	$0.00	$0.92	$201.91	$201.91
BST	28-11-29.1	1410	0.17	0.00	$0.00	$0.92	$220.52	$220.52
BST	28-11-29.1	1463	0.09	0.00	$0.00	$0.92	$121.14	$121.14
BST	28-11-29.1	1463	1.82	0.00	$0.00	$0.92	$2,449.65	$2,449.65
BST	28-11-29.1	1529	0.03	0.00	$0.00	$0.92	$42.20	$42.20
BST	28-11-29.1	1635	0.18	0.00	$0.00	$0.92	$270.76	$270.76
BST	28-11-29.1	1714	0.08	0.00	$0.00	$0.92	$126.15	$126.15
BST	28-11-29.0	40	0.02	0.00	$0.00	$0.92	$0.74	$0.74
BST	28-11-29.0	1745	0.44	0.00	$0.00	$0.92	$706.38	$706.38
			5.11		$0.00		$5,461.29	$5,461.29

2. ROCKWEAR Fees Payable to the U.S. (OPERATOR Maintained Roads):

a. Timber Haul:

Surface Type	ROAD NUMBER	NET MBF	ROAD MILES	SURFACE REPLACEMENT /MBF/Mile	TOTAL FEES
Nat	28-11-34.3	66	0.06	$0.00	$0.00
ASC	29-11-3.3B1	66	0.35	$0.73	$16.86
ASC	29-11-3.3A	264	0.23	$0.73	$44.33
ASC	29-11-3.0	357	0.19	$0.73	$49.52
ASC	29-11-3.0	397	0.11	$0.73	$31.88
ASC	29-11-3.0	463	0.07	$0.73	$23.66
ASC	29-11-3.0	503	0.17	$0.73	$62.42
ASC	29-11-3.4	106	0.03	$0.73	$2.32
ASC	29-11-3.0	609	0.32	$0.73	$142.26
ASC	28-11-33.0	132	0.17	$0.73	$16.38
ASC	28-11-33.0	198	0.10	$0.73	$14.45
ASC	28-11-33.2	132	0.04	$0.73	$3.85
ASC	28-11-33.0	330	0.15	$0.73	$36.14
ASC	28-11-33.0	396	0.05	$0.73	$14.45
ASC	28-11-33.0	489	0.17	$0.73	$60.68
Nat	Spur 4A	66	0.07	$0.00	$0.00
ASC	28-11-29.2	66	0.12	$0.73	$5.78
ASC	28-11-29.2	106	0.20	$0.73	$15.48
			2.60		$540.47

3. ROAD MAINTENANCE AND/OR ROCKWEAR FEES - Payable to Private Company:

Surface Type	COMPANY NAME	AGREEMENT NUMBER	ROAD NUMBER	NET MBF	ROAD MILES	MAINT+Rock $/MBF/Mile		TOTAL FEES
ASC	Roseburg Resources co.	C-344	28-11-3.3 B2	66	0.25	$0.73		$12.05
ASC	Roseburg Resources co.	C-344	28-11-34.2	66	0.22	$0.73		$10.60
					0.47			$22.64

4. OPERATOR MAINTENANCE WILL BE REQUIRED ON APPROX. 2.60 MILES OF ROAD. (SEE EXHIBIT D)

SUMMARY OF ROAD USE & ROAD MAINTENANCE FEES	ROAD USE FEES		ROCKWEAR & MAINTENANCE FEES		MAINTENANCE FEES	
	TOTAL	$/MBF	TOTAL	$/MBF	TOTAL	$/MBF
1. COMPANY-OWNED ROADS:	$0.00	$0.00	$22.64	$0.01		$0.00
2. BLM MAINTAINED ROADS:			$0.00	$0.00	$5,461.29	$3.13
3. BLM OPERATOR-MAINTAINED ROADS:			$540.47	$0.31		$0.00
	$0.00	$0.00	$563.11	$0.32	$5,461.29	$3.13

	TOTAL	$/MBF
MAINTENANCE OBLIGATION PAYABLE TO BLM:	**$6,001.76**	$3.44

United States
Department of the Interior
Bureau of Land Management

Timber Appraisal

Sale Name:	Elk Creek Ridge CT	**Sale Date:**	Friday, October 28, 2022
BLM District:	Coos Bay DO	**Unit of Measure:**	16' MBF
Contract #:	ORC04-TS-2023.0030	**Contract Term:**	36 months
Sale Type:	Advertised	**Contract Mechanism:**	5450-26
			Sale of Timber and other Wood Products - Scale Sale

Content

Prepared By: Blum, Jason - 9/27/2022
Approved By: Thompson, Kristen R - 9/27/2022

Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
CBWR	Coos	T28S	R11W	29	Lot 8,9, SW 1/4 SE 1/4	Willamette
CBWR	Coos	T28S	R11W	32	SE1/4 NE1/4, NE1/4 SE1/4	Willamette
CBWR	Coos	T28S	R11W	33	S1/2 NE1/4, S1/2 NW1/4, N1/2 SW1/4, NW1/4 SE1/4,	Willamette
CBWR	Coos	T28S	R11W	34	E1/2,SE1/4	Willamette
CBWR	Coos	T29S	R11W	3	Lots 7,6,9,5	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
Douglas Fir	1,632.0	1,750.0	1,757.0	41,093	1,373	12,042
Red Alder	41.0	46.0	46.0	1,040	0	535
Grandfir	39.0	40.0	40.0	654	0	163
Western Hemlock	30.0	34.0	34.0	716	0	239
Hardwoods	3.0	6.0	6.0	133	0	66
Totals	**1,745.0**	**1,876.0**	**1,883.0**	**43,636**	**1,373**	**13,045**

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
0.0	132.0	0.0	132.0	13.2

Comments:
Adjusted Appraised Df Prices to compensate for Negative pricing for other species (Wh,Gf,RA,Hardwoods)

Logging Costs

Stump to Truck	$553,741.58
Transportation	$73,722.92
Road Construction	$171,196.17
Maintenance/Rockwear	$58,985.05
Road Use	$0.00
Other Allowances	$46,667.06
Total:	**$904,312.78**
Total Logging Cost per MBF:	**$518.23**

Utilization Centers

Location	Distance	% of Net Volume
Southport Lumber Company	48.5 miles	2 %
RFP Coquille	23.3 miles	98 %

Profit & Risk

Profit	8 %
Risk	1 %
Total Profit & Risk	**9 %**

Tract Features

Quadratic Mean DBH	12.5 in
Average GM Log	42 bf
Average Volume per Acre	13.2 mbf
Recovery	93 %
Net MBF volume:	
Green	1,745.0 mbf
Salvage	0 mbf
Export	0 mbf
Ground Base Logging:	
Percent of Sale Volume	12 %
Average Yarding Slope	20 %
Average Yarding Distance	250 ft
Cable Logging:	
Percent of Sale Volume	88 %
Average Yarding Slope	45 %
Average Yarding Distance	343 ft
Aerial Logging:	
Percent of Sale Volume	0 %
Average Yarding Slope	0 %
Average Yarding Distance	0 ft

Cruise

Cruise Completed	December 2021
Cruised By	Blum, Stover, Felker, Kirkland, Herron, Murphy

Cruise Method

VP Baf 20 80 Plots 48 samples for scale sale thinning

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Appraised Price/MBF		Appraised Value
Douglas Fir	12,042	1,632.0	$658.59	$59.27	$518.23	$0.00	$81.10		$132,355.20
Red Alder	535	41.0	$547.99	$49.32	$518.23	$0.00	$54.80	*	$2,246.80
Grandfir	163	39.0	$434.40	$39.10	$518.23	$0.00	$43.50	*	$1,696.50
Western Hemlock	239	30.0	$426.80	$38.41	$518.23	$0.00	$42.70	*	$1,281.00
Hardwoods	66	3.0	$280.80	$25.27	$518.23	$0.00	$28.10	*	$84.30
Totals	**13,045**	**1,745.0**							**$137,663.80**

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

Other Wood Products

Product	Unit of Measure	# of Units	$/Unit	Appraised Value
Biomass	Green Tons	45	$0.05	$2.25
Totals				**$2.25**

Total Appraised Value: $137,666.05

Percent of Volume By Log Grade

Species	No. 1 & 2 Peeler	No. 3 Peeler	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Douglas Fir				38.0 %	53.0 %	9.0 %	

Comments: Pond values using AVG

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill		Camp Run
Red Alder		31.0 %	11.0 %	56.0 %	2.0 %		

Comments: Pond values using AVG

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Grandfir				78.0 %	16.0 %	6.0 %	

Comments: Pond values using AVG

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Western Hemlock				45.0 %	44.0 %	11.0 %	

Comments: Pond values using AVG

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill		Camp Run
Hardwoods				100.0 %			

Comments: Pond values using AVG

Maple Prices For
Hardwoods

Unit: 1

Net Volume/Acre: 13.2 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	247.0	265.0	266.0	1,824
Grandfir	6.0	6.0	6.0	25
Red Alder	6.0	7.0	7.0	81
Western Hemlock	4.0	5.0	5.0	36
Hardwoods	0.5	1.0	1.0	10
Totals:	**263.5**	**284.0**	**285.0**	**1,976**

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

Unit: 2

Net Volume/Acre: 13.3 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	322.0	345.0	346.0	2,372
Grandfir	8.0	8.0	8.0	32
Red Alder	8.0	9.0	9.0	105
Western Hemlock	6.0	7.0	7.0	47
Hardwoods	1.0	2.0	2.0	13
Totals:	**345.0**	**371.0**	**372.0**	**2,569**

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

Unit: 3

Net Volume/Acre: 13.2 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	791.0	848.0	852.0	5,838
Red Alder	20.0	22.0	22.0	260
Grandfir	19.0	19.0	19.0	79
Western Hemlock	15.0	16.0	16.0	116
Hardwoods	1.0	2.0	2.0	32
Totals:	**846.0**	**907.0**	**911.0**	**6,325**

Regeneration Harvest	0.0
Partial Cut	64.0
Right of Way	0.0
Total Acres:	**64.0**

Unit: 4

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	272.0	292.0	293.0	2,008
Red Alder	7.0	8.0	8.0	89
Grandfir	6.0	7.0	7.0	27
Western Hemlock	5.0	6.0	6.0	40
Hardwoods	0.5	1.0	1.0	11
Totals:	**290.5**	**314.0**	**315.0**	**2,175**

Net Volume/Acre: 13.2 MBF

Regeneration Harvest	0.0
Partial Cut	22.0
Right of Way	0.0
Total Acres:	**22.0**

Total Stump To Truck	Net Volume	$/MBF
$553,741.58	1,745.0	$317.33

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

Yarding System	Unit of Measure	# of Units of Measure	$/Unit of Measure	Total Cost	Remarks
Cable: Small Yarder	GM MBF	1,649.0	$301.26	$496,777.74	Small tower Mech Delimb fuel @ 5.07 per gal. 4 loads per day 4.5Mbf per load
Wheel Skidder	GM MBF	227.0	$215.92	$49,013.84	wheel skidder loader, and one saws for Ground Base 5 loads per day 4.5mbf per load fuel @ 5.07 per gal.
Subtotal				**$545,791.58**	

Additional Costs

Item	Unit of Measure	# of Units of Measure	$/Unit of Measure	Total Cost	Remarks
Lift Tree	Each	28.0	$150.00	$4,200.00	
Intermediate Support	Each	5.0	$150.00	$750.00	
Subtotal				**$4,950.00**	

Additional Moves

Equipment	Unit of Measure	# of Units of Measure	$/Unit of Measure	Total Cost	Remarks
Cable: Small Yarder	Each	3.0	$500.00	$1,500.00	
Wheel Skidder	Each	3.0	$500.00	$1,500.00	
Subtotal				**$3,000.00**	

Comments:
MM Occupied Sites and MM Habitat north of Unit# 1, south and southeast of Unit# 2, west, south, and southeast of Unit#3, and east of Unit#4. There will be seasonal restrictions from April 1 to August 5th with daily timing restrictions for 2 hours after sunrise to 2 hours before sunset for road/landing construction and all harvest operations.

Total	Net Volume	$/MBF
$73,722.92	1,745.0	$42.25

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	$/Unit of Measure	Total Cost	% of Sale Volume
Southport Lumber Company	48.5	Sawlogs	GM MBF	52.0	$64.13	$3,334.76	2 %
RFP Coquille	23.3	Sawlogs	GM MBF	1,824.0	$38.59	$70,388.16	98 %

Engineering Allowances

Total	Net Volume	$/MBF
$230,181.22	1,745.0	$131.91

Cost Item	Total Cost
Road Construction:	$171,196.17
Road Maintenance/Rockwear:	$58,985.05
Road Use Fees:	$0.00

Comments:
Road Maintenance/Rockwear = Ex-D 52,983.29 + Ex-E 6,001.76 = 58,985.05 Road Construction = Ex-C 171,196.17

Total	Net Volume	$/MBF
$46,667.06	1,745.0	$26.74

Environmental Protection

Cost item	Total Cost
girdling	$21,000.00
Equipment Washing	$2,600.00
Subtotal	**$23,600.00**

Logging

Cost item	Total Cost
Flaggers	$18,003.34
Subtotal	**$18,003.34**

Road Construction, Maintenance, Use, & Decommissioning

Cost item	Total Cost
Asphalt Protection	$2,000.00
Subtotal	**$2,000.00**

Slash Disposal & Site Prep

Cost item	Total Cost
Landing Pile Cover (all units)	$3,063.72
Subtotal	**$3,063.72**

Comments:
Equipment Washing 4 pieces of Equipment and 4 more for Seasonal Restrictions
2 Flaggers falling $2,364.30 yarding $15,639.04 Total $18,003.34
Asphalt Protection was calculated by District Engineer

Information for Timber Sale Notice, Prospectus, Sec. 41 & 42
Elk Creek Ridge CT Timber Sale
ORC04-TS-2023.0030

Approx # of trees	Est Volume MBF 32'	Species	Est Volume MBF 16'	Appraised $/MBF		Appraised Price
12,042	1,305.6	Douglas Fir	1,632.0	$81.10		$132,355.20
535	32.8	Red Alder	41.0	$54.80	*	$2,246.80
163	31.2	Grandfir	39.0	$43.50	*	$1,696.50
239	24.0	Western Hemlock	30.0	$42.70	*	$1,281.00
66	2.4	Hardwoods	3.0	$28.10	*	$84.30
13,045	**1,396.0**		**1,745.0**			**$137,663.80**

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

CRUISED BY:	Blum, Stover, Felker, Kirkland, Herron, Murphy
CRUISE COMPLETED:	December 2021
COMBINED SAMPLING ERROR:	19.30 %

CRUISE DESIGN/METHOD Description:
VP Baf 20 80 Plots 48 samples for scale sale thinning

TRACT FEATURES

ALL SPECIES

QM DBH	12.5	INCHES
GM LOG	42	BD FT
Total Gross Volume	1,883	MBF
Recovery	93	%
Salvage	0	MBF
Export	0	MBF

Dominant Species: **Douglas Fir**

QM DBH	12.5	INCHES
GM Log	41	BD FT

Recovery	93	%
Salvage	0	MBF

EXPORT VOLUME (LE-1)	Port Orford Cedar	0	MBF

Reserve Tree Paint Color	Reserve Tree Count
	0

Harvest Tree Paint Color	Harvest Tree Count
	0

UNITED STATES
DEPARTMENT OF THE INTERIOR
Bureau of Land Management

District: Coos Bay
Sale Number: ORC04-TS-2023.0030
Sale Name: Elk Creek Ridge

Stumpage Computation

Species	Pond Value	Logging Costs (-)	Profit & Risk (-)	Marg. Logs (+)	Stumpage
Douglas Fir	$658.59	$518.23	$59.27	$0.00	$81.09
Red Alder	$547.99	$518.23	$49.32	$0.00	($19.56)
Grand Fir	$434.40	$518.23	$39.10	$0.00	($122.93)
Western Hemlock	$426.80	$518.23	$38.41	$0.00	($129.84)
Hardwoods	$280.80	$518.23	$25.27	$0.00	($262.70)

Appraised Price Summary

Species	Volume	Unrounded Stumpage & Value		Adjusted Appraised Price	
		$/M	Value	$/M	Value
Douglas Fir	1,632.0	$81.09	$132,338.88	$71.50	$116,688.00
Red Alder	41.0	($19.56)	($801.96)	$54.80	$2,246.80
Grand Fir	39.0	($122.93)	($4,794.27)	$43.50	$1,696.50
Western Hemlock	30.0	($129.84)	($3,895.20)	$42.70	$1,281.00
Hardwoods	3.0	($262.70)	($788.10)	$28.10	$84.30
TOTALS	1,745.0				$121,996.60

Surplus species stumpage has been reduced to compensate for species stumpage below minimum price policy (10% of pond value).

Approved by: Travis Kirkland

Form 5440-009
(June 2022)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Name of Bidder

Tract Number: ORC04-TS-2023.0030

Sale Name: Elk Creek Ridge CT

Sale Notice *(dated)*: 09/29/2022

BLM Office: Coos Bay District Office

DEPOSIT AND BID FOR: (Check One):

☑ **Timber and/or Other Wood Products**
(Examples of Other Wood Products: biomass, firewood, posts, poles, etc…)

☐ **Vegetative Resources**
(Examples of Vegetative Resources: boughs, pinyon nuts, cones, plants, etc…)

☐ Sealed Bid for Sealed Bid Sale	☑ Written Bid for Oral Auction Sale
Deadline for accepting sealed bids ☐ a.m. ☐ p.m.	Sale commences 10:00 ☑ a.m. ☐ p.m.
On *(date)* Place	On *(date)* 10/28/2022 Place Coos Bay District Office

In response to the above dated Sale Notice, the required deposit and bid are hereby submitted for the purchase of designated Timber and/or Other Wood Products or Vegetative Resources on the tract specified above.

Required bid deposit is $ 12,200.00 and is enclosed in the form of:

☐ cash ☐ money order ☐ cashier's check ☐ certified check ☐ bank draft

☐ 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. If not otherwise specified in the advertisement, bids for less than the advertised price will not be considered. If the bid is rejected the deposit will be returned.

BID SCHEDULE – **TIMBER AND/OR OTHER WOOD PRODUCTS OR VEGETATIVE RESOURCES**
NOTE: Bidders should carefully check computations in completing the Bid Schedule

BID SUBMITTED					**ORAL BID MADE**	
PRODUCT & SPECIES	UNIT of MEASURE	ESTIMATED VOLUME OR QUANITY	UNIT PRICE	PRODUCT VALUE (Quantity X Price)	UNIT PRICE	PRODUCT VALUE (Quantity X Price)
Douglas-fir	MBF	1632	$	$	$	= $ 0.00
Grand Fir	MBF	39	$ 43.50	$ 1,696.50	$	= $ 0.00
Red Alder	MBF	41	$ 54.80	$ 2,246.80	$	= $ 0.00
Western Hemlock	MBF	30	$ 42.70	$ 1,281.00	$	= $ 0.00
Misc. Hardwoods	MBF	3	$ 28.10	$ 84.30	$	= $ 0.00
Biomass	GTN	45	$ 0.05	$ 2.25	$	= $ 0.00
			$	$ 0.00	$	= $ 0.00
			$	$ 0.00	$	= $ 0.00
			$	$ 0.00	$	= $ 0.00
			$	$ 0.00	$	= $ 0.00
			$	$ 0.00	$	= $ 0.00
		TOTAL PURCHASE PRICE		$		$ 0.00

(Continued on Page 2)

If sale contract is executed, undersigned is liable for total purchase price including all modifications executed under the terms of the contract. Timber and/or Other Wood Products or Vegetative Resources designated for removal may be less or more than total estimated volume or quantity shown above.

Bid submitted on *(date)*

By signing this form, the signatory is certifying the following:

☐ *(a) The signatory is a citizen of the United States, a partnership composed wholly of such citizens, an unincorporated association composed wholly of such citizens, or a corporation authorized to transact business in the state in which the timber is located.*

☐ *(b) The signatory is the age of majority in the state of the sale.*

☐ *(c) The signatory is an authorized representative if not signing as an individual and certifies that he or she is authorized to act as or on behalf of the bidder.*

☐ *(d) The signatory and any affiliates have not exported unprocessed private timber from west of the 100th meridian in the lower 48 states in the 24-months prior to the sale date shown on this form.*

☐ *(e) The signatory's bid was arrived at by bidder or offeror independently and was tendered without collusion with any other bidder or offeror.*

☐ *(f) The signatory and any affiliates are not currently suspended or debarred from contracting with the Federal government unless issued an exception by the Department's Director of the Office of Acquisition and Property Management (exception must be attached to bid form).*

Mark each box above to acknowledge each of the certifying statements and complete sections 1-3 as appropriate and sections 4 and 5:

1. Signature, if firm is individually owned	4. Name of firm *(type or print)*
2. Signatures, if firm is a partnership or L.L.C. i. _____ ii. _____	5. Business address, include zip code *(type or print)*
3. Corporation - organized under the state laws of: Signature of Authorized Corporate Officer: _____ Title: _____	*(To be completed following oral bidding)* I HEREBY confirm the above oral bid By *(signature):* Date

Submit bid to qualify for either an oral auction or sealed bid sale, together with the required bid deposit.
Make remittance payable to: "Department of the Interior – BLM"

Oral Auction – Submit to Sale Supervisor prior to closing of qualifying period for tract.
Sealed Bid – Send to Contracting Officer, who issued the sale notice, in a sealed envelope marked on the outside with:
(1) "Bid for Timber and/or Other Wood Products" or "Bid for Vegetative Resources" depending on the products being sold.
(2) Time bids are to be opened.
(3) Legal description.
(4) Sale name and number.

NOTICES

The Privacy Act and the regulations in 43 CFR 2.223(d) require that you be furnished with the following information:

AUTHORITY: 38 FR 6280 and 43 CFR 5442.1

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

ROUTINE USES: 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 and/or Other Wood Products or Vegetative Resources.

(Continued on Page 3)

INSTRUCTIONS TO BIDDERS

1. AUTHORITY – Timber and/or Other Wood Products or Vegetative Resources, 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. 2601); Timber and/or Other Wood Products or Vegetative Resources located on other 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 and/or Other Wood Products or Vegetative Resources, are codified in 43 CFR Group 5400.

2. QUALIFICATIONS OF BIDDERS – A bidder for sale of Timber and/or Other Wood Products or 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 and/or Other Wood Products or Vegetative Resources are located.

3. INSPECTION OF TIMBER AND/OR OTHER WOOD PRODUCTS OR VEGETATIVE RESOURCES – Bidder is invited, urged, and cautioned to inspect the Timber and/or Other Wood Products or Vegetative Resources prior to submitting a bid. By executing the Timber and/or Other Wood Products or Vegetative Resources sale contract, bidder warrants that the contract is accepted on the basis of his/her examination and inspection of the Timber and/or Other Wood Products or Vegetative Resources and his/her opinion of its value.

4. DISCLAIMER OF WARRANTY – Government expressly disclaims any warranty of the fitness of the designated Timber and/or Other Wood Products or Vegetative Resources for any purpose of the bidder; all Timber and/or Other Wood Products or 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 and/or Other Wood Products or Vegetative Resources to be sold is expressly disclaimed by Government.

5. BIDS – Each Sealed or written bid for Timber and/or Other Wood Products or Vegetative Resources must be submitted to the Contracting Officer who issued *Timber and/or Other Wood Products or Vegetative Resources Sale Notice.*

(a) *Sealed Bid Sales* – Bids will be received until time specified in the Advertisement. Enclose the bid with required bid deposit in a sealed envelope marked on the outside *Bid for Timber and/or Other Wood Products or Vegetative Resources*, time bid is to be opened, timber sale name and number, and legal description of land on which Timber and/or Other Wood Products or Vegetative Resources are located. In event of a tie, the high bidder shall be determined by lot from among those who submitted the tie bids.

(b) *Oral 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/her 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/her 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 and/or Other Wood Products or Vegetative Resources 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) *Timber and/or Other Wood Products or Vegetative Resources Sales* – For each product and species, bids shall specify (1) Bureau of Land Management estimated unit volume or quantity, (2) bidder's price per unit and total value, and (3) bidder's total purchase price. Estimated volume and price per unit are to be used for administrative and appraisal purposes only. Upon award of contract, the high bidder agrees to pay the Government for the Timber and/or Other Wood Products or Vegetative Resources designated for removal in accordance with the terms of the contract. Timber and/or Other Wood Products or Vegetative Resources designated for removal may be less or more than the total estimated volume or quantity shown above.

7. BID DEPOSIT – All bidders must make a deposit of not less than the amount specified in the *Timber and/or Other Wood Products or Vegetative Resources 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 (*Applies To Timber Only*), or any approved guaranteed remittance approved by the Contracting Officer. Upon conclusion of bidding, the bid deposit of all bidders, except high bidder, will be returned. The cash deposit of the successful bidder shall be applied toward the required sale deposit and/or the purchase price. If the BLM fails to award the timber sale within 90 days of the determination of the high bidder, a portion of the bid deposit may be refunded to the high bidder upon written request to the authorized officer, such that the BLM retains a deposit of at least 5% of the appraised value. The remainder of the full bid deposit must be resubmitted to the BLM once the high bidder is notified in writing that the delay of award has been remedied and the authorized officer is prepared to issue the contract. If the high bidder is unable to provide the full amount of the bid deposit within 30 days of the written notification, the sale may be re-auctioned and the high bidder will be barred from participating in any subsequent auctions for the same tracts.

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/she 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. If contract award is delayed more than 90 days, half of the bid deposit may be refunded to the high bidder until the sale award process resumes.

9. TIMBER AND/OR OTHER WOOD PRODUCTS OR VEGETATIVE RESOURCES SALE CONTRACTS – To be executed by purchaser, has been prepared by Government, and may be examined in the District or Field Manager's office.

(Continued on Page 4)

10. PERFORMANCE BOND – (Primarily Used For Timber Sales)

(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 Contracting Officer.

(b) If purchaser elects to cut Timber and/or Other Wood Products or Vegetative Resources 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 and/or Other Wood Products or Vegetative Resources 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 and/or Other Wood Products or Vegetative Resources covered by the bond increase. This increased amount of bond shall be used to assure payment for Timber and/or Other Wood Products or Vegetative Resources cut in advance of payment.

11. PAYMENT BOND – (Primarily Used For Timber Sales)

If purchaser elects to (a) cut and remove Timber and/or Other Wood Products or Vegetative Resources, or (b) remove Timber and/or Other Wood Products or Vegetative Resources 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 and/or Other Wood Products or Vegetative Resources covered by the bond. Payment bond shall be used to assure payment for Timber and/or Other Wood Products or Vegetative Resources 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 and/or Other Wood Products or Vegetative Resources 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 and/or Other Wood Products or Vegetative Resources* 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/her 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 and/or Other Wood Products or Vegetative Resources, it may, in its discretion, keep the sale open, not to exceed ninety (90) days.

15. UNAUTHORIZED USE OF GOVERNMENT PROPERTY – A sale may be refused to high bidder who has been notified that he/she 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 any exporters of unprocessed private timber west of the 100th meridian in the contiguous 48 states within 24-months of the sale date are not eligible to purchaser Federal Timber west of the 100th meridian in the contiguous 48 states. For the purpose of this contract, unprocessed timber is defined as: (1) any logs except those of utility grade or below, such as saw logs, 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 dimensions 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 or construction timbers, except western red cedar, meeting current American Lumber Standards Grades or Pacific Lumber Inspection Bureau Export R or N list grades, sawn on four sides, not intended for remanufacture; (2) Lumber, construction timbers, or cants for remanufacture, except western red cedar, meeting current American Lumber Standards Grades or Pacific Lumber Inspection Bureau Export R or N list clear grades, sawn on four sides, not to exceed twelve inches in thickness; (3) Lumber, construction timbers, or cants for remanufacture, except western red cedar, that do not meet the grades referred to in subclause 2 and are sawn on four sides, with wane less than ¼ of any face, not exceeding 8¾ inches in thickness; (4) Chips, pulp, or pulp products; (5) Veneer or plywood; (6) Poles, posts, or piling cut or treated with preservatives for use as such; (7) Shakes or shingles; (8) Aspen or other pulpwood bolts, not exceeding 100 inches in length, exported for processing into pulp; (9) Pulp logs, cull logs, and incidental volumes of grade 3 and 4 saw logs processed at domestic pulp mills, domestic chip plants, or other domestic operations for the primary purpose of conversion of the logs into chips, or to the extent that a small quantity of such logs are processed, into other products at domestic processing facilities.

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

Form 5430-11
(November 2011)
(formerly 1140-6)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INDEPENDENT PRICE DETERMINATION CERTIFICATE

Timber Sale Number
ORC04-TS-2023.0030

Timber Sale Name
Elk Creek Ridge CT

Sale date
10/28/2022

Bidder or Offeror (Name)	Address *(include zip code)*

A. By submission of this bid or proposal, each bidder or offeror certifies, and in the case of a joint bid or proposal, each party thereto certifies as to its own organization, that in connection with this sale:

1. The prices in this bid or proposal have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices, with any other bidder or offeror or with any competitor;

2. Unless otherwise required by law, the prices which have been quoted in this bid or proposal have not been knowingly disclosed by the bidder or offeror and will not knowingly be disclosed by the bidder or offeror prior to opening, in the case of a bid, or prior to award, in the case of a proposal, directly or indirectly to any other bidder or offeror or to any competitor; and

3. No attempt has been made or will be made by the bidder or offeror to induce any other person or firm to submit or not to submit a bid or proposal for the purpose of restricting competition.

B. Each person signing this bid or proposal certifies that:

1. He is the person in the bidder's or offeror's organization responsible within that organization for the decision as to the prices being bid or offered herein and that he has not participated, and will not participate, in any action contrary to A. 1 through 3 above; or

2. (i) He is not the person in the bidder's or offeror's organization responsible within that organization for the decision as to the prices being bid or offered herein but that he has been authorized in writing to act as agent for the persons responsible for such decision in certifying that such persons have not participated, and will not participate, in any action contrary to A. 1 through 3, above, and as their agent does hereby so certify; and

(ii) He has not participated, and will not participate, in any action contrary to A. 1 through 3, above.

C. This certification is not applicable to a foreign bidder or offeror submitting a bid or proposal for a contract which requires performance or delivery outside the United States, its possessions, and Puerto Rico.

D. A bid or proposal will not be considered for award where A. 1, 3, or B., above, has been deleted or modified. Where A. 2, above, has been deleted or modified, the bid or proposal will not be considered for award unless the bidder or offeror furnishes with the bid or proposal a signed statement which sets forth in detail the circumstances of the disclosure and the head of the agency, determines that such disclosure was not made for the purpose of restricting competition.

(Authorized Signature of Bidder)	Name and Title *(type or print)*

INSTRUCTIONS

Submit a properly completed and signed original copy of this form, with offers or bids for sales of all government-owned property to Bureau of Land Management as follows:

A. Include with sealed bids, written quotations and written offers.
B. At auction, at close of bidding and before award of spot bid sale.

Form 5450-017
(July 2021)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

EXPORT DETERMINATION

FORM APPROVED
OMB NO. 1004-0058
Expires: Nov. 30, 2022

Location of facility where Federal timber is expected to be processed:

In compliance with requirements of 43 CFR 5424.1, ☐ I ☐ We hereby submit the following information:

(1) Have you exported unprocessed private timber, or if a sourcing area is established, have you exported private timber from lands tributary to the above processing facility, in the 24 months prior to the auction or purchase date of Federal timber?

☐ Yes ☐ No - Last Export Date *(if any within the past 5 years)* _____

(2) If the answer in (1) is yes, you are not eligible to purchase federal timber until at least 24 months from the date in (1).

(3) Have any of your affiliates* exported unprocessed private timber, or exported unprocessed private timber from lands tributary to the above processing facility if within an established sourcing area, within the 24 months prior to the auction or purchase date of the Federal timber? ☐ Yes ☐ No - Provide affiliate names and last export dates *(if any, list latest export date within the past 5 years)*:

a. Affiliate _____ Last Export date _____

b. Affiliate _____ Last Export date _____

c. Affiliate _____ Last Export date _____

(4) If any affiliates have exported unprocessed private timber within 24 months of the auction or purchase date of the Federal timber, you are not eligible to purchase federal timber until at least 24 months from the most recent export date shown in (3).

*From 43 CFR 5400.0-5: Affiliate means a business entity including but not limited to an individual, partnership, corporation, or association, which controls or is controlled by a purchaser, or, along with a purchaser, is controlled by a third business entity. From 16 USC 620e: Export prohibition applies to any individual, partnership, corporation, association, or other legal entity and includes any subsidiary, subcontractor, or parent company, and business affiliates where one affiliate controls or has the power to control the other or when both are controlled directly or indirectly by a third person.

Name of Firm:

Signature of Signing Officer	Title	Date

By signing this form, you certify that you or your affiliates have not exported unprocessed private timber within the 24 months prior to the sale date of Federal timber and will not export unprocessed private or federal timber for the duration of the federal timber sale. Timber export and substitution violations are subject to civil penalties described in 16 USC 620d and may result in monetary damages and suspension and debarment.

INSTRUCTIONS: The Purchaser must complete the form and return to the Contracting Officer. 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 complete a copy of this form and file the form with the Contracting Officer.

Timber Sale Name and Number:	Return Form to Contracting Officer at:

Unprocessed timber means trees or portions of trees or other roundwood not processed to standards and specifications suitable for end-product use. The term "unprocessed timber" does not include timber processed into any one of the following: (i) Lumber or construction timbers, except Western Red Cedar, meeting current American Lumber Standards Grades or Pacific Lumber Inspection Bureau Export R or N list grades, sawn on 4 sides, not intended for remanufacture; (ii) Lumber, construction timbers, or cants for remanufacture, except Western Red Cedar, meeting current American Lumber Standards Grades or Pacific Lumber Inspection Bureau Export R or N list clear grades, sawn on 4 sides, not to exceed 12 inches in thickness; (iii) Lumber, construction timbers, or cants for remanufacture, except Western Red Cedar, that do not meet the grades referred to in clause (ii) and are sawn on 4 sides, with wane less than ¼ of any face, not exceeding 8¾ inches in thickness; (iv) Chips, pulp, or pulp products; (v) Veneer or plywood; (vi) Poles, posts, or piling cut or treated with preservatives for use as such; (vii) Shakes or shingles; (viii) Aspen or other pulpwood bolts, not exceeding 100 inches in length, exported for processing into pulp; (ix) Pulp logs, cull logs, and incidental volumes of grade 3 and 4 sawlogs processed at domestic pulp mills, domestic chip plants, or other domestic operations for the primary purpose of conversion of the logs into chips, or to the extent that a small quantity of such logs are processed, into other products at domestic processing facilities.

(continued on page 2)

NOTICES

The Privacy Act and 43 CFR 2.48(d) require that you be furnished with the following information in connection with the information requested by this form.

AUTHORITY: 16 USC 620 and 43 CFR Part 5420 permit collection of the information requested by this form.

PRINCIPAL PURPOSE: The BLM uses the information in this form to determine eligibility to purchase federal timber.

ROUTINE USES: Timber sale purchaser provides information regarding their export of private timber.

EFFECT OF NOT PROVIDING INFORMATION: Submission of the requested information is required to obtain or retain a benefit. Failure to submit all of the requested information or to complete this form may result in delay or preclude the BLM's acceptance of your form.

The Paperwork Reduction Act requires us to inform you that:
The BLM collects this information to determine whether Federal timber has been substituted for exported private timber in accordance with 43 CFR 5424.1 and 5424.0-6(e).
You do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: The estimated public reporting burden for this form is 1 hour per response for a majority of responses, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. You may submit comments regarding the burden estimate or any other aspect of this form to: U.S. Department of the Interior, Bureau of Land Management (1004-0058), Bureau Information Collection Clearance Officer, 1849 C Street, N.W., Room 2134 LM, Washington, D.C. 20240.