UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Northwest Oregon District Office
1717 Fabry Road, S.E.
Salem, Oregon 97306

Cefir Miles Timber Sale
ORN02-TS-2023.0203
Date: August 17, 2023

TIMBER SALE PROSPECTUS
SBA SET-ASIDE

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

NOTICE IS HEREBY GIVEN that the Bureau of Land Management will offer for sale timber as described herein for oral auction, pursuant to Instructions to Bidders, as stated on Form No. 5440-9, attached. Written and oral bids will be received by the District Manager, or designated representative, in the timber sale room at the District Office, 1717 Fabry Road, S.E., Salem, Oregon. Written bids and deposits will be accepted beginning at 8:30 a.m. and the timber sale oral auction will commence at 9:00 a.m., on Wednesday, September 20, 2023. Before bids are submitted, full information concerning the timber, the conditions of sale and submission of bids, including appraised prices per species, should be obtained from the above District Manager, or designated representative. The right is hereby reserved to waive technical defects in this advertisement and to reject any or all bids. The United States reserves the right to waive any informality in bids received whenever such waiver is in the interest of the United States.

THIS PROSPECTUS does not constitute the decision document for purposes of appeal of a forest management decision. Consistent with 43 CFR Subpart 5003.2(b), the date the BLM posts the forest management decision on the BLM's ePlanning website establishes the effective date of the decision for purposes of an administrative appeal. The decision was posted to the BLM's ePlanning website on 07/27/2023, referring to the N126 LSR Landscape Plan Environmental Assessment, DOI-BLM-ORWA-N030-2018-0022-EA and Cefir Miles, DOI-BLM-ORWA-N020-2023-0005-DNA. For the purposes of 43 CFR 5401.0-6 and 5430.0-6, this advertisement is being published on 08/23/2023 and 08/30/2023.

AN ENVIRONMENTAL ASSESSMENT was prepared for this timber sale tract, and a Finding of No Significant Impact has been documented. These documents are available for inspection as background for each timber sale tract at the Northwest Oregon District Office.

FOR SBA SET-ASIDE TRACTS, the bidder must not have been determined by the Small Business Administration to be ineligible for preferential award for set-aside sales and must accompany his deposit with a self-certification statement that he is qualified as a small business concern as defined by the Small Business Administration in its regulations, Title 13, Chapter I, Part 121 (Revision 7) as amended, of the Code of Federal Regulations. The Form 5430-1 Self Certification Statement is attached hereto. The successful bidder will be required to sign SBA Form 723 "Small Business Certification Required on All Preferential Sales of Set-Aside Timber" at the time he signs the timber sale contract. Section 2(a) of Form 723 requires that successful bidders of SBA set-aside tracts must comply with delivery requirements pertaining to sawtimber volume. No more than 30 percent of the timber volume from a set-aside sale may be delivered for manufacturing to a business that is not a small business, as defined by the SBA (13 CFR 121.507 (a)). A copy of SBA form 723 is attached.

A WRITTEN BID on Form 5440-9 at not less than the advertised appraised price on a unit basis per species and the required minimum bid deposit shall be required to participate in oral bidding.

THE SUCCESSFUL BIDDER, as a condition of award, will be required to sign Form 5430-11, a certification that the bid was arrived at by the bidder or offeror independently, and was tendered without collusion with any other bidder or offeror. Also, Form 5450-17, Export Determination must be completed by the successful bidder. To expedite procedure, this form should be completed and submitted with the written bid.

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

THIS TIMBER SALE has been cruised based upon Eastside Scribner board foot measure. The minimum bid figures shown by species are dollars per thousand board feet (MBF). The minimum bid increment will be $0.10 per MBF.

A PERFORMANCE BOND in an amount not less than 20 percent of the total purchase price will be required for all contracts of $2,500 or more. A minimum performance bond of not less than $500 will be required for all installment contracts less than $2,500.

QUALIFIED SMALL BUSINESS concerns may apply to SBA for a loan to provide financing for access road construction required under the terms of qualifying timber sale contracts, and necessary contract changes will be made. Approval of loan applications rests with SBA and may be contingent on availability of funds. Applicants for such loans shall notify BLM of their intention to apply for a loan.

PRE-AWARD QUALIFICATIONS. The high bidder may be required to furnish information to determine the ability to perform the obligations of the contract. If the high bidder is determined not qualified, responsible or refuses to respond within fifteen (15) days of a request for information pertaining to qualifications, the contract may be offered and awarded for the amount of the high bid to the highest of the bidders who is qualified, responsible, and willing to accept the contract.

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 5420, as amended. The BLM has revised the log export restrictions special provision to reduce the log branding and painting requirements.

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

CONTRACT MODIFICATION, SUSPENSION OR TERMINATION: A revised Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and/or to modify or terminate the contract when necessary to: (1) Comply with the Endangered Species Act or to prevent incidental take of northern spotted owls in accordance with management direction in the Record of Decision (ROD) and Resource Management Plan (RMP), or; (2) Comply with a court order, or; (3) Protect species which were identified for protection through survey and manage and/or protection buffer standards and guidelines or management direction established in the ROD and RMP.

ADDITIONAL INFORMATION concerning this timber sale tract is available at the above District Office. A copy of the timber sale contract is also available for inspection at the District Office. The prospectus for this/these sale(s) is also available online at: https://www.blm.gov/or/resources/forests/index.php. The prospectus includes maps and tables that cannot be made Section 508 compliant. For help with its data or information, please contact the Northwest Oregon District Office at 503-375-5646.

TIMBER SALE NOTICE
SCALE SALE
SBA SET-ASIDE SALE

NORTHWEST OREGON DISTRICT
MARYS PEAK FIELD OFFICE
ALSEA-RICKREALL MASTER UNIT

SALE DATE: September 20, 2023

CONTRACT NO. ORN02-TS-2023.0203, CEFIR MILES: SCALE SALE: SBA SET-ASIDE:
LANE AND BENTON COUNTY, OREGON: O&C: ORAL AUCTION:
BID DEPOSIT REQUIRED: $32,700.00.

All timber designated for cutting on: Lot 17, Section 4; Lot 4, Section 7; SW1/4NW1/4, W1/2SW1/4, Section 9; NE1/4, N1/2NW1/4, SE1/4NW1/4, NE1/4SW1/4, NW1/4NE1/4, Section 16; NE1/4, S1/2NW1/4, SW1/4, SE1/4 Section 17; T. 15 S., R. 8 W; SE1/4SE1/4, Section 12; T. 15 S., R. 9 W., Willamette Meridian.

THIS TIMBER SALE HAS BEEN CRUISED BASED UPON EASTSIDE SCRIBNER MEASURE.
Minimum bid figures shown by species are dollars per thousand board feet (MBF). The minimum bid increment will be $0.10 per MBF.

Approx. No. Merchantable Trees	Est. Vol. MBF 32' Log	Species	Est. Vol. MBF 16' Log	Appraised Price Per MBF	Estimated Volume Times Appraised Price
13,371	1,977	Douglas-fir	2,396	$132.00	$316,272.00
1,181	153	Western hemlock	188	$44.70	$8,403.60
644	24	Red alder	36	$26.40	$950.40
18	3	Western redcedar	4	$194.10	$776.40
50	2	Bigleaf maple	3	$23.40	$70.20
15,264	2,159	**Totals**	2,627		$326,472.60

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

LOG EXPORT AND SUBSTITUTION RESTRICTIONS: All timber offered for sale hereunder is restricted from export from the United States in the form of unprocessed timber and prohibited from substitution of exported private timber.

CRUISE INFORMATION: The timber volumes were based on variable plot cruise in the Partial Cut Areas and 100% cruise in the Right-of-way areas for estimated board foot volumes of trees in 16-foot logs. Approximately 0% of the total sale volume is salvage material. With respect to merchantable trees of all species; the average tree is 13.6 inches DBHOB; the average log contains 46 bd. ft.; the total gross volume is approximately 2,782 MBF; and 94% recovery is expected. This cruise information is given for informational purposes only and the contract price and volume will be determined by a scale using eastside scribner.

CUTTING AREA: Ten units totaling approximately 167 acres shall be Partial Cut. Approximately 4 acres of Right-of-Way shall be cut. Approximately 1 acre of Special Mark along roads shall be cut. Harvest areas shown on Exhibit A have been traversed using a Trimble R1 Global Positioning System receiver.

DURATION OF CONTRACT: Contract length will be 36 months for cutting and removal of timber.

LOCATION: The Cefir Miles Sale is located approximately twenty (20) air miles southwest of Philomath, Oregon. From Philomath, drive south on Highway 34 for approximately 17 miles. Turn left on to 1st Street/Alsea-Deadwood Highway. Drive approximately 9.5 miles and turn left on to Hazel Glen Road. In approximately 2 miles, you will arrive in Contract Area. See general vicinity map and Exhibit E for details.

ACCESS AND ROAD MAINTENANCE: Access is provided on United States Forest Service and Bureau of Land Management controlled roads.

In the use of Bureau of Land Management controlled roads – Purchaser Maintenance and United States Forest Service controlled roads – Purchaser Maintenance, the Purchaser will be required to perform maintenance on approximately 10.5 miles of road. The Purchaser shall pay the Government a road maintenance obligation for rockwear of one and 21/100 dollars ($1.21) per MBF for timber and mineral haul associated with the contract.

Purchaser maintenance shall include frequent blading and shaping of road surface; ditch, culvert, and catch basin cleaning; removal of minor slides and other debris. Roads shall be left in a condition to withstand adverse weather at the end of the seasonal operations.

ROAD CONSTRUCTION AND RENOVATION: The purchaser will be required to do all work set forth below. The purchaser shall supply all materials unless otherwise indicated.

1. Construction:

   P1, Station 0+00 – 3+09, 16-foot subgrade with 2-foot ditch
   Excavation; Grading and compacting; erosion control; Decommissioning

   P3, Station 0+00 – 7+39, 16-foot subgrade with 2-foot ditch
   Excavation; Grading and compacting; erosion control; Decommissioning

   P5, Station 0+00 – 2+11, 16-foot subgrade with 2-foot ditch
   Excavation; Grading and compacting; erosion control; Decommissioning; Surfacing – Aggregate surface course, depth 6 inches, useable width 12 feet

   P6, Station 0+00 – 6+86, 16-foot subgrade with 2-foot ditch
   Excavation; Grading and compacting; erosion control; Decommissioning; Surfacing – Aggregate surface course, depth 6 inches, useable width 12 feet

   P7, Station 0+00 – 8+98, 16-foot subgrade with 2-foot ditch
   Excavation; Grading and compacting; erosion control; Decommissioning; Surfacing – Aggregate surface course, depth 6 inches, useable width 12 feet

   P9, Station 0+00 – 4+22, 16-foot subgrade with 2-foot ditch
   Excavation; Grading and compacting; erosion control; Decommissioning; Surfacing – Aggregate surface course, depth 6 inches, useable width 12 feet

   R2, Station 0+00 – 6+34, 16-foot subgrade with 2-foot ditch
   Excavation; Grading and compacting; erosion control; Decommissioning

   R4, Station 0+00 – 5+28, 16-foot subgrade with 2-foot ditch
   Excavation; Grading and compacting; erosion control; Decommissioning; Surfacing – Aggregate surface course, depth 6 inches, useable width 15 feet

2. Renovation/Improvement:

   15-8-16.1, MP 0.00 – 3.09, 16-foot subgrade with 2-foot ditch
   Roadside brushing; culvert installation and replacement; grading and compacting; erosion control; Surfacing – Aggregate surface coarse, depth 6 inches, useable width 15 feet

15-8-17.1, MP 0.00 – 0.46, 16-foot subgrade with 2-foot ditch
Roadside brushing; culvert installation; grading and compacting; erosion control; Surfacing – Aggregate spot rock, useable width 15 feet

15-8-18.0, MP 0.00 – 0.58, 16-foot subgrade with 2-foot ditch
Roadside brushing; grading and compacting; erosion control

15-8-18.1, MP 0.00 – 0.86, 16-foot subgrade with 2-foot ditch
Roadside brushing; culvert installation and replacement, grading and compacting; erosion control

15-8-9.1, MP 0.00 – 0.72, 16-foot subgrade with 2-foot ditch
Roadside brushing; grading and compacting; erosion control; Surfacing – Aggregate spot rock

15-8-9.2, MP 0. – 0.19, 16-foot subgrade with 2-foot ditch
Roadside brushing; grading and compacting; erosion control; Surfacing – Aggregate surface coarse, depth 3 inches, useable width 15 feet

15-8-9.3, MP 0.00 – 0.27, 16-foot subgrade with 2-foot ditch
Roadside brushing; grading and compacting; erosion control; Surfacing – Aggregate surface coarse, depth 3 inches, useable width 15 feet

15-8-9.4, MP 0.00 – 0.35, 16-foot subgrade with 2-foot ditch
Roadside brushing; culvert installation and replacement; grading and compacting; erosion control; Surfacing – Aggregate surface coarse, depth 3 inches, useable width 15 feet

15-9-12, MP 0.00 – 2.98, 20-foot subgrade with 2-foot ditch
Roadside brushing; and ditch clean up

15-9-12, MP 2.98 – 5.25, 16-foot subgrade with 2-foot ditch
Roadside brushing; culvert installation and replacement; grading and compacting; erosion control; Surfacing – Aggregate surface coarse, depth 3 inches, useable width 15 feet

3. Estimated Quantities:

Clearing and grubbing:
2.88 acres

Excavation:
3,981 cubic yards of common

Culvert and Flume:
130 feet of 24 inch CMP
660 feet of 24 inch CPP

Aggregate Material:

Quantity:	Description:
754 cubic yards	Pit Run
1,505 cubic yards	3 inch crushed rock
459 cubic yards	1 ½ inch crushed rock
150 cubic yards	1 inch crushed rock

Miscellaneous:

Brushing 22.74 acres
Soil stabilization 3.33 acres
Blading 3.26 miles

Rock Source: Commercial or source that meets specs and is approved by the Authorized Officer.

Special Attention Items:
Restricted Operating Area (Sec. 44.k.)
Logging Residue Reduction (Sec. 44.cc.)
Tree topping/girdling (Exhibit G)

SEASONAL RESTRICTION MATRIX

Activity	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Road Renovation												
In-Stream Work Period												
Ground-based Yarding (tractor)												
Daily Operating Restriction (Restricted Operating Area)												
Skyline Yarding												
Log Hauling												
Generally allowed												
Generally not allowed – or restriction applies												

TIMBER SALE CONTRACT RESERVATIONS AND SPECIAL PROVISIONS

Sec. 43.

RESERVED

a. All timber on the Reserve Areas shown on Exhibit A and all painted orange or posted trees which are on or mark the boundaries of the Reserve Areas and/or right-of-way areas of Roads to be Constructed and of Roads to be Improved shown on Exhibit A.

b. All trees other than Douglas-fir and western hemlock in the Partial Cut and Gap areas, as shown on Exhibit A.

c. All preexisting down logs and snags in the Partial Cut and Gap areas, as shown on Exhibit A, which do not present a safety hazard as determined by the Authorized Officer. All snags felled for safety reasons shall be retained on site.

d. All trees less than seven (7) inches DBHOB not designated for cutting.

e. Trees required to meet residual tree requirements set forth in Exhibit F, attached hereto and made a part hereof.

f. Trees required to meet snag creation requirements set forth in Exhibit G, attached hereto and made a part hereof.

g. All trees greater than forty (40) inches DBHOB and established prior to 1850 as determined by the Authorized Officer.

Sec. 44. Special Provisions

LOGGING

a. Before beginning the operations on the Contract Area for the first time or after a shutdown of 7 or more days, the Purchaser shall notify the Authorized Officer in writing of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if he intends to cease operations for any period of 7 or more days.

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

c. Excessive damage to reserve timber, as determined by the Authorized Officer, will result in suspension of the yarding operations until mitigation measures are in place to prevent further damage as approved by the Authorized Officer.

d. In accordance with Exhibit G, which is attached hereto and made a part hereof, the Purchaser shall create one thousand six hundred forty-five (1,645) snags located in the Partial Cut Area and Reserve Area shown on Exhibit A.

e. No trees may be felled, yarded, decked or loaded in or through the Reserve Areas shown on Exhibit A, or adjacent private land, unless expressly authorized by other provisions of this contract. Tops, limbs, and other logging debris entering the Reserve Areas from felling operations shall be pulled back into the Partial Cut Areas shown on Exhibit A.

f. In the Partial Cut Areas, Gaps and Special Mark Areas as shown on Exhibit A trees shall be cut in accordance with Exhibit F, which is attached hereto and made a part hereof.

g. In the Partial Cut Area – Skyline Yarding shown on Exhibit A, yarding shall be done with a skyline or similar cable system equipped with a slack pulling carriage capable of yarding one thousand five hundred (1,500) feet slope distance from the landing and having at least seventy-five (75) feet lateral yarding capabilities. The carriage shall be capable of being held in position on the skyline during all lateral yarding and shall be able to pass intermediate support jacks as required. The Purchaser shall directionally fall trees into the lead with the yarding direction. The leading end of all logs shall be transported free of the ground during yarding. The rigging of tail or lift trees, intermediate supports, and use of tailholds outside of Partial Cut Areas shall be required where necessary to meet this requirement. The Purchaser shall locate Skyline yarding roads as follows:

1. Skyline yarding roads shall be located perpendicular to the yarding slope unless otherwise approved by the Authorized Officer.

2. Mark the location of the skyline yarding roads on the ground with high visibility flagging in accordance with the required Logging Plan.

3. Space designated skid roads at a minimum of 150 feet apart unless otherwise agreed to in writing by the Authorized Officer.

4. The width of each skyline yarding road shall be limited to 12 feet.

5. Obtain written approval from the Authorized Officer of the location of all skyline yarding roads.

h. In the Partial Cut Area – Ground-based Yarding shown on Exhibit A, all yarding shall be done by equipment operated entirely on designated skid roads. Before felling and yarding any timber, except skid road right-of-way timber, in the Partial Cut Area – Ground-based Yarding the Purchaser shall locate and construct designated skid roads as follows:

1. Mark the location of the designated skid roads on the ground with high visibility flagging in accordance with the required Logging Plan.

2. Space designated skid roads at a minimum of 150 feet apart unless otherwise agreed to in writing by the Authorized Officer.

3. Obtain written approval from the Authorized Officer of the location of all designated skid roads.

4. Limit the width of each skid road to a maximum of 12 feet.

5. Limit skid roads to slopes less than 35% and located perpendicular to the slope to minimize road cutting.

i. No ground-based yarding shall be conducted on the Partial Cut – Ground-based yarding shown on Exhibit A between October 16 of one calendar year and May 14 of the following calendar year, both days inclusive, or during any period of wet soil conditions as determined by the Authorized Officer.

j. No yarding or falling operations shall be conducted in the Restricted Operating Area shown on Exhibit A between April 1 and August 5 of each calendar year, both days inclusive.

k. In the Restricted Operating Area shown on Exhibit A, daily operation of power-driven equipment shall be limited to the period of 2 hours after sunrise until 2 hours before sunset between August 6 and September 15 of each calendar year, both days inclusive.

ROAD CONSTRUCTION, RENOVATION, IMPROVEMENT, MAINTENANCE AND USE

l. The Purchaser shall construct approximately 2,927 feet of road, renovate approximately 52,066 feet of road and improve approximately 614 feet of road in strict accordance with the plans and specifications shown on Exhibit C, which is attached hereto and a made a part hereof.

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

n. No road construction, renovation or improvement shall be conducted on the Contract Area shown on Exhibit A between November 1 of one calendar year and April 30 of the following calendar year, both days inclusive, or during other periods of wet soil conditions as determined by the Authorized Officer.

o. No instream work shall be conducted on the Contract Area shown on Exhibit A between September 1 of one calendar year and June 30 of the following calendar year, both days inclusive, or during other periods of wet conditions as determined by the Authorized Officer.

p. The Purchaser is authorized to use the roads shown on Exhibit E for the removal of Government timber sold under the terms of this contract and the hauling of rock as required in Exhibit C, provided that the Purchaser pay the required rockwear obligations described in Section 42.q. and Section 42.r. Any road shown on Exhibit E and requiring construction or renovation in Exhibit C of this contract, shall be maintained by the Purchaser until receiving written acceptance of the construction or renovation from the Authorized Officer.

q. The Purchaser shall pay a road rockwear fee of one and 21/100 dollars ($1.21) per thousand board feet log scale per mile for the use of Purchaser maintained roads. The total maintenance fee due shall be based upon volumes determined pursuant to Exhibit B of this contract and mileage of roads used as determined by the Authorized Officer. Prior to the use of such roads, the Purchaser shall give written notice to the Authorized Officer of the roads intended for use in the removal of timber purchased under this contract, together with an estimate of the volume to be hauled over such roads. The Authorized Officer shall establish an installment schedule of payment of the maintenance obligation. If it is determined by the Authorized Officer, after all merchantable timber has been cut and scaled, that the total rockwear payments made under this contract exceed the rockwear payment due, such excess shall be returned to the Purchaser after such determination is made.

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

s. In the maintenance and use of USFS Rd No. 3500 (15-9-12.00), the Purchaser shall comply with the conditions of the Bureau of Land Management and U.S. Forest Service Interagency Right-of-Way and Road Use Agreement dated May 20, 1980, and Exhibit A, Agreement No. 06-06-11-01. The conditions include: entering into a road use permit with the U.S. Forest Service and performing the maintenance.

t. The Purchaser agrees that if they elect to use any other private road, which is the subject of a right-a-way agreement with the Government for the removal of Government timber sold under the terms of this contract, Purchaser shall request and agree to the modification of this contract to provide for such use and for allowances for amortization of the Government's shares of the capital investment of any such road.

u. With the prior written approval of the Authorized Officer, the Purchaser may arrange for cooperative maintenance with other users of roads included in Exhibit E; 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 of these roads.

v. The Purchaser shall waterbar, grass seed and mulch all newly constructed natural surface roads, for overwinter erosion control, or during any period of wet soil conditions as determined by the Authorized Officer.

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

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

Details shall include:

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

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

x. Tracked type equipment shall not be allowed to track on asphalt surfaced roads without the proper protection of that surface. Prior approval shall be obtained from the Authorized Officer when crossing with protective devices.

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

ENVIRONMENTAL PROTECTION

y. In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall complete grass seeding on exposed soil on all skyline roads, ground-based skid roads, landings, and any other exposed soil caused by contract obligations as directed by the Authorized Officer. Grass seed and suitable equipment to apply seed shall be furnished by the Purchaser.

Seed to be supplied shall meet the following requirements:

SPECIES	**RATE**
Red Fescue (Festuca rubra)	100%
Oregon Certified Seed (Blue Tag)	
Purity	95% minimum
Germination	85% minimum
Noxious Weed Content	None (Tested: None Found)

The Purchaser shall apply grass seed uniformly on the designated areas at a rate equal to ten (10) pounds per acre. Evidence of seed certification shall be furnished to the Authorized Officer prior to application. Grass seed which has become wet, moldy or otherwise damaged shall not be provided.

z. In addition to the requirements set forth in Sec. 26 of this contract, in order to reduce or prevent the spread of noxious weeds to BLM lands, all road construction, piling, and ground-based logging equipment including loaders shall be cleaned of all plant parts and soil prior to entry onto BLM lands. Equipment shall be inspected by the Authorized Officer at a site approved by the Authorized Officer to verify that the equipment had been reasonably cleaned prior to entry onto BLM lands.

aa. Immediately following ground-based yarding activities for any operating season, the Purchaser shall construct water bars, as shown on Exhibit C, on ground-based skid roads and block them to vehicular traffic as directed by the Authorized Officer. The location of water bars shall be approved by the Authorized Officer prior to construction.

FIRE PREVENTION

bb. Primarily for purposes of fire prevention and control, the Purchaser shall, prior to the operation of power-driven equipment in construction or logging operations under this contract during the fire season or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the Authorized Officer. Purchaser shall take such measures for prevention and suppression of fire on the contract area and other adjacent Government lands used or traversed by Purchaser in connection with operations as are required by applicable laws and regulations. However, when in the opinion of the Authorized Officer, weather and other conditions affecting fire incidence and control make special precautions necessary to protect the contract area and said Government lands, Purchaser shall take such additional or other fire

prevention and control measures as may be required by the Authorized Officer. The Purchaser shall comply with Oregon Department of Forestry Industrial Fire Precaution Level (IFPL) I Fire Season requirements. At IFPL II and III, additional fire prevention and control provisions may be added as determined by the Authorized Officer and specified in written instructions to the Purchaser to mitigate dry fuel and weather conditions.

LOGGING RESIDUE REDUCTION

cc. In addition to the requirements of Sec. 15 of this contract, and notwithstanding the Purchasers satisfactory compliance with State laws and regulations regarding offsetting or abating the additional fire hazard created by this operation and the States willingness to release the Purchaser from liability for such hazard, the Purchaser shall remain responsible to the Government for performance of the following hazard reduction measure(s) required by this contract: Perform logging residue reduction and site preparation work on forty-six (46) acres of harvest area located within harvest units. The required work shall consist of any treatment or combination of treatments, as determined by the Authorized Officer and specified in writing by the Contracting Officer. The number of acres of each treatment shall be determined by the Authorized Officer. Prior to commencement of any operation under this Section of the contract, a slash disposal and pre-work conference between the purchaser's representative and the Authorized Officer must be held at a location designated by the Authorized Officer. The number of acres of each treatment shall be determined by the Authorized Officer. All slash disposals shall be done in accordance with the plans developed at this pre-work conference. Slash, as defined for this section, shall mean all material (brush, limbs, tops, unmerchantable stems, and chunks) severed or knocked over as a result of purchaser's operations under the terms of this contract.

1. Excavator pile and burn slash where ground base logging operations in salvage harvest occurs and 25 feet off both sides of all roads in harvest units. All road and in harvest area slash shall be piled by an excavator equipped with a hydraulic thumb. Finished piles shall be tight and free of dirt.

    a. Unmerchantable logs greater than six (6) inches on the small end shall be left in place, or positioned so that they will not be burned.

    b. Machine piles shall be located as far as possible from green trees, snags, or unit boundaries to minimize damage.

    c. Machine piles shall be kept free of dirt and other non-wood debris and constructed as compactly as possible. There should be an adequate supply of finer fuels located within and under the covered area of the pile to ensure ignition of the larger fuels.

    d. A 10-foot by 10-foot cover of four (4) mil. polyethylene shall cap each machine pile and remain visible to maintain a dry ignition point. The cover shall be firmly fixed to each pile to hold it in place. Plastic shall be held in place

with woody debris or tied with rope or twine. The plastic must be secured so that it is held in place during strong wind conditions. The Purchaser is required to furnish the covering materials. Covering shall be completed as directed by the Authorized Officer. When burned, machine piles are to consume 70-90% when burning is complete. If consumption is less then desired percentages, piles are to be recovered for burning during the next prescribed burning opportunity.

e. Cutting Areas shall be piled during the same season that they are logged.

2. Pile and burn landing slash within thirty (30) feet of the edge of each landing, all tops, broken pieces, limbs and debris more than one (1) inch in diameter at the large end and longer than three (3) feet in length shall be piled within fifteen (15) days of completion of hauling logs from that landing. Landing piles shall be kept free of dirt and located adjacent to roads at least twenty (20) feet from any Reserve Tree and/or as directed by the Authorized Officer.

    a. Upon completion of landing piling, the Purchaser shall prepare the landing piles for burning by securely covering each landing pile by securely covering each pile with four (4) mil. thick polyethylene plastic film at least 20 feet wide. Landing piles shall be 75 percent covered with the covering extending three-quarters of the way down all sides. The plastic shall be oriented southwest to northeast. Pieces of burnable material shall be placed on top of the plastic to secure it from moving while remaining visible and to prevent it from blowing off during strong wind episodes. The Purchaser is required to furnish the covering materials. The timing of this covering work shall be in accordance with instructions from the Authorized Officer.

    b. When burned, machine piles are to consume 70-90% when burning is complete. If consumption is less then desired percentages, piles are to be recovered for burning during the next prescribed burning opportunity. No landing debris shall be dozed off the landing and covered with dirt. Debris which has been buried and is determined to be the source of holdover fire shall be excavated by the Purchaser, at the Purchaser's expense, with a tractor and/or hydraulic excavator as directed by the Authorized Officer. If the structure of the landing piles will not permit adequate consumption of piled debris by burning, the Purchaser shall re-pile them at the direction of the Authorized Officer.

3. Lop and Scatter logging residue concentrations within gap prescriptions on up to Twenty (20) total acres within all units. Slash shall cut and dispersed to the approval of the authorized officer.

dd. Notwithstanding the provisions of Sec. 15 of this contract, the Government shall assume all obligations for disposal or reduction of fire hazards created by Purchaser's operations

on Government lands, except for burning and mop-up assistance as required. The Purchaser shall, under supervision of the Authorized Officer or designated representative, assist in preparing units for burning, burning, mop-up, and patrol by furnishing, at the Purchaser's own expense, the services of personnel and equipment on each unit as shown below:

1. For Igniting and Burning Piles on Units:

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

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

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

d. All ignition personnel will be directly supervised by a BLM representative.

2. For Mop-up of Piles on Units:

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

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

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

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

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

All listed personnel shall be physically fit, experienced, and fully capable of functioning as required. In addition, all listed personnel shall be qualified according to the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System Guide, PMS-310-1 and provide documentation of these qualifications. On the day of ignition all listed personnel shall be fluent in speaking and understanding English, clothing shall consist of long pants and long-sleeved shirts and be of approved aramid fabric (Nomex™ or equivalent), as well as being free of diesel fuel oil. All personnel shall wear lug sole boots with minimum eight (8) inch tall uppers that provide ankle support, approved hardhats, and leather gloves. Personnel who do not meet these requirements or do not have proper clothing and personal protective equipment (PPE) will not be allowed to participate. All listed tools and equipment shall be in good usable condition. All power-driven equipment shall be fully fueled and available for immediate use. During periods of use under this subsection, the Purchaser shall provide fuel and maintenance for all such power-driven equipment.

Except as provided hereafter for fire escapement, the Purchaser shall continue the required assistance in mop up on each cutting unit shown on Exhibit A for seventy-two (72) hours, as directed by the Authorized Officer within a five (5) day period commencing at 8:00 a.m. the day following the completion of ignition in that unit, or until released from such service by the Government, whichever occurs first.

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

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

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

Time is of the essence in complying with this provision. In the event the Purchaser fails to provide the personnel and equipment required herein, the Purchaser shall be responsible for all additional cost incurred by the Government in disposing of slash including but not limited to the wages and other costs of providing federal employees and others as substitute labor force, the cost of providing substitute equipment and appropriate additional overhead expenses. If the

Purchaser's failure results in a deferral of burning and new conditions necessitate additional personnel and equipment to accomplish the planned burn, the Purchaser also shall be responsible for such additional costs.

LOG EXPORT RESTRICTION

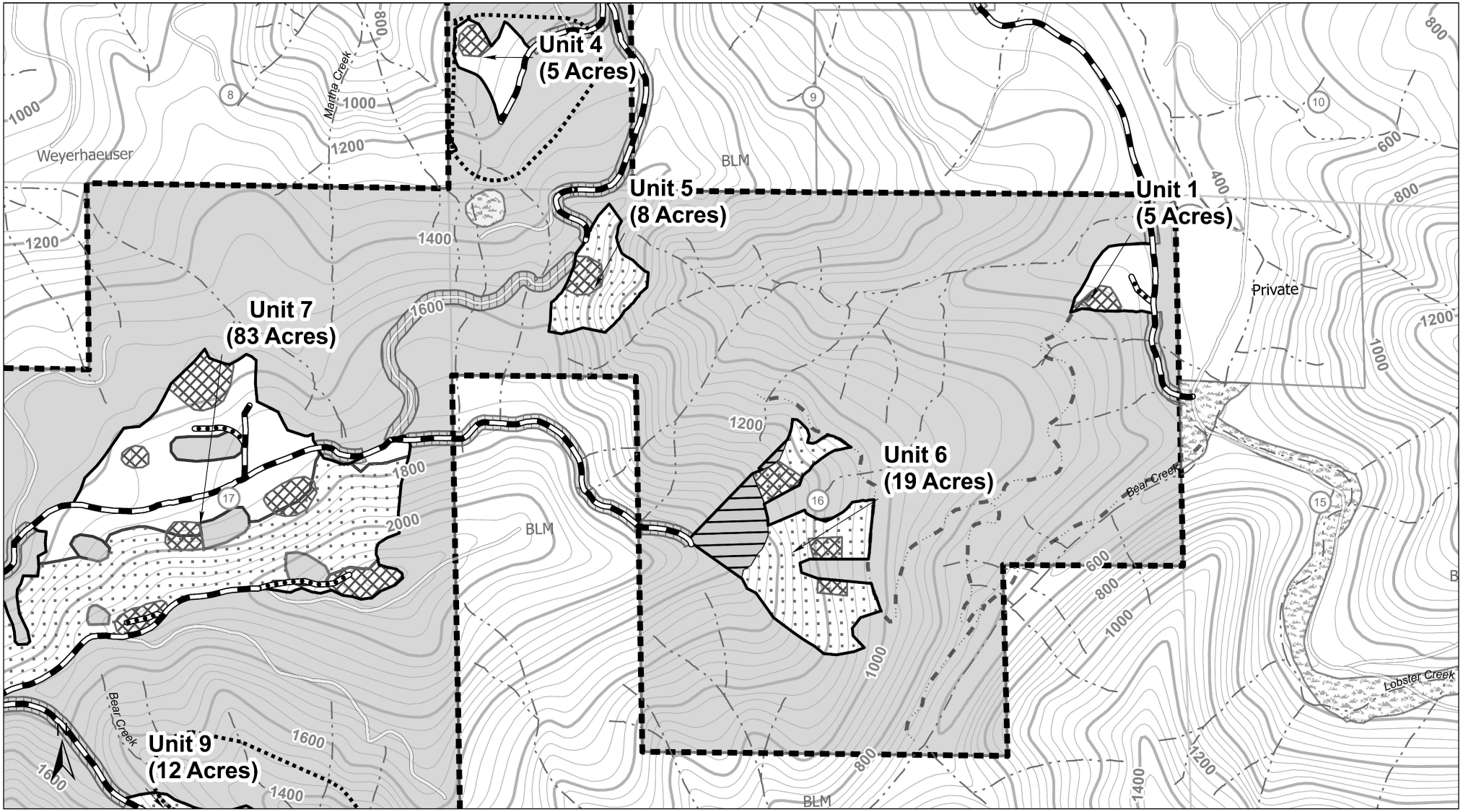
ee. Unless otherwise authorized in writing by the Contracting Officer, the Purchaser shall brand clearly and legibly one end of all logs with a scaling diameter (small end inside bark) of over ten (10) inches, prior to the removal of timber from the contract area. All loads of eleven (11) logs or more will have a minimum of ten (10) logs clearly and legibly branded on one end regardless of the diameter of the logs. All logs will be branded on loads of ten (10) logs or less. One end of all branded logs to be processed domestically will be marked with a three (3) square inch spot of highway yellow paint. The Purchaser will stop trucks for accountability monitoring at mutually agreed upon locations when notified by the Authorized Officer. If multiple trailers (mule trains) are used, each bunked load shall be considered an individual load, and these guidelines will apply to each bunked load. If a flatbed stake trailer is used, each bundle will be treated as a separate load. At the discretion of the Contracting Officer, the Purchaser may be required to brand and paint all logs. Any increased costs for log branding and painting shall be the responsibility of the Purchaser.

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Northwest Oregon District

Cefir Miles
EXHIBIT A

TIMBER SALE CONTRACT MAP - ORN02-TS-2023.0203

T. 15 S., R. 8 W., Sections 04, 07, 09, 16, 17 and T. 15 S., R. 9 W., Section 12 W.M.



Contour Interval: 40 ft (LiDAR)

- Existing Road
- Decommissioned Road
- Road to be Constructed
- Road to be Renovated
- Reserve Area
- Boundary Contract Area
- Boundary Cutting Area
- Partial Cut - Ground Based Yarding
- Partial Cut - Skyline Yarding
- Gap
- Yarding Allowed in Reserve Area
- Special Mark Area
- Restricted Operation Area
- Stream
- Waterbody

Feet
0 1,000

Harvest Area	167.00 Acres
Right of Way Area	4.00 Acres
Reserve Area	982.74 Acres
Total Contract Area	1153.74 Acres

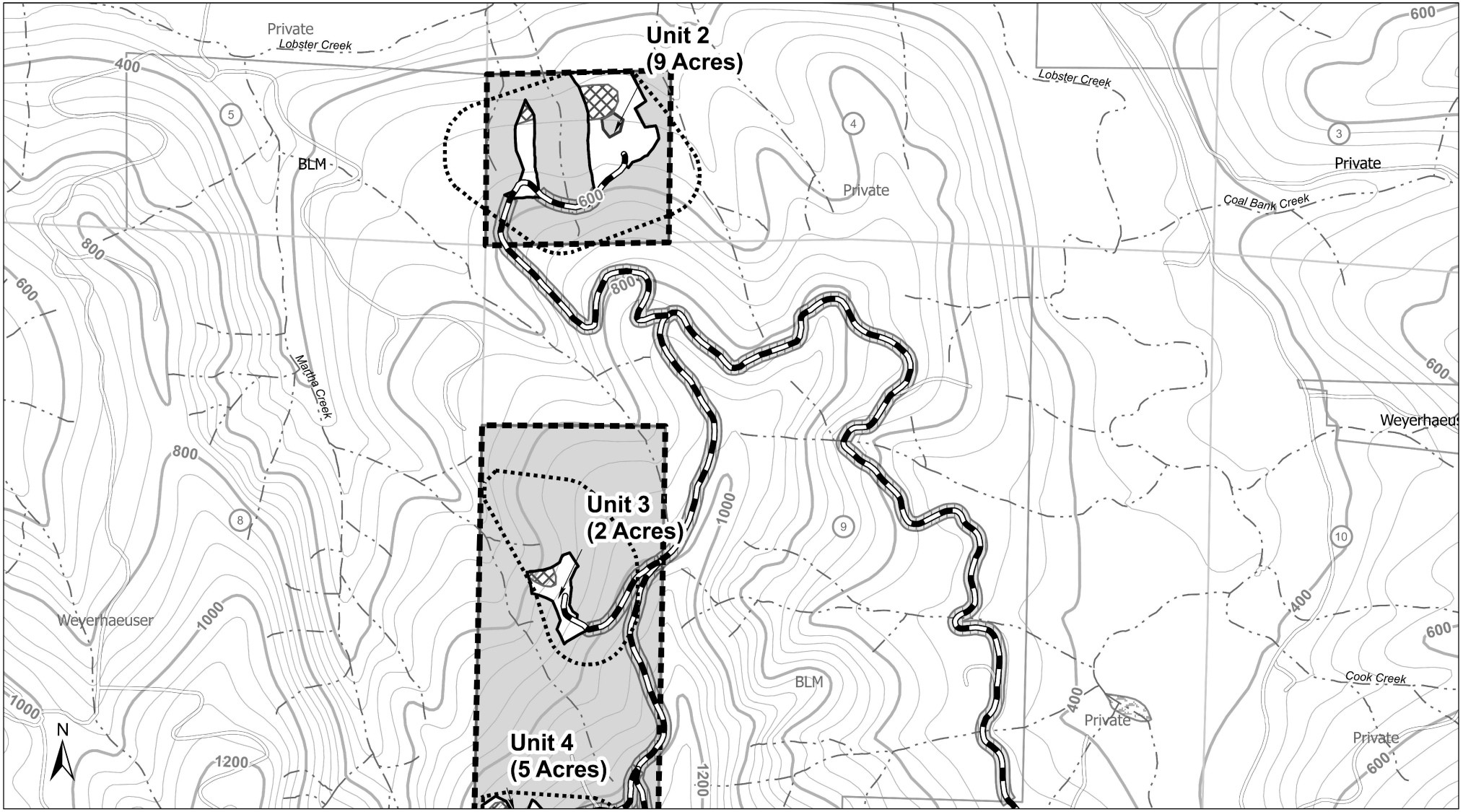
NOTES: Boundary of salvage areas are painted orange and posted. Unit acres do not include existing roads.

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Northwest Oregon District

Cefir Miles
EXHIBIT A

TIMBER SALE CONTRACT MAP - ORN02-TS-2023.0203

T. 15 S., R. 8 W., Sections 04, 07, 09, 16, 17 and T. 15 S., R. 9 W., Section 12 W.M.



Contour Interval: 40 ft (LiDAR)

- Existing Road
- Road to be Renovated
- Reserve Area
- Boundary Contract Area
- Boundary Cutting Area
- Partial Cut - Ground Based Yarding
- Gap
- Special Mark Area
- Restricted Operation Area
- Stream
- Waterbody

Feet
0 1,000

Harvest Area	167.00 Acres
Right of Way Area	4.00 Acres
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Bureau of Land Management
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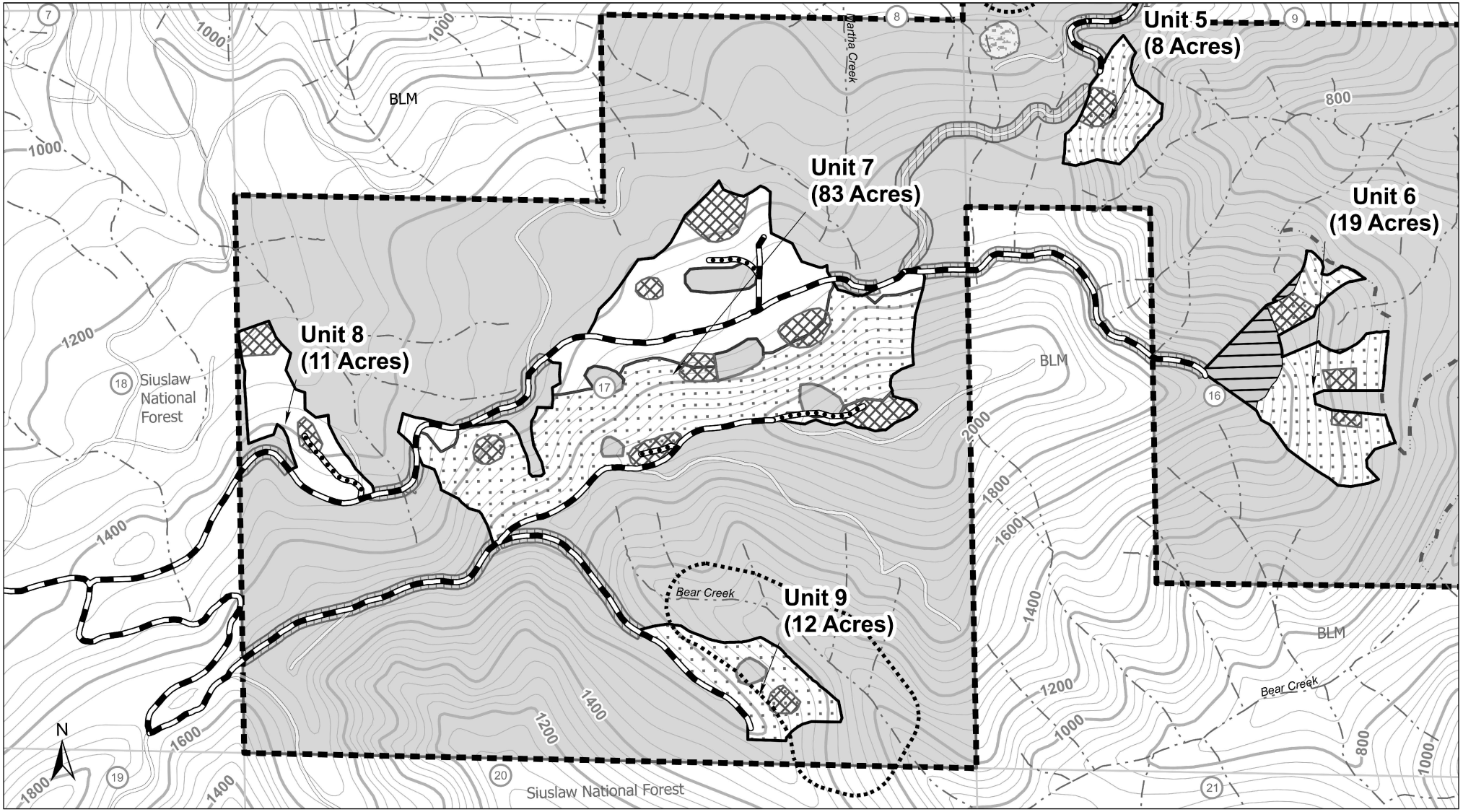
T. 15 S., R. 8 W., Sections 04, 07, 09, 16, 17 and T. 15 S., R. 9 W., Section 12 W.M.



Contour Interval: 40 ft (LiDAR)

- Existing Road
- Decommissioned Road
- Road to be Constructed
- Road to be Renovated
- Reserve Area
- Boundary Contract Area
- Boundary Cutting Area
- Partial Cut - Ground Based Yarding
- Partial Cut - Skyline Yarding
- Gap
- Yarding Allowed in Reserve Area
- Special Mark Area
- Restricted Operation Area
- Stream
- Waterbody

Feet
0 1,000

Harvest Area	167.00 Acres
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UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
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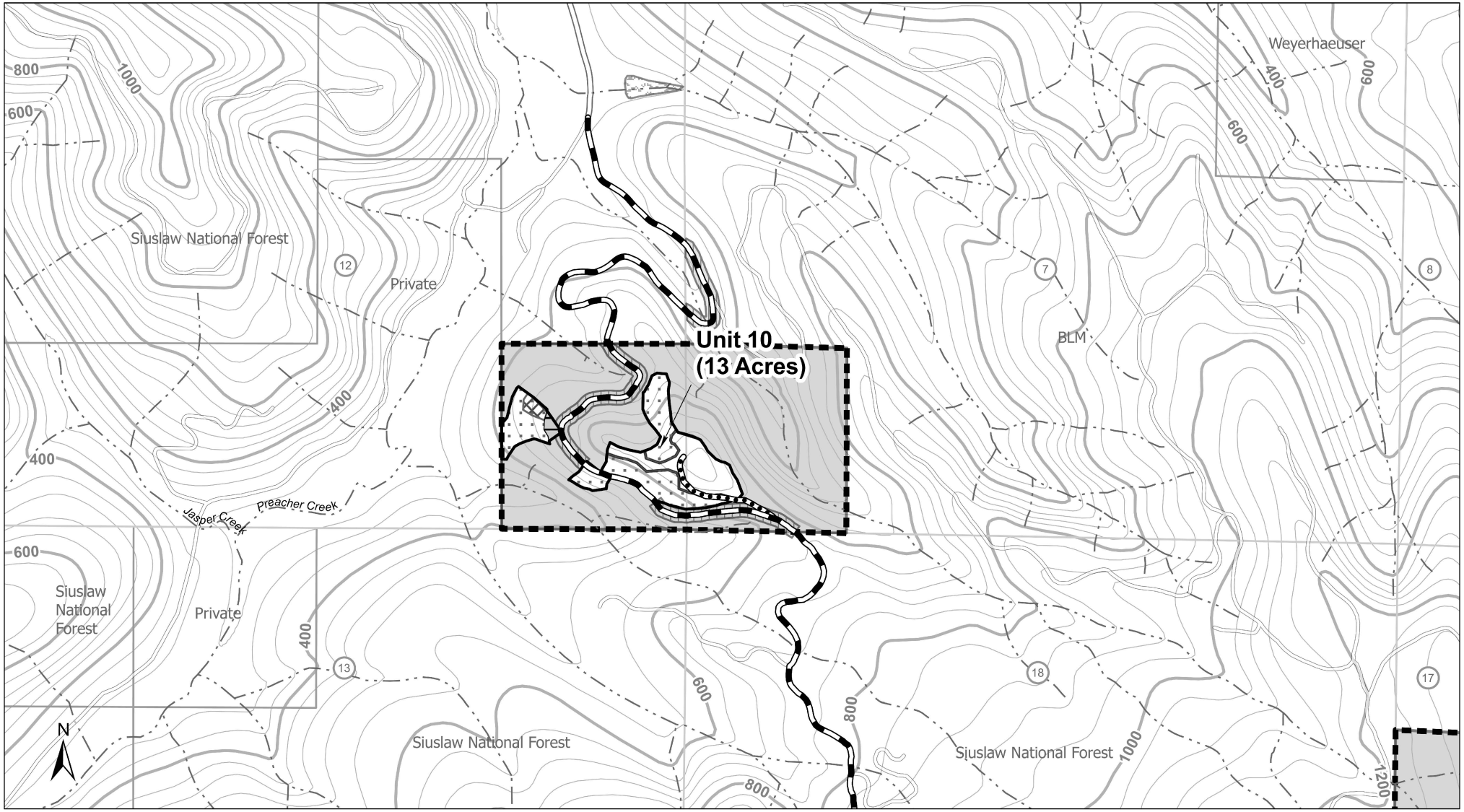

Contour Interval: 40 ft (LiDAR)

- Existing Road
- Road to be Constructed
- Road to be Renovated
- Reserve Area
- Boundary Contract Area
- Boundary Cutting Area
- Partial Cut - Ground Based Yarding
- Partial Cut - Skyline Yarding
- Gap
- Yarding Allowed in Reserve Area
- Special Mark Area
- Stream
- Waterbody

Feet
0 1,000

Harvest Area	167.00 Acres
Right of Way Area	4.00 Acres
Reserve Area	982.74 Acres
Total Contract Area	1153.74 Acres

NOTES: Boundary of salvage areas are painted orange and posted. Unit acres do not include existing roads.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
NORTHWEST OREGON DISTRICT

EXHIBIT B - PRESALE
SCALE SALE

PURCHASE PRICE SCHEDULE AND MEASUREMENT SPECIFICATIONS

I. **Timber and Other Wood Products Sold -** In accordance with Section 2 and 3, the Purchaser agrees to pay the Government for the timber and other wood products sold under the contract in accordance with the following schedule, measurement standards, and requirements. Wood products sold is comprised of Timber, Other Wood Products, and Timber and Other Wood Products Remaining as defined below. In the event an Extension of Time is approved, the prices per measurement unit may be subject to readjustment in accordance with Section 9 of the contract.

Timber Schedule		
Species	**Unit of Measure**	**Price Per Measurement Unit**
Douglas-fir	MBF	$132.00
Western hemlock	MBF	$44.70
Red alder	MBF	$26.40
Western Redcedar	MBF	$194.10
Bigleaf Maple	MBF	$23.40

The Authorized Officer shall establish unit of measure and price per measurement unit, in accordance with standard Bureau of Land Management (BLM) procedures, for any species or products not listed in this Exhibit that are cut or removed from the contract area.

II. **Timber** – Includes standing trees, downed trees or logs, or portions thereof, which can be cut into logs that equal or exceed the specifications below.

All logs defined below, which have not been reserved to Government in Section 43 of the contract, shall be designated as timber under this contract. Logs or portions of logs which equal or exceed all the following minimum log specifications shall be considered timber sold. The Purchaser shall pay for all timber removed in accordance with Section 3 of the contract at the price per measurement unit shown in Section I of this Exhibit.

- Log or portion of a log that is:
  - One third (1/3) sound.
  - Small End Diameter Inside Bark (DIB) – Five (5) inches
  - Length – Eight (8) feet four (4) inches

III. **Other Wood Products** – Includes timber and other woody material not meeting the timber specifications above (i.e., pulp, biomass, chips, hog fuel).

If Purchaser removes any products or species which do not meet the minimum log specifications for timber in Section II, such material shall be considered other wood products. Purchaser shall pay for other wood products in accordance with Section 3 of the contract at the price per measurement unit shown in Section I of this Exhibit.

IV. **Timber and Other Woods Products Remaining -** The remaining volume of any timber or other wood products, which have not been reserved to Government in Section 43 of the contract, shall be determined as provided in Section 3(g) of the contract using specifications set forth in the table below. The Purchaser shall pay for the sum of all remaining volume in accordance with Section 3 of the contract at the unit prices shown in Section I of this Exhibit.

Left Standing Timber	Felled Timber Not Removed
Diameter at Breast Height (DBH): n/a	Small End DIB: 5”
Log Height: n/a	Log Length: 8’
% Sound: n/a	% Sound: 33%
Net Tree Volume: n/a	Net Log Volume: 10 bd. ft.

V. **Measurement Standards**

1. **Log Scaling Loads:** All species or products in Section I, with MBF as the Unit of Measure shall be designated as log scaling loads.

    a. Log scaling services shall be provided and performed by BLM Certified Scalers or BLM-authorized Third-Party Scaling Organizations (TPSO), as determined by the Authorized Officer. The Purchaser’s employees or contractors may not perform log scaling.

    b. All logs shall be scaled in Eastside Scribner Log Rules according to the Official Log Scaling and Grading Bureaus, Northwest Log Rules Eastside and Westside Log Scaling Handbook, as amended or supplemented, at the time the logs are scaled.

    c. All logs shall be scaled using an authorized BLM log scaling method approved by the Authorized Officer in accordance with BLM prescribed procedures. A list of authorized BLM log scaling methods is available upon request.

    d. Purchaser shall ensure all logs are presented so that they may be scaled in an economical and safe manner.

    e. Scaling deductions made for rot, check or other defect resulting from abnormal delay in scaling caused by Purchaser shall be recorded separately and charged to the

Purchaser in accordance with Section 3(g) of the contract when applicable. Avoidable delay in log scaling caused by the Purchaser that results in a measurable reduction in timber volume or quality would generally be considered abnormal delay, as determined by the Authorized Officer.

f. Mechanical damage to logs that occurs during unloading identified by the TPSO will not be considered a deductible defect.

g. The BLM will conduct check scaling using the following standards:
Gross Scale - A variance of one and ½ percent (1.5%) in gross scale is the standard unless otherwise justified.
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	0.2 * percent defect to a maximum of 5 percent

Determinations as to volume of timber made by a BLM check scaler in conformance with the standards as set forth herein shall be final. When such checks show a variance in scale more than 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 BLM check scales and the original scale during the period covered by the unsatisfactory check scales. Unless otherwise approved in writing by the Authorized Officer, the volume to which this difference will be applied will be fifty (50) percent of the volume scaled between the last satisfactory check and the first unsatisfactory check, one hundred (100) percent of the volume scaled during the unsatisfactory check, and fifty (50) percent of the volume between the last unsatisfactory check scale and the next satisfactory check scale.

2. **Weight Loads:** All species or products in Section I, with Tons as the Unit of Measure shall be designated as weight loads.

a. All weight loads shall be weighed on State certified scales.
b. Scales must have a current inspection tag or seal posted which shows the date of the most recent test by the State weights and measures agency.
c. No load shall be presented for weighing that exceeds the certified capacity of the scales in use.
d. Each load shall be weighed as a single unit. Gross and tare weight must be machine printed on a weight receipt. Average tare weights shall not be used, unless approved by the Authorized Officer. In addition to the gross and tare weight, the following shall be recorded with each weight receipt:
- Contract name and number
- Load Ticket number
- Date, time, and location the load was weighed

VI. **Accountability**

1. Purchaser shall notify the Authorized Officer seven (7) business days prior to starting or stopping of hauling operations performed under the contract.

2. The Purchaser must provide the following information to the Authorized Officer seven (7) business days prior to the commencement of haul: log scaling and weighing location(s), planned beginning haul dates, anticipated number of loads per day to each scaling or weighing location, logger name and contact information, and log brands to be used, and the log brand registration number(s).

3. A Scaling Authorization Form(s) must be completed and approved by the Contracting Officer prior to beginning of hauling operations. The Scaling Authorization(s) will include approved measurement methods, merchantability standards, sort descriptions, and authorized delivery locations for all loads hauled from the contract area. For log scale loads, all log scaling locations on the Scaling Authorization(s) are required to have a Log Yard Authorization with the BLM. Approved Scaling Authorizations will be provided to the Purchaser upon request.

4. All loads will be scaled and/or weighed at locations listed on the Scaling Authorization as approved by the Authorized Officer.

5. Purchaser shall notify the Authorized Officer seven (7) business days in advance to request additional log scaling and/or weighing locations for approval on the Scaling Authorization(s).

6. Purchaser shall not intermingle BLM timber and other wood products with any other timber or wood products before log scaling and/or weighing occurs.

7. All logs on timber loads will be painted and branded at the landing and accounted for accordance with Section 44 of the contract. If contract area is within a State that maintains a log brand register, brands shall be registered with the State and Purchaser shall use assigned brand(s) exclusively on logs from this contract until the Authorized Officer releases the brand(s).

8. The Authorized Officer shall issue the Purchaser serially numbered load ticket books prior to any haul operations. The Purchaser shall sign a receipt for all ticket books received. The Purchaser shall accurately complete all load receipts in accordance with the instructions on the front of the ticket books, or as directed by the Authorized Officer. Separate load ticket books will be used for timber and other wood products. Mule train timber loads will be treated as two separate loads with a ticket for each load**.** All load tickets will be marked with the cutting area number using a permanent marker or as directed by the Authorized Officer. The Purchaser shall deliver all loads to the log scaling or weighing location on the Scaling Authorization and listed on the BLM receipt. The load receipt and BLM receipt shall remain attached to the log load until it is scaled and/or weighed. For log scale loads, attach on the bunk or wing log at the front of the load on the driver's side, and surrender the load receipt and BLM receipt to the TPSO or Authorized Officer at the scaling location. For weight loads,

either attach at the front of the load on the driver's side or place on the driver's side dashboard, attach the load receipt and BLM receipt to the weight receipt and deliver to the BLM weekly, unless otherwise directed by the Authorized Officer. The Purchaser will return all used load ticket books with woods receipts still attached to the BLM at the time new books are being issued. All unused and partial load ticket books, with receipts still attached, must be returned to the BLM upon completion of the contract and prior to final payment, or at the request of the Authorized Officer.

9. The Purchaser must account for all load receipts from each load ticket book. For all load receipts not accounted for, the Contracting Officer, at their sole discretion, will determine if the receipts are void or if the Purchaser shall pay damages for lost products. The value of lost products shall be equal to the highest value load for the month in which the receipt is lost. If no loads have been hauled in that month, value will be determined from the closest month in which loads were hauled. In the event a load receipt or load ticket book is lost or stolen, the Purchaser must immediately notify the Authorized Officer, and provide a complete explanation.

10. The Purchaser shall furnish BLM a map showing the route which shall be used to haul loads from the timber sale area to the log scaling/weighing location. Upon loading timber or other wood products in the contract area, all loads shall be hauled directly to the authorized scaling or weighing location as stated on the load receipt. The route of haul may be changed only with advance notice to and approval by BLM.

11. The Purchaser shall notify the Authorized Officer and receive advance authorization if any loads will arrive at an authorized scaling or weighing locations outside of their normal operating hours. No loads will be left on the truck for overnight storage without advance permission from the Authorized Officer.

12. If scaling or weighing services are unavailable, delayed or interrupted for any reason, hauling operations will cease immediately until services resume or an alternate scaling or weighing location is approved by the Authorized Officer.

13. Any removal of wood products from loaded trucks before being accounted for as required by the contract shall be considered a trespass and render the Purchaser liable for damages under applicable law in accordance with Section 13 of the contract. Any payment made for purchase of such loads shall be deducted from amount due because of trespass.

VII. **Total Estimated Purchase Price –** For administrative purposes, the following will be used for determining (1) when payments are due and (2) the value of timber or other wood products subject to any special bonding provisions in accordance with Section 3(f) of the contract.

1. When payments are made under Section 3 of the contract, the Authorized Officer shall determine the value of removed timber and other wood products using the Government's records of log scale and/or weight volumes removed from the contract area.

2. The estimated value of timber and other wood products not yet removed from the contract area will be determined by subtracting the Government's records for value of removed timber and other wood products from the estimated total purchase price as shown in the table below. The estimated Total Purchase price is calculated by multiplying the estimated volume or weight for all species/products, listed below, by the bid prices in Section 1.

Total Estimated Purchase Price for Timber and Other Wood Products			
Species/Product	**Estimated Volume (MBF or Tons)**	**Bid Price ($/MBF or $/Ton)**	**Estimated Value**
Douglas-fir	2,396	$132.00	$316,272.00
Western hemlock	188	$44.70	$8,403.60
Red alder	36	$26.40	$950.40
Western redcedar	5	$194.10	$776.40
Bigleaf maple	3	$23.40	$70.20
Total Estimated Purchase Price:			**$326,472.60**

U.S. DEPT. OF THE INTERIOR
Bureau of Land Management
NORTHWEST OREGON DISTRICT - OREGON
TIMBER SALE CONTRACT

EXHIBIT C

Table of Contents

U.S. DEPT. OF THE INTERIOR
Bureau of Land Management
NORTHWEST OREGON DISTRICT - OREGON
TIMBER SALE CONTRACT

Road Number and Segment	Class SN-	Length (Stations and Miles)		
		New Construction	Improvement	Renovation
15-8-16.1 A	16			0.32
15-8-16.1 B	16			0.36
15-8-16.1 C	16			2.58
15-8-17.1	16			0.46
15-8-18.0	16			0.58
15-8-18.1 A	16			0.11
15-8-18.1 B	16			1.17
15-8-18.1 C	16			0.10
15-8-9.1	16			0.72
15-8-9.2	16			0.19
15-8-9.3	16			0.27
15-8-9.4	16			0.65
15-9-12.0 A	20			0.27
15-9-12.0 B	20			0.13
15-9-12.0 C	20			0.42
15-9-12.0 D	20			0.37
15-9-12.0 E	20			0.17
15-9-12.0 F	20			1.05
15-9-12.0 G	20			0.57
15-9-12.0 H	16			0.36
15-9-12.0 I	16			0.37
15-9-12.0 J	16			0.28
15-9-12.0 K	16			0.44
15-9-12.0 L	16			0.27
R2	16		0.12	
R3/15-9-12.0 M	16			0.55
R4	16			0.08
P1	16	0.05		
P3	16	0.17		
P5	16	0.04		
P6	16	0.13		
P7	16	0.17		
P9	16	0.07		

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101 - Prework Conference(s):

A prework conference will be held prior to the start of renovation, improvement, new construction, surfacing, and mulching operations. The Purchaser shall request the conference at least 7 days prior to the time it is to be held. The conference will be attended by the Purchaser and/or his representative(s), subcontractor(s) and/or his or their representative(s) and the Authorized Officer and/or his representative(s).

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

102 - Definitions:

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

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.

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

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

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

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

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

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.

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

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

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

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

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.

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

Road Centerline - Longitudinal center of 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.

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

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.

Slope Ratio – Slope ratio equals horizontal distance: vertical distance, HD:VD

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 or crushed stone. Usually confined to roads having wet subgrades or subgrades with weak support characteristics.

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

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

Timber - 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.

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

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 96 — Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.
This test required if requested by the Authorized Officer.

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 inches sieve.
56 blows/layer & 3 layers.
This test required if requested by the Authorized Officer.

AASHTO T 210 — Durability of aggregate based on resistance to produce fines.
This test required if requested by the Authorized Officer.

103 - Compaction equipment shall meet the following requirements:

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

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

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

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

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

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.

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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.

105 - All project activities shall meet the following BMP requirements:

105a - All heavy equipment shall be cleaned prior to initially entering or operating on BLM lands. The equipment shall be free of noxious weed seed, external petroleum residue, caked on dirt or grime, and other contaminants. Any leakage or contamination risk shall be corrected prior to continuing operation. An inspection by the Authorized Officer is required prior to beginning work.

105b - No refueling of any heavy equipment shall be done within 100 feet of standing or running water.

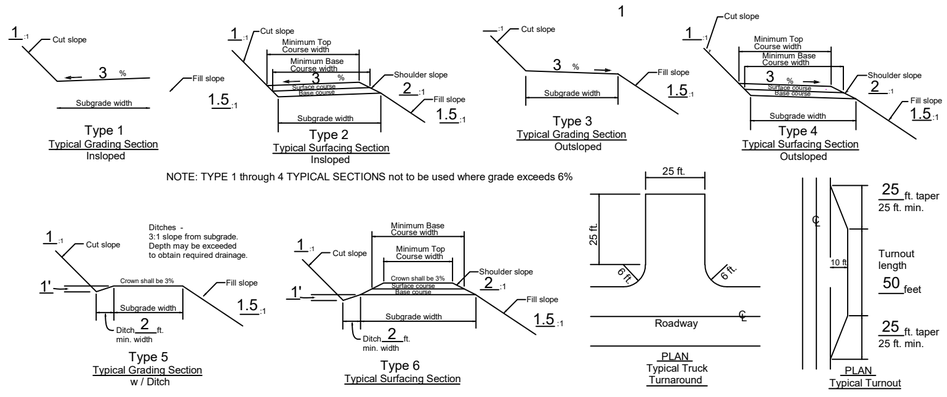
GENERAL – 100

105c - The Purchaser and/or his representative(s), subcontractor(s) and/or his or their representative(s) shall comply with the following Sections of this contract in connection with any operations under this contract:

Section 26 - Watershed Protection
Section 27 - Refuse Control and Disposal of Waste Materials
Section 28 - Storage and Handling of Hazardous Materials

150: ROAD PLAN AND DETAIL SHEET

Road Number	From: Mile Post	To: Mile Post	Length	Typical Section Type	Min Curve Radius	Road Width		Gradient		Clearing Width(*7)				Surfacing										REMARKS
														Base Course					Surface Course					
						Subgrade Width	Ditch Depth	Fav	Adv	Beyond		Existing Roads (*6)		Minimum Width	Compact Depth	Surface Type	Grading Size	Number of Lifts	Minimum Width	Compact Depth	Surface Type	Grading Size	Number of Lifts	
										Top Cut	Toe Fill	L	R											
15-8-16.1	0.00	3.26	3.26	6	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260 cu yd 3" stream crossing rock , 50 cu yd 1"pipe bedding rock
15-8-17.1	0.00	0.46	0.46	6	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20 cu yd 1.5" ASC to rock road apron, 40 cu yd 3" for roadside landings
15-8-18.0	0.00	0.58	0.58	6	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15-8-18.1	0.00	1.17	1.17	6	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	113 cu yd of 3" for armoring, roadside landings and truck turnaround
15-8-9.1	0.00	0.72	0.72	6	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26 cu yd of 3" stream crossing rock
15-8-9.2	0.00	0.19	0.19	6	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	16	3	ASC	C	1	173 cu yd of 1.5" for 3" lift of ASC along entire road
15-8-9.3	0.00	0.27	0.27	6	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	16	3	ASC	C	1	246 cu yd of 1.5" for 3" lift of ASC along entire road, 30 cu yd of 1" asc for pipe bedding
15-8-9.4	0.00	0.65	0.65	6	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72 cu yd of 3" for stream crossings and roadside landing
15-9-12.0	2.98	5.25	2.27	6	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40 cu yd of 1" for pipe bedding 52 cu yd 3" for stream crossings
R2	0.00	0.15	0.15	6	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20 cu yd 3" spot rock
R3/15-9-12.0 M	0.00	0.09	0.09	6	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20 cu yd 3" spot rock
R4	0.00	0.06	0.06	6	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
P1	0.00	0.05	0.05	7	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20 cu yd of 3" for road apron
P3	0.00	0.14	0.14	8	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30 cu yd of 3" for road apron
P5	0.00	0.04	0.04	9	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	16	6	ABC	A	1	45 cu yd of 3" for surfacing and 172 cu yd of 6" for landing
P6	0.00	0.13	0.13	10	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	16	6	ABC	A	1	235 cu yd of 3" for surfacing and 62 cy yd for landing
P7	0.00	0.17	0.17	11	-	16’	2'	-	-	-	-	-	-	50	12	JRR	-	1	16	6	ABC	A	1	10 cu yd of 1" for pipe bedding, 298 cu yd of 3" for surfacing and 148 cu yd of 6" for landing
P9	0.00	0.08	0.08	12	-	16’	2'	-	-	-	-	-	-	-	-	-	-	-	16	6	ABC	A	1	148 cu yd of 3" for surfacing and 126 cu yd of 6" for landing



*NOTES

1. Extra subgrade widths
   Add to each shoulder: 1 foot for fills of 1 to 6 feet. Widen inside or outside shoulder of tight curves as needed for log trucks to maneuver, with tires remaining on roadbed.

2. Backslopes

Materials	Cut slopes	Fill slopes
Solid rock	1/2:1	Angle of repose
Soft rock and shale	3/4:1	1:1
Common		
Slopes under 55%	1:1	1-1/2:1
Slopes over 55%	1-1/2:1	1-1/2:1

   Note:
   Full bench construction is required on side slopes exceeding 60%.
   Slope Ratio = Horizontal Distance:Vertical Distance (HD:VD)

3. Surface type
   PRR - Pit run rock
   GRR - Grid rolled rock
   SRN - Screened rock
   JRR - Jaw run rock
   ABC - Aggr. base course
   ASC - Aggr. surface course
   WC - Wood chips

   Grading
   C - 1 1/2" minus
   D - 1" minus (surface course)
   E - 3/4" minus
   A - 3" minus
   B - 2" minus (base course)
   C - 3"

4. Turnouts
   Width shall be 10 feet in addition to the subgrade width, with lengths as shown on this plan, or as directed by the Authorized Officer.

5. Surfacing
   Turnouts, curve widening, and the first 50 feet of all road aprons shall be surfaced, for all road stations requiring surfacing, as listed above, and as directed by the Authorized Officer.

6. Clearing width
   See Section 200

7. As posted and painted for Right-of-Way, and as required in Section 2100 of this contract.

8. Grading (Renovation)
   See Section 500

9. Drainage
   See Section 400
   Culvert site aggregate, as designated in Section 400 of this contract, does not fulfill any requirements as listed above for full lifts of surface or base applications.

10. Compaction
    See Sections 300 and 500

CLEARING AND GRUBBING - 200

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

202 - Where clearing limits have not been staked, established by these specifications or shown on the plans, the limits shall extend 4 feet back of the top of the cut slope and 4 feet out from the toe of the fill slope.

202a - Where clearing limits for structures have not been staked or shown on the plans, the limits shall extend 10 feet out from the outside edge of the structure.

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

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

204 - Grubbing shall consist of the removal and disposal of stumps, roots, and other wood material embedded in the ground and protruding obstacles remaining as a result of the clearing operation and in accordance with Subsections 204a, and 204c between the top of the cut slope and the toe of the fill slope.

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

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

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

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

CLEARING AND GRUBBING - 200

210a - Disposal of clearing and grubbing debris shall be by piling on government lands outside of established clearing limits in an area and in a manner acceptable to the Authorized Officer, when accumulations are too great to scatter.

210b - Disposal of clearing and grubbing debris, stumps and cull logs on non-government property by scattering this material outside of clearing limits will not be permitted unless the Purchaser obtains a written permit, or other approved documentation, 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 or otherwise impede tree felling on any trees within the existing stands adjacent to the road construction.

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.

EXCAVATION AND EMBANKMENT - 300

304 - Borrow shall consist of suitable material required for the construction of embankments or for other portions of the work; such material shall be obtained from sources selected by the Purchaser at his option and approved by the Authorized Officer.

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

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

305b - Embankment materials shall be placed in successive parallel layers on areas cleared of stumps, cull logs, brush, sod, and other vegetative and deleterious materials, except as provided under Subsection 204. Roadway embankments of earth material shall be placed in horizontal layers not exceeding 12 inches in depth.

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 uniform optimum moisture content suitable for maximum density and compacted to full width with compacting equipment conforming to requirements of Subsections 103f, 103g and 103i.

306e - The final subgrade, including landings, shall be compacted to full width with compacting equipment conforming to the requirements of Subsections 103f, 103g, and 103i until visible displacement ceases.

308 - In the case of rock fills, placement of material in layers is not required and such material may be placed by end-dumping or other methods approved by the Authorized Officer provided that the rock shall be reasonably prevented from escaping beyond the embankment toe.

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 306e.

EXCAVATION AND EMBANKMENT - 300

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.

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

318 - Selected borrow or selected roadway excavation material shall be uniformly spread on the roadbed in lifts not to exceed 8 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 Section 150 sheet. Roots, stumps, rocks, and other projections shall be removed to form smooth, even slopes.

321 - Excess excavated, unsuitable, or slide materials shall not be disposed of on areas where the material will encroach on a stream course or other body of water. Such materials shall be disposed of in accordance with Subsection 321c.

321c - End-dumping will be permitted for the placement of excess materials under Subsection 321 in designated disposal areas or within areas approved by the Authorized Officer. Watering, rolling, and placement in layers is (not) required. Materials placed shall be sloped, shaped, and otherwise brought to a neat and sightly condition acceptable to the Authorized Officer. Exposed soils must be seeded and mulched in accordance with Section 1800 of this Contract.

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

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

PIPE CULVERTS - 400

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

402 - The pipe culverts located at the following road locations:

Road No.	Sta./MP	Type	Remove	Diameter (inch)	Length (feet)	Surface Aggregate (cubic yard)	Remarks
15-8-16.1	1.19	CPP	18”x30’	24	30	10	--
	1.25	CMP	24”x50’	36	50	10	--
	1.26	CPP	--	24	30	10	--
	1.41	CPP	--	24	40	10	--
	1.32	CPP	18”x30’	24	30	10	15’ downspout
	1.62	CPP	18”x30’	24	30	10	--
	3.01	CPP	18”x30’	24	30	10	--
15-8-18.1	0.05	CPP	18”x30’	24	40	10	--
	0.52	CPP	18”x40’	24	40	10	--
15-8-9.3	0.06	CPP	18”x40’	24	40	10	--
	0.08	CPP	18”x40’	24	40	10	--
	0.18	CPP	18”x40’	24	40	10	--
15-9-12.0	4.48	CMP	--	24	50	10	--

	4.74	CMP	18”x30’	24	30	10	20’ Downspout
	4.82	CPP	18”x30’	24	30	10	--
P1	0.00	CPP	--	18	40	10	--
P5	0.00	CPP	--	24	40	10	--
P6	0.00	CPP	--	24	40	10	--
	0.10	CPP	--	24	40	10	--
P7	0.10	CPp	--	24	40	10	--
R4	0.00	CPP	--	24	40	10	--

402a - The aggregate listed on the above tables shall meet the requirements of Section 1000 in conjunction with the specifications in Section 150 and shall be evenly distributed and compacted within the uppermost portion of the excavation limits. This material serves as a base rock and will not fulfill the obligation of surface rock required in Section 150. That rock shall still be placed on top of this base, at the required width and depth specified in Section 150.

402b - At culvert installation sites where riprap and surface aggregate currently exists, conserve the material for reuse as slope armor and for base material in the upper limits of the trench backfill.

403 - Grade culverts shall have a gradient of from 2 percent to 4 percent greater than the adjacent road grade and shall be skewed down grade 30 degrees as measured from the perpendicular to the centerline unless otherwise specified on the plans or by the Authorized Officer.

405e - Corrugated-polyethylene pipe for culverts 12-inch through 36-inch diameter shall meet the requirements of AASHTO M 294.

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.

PIPE CULVERTS - 400

408 - Pipe 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 shown on the plans and the Culvert Installation Detail Sheets.

412 - Where ledge rock, boulders, soft, or spongy soils are encountered, they shall be excavated a minimum of 12 inches below the invert grade for a width of at least one pipe diameter or span on each side of the pipe and shall be backfilled with selected granular or fine readily compactible soil material.

413 - Pipe culverts shall be bedded on 1 ½" or ¾" crushed rock bed in accordance with Section 1200 gradation and having at least a depth of 4 inches. Each layer of crushed rock material for base shall be placed, processed, shaped, moistened or dried to uniform moisture content suitable for maximum compaction, and compacted to full width by compaction equipment conforming to the requirements of Subsection 103f and 103i. Foundation material shall be of uniform density throughout the length of the structure and shall be shaped to fit the pipe.

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 compactible soil or granular fill material free of excess moisture, muck, frozen material, roots, sod, or other deleterious or caustic material and devoid of rocks or stones of sizes which may impinge upon and damage the pipe or otherwise interfere with proper compaction.

417 - Side-fill material conforming to the requirements of Subsection 416 shall be placed and compacted under the haunches of the pipe, and shall be brought up evenly and simultaneously on both sides of the pipe to 1 foot above the pipe, in layers not exceeding 8 inches in depth and 1 pipe diameter/span, or a minimum of 2 feet in width each side of, and adjacent to, the full length of the pipe barrel.

PIPE CULVERTS - 400

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 grade culverts.

424 - Construction of splash pads conforming to lines, grades, dimensions and typical diagram shown in the plans, shall be required and at the specified locations and with riprap amounts as stated in the table in Subsection 401.

426 - Culvert markers consisting of 5-foot steel fence posts painted green with white tops, shall be furnished, fabricated, and installed by the Purchaser at the culvert inlets, as shown on the plans and as directed by the Authorized Officer.

427 - The Purchaser shall record culvert sizes, lengths and locations actually installed on a copy of the culvert list. This culvert list shall be furnished to the Authorized Officer.

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

RENOVATION OF EXISTING ROADS - 500

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

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

RENOVATION OF EXISTING ROADS - 500

502 - The existing road surface shall be bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans at the following locations:

Road No.	From Sta./M.P.	To Sta./M.P.
R3/15-9-12.0 M	4.70	5.25
R4	0.00	0.08
15-8-16.1 A	0.00	0.32
15-8-16.1 B	0.32	0.68
15-8-16.1 C	0.68	3.26
15-8-9.1	0.00	0.72
15-8-9.2	0.00	0.19
15-8-9.3	0.00	0.27
15-8-9.4	0.00	0.65
15-9-12.0 L	4.43	4.70
15-9-12.0 K	3.99	4.43
15-9-12.0 J	3.71	3.99
15-9-12.0 I	3.34	3.71
15-9-12.0 H	2.98	3.34
15-8-18.0	0.00	0.58
15-8-18.1 A	0.00	0.11
15-8-18.1 B	0.11	1.28
15-8-17.1	0.00	0.46

RENOVATION OF EXISTING ROADS - 500

502a - Rocks larger than 6 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.

504 - Existing road surfaces shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width with equipment conforming to requirements of Subsections 103f, and 103i, until visible displacement ceases, generally 4 stations per hour.

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.

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

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

WATERING - 600

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

602 - Water, when needed for compaction 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.

WATERING - 600

604 - Water required under these specifications is subject to applicable State water regulations.

605 - The Purchaser shall secure the necessary water permits for use of water source(s) selected by the Purchaser and approved by the Authorized Officer.

AGGREGATE BASE COURSE - 1000
CRUSHED ROCK MATERIAL

1001 - This work shall consist of furnishing, hauling, and placing one or more lifts of crushed rock material on roadbeds, turnouts 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 Section 150 plans. Material not conforming to these specifications will be rejected, and shall be removed from the road.

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

1003 - Crushed rock material produced from gravel shall have 2 manufactured fractured faces on 65 percent, by weight, of the material retained on the No. 4 sieve.

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

TABLE 1004
AGGREGATE BASE COURSE
CRUSHED ROCK MATERIAL

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

GRADATION

Sieve Designation	A	B	C	D	F	G	H	JRR
(6) -inch	-	-	-	-	-	-	-	100
3-inch	100	-	100	-	100	-	-	-
2-inch	90-95	100	-	100	65-95	100	100	-
1½-inch	-	90-95	-	-	-	-	-	-
1-inch	45-75	50-90	-	-	-	50-85	60-90	-
3/4-inch	-	-	-	-	28-70	-	-	-
½-inch	-	-	-	-	-	27-60	44-70	-
3/8-inch	-	-	-	-	-	-	-	-
No. 4	15-45	15-50	-	-	10-35	15-40	28-50	-
No. 8	-	-	-	-	-	-	20-41	-
No. 10	-	-	-	-	-	-	-	-
No. 30	-	-	-	-	5-22	8-26	9-26	-
No. 40	5-25	5-25	-	-	-	-	-	-
No. 200	2-15	2-15	-	-	3-10	3-12	3-12	-

AGGREGATE BASE COURSE - 1000
CRUSHED ROCK MATERIAL

1004a - The Purchaser shall be required to take 1 sample of each 2,000 cubic yards of crushed rock material produced, using approved AASHTO sampling procedures. The Purchaser shall submit samples to a certified lab or shall perform testing for gradation requirements using ASHTO T 11 and AASHTO T 27 testing procedures. Prior to testing, each sample shall be split, making one-half of the samples with proper identification available for testing by the Authorized Officer. Each sample and the results of Purchaser testing shall be made available to the Authorized Officer within 24 hours of sampling. The Purchaser shall provide test results for the first 500 cubic yards produced prior to commencing production crushing and hauling.

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.

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 by the Authorized Officer prior to placement of crushed rock materials. Notification for final inspection prior to rocking shall be 72 hours prior to that inspection and shall be 7 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 6 inches in depth. When more than one layer is required, each shall be shaped, processed, compacted, and approved by the Authorized officer before the succeeding layer is placed. Irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and adding or removing crushed rock material until the surface is smooth and uniform.

1010a - Crushed rock material used to repair or reinforce soft, muddy, frozen, yielding, or rutted roadbed shall not be construed as surfacing under this specification.

AGGREGATE BASE COURSE - 1000
CRUSHED ROCK MATERIAL

1012 - Each layer of crushed rock material for base shall be placed, processed, shaped, moistened or dried to uniform moisture content suitable for maximum compaction, and compacted to full width by compaction equipment conforming to the requirements of Subsection 103f and 103i. Minimum compaction shall be deemed adequate when the surface can withstand five passes of a truck, with H-20 loading without appreciable deformation.

AGGREGATE SURFACE COURSE - 1200
CRUSHED ROCK MATERIAL

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

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

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

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

AGGREGATE SURFACE COURSE - 1200
CRUSHED ROCK MATERIAL

1204a - The Purchaser shall be required to take one sample for each 1,000 cubic yards of crushed rock material to be utilized using AASHTO sampling procedures. The Purchaser shall submit samples to a certified lab or perform testing for gradation requirements using AASHTO T 11 and AASHTO T 27 testing procedures. Prior to testing, each sample shall be split, making one half of the sample, with proper identification, available for testing by the Authorized Officer. Each sample and the results of Purchaser testing shall be made available to the Authorized Officer within 24 hours of sampling. The Purchaser shall provide test results for the first 500 cubic yards produced prior to commencing production crushing and hauling.

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.

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

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

1209 - Shaping and compacting of roadbed and base course shall be completed and approved, prior to placing crushed rock material, in accordance to the requirements of Subsections 300 and 500 for placing on the roadbed and landings and Subsection 1000 for placing on the base course. Notification for final inspection prior to rocking shall be 7 days prior to the inspection and shall be 10 days prior to start of surfacing operations.

AGGREGATE SURFACE COURSE - 1200
CRUSHED ROCK MATERIAL

1210 - Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed, landings, and base course in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Compacted layers shall not exceed 4 inches in depth. When more than one layer is required, each 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 Subsection 103f. Minimum compaction shall be 1 hour of continuous compacting for each 6 stations, or fraction thereof.

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 4000 square feet after September 15, without prior approval by the Authorized Officer.

1706 - The surface area of erodible earth material exposed at one time by excavation, borrow, or fill within the right-of-way shall not exceed 4000 square feet after September 15, without prior approval by the Authorized Officer.

EROSION CONTROL - 1700

1712 - The Purchaser shall provide erosion control measures for reconstructed ditches on steep grades which includes but is not limited to, dumped stone, jute mesh, sod, or check dams consisting of stone. Width of protective lining or dam should extend far enough up the ditch slopes to effectively contain the runoff and prevent erosion and washout at the edges and prevent sediment from reaching live water.

SOIL STABILIZATION - 1800

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

1802 - Soil stabilization work consisting of seeding and mulching shall be performed on existing roads and designated locations in accordance with these specifications, at the following locations:

Road No.	From Sta./M.P.	To Sta./M.P.
15-9-12.0 M	0.00 mile	0.55 mile
P1	0.00 mile	0.05 mile
P3	0.00 mile	0.14 mile

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

From: April 15 To: May 15
From: September 30 To: October 31

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

SOIL STABILIZATION - 1800

1804 - The Purchaser shall furnish the following species of grass seed meeting corresponding germination, purity, and weed-content requirements:

Species	Germination Min. %	Purity Min. %	Crop and Weed Content Max. %	Noxious Weed Content Max %
Red Fescue	85%	97%	0%	0%

Furnished seed shall meet or exceed the factors in the above table. Furnished seed shall be sown at a rate equal to 10 pounds per acre. Prior to applying seed, the contractor will supply the BLM with the seed label showing testing results.

If seed is not available that meets the factors in the above table, the project area would be sown with seed approved by the resource area botanist. Prior to applying seed, the contractor will supply the BLM with the seed label showing testing results.

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 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 which are free from mold, or other objectionable materials. Straw mulch shall be in an air-dry condition and suitable for placement.

SOIL STABILIZATION - 1800

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.

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

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

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

1818 - At the beginning of each day's operation, a measured area will be seeded and mulched to assure uniform application.

1819 - The maximum distance to be seeded and mulched from the road centerline shall be 100 feet for the cut slopes and 150 feet for the fill slopes.

1820 - The Purchaser shall notify the Authorized Officer at least 3 days in advance of date he intends to commence the specified soil stabilization work.

1822 - 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.

1823 - No materials shall be applied when wind velocities would prevent a uniform application of the mix or slurry or when winds would drift the mix or slurry spray outside of the designated treatment area.

1826 - 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.

ROADSIDE BRUSHING - 2100

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

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

2103 - Vegetation, cut manually or mechanically, less than 6 inches in diameter at D.B.H.O.B., shall be cut to a maximum height of 3 inches above the ground surface or above obstructions such as rocks or stumps, on cut and fill slopes. All limbs below the 3 inch area will be severed from the trunk.

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

2104 - Trees in excess of 6 inches in diameter at D.B.H.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 14 feet in elevation above the running surface shall be cut, to within 1 inch of the trunk to produce a smooth vertical face.

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

2107 - Inside curves shall be brushed out for a sight distance of 200 feet chord distance or a 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.

ROADSIDE BRUSHING – 2100

2109 - Debris resulting from this operation shall be scattered downslope from the roadway. Debris shall not be allowed to accumulate in concentrations. Debris in excess of 1 foot in length and 2 inches in diameter shall not be allowed to remain on cut slopes, ditches, roadways or water courses, or as directed by the Authorized Officer.

2112 - Roadside brushing shall be accomplished as shown on the plans and as listed below:

Road No.	From Sta./M.P.	To Sta./M.P.
R3/15-9-12.0 M	4.70	5.25
R4	0	0.08
15-8-16.1 A	0.00	0.32
15-8-16.1 B	0.32	0.68
15-8-16.1 C	0.68	3.26
15-8-9.1	0.00	0.72
15-8-9.2	0.00	0.19
15-8-9.3	0.00	0.27
15-8-9.4	0.00	0.65
15-9-12.0 L	4.43	4.70
15-9-12.0 K	3.99	4.43
15-9-12.0 J	3.71	3.99
15-9-12.0 I	3.34	3.71
15-9-12.0 H	2.98	3.34
15-8-18.0	0.00	0.58
15-8-18.1 A	0.00	0.11
15-8-18.1 B	0.11	1.28
15-8-17.1	0.00	0.46

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 Control Devices.

ROAD DECOMMISSIONING - 2700

2701 - This work consists of decommissioning the following roads:

Road Number	Length
P1	0.05
P3	0.14
P5	0.04
P6	0.13
P7	0.17
P9	0.08
R4	0.10

This work is not required for road acceptance under Section 18 of this contract.

2702 - Decommissioning shall consist of removing cross drains and removing crossing by excavating fill material and placing in locations to form partially recontoured roadway sections. Work includes ripping and subsoiling and installing water bars, drain dips and placement of slash and placement of soil stabilization material. This work is not required under Section 18 of this Contract and in accordance with Exhibit D section 3500.

2703 - Where windrows, berms, or vegetation exist along the outside shoulder of the decommissioned roadbed, they shall be removed to promote drainage. Outlet channels will be constructed at as frequent of locations as possible where trees interfere with drainage.

ROAD DECOMMISSIONING – 2700

2704 - Water bars shall be installed on the road listed in Subsection 2601, at the following intervals:

Road Gradient	Spacing Distance
0 - 5%	400 feet
6 - 12%	300 feet
13% and greater	200 feet

at locations approved by the Authorized Officer, and in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans, skipping locations that are at high points.

2706 - Soil stabilization work consisting of seeding and mulching shall be performed as specified under Section 1800, in areas left exposed as a result of logging, final road maintenance, or decommissioning operations.

ROAD RENOVATION WORKLIST

MP - Work to be Accomplished

Road renovation as required under Exhibit C of this contract shall include, but is not limited to the following worklist. All existing roads shall be brushed, shall be graded and compacted to their full width, shall have the ditches cleared of any blockages, and shall have existing culverts and catch basins cleaned at locations that are not listed in Section 400 for replacement. Any soils left exposed after renovation or new construction activities shall be seeded and mulched. Roadside tree removal shall be accomplished prior to culvert installations and aggregate placement. Roadside trees shall not be felled onto existing roads. Processing shall not be accomplished on top of existing aggregate surfaces. Logging slash and log decks shall not be placed in ditches, in catch basins, or on top of outlets of culverts.

ROAD RENOVATION WORKLIST

Road No. 15-8-16.1

MP

0.00 - Place 6” lift of 3 inch minus from end of county pavement on Lobster Creek Access road until 100’ up 15-8-16.1 road to reduce sediment runoff. Begin renovation work as described in Sections 150, 500, and this worklist. Begin brushing as described in Section 2100.

0.04 Place 6” lift of 3” minus in order to create crowned surface over pipe for 50’ on approach and departure of pipe.

0.28 Improve uphill ditchout (marked by flagging) into stream buffer to ensure ditchline flow filters through riparian area. Place 6” lift of 3” minus in order to create crowned surface over pipe for 50’ on approach and departure of pipe.

0.64 Place 6” lift of 3” minus in order to create crowned surface over pipe for 50’ on approach and departure of pipe.

0.79 Place 6” lift of 3” minus in order to create crowned surface over pipe for 50’ on approach and departure of pipe.

0.97 Install 24”x30’ CPP XDR . Install cross drain as described in Section 400. Mile post is approximate, culvert will be placed in the best spot for drainage.

0.99 Place 6” lift of 3” minus in order to create crowned surface over pipe for 50’ on approach and departure of pipe.

1.19 Replace 18"x30’ x-drain with 24”x30’ CPP. Install cross drain as described in Section 400. Mile post is approximate, culvert will be placed in the best spot for drainage.

1.25 Replace 24"x50’ cmp with 36”x50’ Aluminized CMP on intermittent stream. Moderate Heavy bottom rust. 4’ In/12’ Outlet fill height. Place 6” lift of 3” minus in order to create crowned surface over pipe for 50’ on approach and departure of pipe.

1.26 Install 24”30’ CPP XDR for ditchline relief to mp 1.25 pipe. Install cross drain as described in Section 400. Mile post is approximate, culvert will be placed in the best spot for drainage.

1.32 Replace 18"x30’ x-drain with 15’ down flume with 24”x30’ CPP w/15’ down spout. Install cross drain as described in Section 400. Mile post is approximate, culvert will be placed in the best spot for drainage.

1.39 Place 6” lift of 3” minus in order to create crowned surface over pipe for 50’ on approach and departure of pipe.

1.62 Replace 18"x30’ x-drain with 24”x30’ CPP. Install cross drain as described in Section 400. Mile post is approximate, culvert will be placed in the best spot for drainage.

1.78 Place 6” lift of 3” minus in order to create crowned surface over pipe for 50’ on approach and departure of pipe.

3.01 Replace 18"x30' x-drain with 24”x30’ CPP and steepen pipe grade. Install cross drain as described in Section 400. Mile post is approximate, culvert will be placed in the best spot for drainage.

3.09 - End of renovation at inline junction with 15-8-9.4 road.

Road No. 15-8-17.1

MP

0.00 - Begin renovation work as described in Sections 150, 500, and this worklist. Begin brushing as described in Section 2100. Place, grade, and compact 20 cu yd of 1.5” minus at junction with 15-8-18.1 to improve traction and road surface.

0.34 Construct roadside landing as described in Sections 150, 200, 300, and this worklist. Rock application as described in Sections 150, 1000, and 1200. Soil stabilization and erosion control measures will be required as necessary and as described in Sections 1700 and 1800.

0.42 Construct roadside landing as described in Sections 150, 200, 300, and this worklist. Rock application as described in Sections 150, 1000, and 1200. Soil stabilization and erosion control measures will be required as necessary and as described in Sections 1700 and 1800.

0.46 - End of renovation.

Road No. 15-8-18.0

MP

0.00 - Begin renovation work as described in Sections 150, 500, and this worklist. Begin brushing as described in Section 2100. Soil stabilization and erosion control measures will be required as necessary and as described in Sections 1700 and 1800.

0.58 End of renovation.

Road No. 15-8-18.1

MP

0.00 - Begin improvement work as described in Sections 150, 200, 300, 500, and this worklist. Rock application as described in Sections 150, 1000, and 1200. Begin culvert installation as described in Section 400. Soil stabilization and erosion control measures will be required as necessary and as described in Sections 1700 and 1800.

0.05 Replace 18”x30’ CMP XDR with 24”x30’ CPP. Install cross drain as described in Section 400. Mile post is approximate, culvert will be placed in the best spot for drainage.

0.41 Rip, re-shape and compact soft area of sunken subgrade to restore properly draining road prism. Place, shape, and compact 6” lift of 3” ASC to restore road surface.

0.52 Replace 18”x40’ CMP XDR with 24”x40’ CPP. Install cross drain as described in Section 400. Mile post is approximate, culvert will be placed in the best spot for drainage.

0.72 Construct truck turnaround as described in section 100.

0.86 End renovation.

Road No. 15-8-9.1

MP

0.00 - Begin improvement work as described in Sections 150, 200, 300, 500, and this worklist. Rock application as described in Sections 150, 1000, and 1200. Begin culvert installation as described in Section 400. Soil stabilization and erosion control

measures will be required as necessary and as described in Sections 1700 and 1800.

0.56 Place 6” lift of 3” minus in order to create crowned surface over pipe for 50’ on approach and departure of pipe.

0.72 - End of renovation.

Road No. 15-8-9.2

MP

0.00 - Begin renovation work as described in Sections 150, 200, 300, and this worklist. Rock application as described in Sections 150, 1000, and 1200. Soil stabilization and erosion control measures will be required as necessary and as described in Sections 1700 and 1800. Begin placement, shaping, and compaction of 3” lift of 1.5” ASC.

0.19 - End of renovation and rock placement.

Road No. 15-8-9.3

MP

0.00 - Begin renovation work as described in Sections 150, 200, 300, and this worklist. Rock application as described in Sections 150, 1000, and 1200. Soil stabilization and erosion control measures will be required as necessary and as described in Sections 1700 and 1800. Begin placement, shaping, and compaction of 3” lift of 1.5” ASC.

0.06 Replace 18"x40' CMP XDR with 24”x40’ CPP. Install cross drain as described in Section 400. Mile post is approximate, culvert will be placed in the best spot for drainage.

0.08 Replace 18"x40' CMP XDR with 24”x40’ CPP and deepen outlet to align with flow channel. Mile post is approximate, culvert will be placed in the best spot for drainage.

0.18 Replace 18"x40' CMP XDR with 24”x40’ CPP and deepen outlet to align with flow channel. Mile post is approximate, culvert will be placed in the best spot for drainage.

0.27 - End renovation. End rock placement.

Road No. 15-8-9.4

MP

0.00 - Begin renovation work as described in Sections 150, 200, 300, and this worklist. Rock application as described in Sections 150, 1000, and 1200. Soil stabilization and erosion control measures will be required as necessary and as described in Sections 1700 and 1800.

0.10 Construct roadside landing to left as described in Sections 150, 200, 300, and this worklist Rock application as described in Sections 150, 1000, and 1200. Soil stabilization and erosion control measures will be required as necessary and as described in Sections 1700 and 1800.

0.21 Place 6" lift of 3" minus in order to create crowned surface over pipe for 50' on approach and departure of pipe.

0.30 Place 6" lift of 3" minus in order to create crowned surface over pipe for 50' on approach and departure of pipe.

0.35 - End of renovation.

Road No. 15-9-12 (USFS RD 6300)

MP

0.00 - Begin renovation work as described in Sections 150, 500, and this worklist.

2.98 End USFS pavement. Begin grading as described in Sections 150, 500, and this worklist.

3.51 Place 6" lift of 3" minus in order to create crowned surface over pipe for 50' on approach and departure of pipe.

3.53 Place 6" lift of 3" minus in order to create crowned surface over pipe for 50' on approach and departure of pipe.

4.48 Install 24"x50' Aluminized CMP on intermittent stream.

4.74 Replace 18”x30’ with 24”x26’ cmp, with 20’ downpipe, on small perennial Stream.

4.82 Replace 18”x30’ x-drain with 24”x30’ cpp. Mile post is approximate, culvert will be placed in the best spot for drainage.

5.25 - End of renovation.

Road No. R2

MP

0.00 Begin improvement work as described in Sections 150, 200, 300, 500, and this worklist. Rock application as described in Sections 150, 1000, and 1200. Soil stabilization and erosion control measures will be required as necessary and as described in Sections 1700 and 1800. Place, shape and compact 123 cu yd of 6” ABC to form roadside landing with 20 cu yd of 1.5” ASC for transition apron onto main road.

0.12 - End of improvement

Road No. R4

MP

0.00 - Begin improvement work as described in Sections 150, 200, 300, 500, and this worklist. Rock application as described in Sections 150, 1000, and 1200. Begin culvert installation as described in Section 400. Soil stabilization and erosion control measures will be required as necessary and as described in Sections 1700 and 1800. Begin placement, shaping, and compaction of 6” lift of 3” ASC.

0.00 - Install 24”x 40’ CPP to ensure ditchline flow. Install cross drain as described in Section 400. Mile post is approximate, culvert will be placed in the best spot for drainage.

0.10 - End of improvement

U.S. DEPT. OF THE INTERIOR
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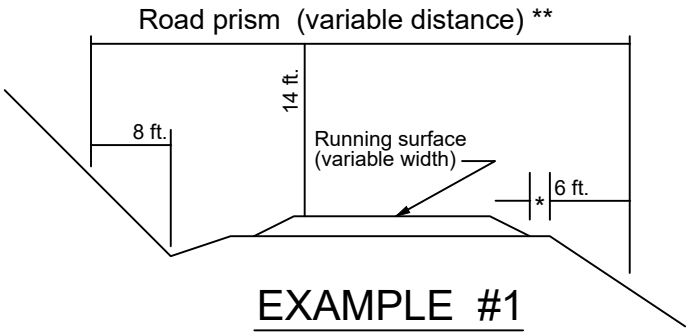
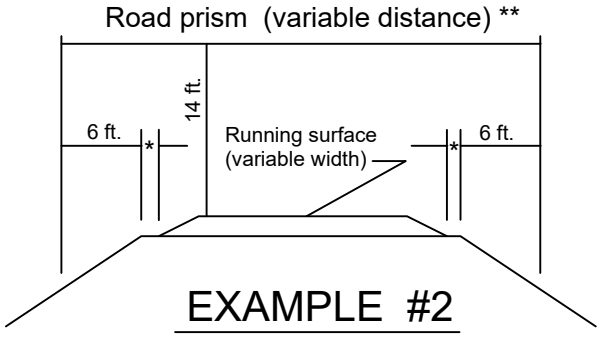
NORTHWESTOREGON DISTRICT

ROADSIDE BRUSHING
DETAIL SHEET

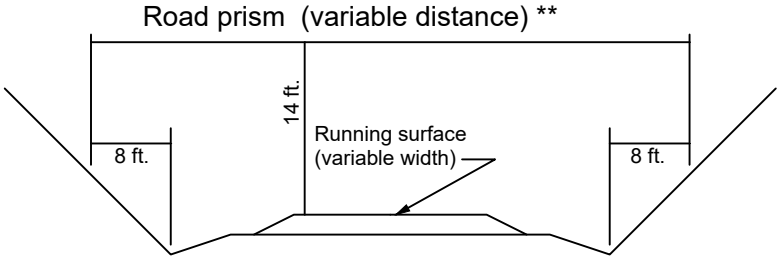


EXAMPLE #1



EXAMPLE #2

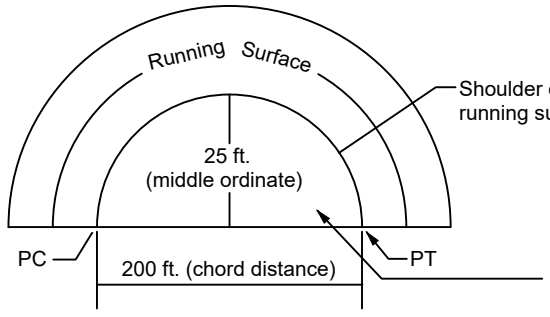
(NO SCALE)



EXAMPLE #3

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

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



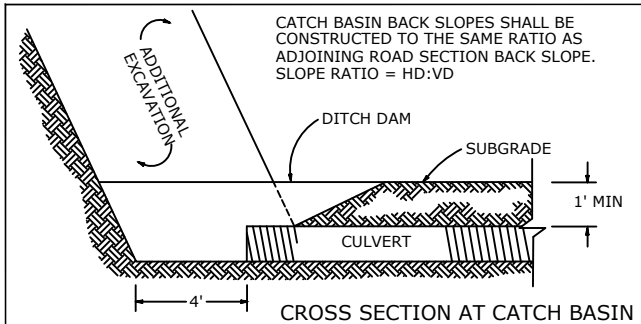
SIGHT DISTANCE DIAGRAM

NOTE:

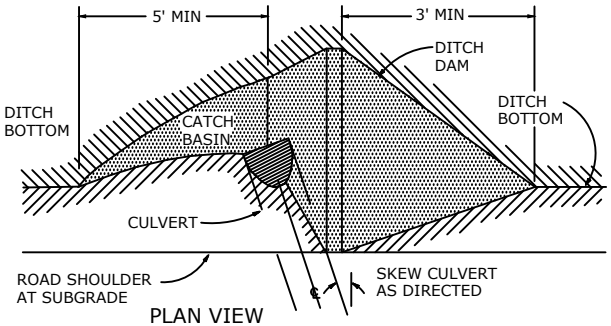
Prior to beginning roadside brushing the purchaser shall establish a control section in a location determined by the Authorized Officer. This section will be used to physically and visually establish acceptable cutting and cleanup standards to be used for the remaining roadside brushing.

EXHIBIT C
Sale Name: Cefir Miles TS
Contract No: ORNO2-TS-2023.0203
Sheet 42 of 46

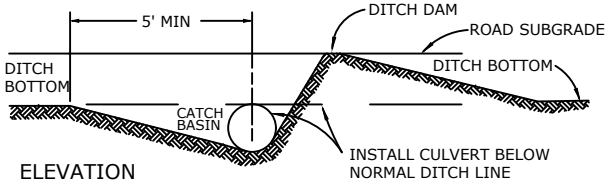
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Northwest Oregon District



CROSS SECTION AT CATCH BASIN

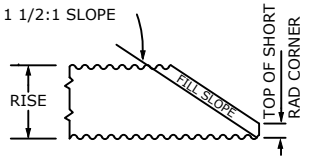


PLAN VIEW



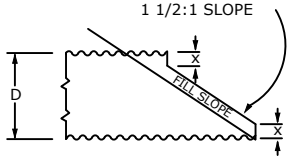
ELEVATION

CATCH BASIN



STEP BEVEL WHEN RISE EQUALS 40" OR LARGER

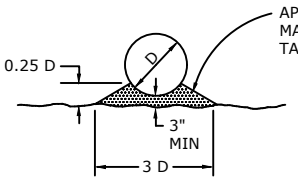
PIPE ARCH



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

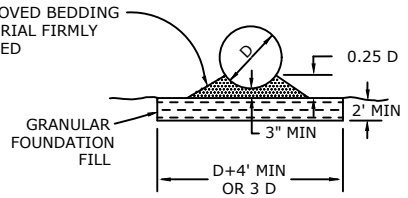
ROUND PIPE

BEVELED END DETAIL



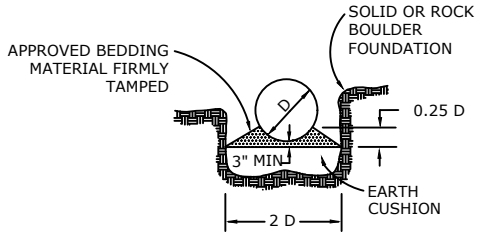
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT.

BEDDING OF CULVERTS ON STABLE NATURAL GROUND FOUNDATION OR COMPACTED EMBANKMENT



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

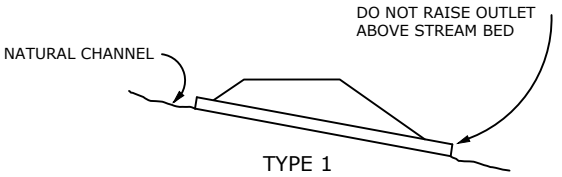
BEDDING OF CULVERTS ON SOFT SPONGY OR UNSTABLE SOIL FOUNDATION



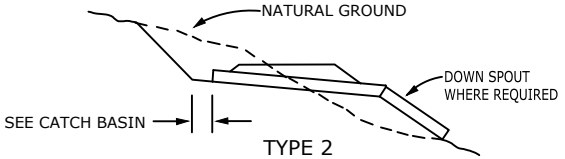
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT. EARTH CUSHIONING OF SILTY CLAY LOAM OR SAND MAY BE USED IF MATERIAL CAN BE PLACED IN THE DRY CONDITION. iF THE EXCAVATION IS WET, USE GRANULAR FOUNDATION FILL MATERIAL. MAINTAIN 8" MIN. DEPTH BETWEEN HIGH POINTS OF ROCKS AND/OR BOULDERS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

BEDDING OF CULVERT IN SOLID ROCK OR BOULDER FOUNDATION

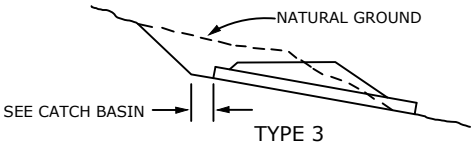
BEDDING OF CULVERTS



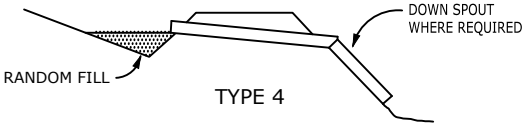
TYPE 1



TYPE 2

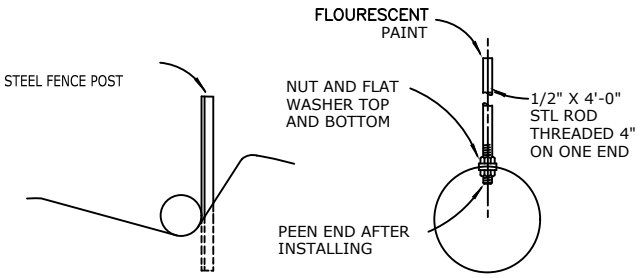


TYPE 3



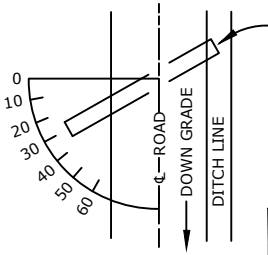
TYPE 4

CULVERT INSTALLATION TYPES



INSTALL MARKERS NOT MORE THAN 6" BACK FROM END OF CULVERT

CULVERT MARKER INSTALLATION



SKEW DIAGRAM

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

ALWAYS THINK SAFETY

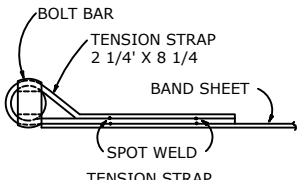
UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
SALEM DISTRICT – OREGON

CULVERT INSTALLATION DETAILS

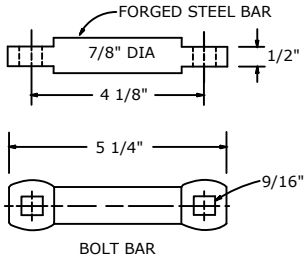
DRAWN J. REMIRO Eugene D.O.	SCALE not to scale
DATE 1990	SHEET 1 OF 1

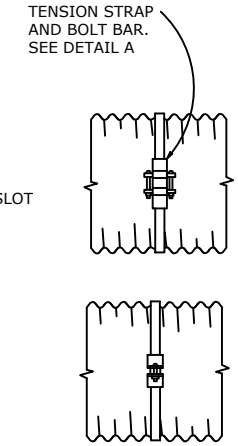
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Northwest Oregon District

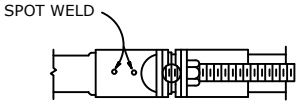
NOTE:
DESIGN VARIATIONS IN FASTENERS, (STRAPS, BARS & WELDS) WHICH PROVIDE A TENSILE STRENGTH OF 7500 LBS. ARE PERMISSIBLE.

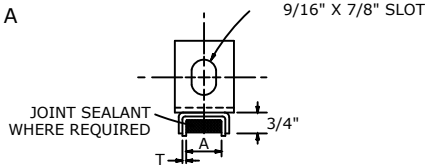


DETAIL A





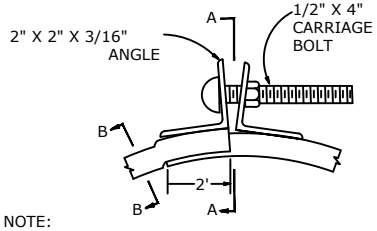




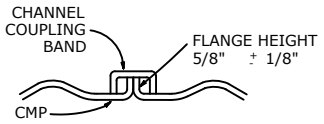
DIMENSIONS IN INCHES

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

SECTION A-A

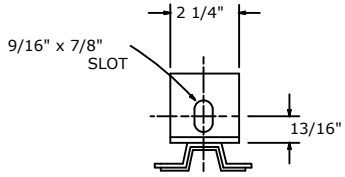


NOTE:
AS AN ALTERNATE TO SWEDGE, AN OVERSIZE BRIDGE CLIP MAY BE USED.

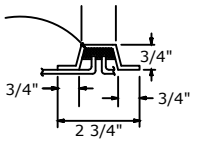


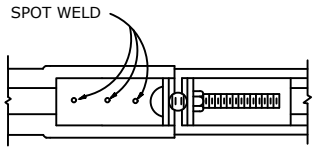
SECTION B-B

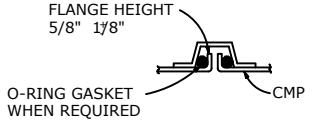
CHANNEL BAND COUPLER



SECTION C-C

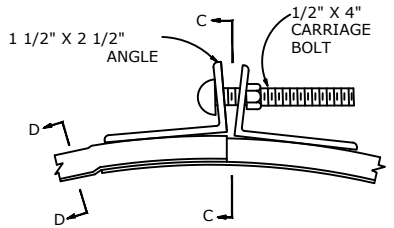


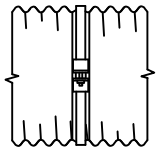




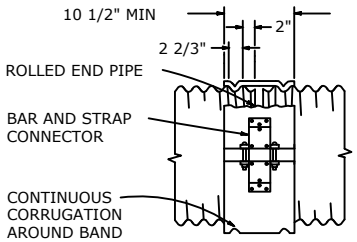
SECTION D-D

SHOWN WITH ALTERNATE TYPES OF JOINT SEALERS





FLANGED END COUPLER



STANDARD CONSTRUCTION IS 1 PIECE 12" THRU 48" AND 2 PIECE 54" AND ABOVE

THE HUGGER COUPLER BAND OR AN APPROVED EQUIVALENT COUPLER BAND SHALL BE MADE OF THE SAME MATERIAL AND FINISH AS THE PIPES JOINED. THE COUPLER BANDS SHALL HAVE A MINIMUM WIDTH OF 10 1/2 INCHES AND MAY BE TWO NUMERICAL THICKNESSES LIGHTER THAN THE GAGE OR THICKNESS DESIGNATED FOR THE CONDUIT JOINED. THE BAND SHALL BE DESIGNED TO BE DRAWN TOGETHER WITH TWO 1/2 INCH BOLTS THROUGH USE OF A BAR AND STRAP SUITABLY WELDED TO THE BAND. THE BAND SHALL ENGAGE AND MESH WITH THE SECOND ANNULER CORRUGATION INWARD FROM THE END OF EACH OF THE CONDUIT SECTIONS JOINED.

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

``HUGGER'' COUPLER BANDS

STANDARD COUPLER BANDS

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

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

Ⓐ BANDS WITH ANGLES

Ⓑ BANDS WITH TENSION TYPE CONNECTIONS

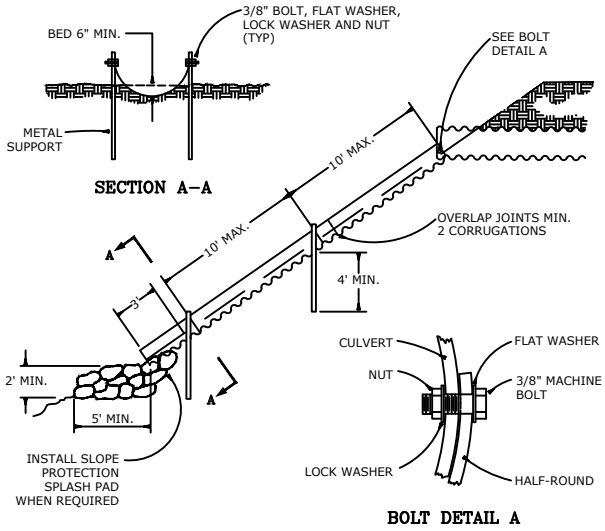
ALWAYS THINK S-FETY

UNITED ST-TES DEP-RTMENT OF THE INTERIOR
Bureau of Land Management
S-LEM DISTRICT – OREGON

CULVERT BAND DETAILS

DR-	J. RE IRO Eugene D.O.	SC-LE	not to scale
D-TE	1990	SHEET	1 OF 1

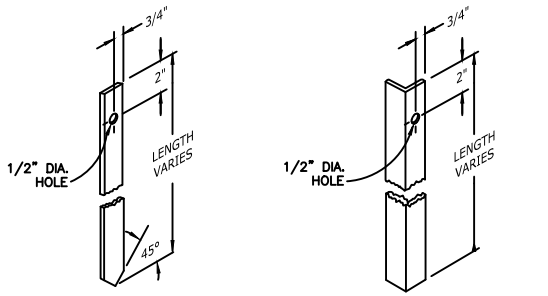
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Northwest Oregon District



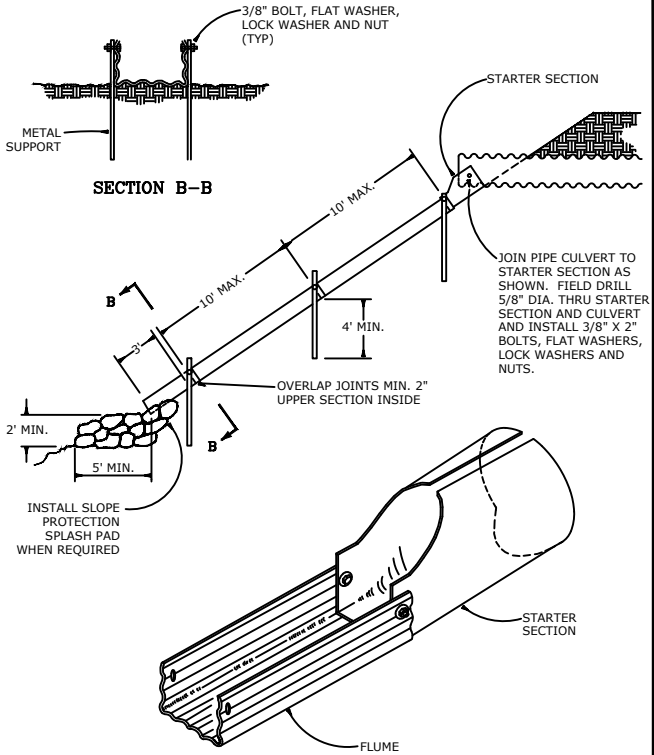
HALF ROUND DOWNSPOUT

NOTE:

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



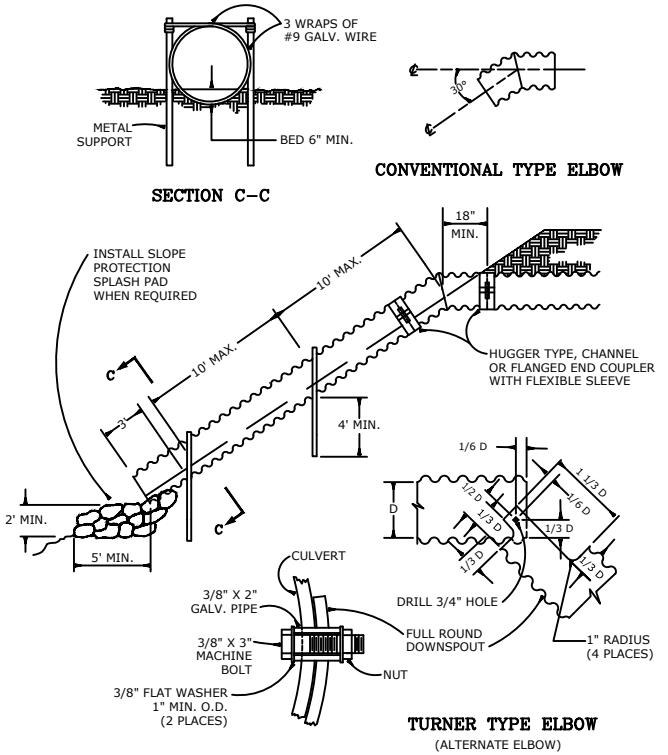
METAL SUPPORT DETAIL



RECTANGULAR FLUME

NOTE:

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



FULL ROUND DOWNSPOUT

NOTE:

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

GENERAL NOTES

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

ALWAYS THINK SAFETY

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
SALEM DISTRICT – OREGON

DOWNSPOUT INSTALLATION DETAILS

DRAWN	J. REMIRO Eugene D.O.	SCALE	not to scale
DATE	1990	SHEET	1 OF 1

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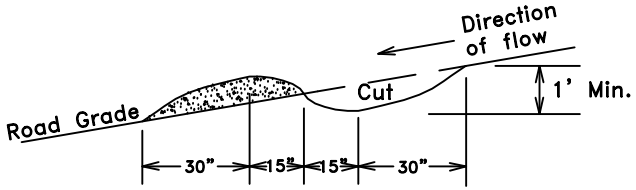
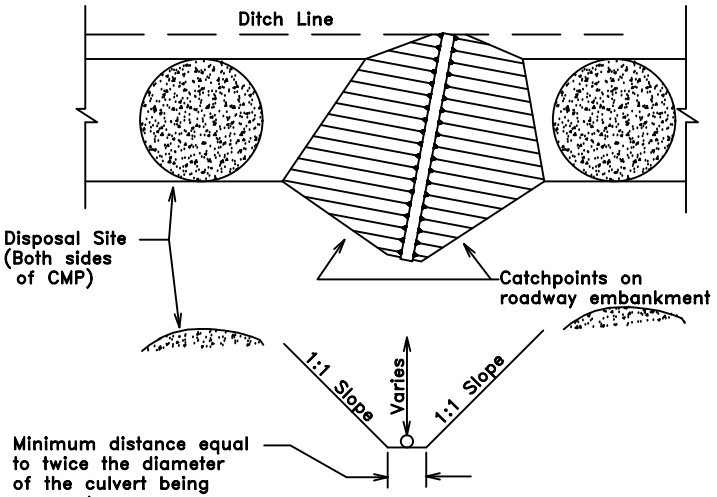
Bureau of Land Management
Northwest Oregon District



1. Waterbars shall be constructed as shown.
2. Exact locations will be flagged by the Authorized Officer prior to construction.
3. All waterbars shall be skewed 30 degrees.
4. Waterbars shall extend from the cut bank to the fill slope and be readily crossed by passenger type vehicles.
5. See itemized Project List for quantities and locations.

Typical Waterbar Details
(Not to scale)

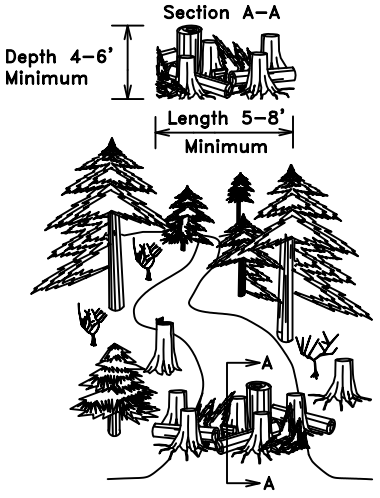
Typical Culvert Removal Details
(Not to Scale)



1. Culverts shall be removed as shown
2. Removed culverts shall be disposed of as directed by the Authorized Officer
3. The exposed areas shall be seeded in accordance with Section 1800, Exhibit C
4. Excavated material shall be stockpiled as shown

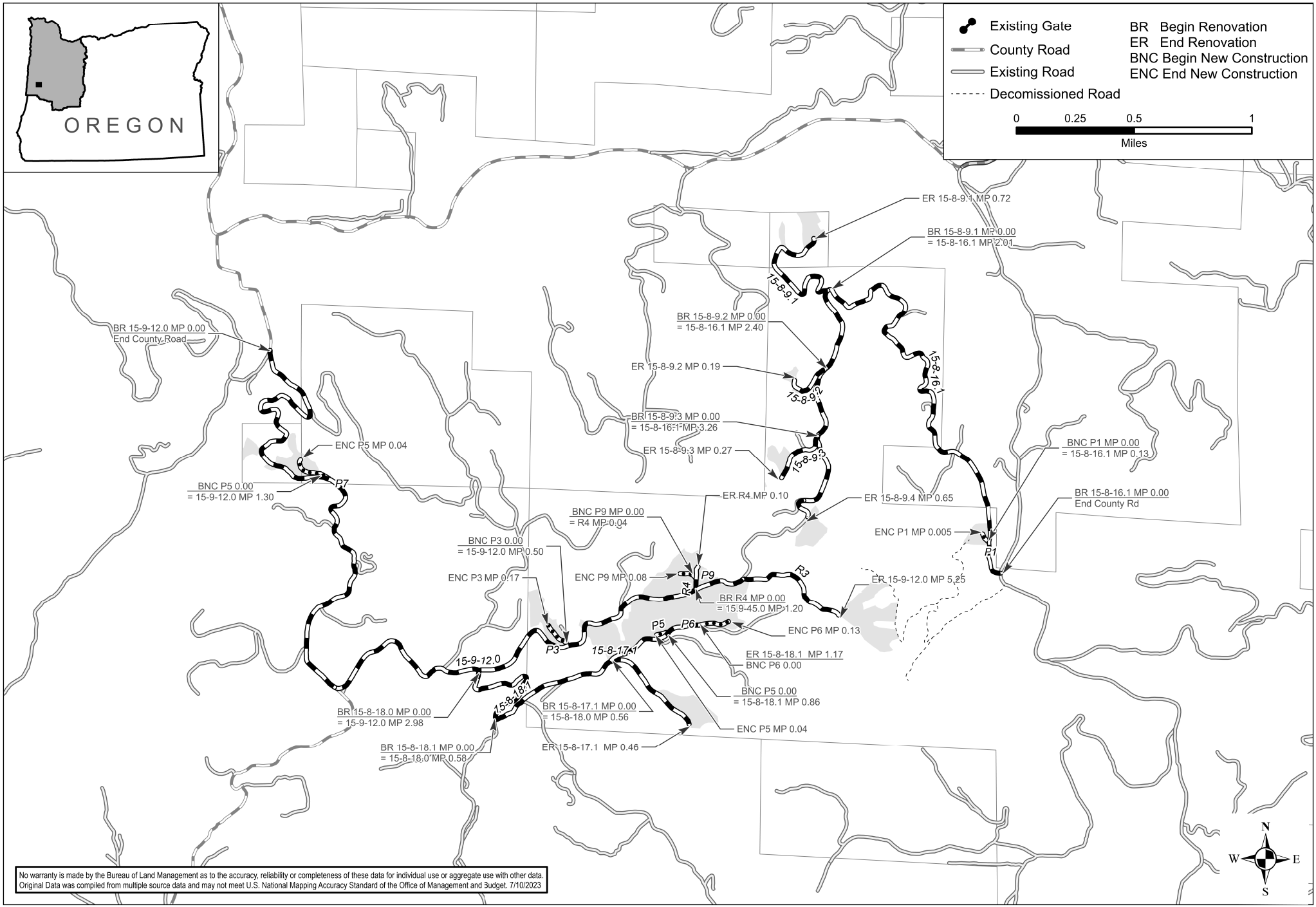
Typical Debris Barricade Details
(Debris & Earth berm)
(Not to Scale)

1. Roads shall be blocked as shown using available debris
2. All barricade material shall be stock piled in a large configuration of stumps, logs, large rocks, woody material and earth. Earth will be used to aid debris from being cut, stolen or moved from site.
3. Barricade locations will be flagged by the Authorized Officer prior to construction
4. The barricade shall span the entire width of the roadway and shall sufficiently block all vehicular access to the road



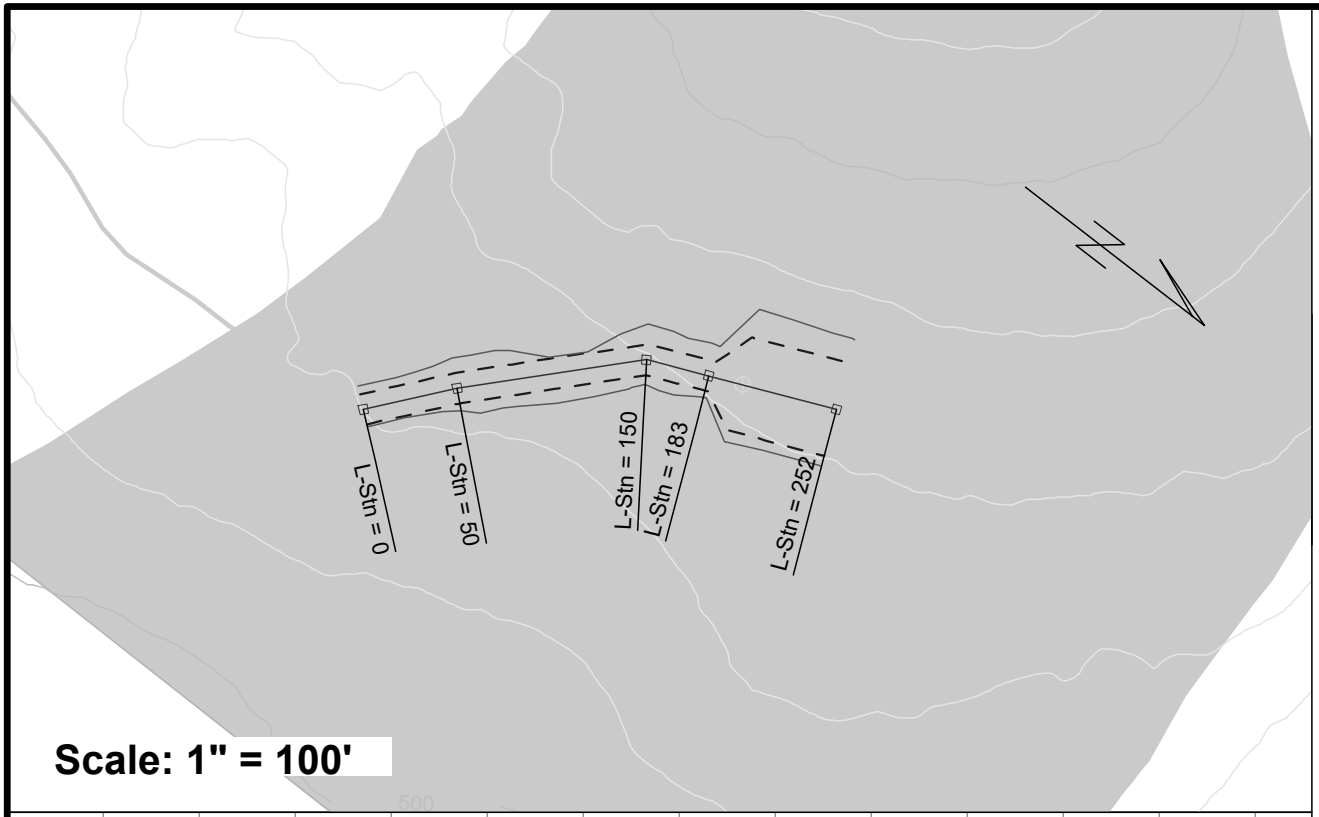
UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Road Plan Map
T. 15 S., R. 8 W., Sections 04, 07, 09, 16, 17 and T. 15 S., R. 9 W., Section 12 W.M.

Cefir Miles
ORN02-TS-2023.0203
EXHIBIT C
Sheet 46 of 46

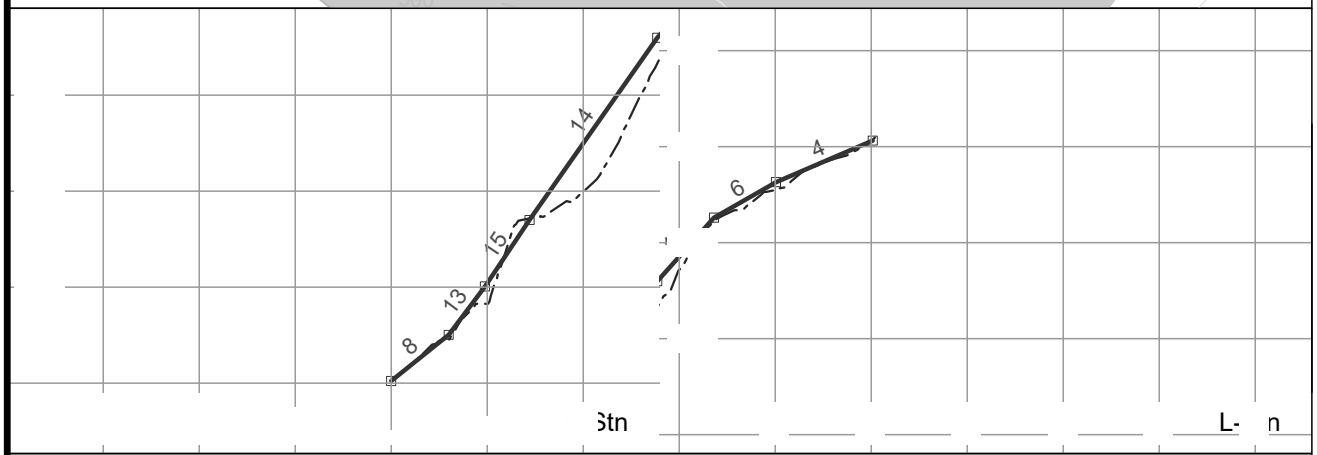


CEFIR MILES TS
ORN02-TS-2023.0203
APPENDIX C1

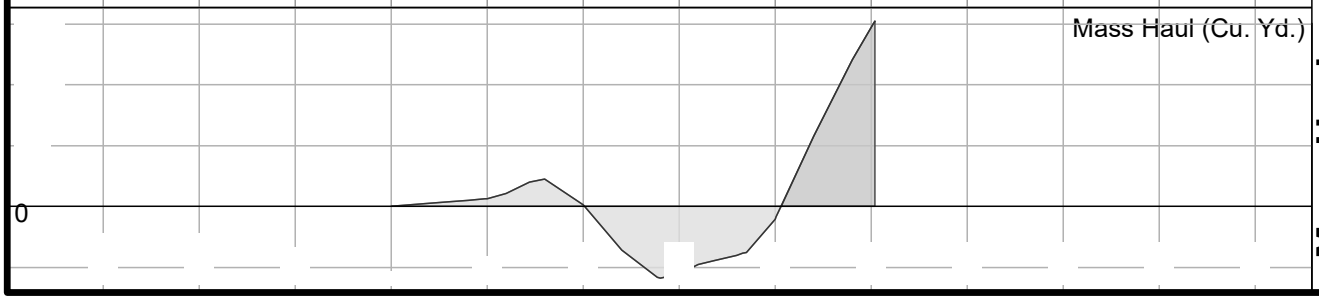
P1



Plan View



Profile View



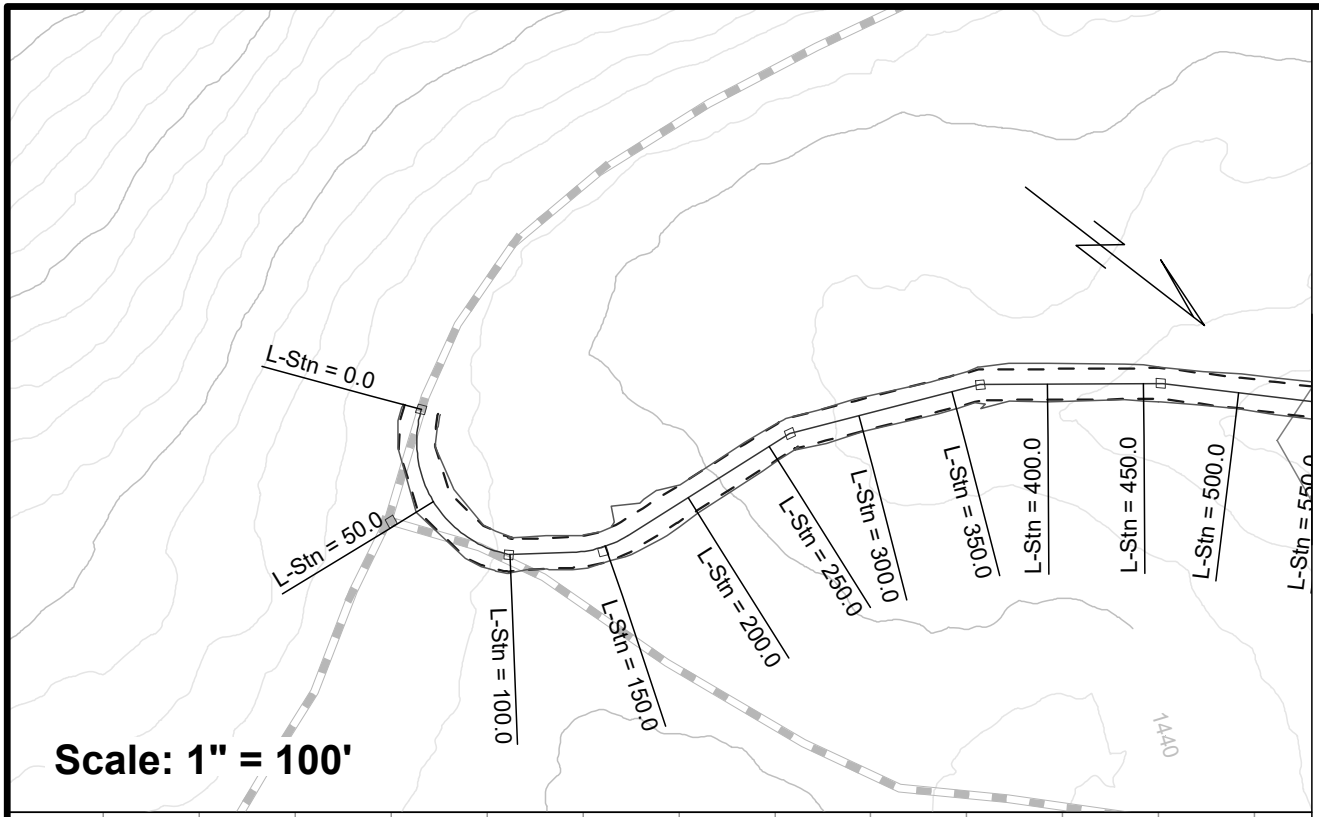
Mass Haul

Legend
Plan L-line Location
Plan P-line Location
Plan Road Edges
Plan Clearing Limits
Plan Cross Section Lines
Profile Topopgraphy
Profile Finished Grade

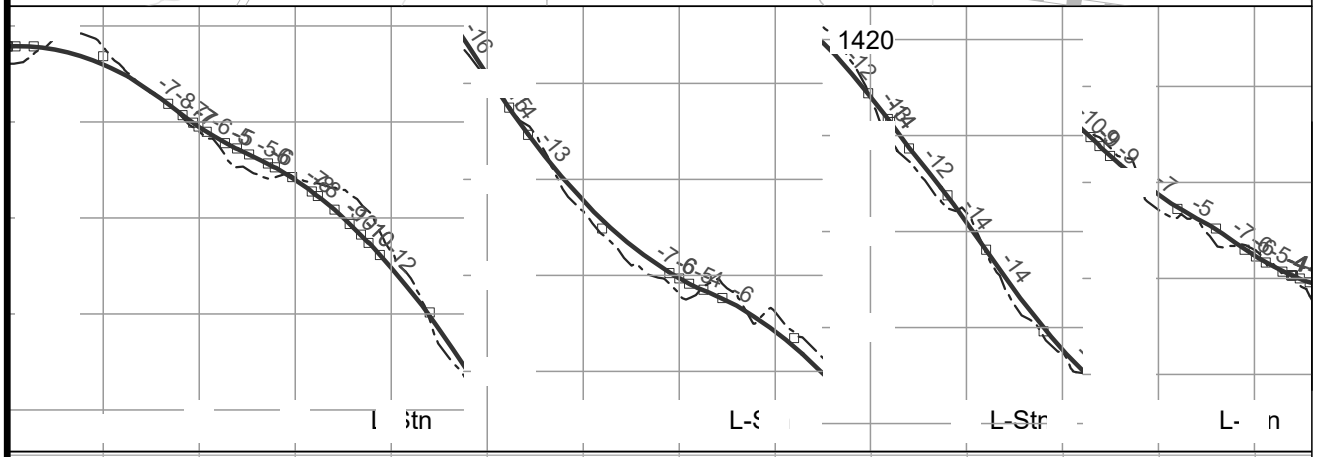
Template Assignments			
ID	L-Stn From	L-Stn To	Description
DLT	..	185.0	Crown with Ditch
TP	185.0	200.0	Taper Template
LNDG	200.0	..	Landing

CEFIR MILES TS
ORN02-TS-2023.0203
APPENDIX C1

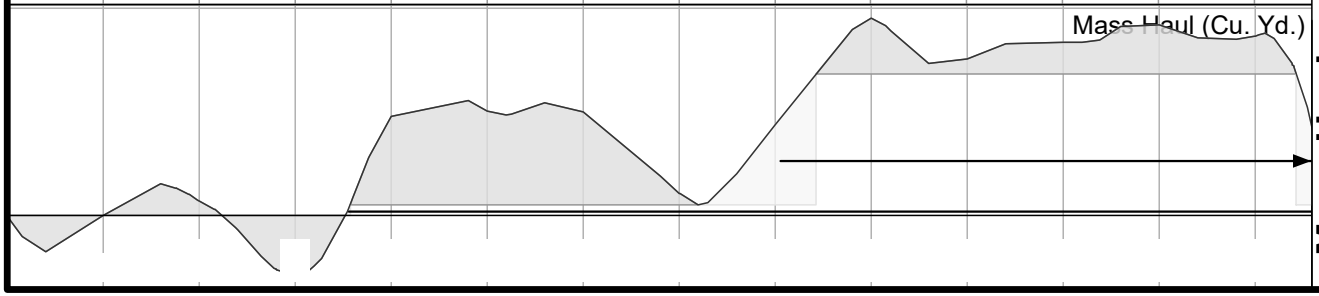
P3



Plan View



Profile View



Mass Haul

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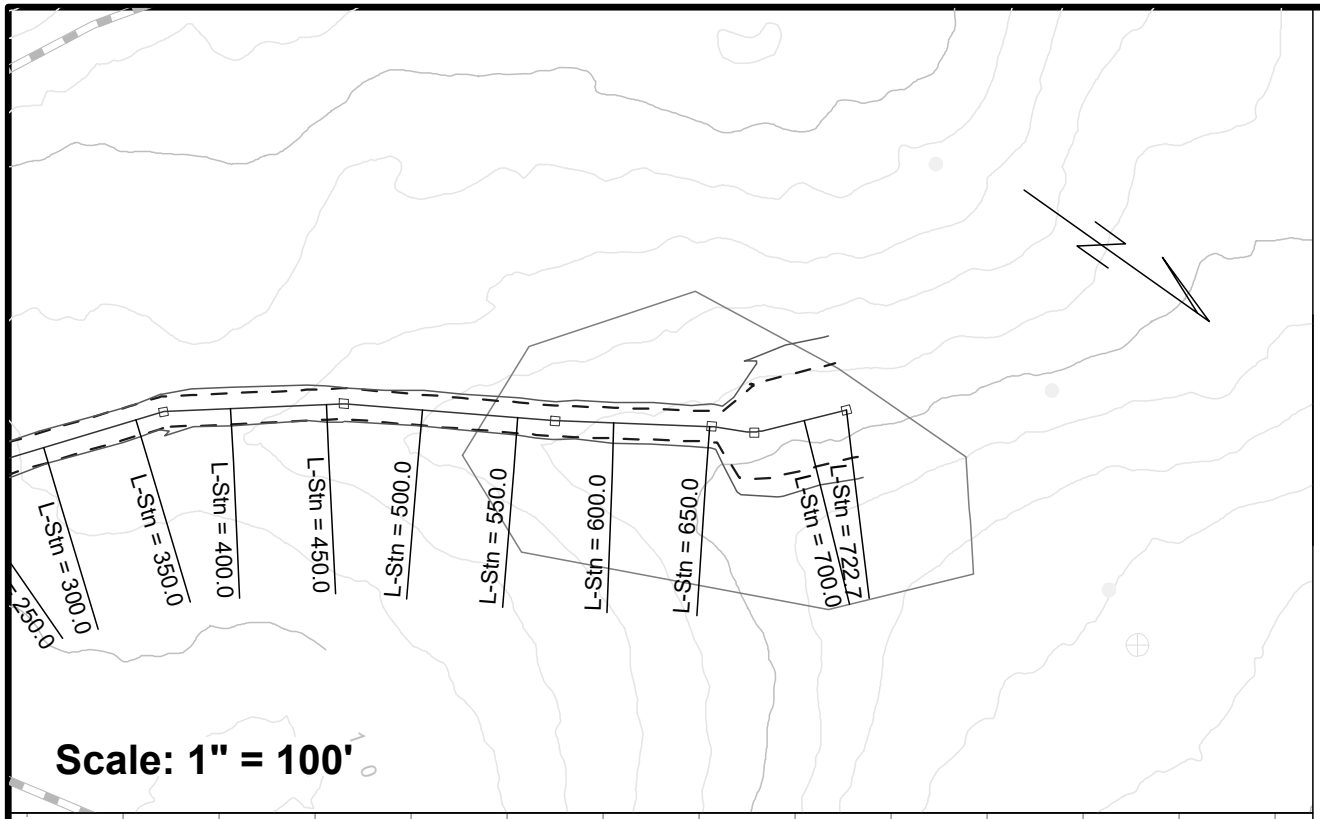
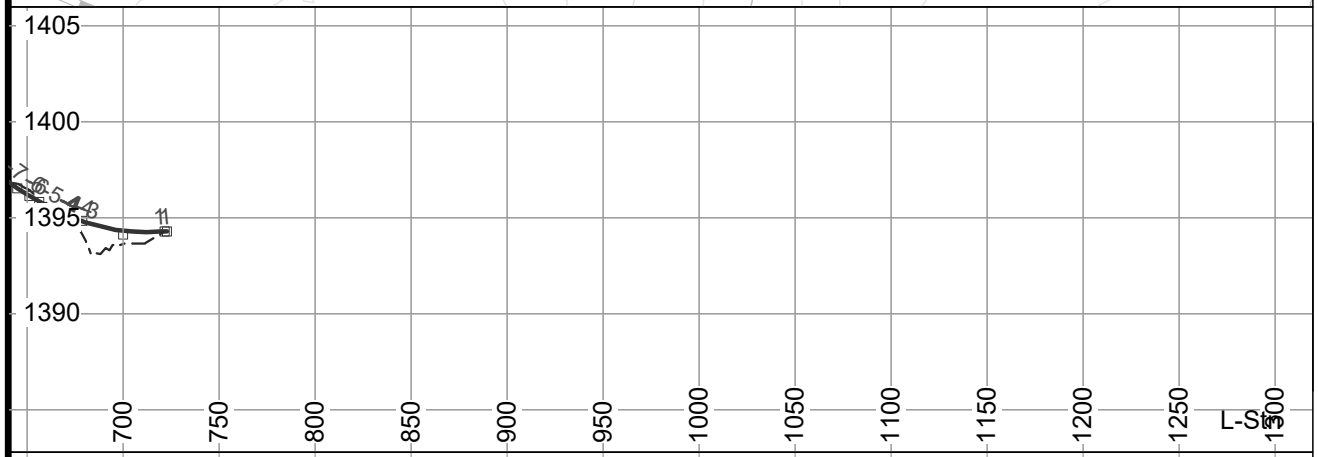
Template Assignments			
ID	L-Stn From	L-Stn To	Description
DF	..	655.0	DEFAULT TEMP
TP	655.0	670.0	Taper Template
LNDG	670.0	..	Landing

CEFIR MILES TS
ORN02-TS-2023.0203
APPENDIX C1

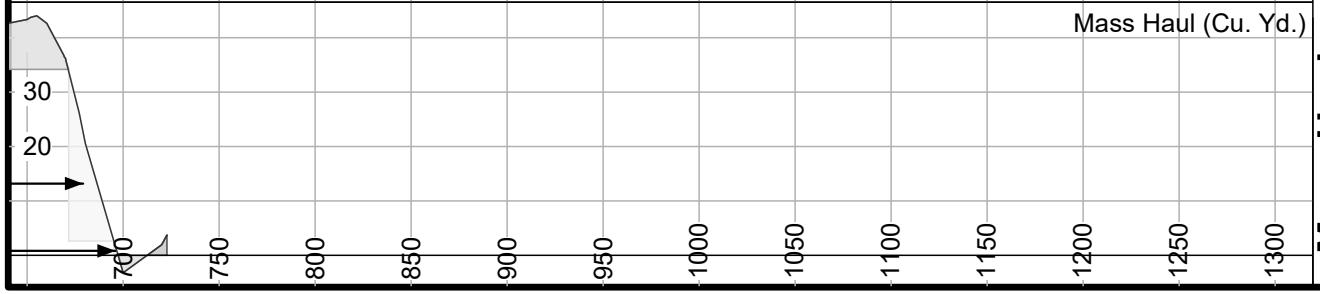
P3



Plan View



Profile View



Mass Haul

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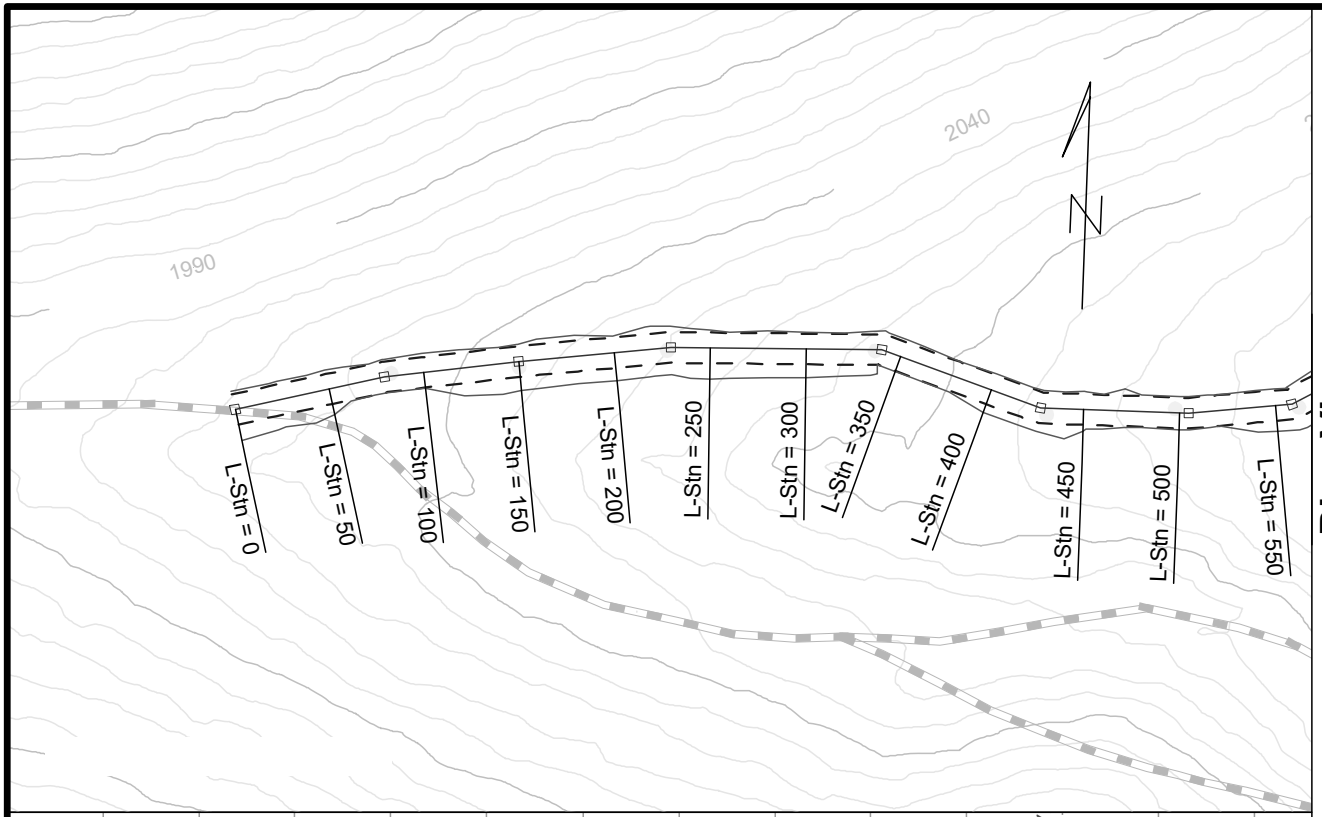
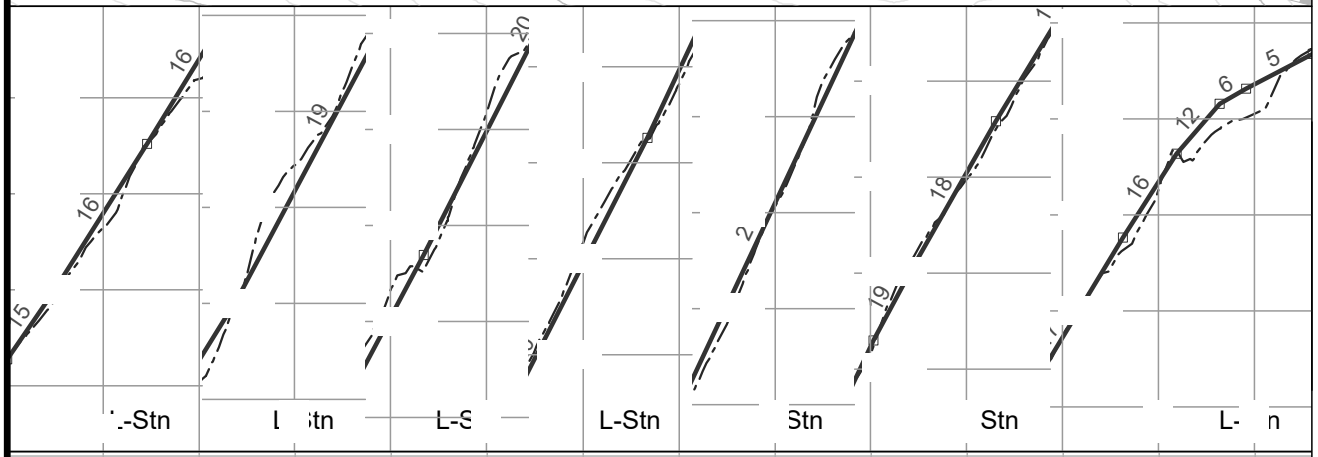
Template Assignments			
ID	L-Stn From	L-Stn To	Description
DF	..	655.0	DEFAULT TEMP
TP	655.0	670.0	Taper Template
LNDG	670.0	..	Landing

CEFIR MILES TS
ORN02-TS-2023.0203
APPENDIX C1

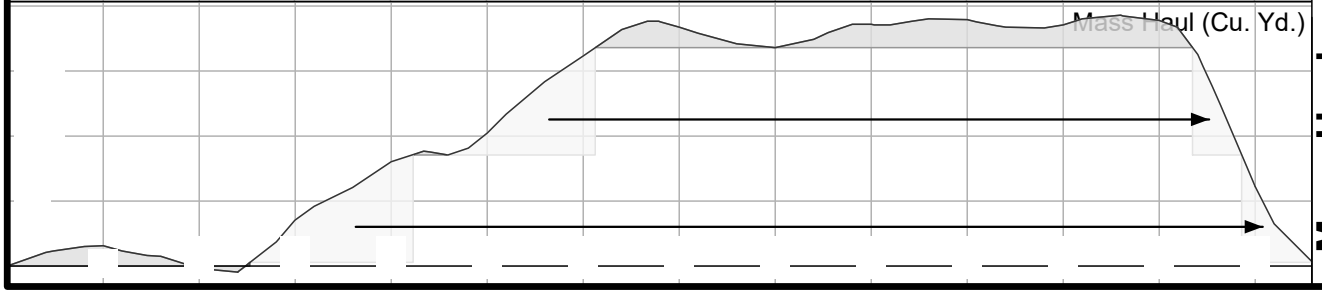
P6



Plan View



Profile View



Mass Haul

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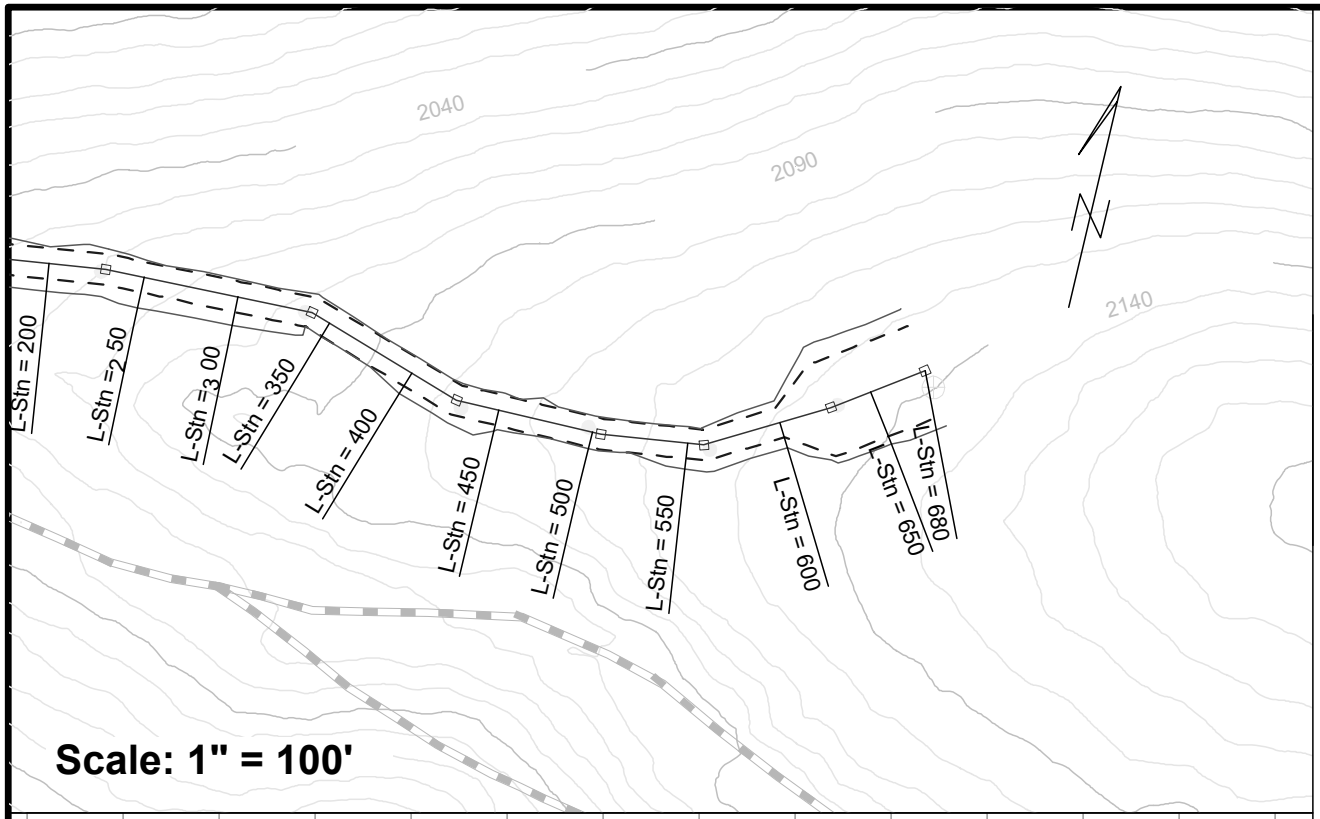
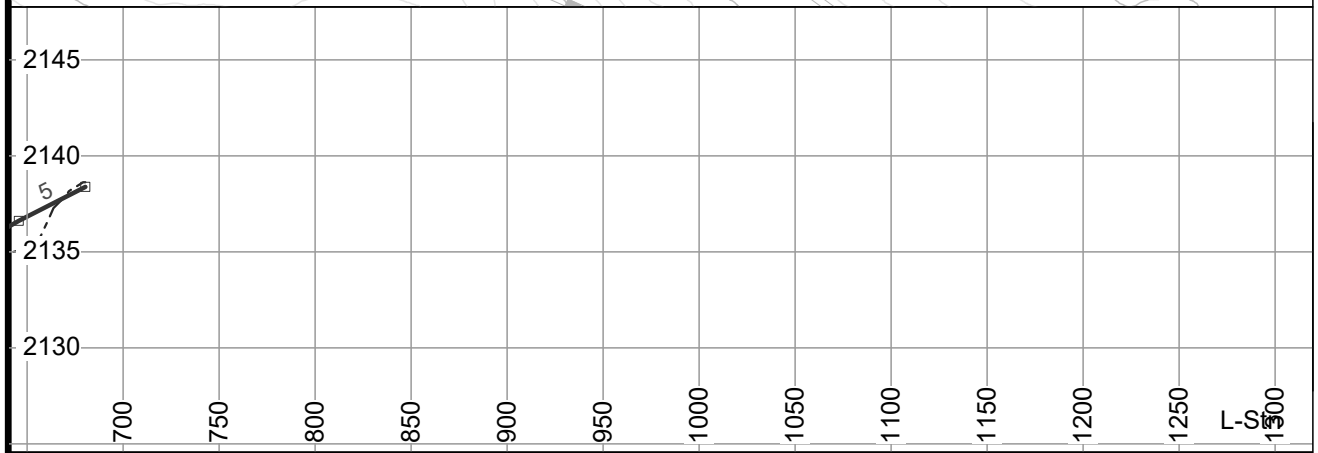
Template Assignments			
ID	L-Stn From	L-Stn To	Description
DRT	..	600.0	Crown with Ditch
TP	600.0	623.0	Taper Template
LNDG	623.0	..	Landing

CEFIR MILES TS
ORN02-TS-2023.0203
APPENDIX C1

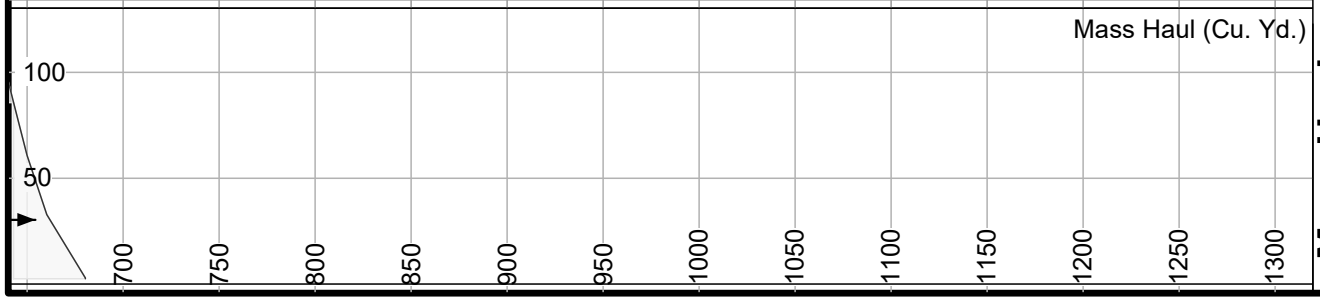
P6



Plan View



Profile View



Mass Haul

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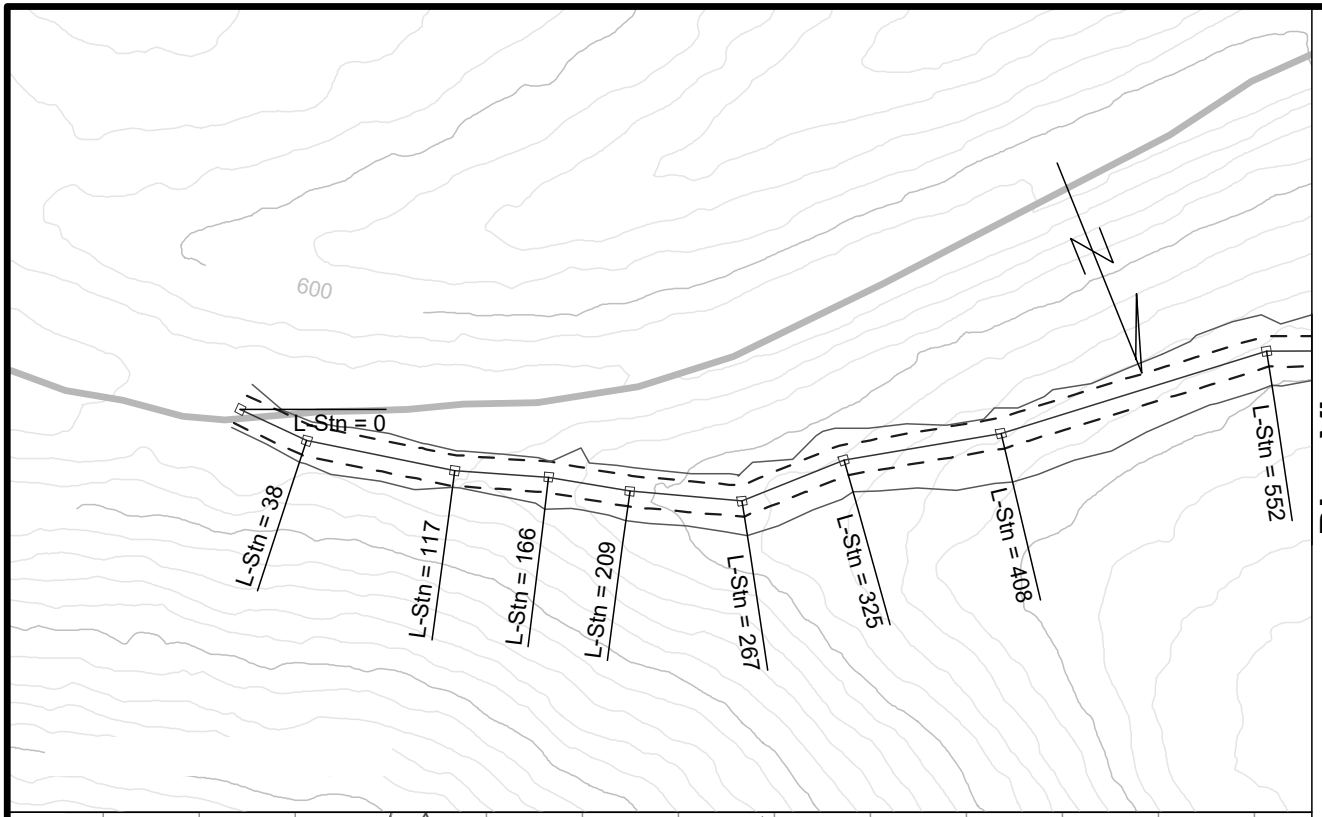
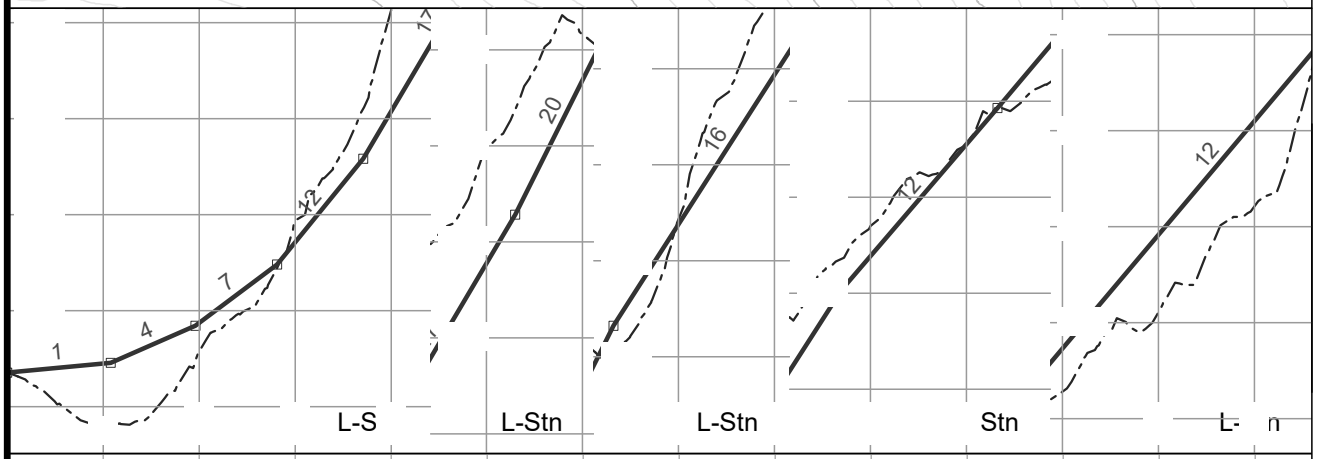
Template Assignments			
ID	L-Stn From	L-Stn To	Description
LNDG	623.0	..	Landing

CEFIR MILES TS
ORN02-TS-2023.0203
APPENDIX C1

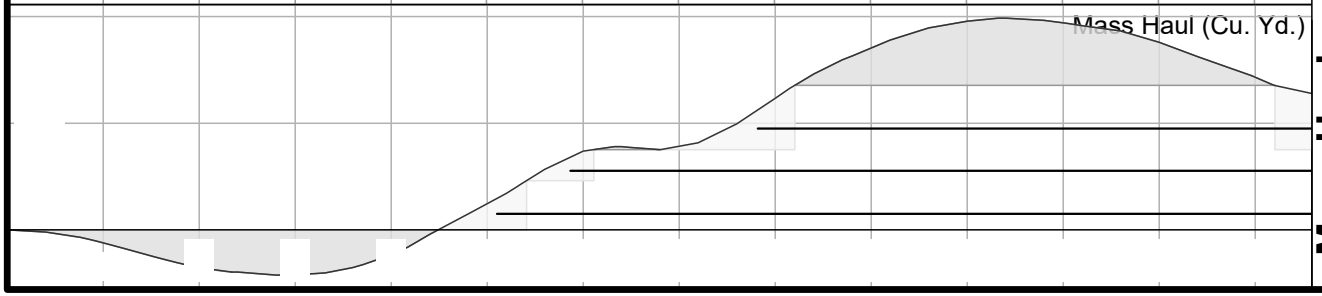
P7



Plan View



Profile View



Mass Haul

Legend
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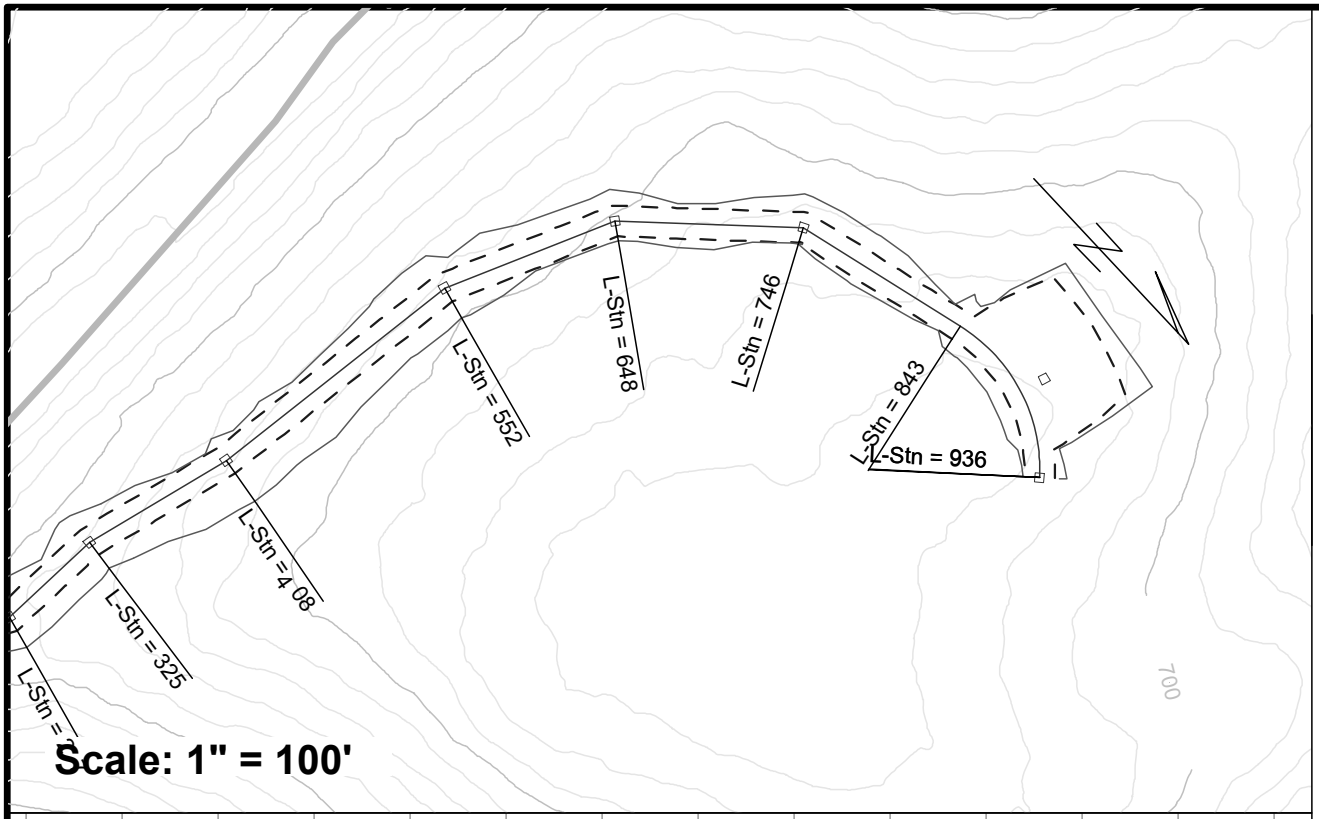
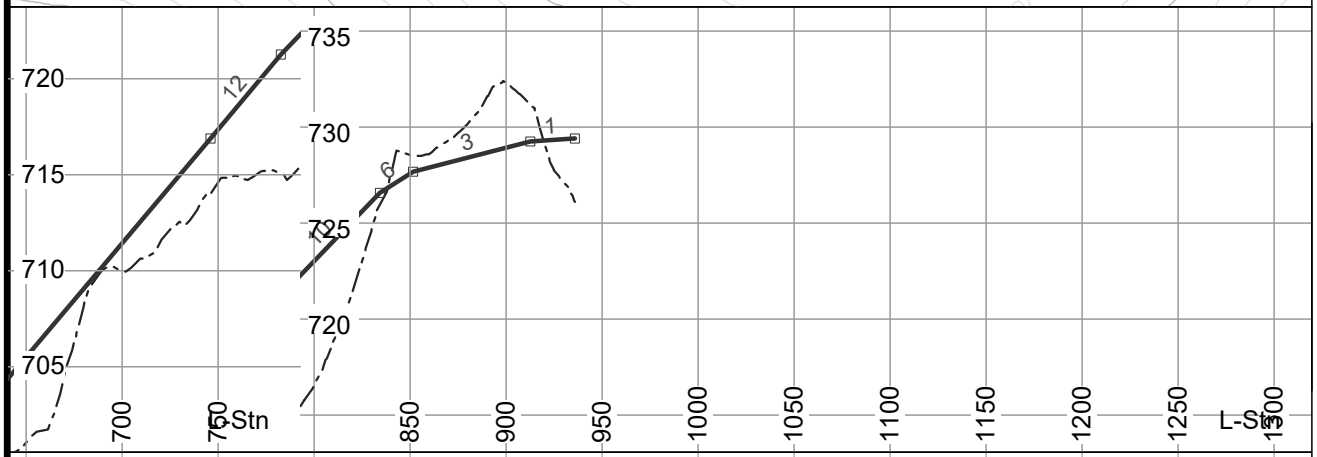
Template Assignments			
ID	L-Stn From	L-Stn To	Description
DRT	..	845.7	Crown with Ditch

CEFIR MILES TS
ORN02-TS-2023.0203
APPENDIX C1

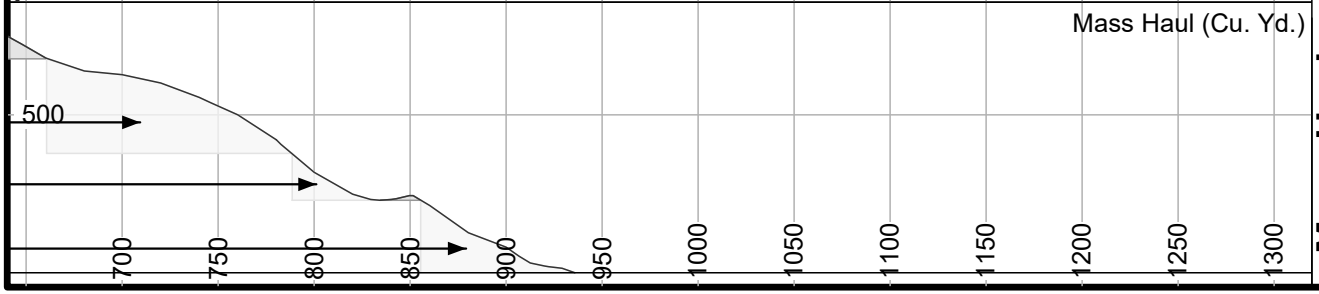
P7



Plan View



Profile View



Mass Haul

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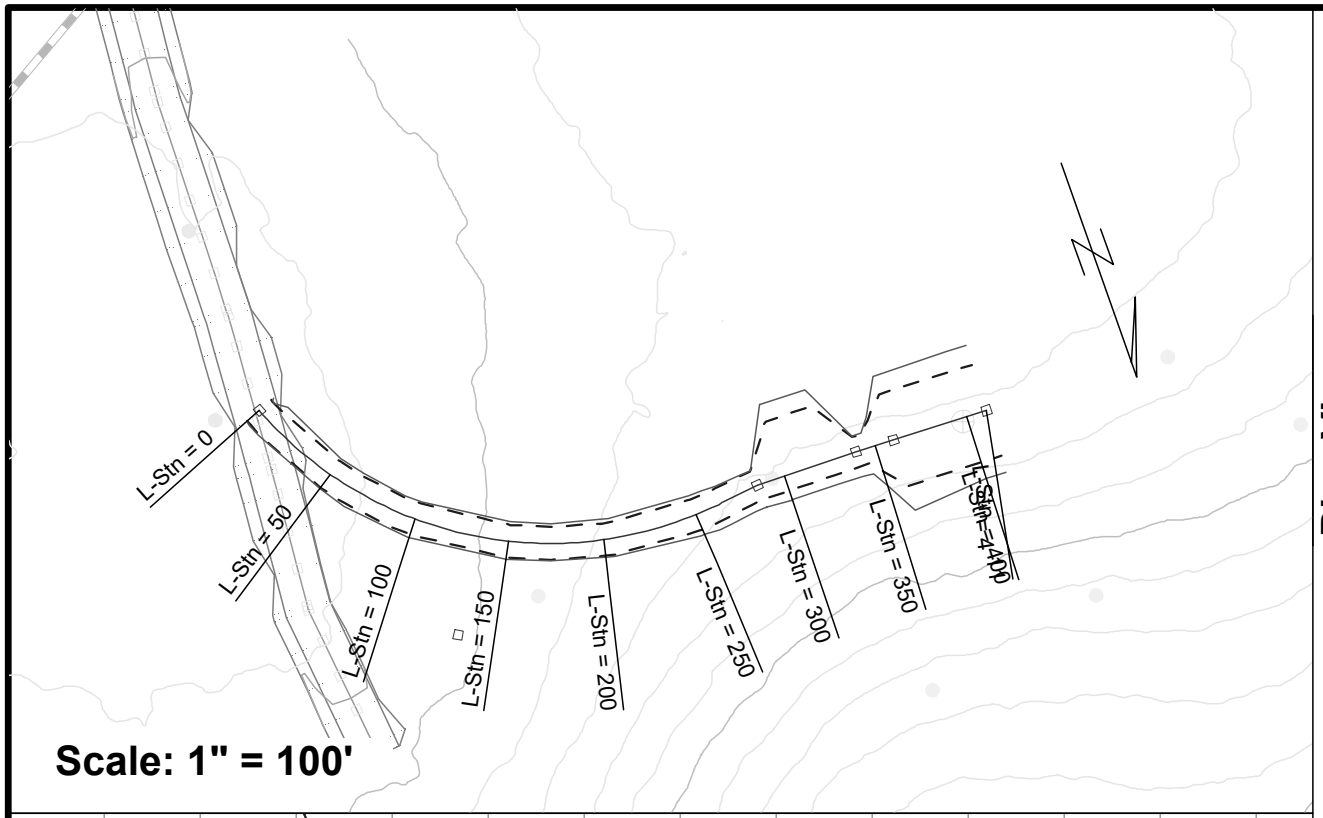
Profile Finished Grade

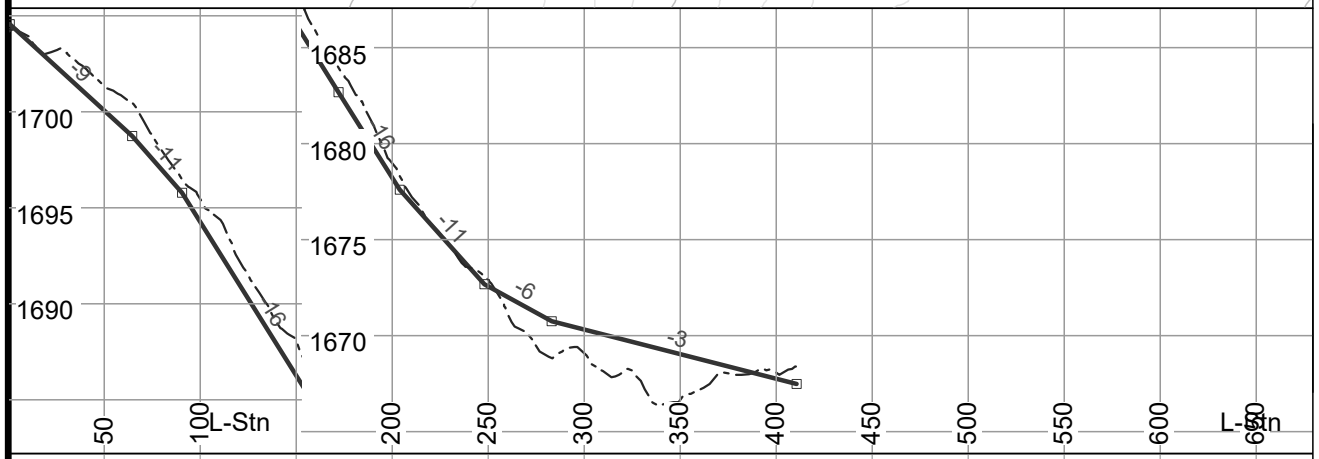
Template Assignments			
ID	L-Stn From	L-Stn To	Description
DRT	..	845.7	Crown with Ditch
TP	845.7	860.0	Taper Template
RLL	860.0	906.5	Roadside Landin
TP	906.5	921.8	Taper Template
DF	921.8	..	DEFAULT TEMP

CEFIR MILES TS
ORN02-TS-2023.0203
APPENDIX C1

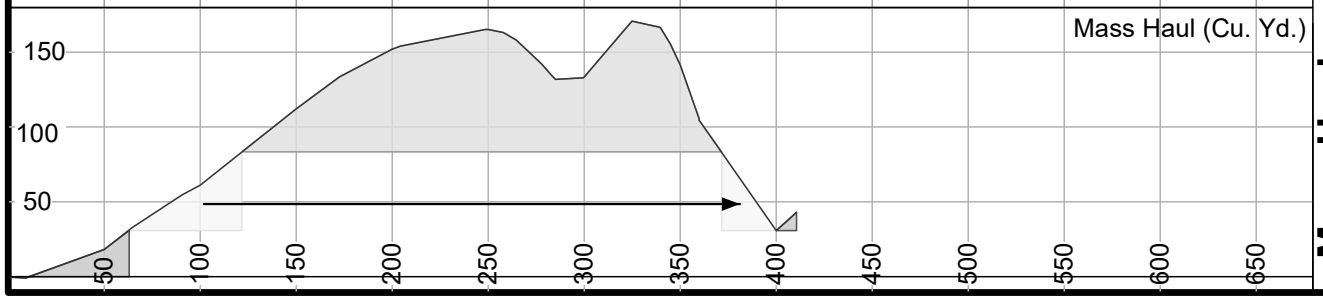
P9



Plan View



Profile View



Mass Haul

Legend
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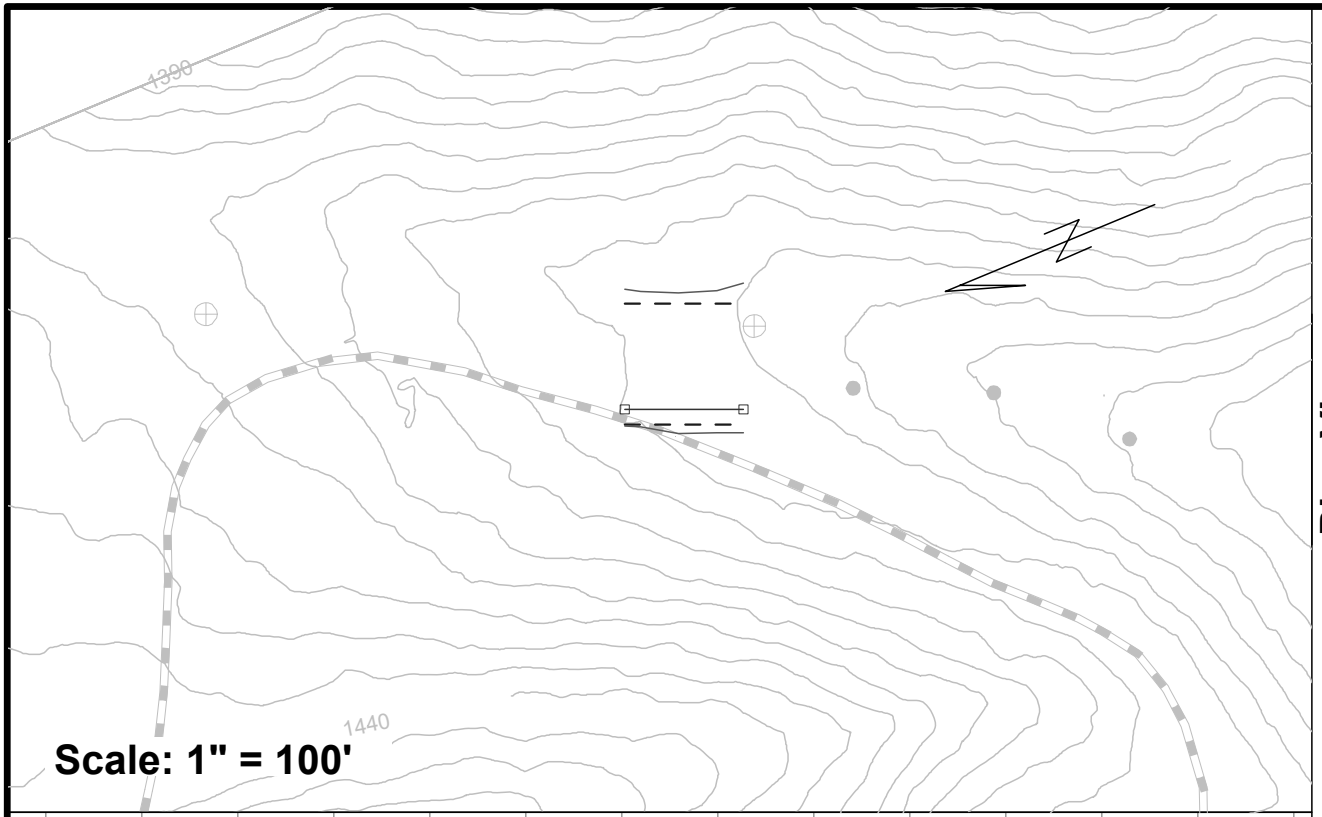
Profile Finished Grade

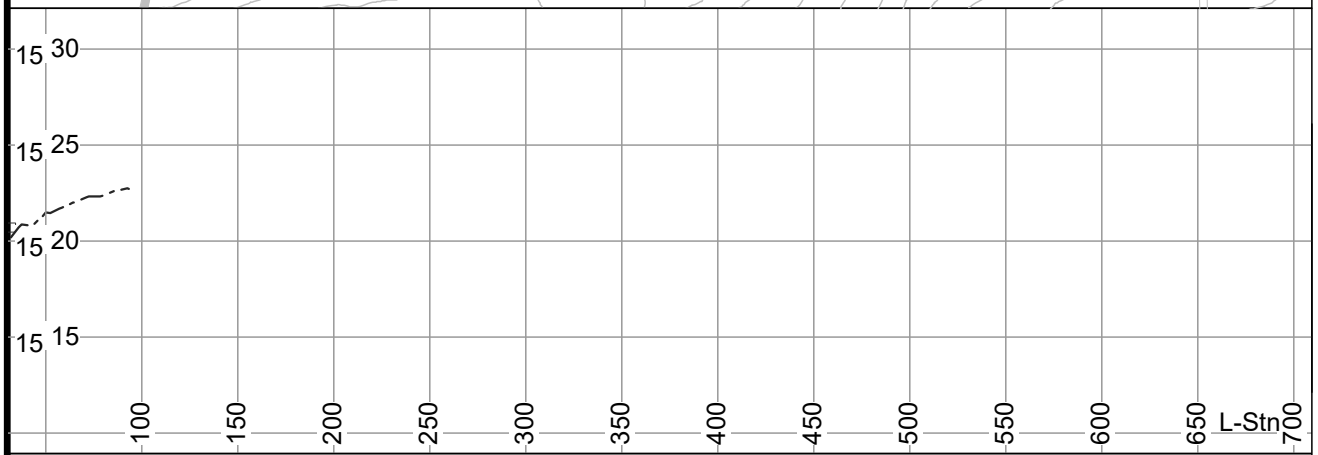
Template Assignments			
ID	L-Stn From	L-Stn To	Description
DF	..	285	DEFAULT TEMP
TP	285	300	Taper Template
TTL	300	325	Truck Turnarond
TP	325	340	Taper Template
DF	340	345	DEFAULT TEMP
TP	345	360	Taper Template

CEFIR MILES TS
ORN02-TS-2023.0203
APPENDIX C1

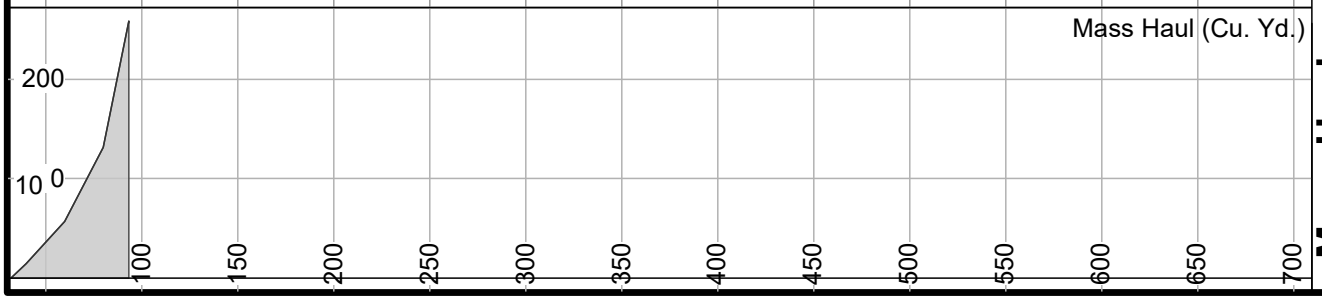
R2



Plan View



Profile View



Mass Haul

Legend
Plan L-line Location
Plan P-line Location
Plan Road Edges
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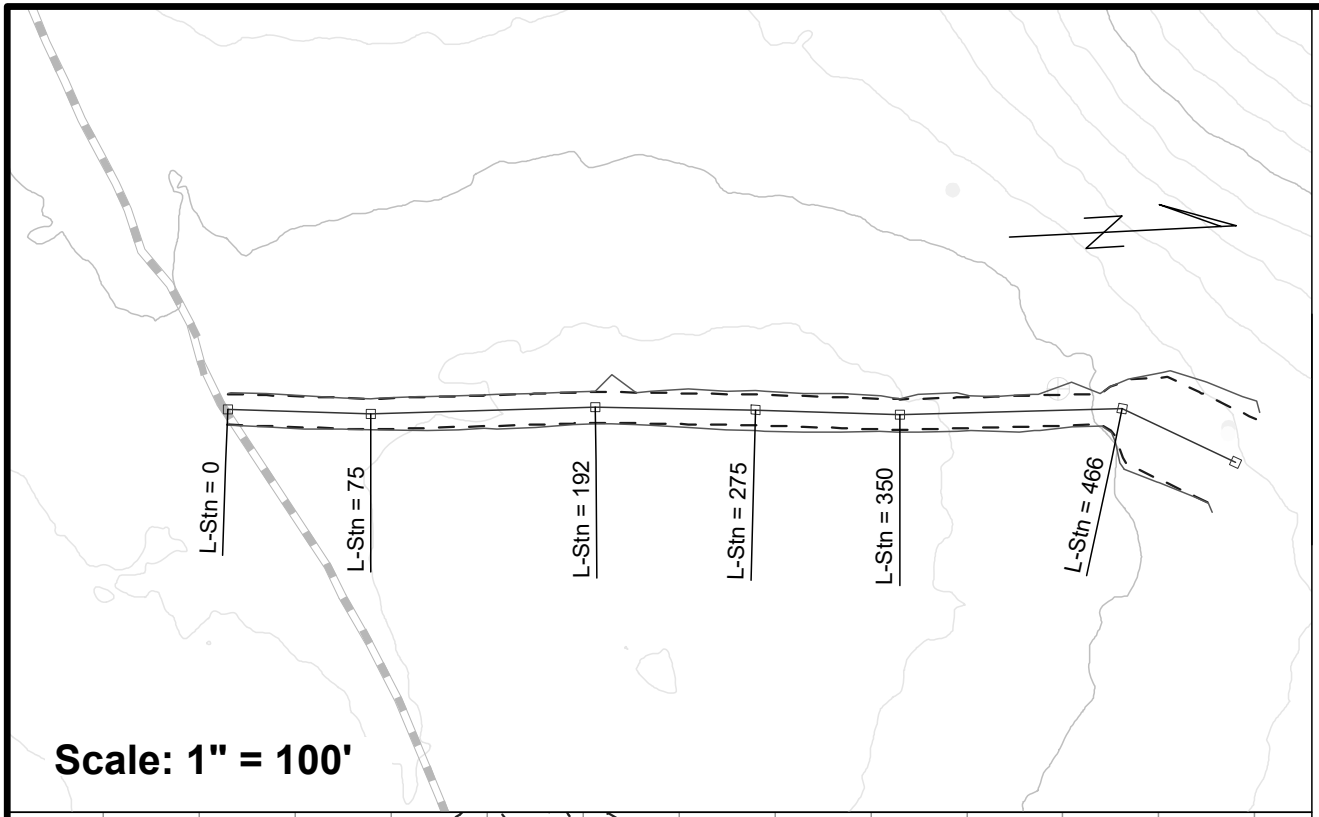
Plan Cross Section Lines
Profile Topopgraphy
Profile Finished Grade

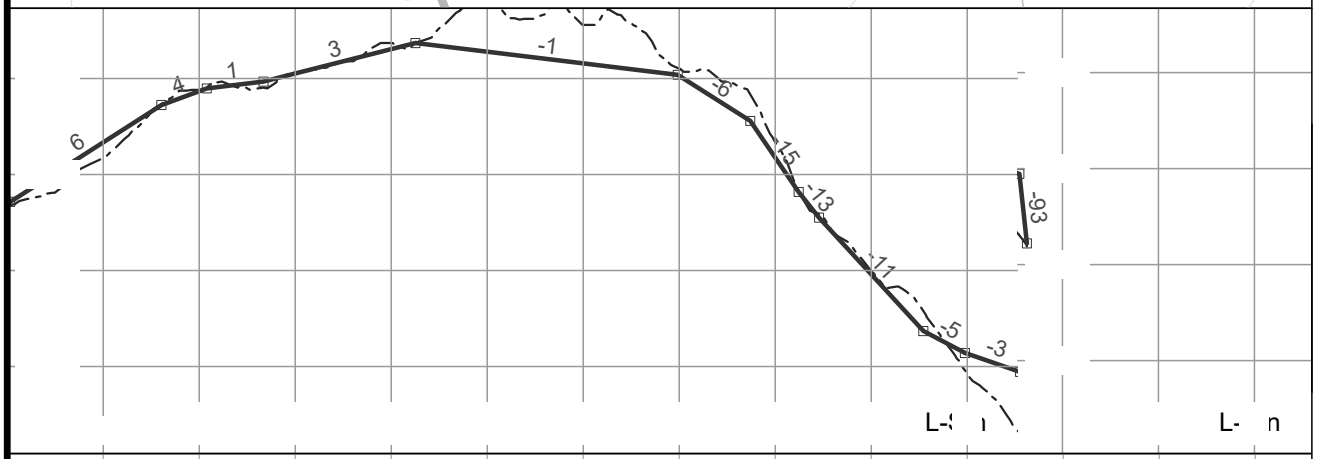
Template Assignments			
ID	L-Stn From	L-Stn To	Description
LPAD	..	95.0	Pad Left

CEFIR MILES TS
ORN02-TS-2023.0203
APPENDIX C1

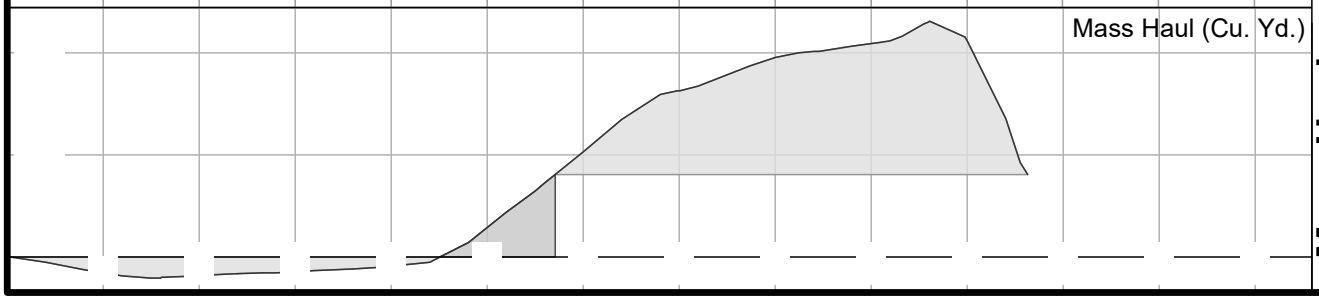
R4



Plan View



Profile View



Mass Haul

Legend
Plan L-line Location
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Plan Clearing Limits
Plan Cross Section Lines
Profile Topopgraphy
Profile Finished Grade

Template Assignments			
ID	L-Stn From	L-Stn To	Description
DF	..	455.0	DEFAULT TEMP
TP	455.0	480.2	Taper Template
LNDG	480.2	..	Landing

United States
Department of the Interior
Bureau of Land Management
Northwest Oregon District

Timber Sale Contract
Purchaser Road Maintenance Specifications

ROAD MAINTENANCE SPECIFICATIONS

GENERAL - 3000

3001 The Purchaser shall be required to maintain all roads listed and/or referenced in section 41, Special Provisions, and as shown on the Exhibit E 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 the terms of this contract shall be maintained to the geometric standards required in Exhibit C of this contract.

3003 The minimum required maintenance on any roads shall include the provisions specified in Subsections 3101, 3104, and 3105.

3004 The Purchaser shall be responsible for providing timely maintenance and cleanup on any roads with logging units substantially completed, prior to moving operations to other roads, unless otherwise permitted by the Authorized Officer. The maximum length of non-maintained or non-cleanup of the road prism shall not exceed the sum of one (1) mile at any time. Release of maintenance requirements may be granted, upon written request, when the conditions specified in Sections 3300 and 3400 are met satisfactorily.

OPERATIONAL MAINTENANCE - 3100

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

3102 The Purchaser shall furnish and place a minimum of 100 cubic yards of 1 ½" aggregate conforming to the requirements in Section 1000 of Exhibit C of this contract on the roadway and landings at locations and in the amounts designated by the Authorized Officer. The aggregate gradation and compacted depth will also be designated by the Authorized Officer. This aggregate shall be used to repair surface failures, landings and areas of depleted surface depth excluding damages covered by Section 12 of this contract. The aggregate shall be furnished, hauled, placed, spread, and compacted by use of dump trucks, water trucks, and motor grader or similar equipment.

OPERATIONAL MAINTENANCE - 3100

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

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

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

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

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

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

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

OPERATIONAL MAINTENANCE - 3100

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

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

3107 The Purchaser shall cut or trim trees and brush which obstructs vision or prevents the safe passage of traffic along the traveled way when directed by the Authorized Officer.

The Purchaser shall also cut trees or brush encroaching on the road prism that are a result of his activities or winter damage during the contract period. Disposal of such vegetative material shall be by scattering below the road.

3108 The Purchaser shall avoid fouling gravel or bituminous surfaces through covering with earth and debris from side ditches, slides or other sources. The Purchaser shall also avoid blading surfacing material off the running surface of the roadway. Skidding of logs on the roadway in or outside designated logging units is not authorized without prior written approval by the Authorized Officer. Repair required caused by such skidding activity is not considered maintenance and shall be repaired at the Purchaser's expense.

SEASONAL MAINTENANCE - 3200

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

3202 The purchaser shall perform and complete maintenance specified in Sections 3000, 3100, and 3200 on all roads maintained by him, prior to October 31 each year, except as specified in Subsection 3203, after initial commencement of construction or logging operations. Thereafter, all roads shall have continuous preventive maintenance and road cleanup until suspension of seasonal operations. This includes all roads used and not used during the proceeding operating seasons.

SEASONAL MAINTENANCE - 3200

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

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

FINAL MAINTENANCE - 3300

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

The Authorized Officer may grant acceptance of Purchaser's maintenance responsibility in part where certain individual roads or road segments are no longer of any use to the Purchaser's remaining removal operations, providing that all contract requirements as specified under Sec. 16(b), Special Provisions, Sections 3000, 3100, 3200 and 3300 of the maintenance specifications have been completed and a relinquishment of cutting and removal rights on cutting units tributary to these roads is signed by the Purchaser. Request for partial acceptance must be submitted in writing by the Purchaser.

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

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

OTHER MAINTENANCE - 3400

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

3402 The Purchaser shall be permitted to remove ice and snow from roads authorized for use under this contract only when prior written approval has been secured from the Authorized Officer. The Purchaser shall submit a written request for permission to remove ice and snow in advance of the date operations are to begin.

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

DECOMMISSIONING – 3500

3501 Decommissioning of newly constructed rocked roads shall consist of installing water bars, seeding and mulching of exposed soils, and blocking road entrances, as directed by the Authorized Officer and in accordance with Section 2700 of Exhibit C of this contract. Decommissioning of natural surfaced newly constructed roads shall consist of full decompaction of road surface to a depth of 18”, and blocking entrances , as directed by the Authorized Officer and in accordance with Section 2700 of Exhibit C of this contract. Seeding and mulching of exposed soils will be required, and must be in accordance with Section 1800 of Exhibit C of this contract. This work is not required for road acceptance under Section 18 of this contract.

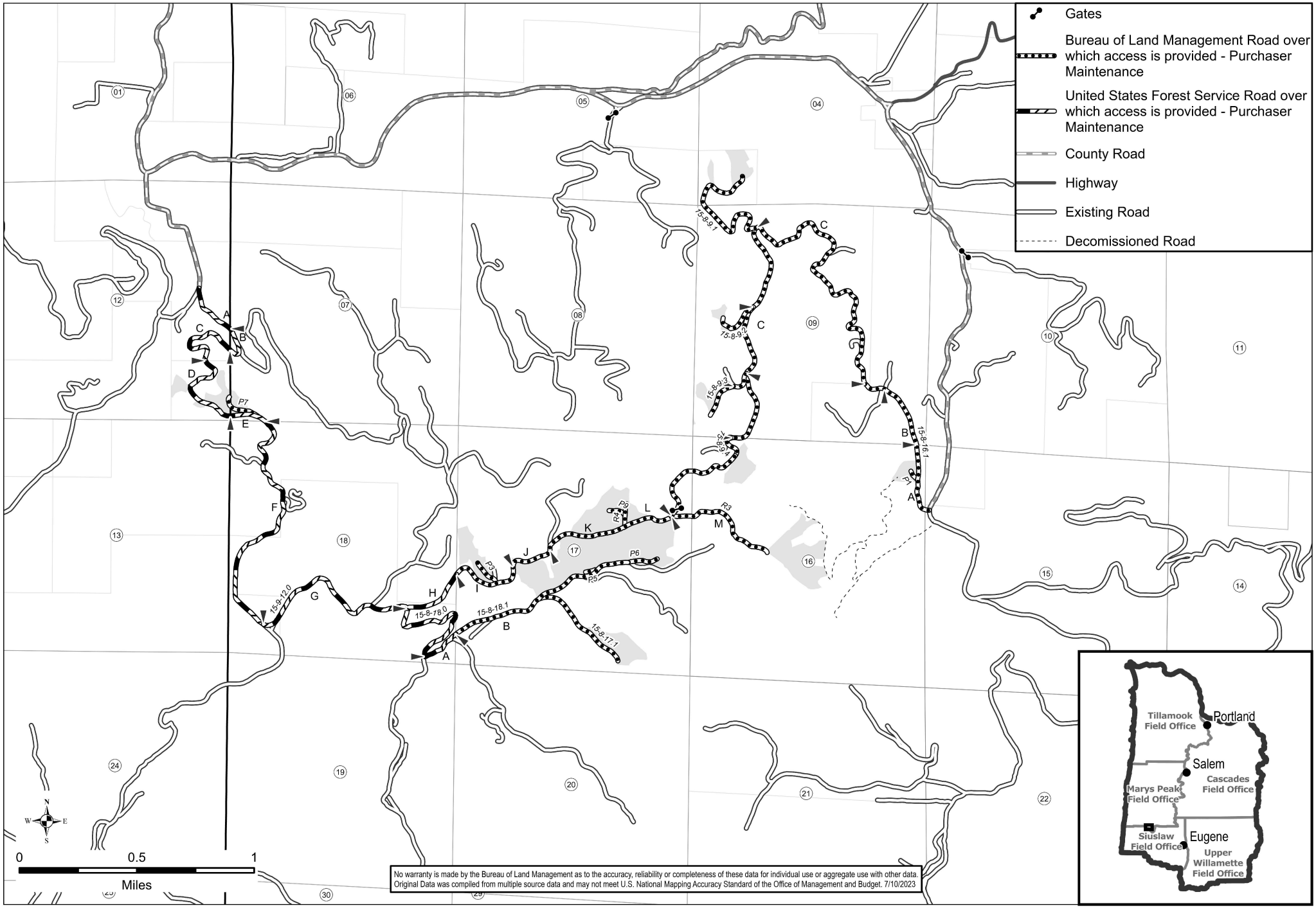
DECOMMISSIONING – 3500

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

ROAD NO OR SITE	FROM MP/STA.	TO MP/STA.	DECOMMISSION
P1	0.00	0.05	Rip all compacted soil to a depth of 18", cover mulch and replant. Pull ditch relief culvert and restore ditchline.
P3	0.00	0.14	Rip all compacted soil to a depth of 18", cover mulch and replant.
P5	0.00	0.04	Pull ditch relief culvert and construct earthen barrier to block road.
P6	0.00	0.13	Pull 1 cross drain, 1 ditch relief pipe, install 5 water bars and construct earthen barrier to block road.
P7	0.00	0.17	Pull 3 cross drain, 1 ditch relief pipe, install 9 water bars and construct earthen barrier to block road.
P9	0.00	0.08	Install 4 water bars.
R4	0.00	0.10	Pull ditch relief pipe, install 3 water bars and construct earthen barrier to block road.

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Road Use and Maintenance Map
T. 15 S., R. 8 W., Sections 04, 07, 09, 16, 17 and T. 15 S., R. 9 W., Section 12 W.M.

Cefir Miles
ORN02-TS-2023.0203
EXHIBIT E



No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual use or aggregate use with other data. Original Data was compiled from multiple source data and may not meet U.S. National Mapping Accuracy Standard of the Office of Management and Budget. 7/10/2023

EXHIBIT F
Designation by Description
Scale Timber Sale Requirements

I. **Training**

A. In the required logging plan, the Purchaser shall provide a list of fallers who will be conducting the cutting operations.

B. Prior to any harvesting operations in a Partial Cut Area as shown on Exhibit A, the Authorized Officer will designate test mark areas. Any mechanical harvester operator and/or fallers designated to conduct falling operations within a Partial Cut Area will be required to mark (with paint or flagging) a two-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 Partial Cut Area.

C. The Purchaser shall notify the Authorized Officer at least 48 hours in advance of replacement or addition of a timber faller.

D. Approved Cutting Areas - No yarding of cut timber will be allowed until the cutting operations have been approved in writing by the Authorized Officer.

II. **Cutting Operations**

A. Purchaser Pre-Marking. In the event the Purchaser elects to mark (paint) the cutting areas prior to falling, the Authorized Officer shall approve such marking prior to falling.

B. Approved Cutting Areas. No yarding of felled timber will be allowed until the cutting operations have been approved in writing by the Authorized Officer.

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

III. **Selection Criteria – For Trees over Seven (7) inches DBH.** The Selection Criteria shown below shall be used by the Purchaser in determining which trees greater than seven (7) inches diameter at breast height (DBH defined as four and one-half feet (4.5 feet), above ground level on the uphill side of the tree) are designated for retention and which are designated for falling:

A. Maintain stand structural and species diversity:

1. All tree species besides Douglas-fir and all snags and Continuous Vegetation Survey plot reference trees are reserved and will be left. All merchantable trees of all species count toward the basal area targets.

2. Retain the following density measurement requirements expressed as basal area measured in square feet/acre, of live trees larger than seven (7) inches DBH on each Partial Cut Area.

Exhibit A Unit	Acres	Target Basal Area	Comments
1	5	130	Thin DF and WH. Retain all other species
2	9	110	Thin DF and WH. Retain all other species
3	2	130	Thin DF and WH. Retain all other species
4	5	110	Thin DF and WH. Retain all other species
5	8	130	Thin DF and WH. Retain all other species
6	19	110	Thin DF and WH. Retain all other species
7	83	130	Thin DF and WH. Retain all other species
8	11	130	Thin DF and WH. Retain all other species
9	12	110	Thin DF and WH. Retain all other species
10	13	110	Thin DF and WH. Retain all other species

3. Select dominant healthy trees with the largest crowns for retention. Leave basal area includes all merchantable trees greater than seven (7) inches DBH only. Hardwood trees of all species count toward BA target.

4. Leave "unique" trees of average or larger size based on DBH that are full-crowned, "wolf" trees, broken-top, forked, deep crowns, evidence of wildlife use, or visible nests. Retain all snags and protect snags that are greater than twenty (20) inches DBH and greater than forty (40) feet tall by leaving surrounding closest adjacent trees.

5. All trees greater than forty (40) inches DHBOB and that the Bureau of Land Management identifies were established prior to 1850 in the Partial Cut and Gap areas are reserved from cutting.

6. Trees to be removed shall be greater than seven (7) inches DBH and will be thinned from below leaving healthy dominant and co-dominant trees with the largest crowns. Trees less than seven (7) inches DBH are reserved from cutting and do not count towards basal area target.

8. In areas where basal area targets cannot be met, remove all Douglas-fir trees and leave all other species.

9. In Gap areas, marked with Patch Opening tags, remove only Douglas-fir and western hemlock. A minimum of three (3) trees greater than seven (7) inches DBHOB of any species will remain within Gap areas immediately following harvest.

B. Provide roadside maintenance and restoration along roads 15-8-9.1, 15-8-9.2, 15-8-9.3, 15-8-16.1, 15-8-17.1, 15-8-18.1, 15-9-12.0 and R3 within the areas marked Special Mark Area, as shown on Exhibit A, by complying with the following criteria:

1. Hardwood trees within fifty (50) horizontal feet of the roads listed above shall be harvested if leaning toward or over the roadbed, and/or trees with canopies overtopping the roadbed, and/or trees with conditions of likely or imminent failure.

2. Remove unstable roadside conifers: Conifers on road cut slopes or on top of cut slope that are unstable shall be cut and removed.

3. Approximately two hundred and eight (208) trees painted yellow shall be felled and scattered on site as directed by the Authorized Officer.

4. Approximately one hundred eight-four (184) trees painted pink, shall be felled and bucked to a length of sixty (60) feet. Logs will be decked in Fish Log Decking Area, as directed by the Authorized Officer.

IV. **Compliance Inspection.** Compliance inspection will consist of visual observation of on-going falling operations and collecting plot data after the trees have been felled as specified below:

A. Visual observation compliance will consist of subjective monitoring by the Authorized Officer for compliance with the Selection Criteria. Compliance will be considered satisfactory if ninety (90) percent of the observed cut or retained trees are determined by the Authorized Officer to meet the Section Criteria.

B. The Authorized Officer shall inspect felling operations by random plot selections through felled areas. At each plot, the following will be inspected to determine if the approval level is being met:

1. Diameter and species of both cut trees (stumps) and residual trees to determine initial and residual basal area per acre.

2. The selection of residual trees and work quality.

C. The approval level for the residual basal area target for each unit shall be considered met if the average residual basal area of all plots measured during one inspection is within ten (10) percent of the residual basal area target. If this requirement falls below the approval level, a written warning will immediately be issued to the Purchaser.

V. Non-Compliance. If the Purchaser does not comply with the DxD Selection Criteria to the satisfaction of the Authorized Officer applying the Compliance Inspection Criteria in Section IV., and after a written warning has been issued, the Contracting Officer may suspend felling operations until corrective measures have been taken by the Purchaser. It will be the responsibility of the Purchaser to pay any costs incurred in the implementation of the corrective measures required by the Authorized Officer. Corrective measures, as specified in writing by the Authorized Officer, may include but are not limited to:

A. 1st Warning.

1. Approval of original or additional mechanical harvester operators and/or fallers by the Authorized Officer based on operator's satisfactory completion of a five (5) acre test mark area.

B. 2nd Warning.

1. Approval of original or additional mechanical harvester operators and/or fallers by the Authorized Officer based on operator's satisfactory completion of a twenty-five (25) acre test mark area; or

2. Replacement of mechanical harvester operator and/or fallers by Purchaser.

C. 3rd Warning.

1. The Purchaser will mark all reserve trees in the Partial Cut Areas, as shown on Exhibit A, for approval by the Authorized Officer prior to falling.

VI. Reserved Timber. The provisions of Section 43 of the contract are repeated below for convenience of reference:

Sec. 43.

RESERVED

a. All timber on the Reserve Areas shown on Exhibit A and all painted orange or posted trees which are on or mark the boundaries of the Reserve Areas and/or right-of-way areas of Roads to be Constructed and of Roads to be Improved shown on Exhibit A.

b. All trees other than Douglas-fir and western hemlock in the Partial Cut and Gap areas, as shown on Exhibit A.

c. All preexisting down logs and snags in the Partial Cut and Gap areas, as shown on Exhibit A, which do not present a safety hazard as determined by the Authorized Officer. All snags felled for safety reasons shall be retained on site.

d. All trees less than seven (7) inches DBHOB not designated for cutting.

e. Trees required to meet residual tree requirements set forth in Exhibit F, attached hereto and made a part hereof.

f. Trees required to meet snag creation requirements set forth in Exhibit G, attached hereto and made a part hereof.

g. All trees greater than forty (40) inches DBHOB and established prior to 1850 as determined by the Authorized Officer.

EXHIBIT G

Snag Creation Requirements

I. Snag Selection, Location, and Tally

A. Within Partial Cut Areas and Snag Creation Areas, as shown on Exhibit G, the Purchaser shall select and create a total of one thousand six hundred forty-five (1,645) snags as specified in Tables 1 and 2 below. Snag creation will be accomplished by base girdle, high girdle, and saw-topping selected trees as described below.

B. Trees selected for snag creation shall have the following characteristics:
   1. Green trees (alive)
   2. between 10” and 30” DBH,
   3. limited to Douglas-fir within the Partial Cut Areas,
   4. limited to Douglas-fir and western hemlock within Snag Creation Areas,

C. The following trees are reserved, and the Purchaser shall not select these trees for snag creation:
   1. orange-painted trees,
   2. trees marked with yellow metal seed-tree tag,
   3. trees with unique structure such as forked boles, broken tops, crooked boles, large scars, cavities, and visible nest structures larger than twice the bole diameter.

D. At least forty (40) percent of all snags that are created for this project shall be over 20 inches DBH. This requirement does not apply to individual treatment units.

E. Trees selected for base girdling shall be from the smaller diameter classes available within each treatment area, generally less than 20" DBH.

F. Trees selected for high girdling and saw-topping shall be from the larger diameter classes available within each treatment area, generally larger than 20" DBH

G. Trees selected for base girdling shall be located at least 150 feet away from roads and landings; while high girdle and saw-topped trees shall be located at least 75 feet away from roads and landings.

H. If the target number of base girdle trees cannot be met from within a partial cut unit, the Authorized Officer may approve substitution with high girdling, saw topping, or felling some trees that are within 150 feet of roads and landings.

I. The Purchaser shall maintain at least 3 untreated live conifer trees greater than 10” DBH dispersed within each Snag Creation Area, as shown on Exhibit G. Trees retained to meet this requirement should preferentially select Douglas-fir with the fullest crowns, and western hemlock with the largest diameter.

J. If the specified number of trees for snag creation are not available within any Snag Creation Area, as shown on Exhibit G, the Purchaser shall select additional trees at the discretion of the Authorized Officer.

K. The Purchaser shall field locate Snag Creation Areas by using a GPS enabled device capable of geo-referencing PDF maps. The boundary of Snag Creation Areas may not be marked on all sides. All Partial Cut Areas have painted and posted boundaries.

L. The Purchaser shall mark one tree in each Snag Creation Area with the corresponding identifier (Area Letter) as specified on Table 2 and shown on Exhibit G. Trees shall be marked with high visibility pink paint on two sides at DBH and be visible from a distance.

M. The Purchaser shall tally all girdled trees by 2-inch diameter class, tree species, snag type, and unit identifier on a daily basis. The Authorized Officer may request the tally at any time during girdling operations. At the completion of girdling operations, the Purchaser shall submit a completed tally to the Authorized Officer.

N. Chainsaw use within the **Restricted Operating Area,** as shown on Exhibit G, shall not be permitted from April 1 through August 5 of each year, both days inclusive; and shall not begin until 2 hours after sunrise and shall cease 2 hours prior to sunset from August 6 through September 15 of each year, both days inclusive. These restrictions shall not be waived.

II. Base Girdle Instructions

A. Each base girdled tree shall have the bark and cambium layer removed from a 12-inch wide or greater band completely encircling the bole of the tree at or below breast height.

B. Mark each base girdled tree with a band of high visibility pink paint near DBH level.

III. High Girdle Instructions

A. High girdle trees shall have the bark and cambium layer removed from a 12-inch wide or greater band completely encircling the bole of the tree.

B. High girdled trees shall retain at least 15 live limbs greater than 5 feet long below the girdle site and have a bole diameter at the girdle site that is between 8 and 12 inches.

C. High-girdled trees shall be marked with a band of high visibility pink paint near DBH, and two pieces of high visibility pink flagging tied on a branch, or around the bole, directly below the girdle site. Flagging shall extend a minimum of three feet downward and must be visible from the ground.

IV. Saw-Top Instructions

A. Saw-topped trees must be severed completely from the bole and fall to the ground. No tops shall be left hung up in other trees or left leaning against the bole of a tree.

B. At least 50 percent of saw-topped trees created in each Partial Cut Area unit, and 100 percent of saw-topped trees created in each Snag Creation Area shall be severed at a height of 60 feet, or above 25 percent live crown, which ever height is greater.

C. Up to 50 percent of the saw-topped trees created in each Partial Cut Area unit can be severed at 40 feet, or at a height where the bole diameter is between 8-12 inches, which ever height is greater.

D. Saw-topped trees shall be directionally felled away existing snags, and away from roads and landings. No part of the severed tops shall rest on non-BLM land.

E. Saw-topped trees shall be marked with a band of high visibility pink paint near DBH, and two pieces of high visibility pink flagging tied on a branch, or around the bole, directly below the saw top. Flagging shall extend a minimum of three feet downward and must be visible from the ground.

Table 1. Snag Treatment within Partial Cut Areas.

Unit Location	Exhibit A Unit	Area (acres)	Total Snags to Create	Base Girdle	High Girdle	Saw Topped
15S-08W, Section 16	1	5	12	4	4	4
15S-08W, Section 04	2	9	18	6	6	6
15S-08W, Section 09	3	2	6	2	2	2
15S-08W, Section 09	4	5	10	4	3	3
15S-08W, Section 16	5	8	16	6	5	5
15S-08W, Section 16	6	19	36	12	12	12
15S-08W, Section 17	7	83	172	57	57	58
15S-08W, Section 17	8	11	22	7	8	7
15S-08W, Section 17	9	12	24	8	8	8
15S-09W, Section 12	10	13	26	8	9	9
Total		**167**	**342**	**114**	**114**	**114**

Table 2. Snag Treatment within Snag Creation Areas.

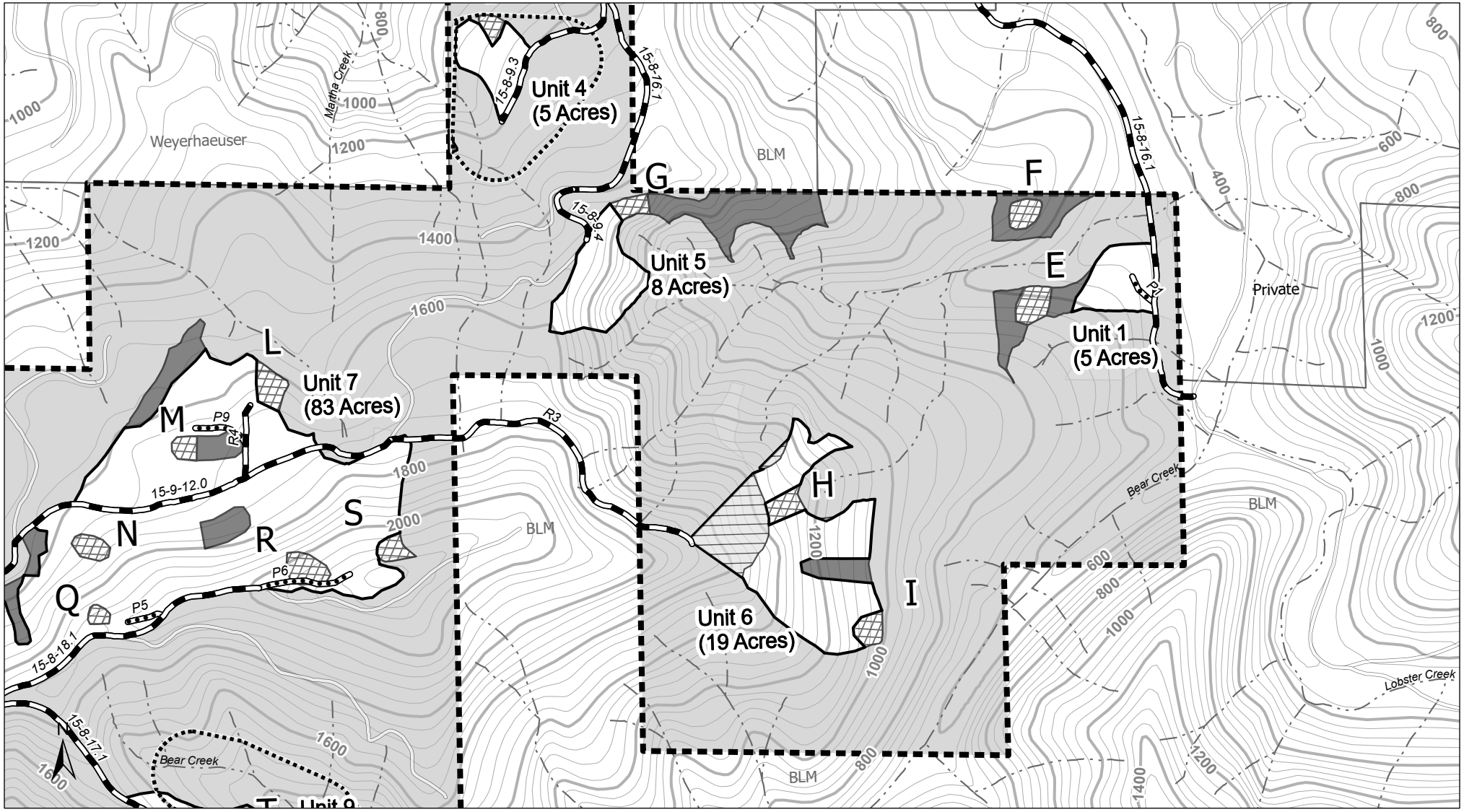
Unit Location	Snag Creation Area	Area (acres)	Total Snags to Create	Base Girdle	High Girdle	Saw Topped
15S-08W, Section 04	A	0.33	30	10	10	10
15S-08W, Section 09	B	0.17	10	3	4	3
15S-08W, Section 09	C	0.66	60	20	20	20
15S-08W, Section 09	D	0.58	54	18	18	18
15S-08W, Section 16	E	1.29	116	39	38	39
15S-08W, Section 16	F	0.94	84	28	28	28
15S-08W, Section 16	G	0.77	63	21	21	21
15S-08W, Section 16	H	1.01	81	27	27	27
15S-08W, Section 16	I	0.93	75	25	25	25
15S-08W, Section 17	J	0.56	45	15	15	15
15S-08W, Section 17	K	0.86	75	25	25	25
15S-08W, Section 17	L	1.22	99	33	33	33
15S-08W, Section 17	M	0.65	51	17	17	17
15S-08W, Section 17	N	0.86	69	23	23	23
15S-08W, Section 17	O	0.31	24	8	8	8
15S-08W, Section 17	P	0.60	48	16	16	16
15S-08W, Section 17	Q	0.41	30	10	10	10
15S-08W, Section 17	R	1.30	105	35	35	35
15S-08W, Section 17	S	0.79	63	21	21	21
15S-08W, Section 17	T	0.68	54	18	18	18
15S-09W, Section 12	U	0.28	21	7	7	7
15S-09W, Section 12	V	0.36	22	7	8	7
15S-09W, Section 12	W	0.38	24	8	8	8
Total		**15.94**	**1303**	**434**	**435**	**434**

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Northwest Oregon District

Cefir Miles
EXHIBIT G

TIMBER SALE CONTRACT MAP - ORN02-TS-2023.0203

T. 15 S., R. 8 W., Sections 04, 07, 09, 16, 17 and T. 15 S., R. 9 W., Section 12 W.M.



Existing Road
Road to be Constructed
Road to be Renovated
Stream
Boundary Contract Area
Reserve Area
Partial Cut Area
Snag Creation Areas
Skip
Yarding in Reserve
Restricted Operation Area

Feet
0 1,000

Contour Interval: 40 ft

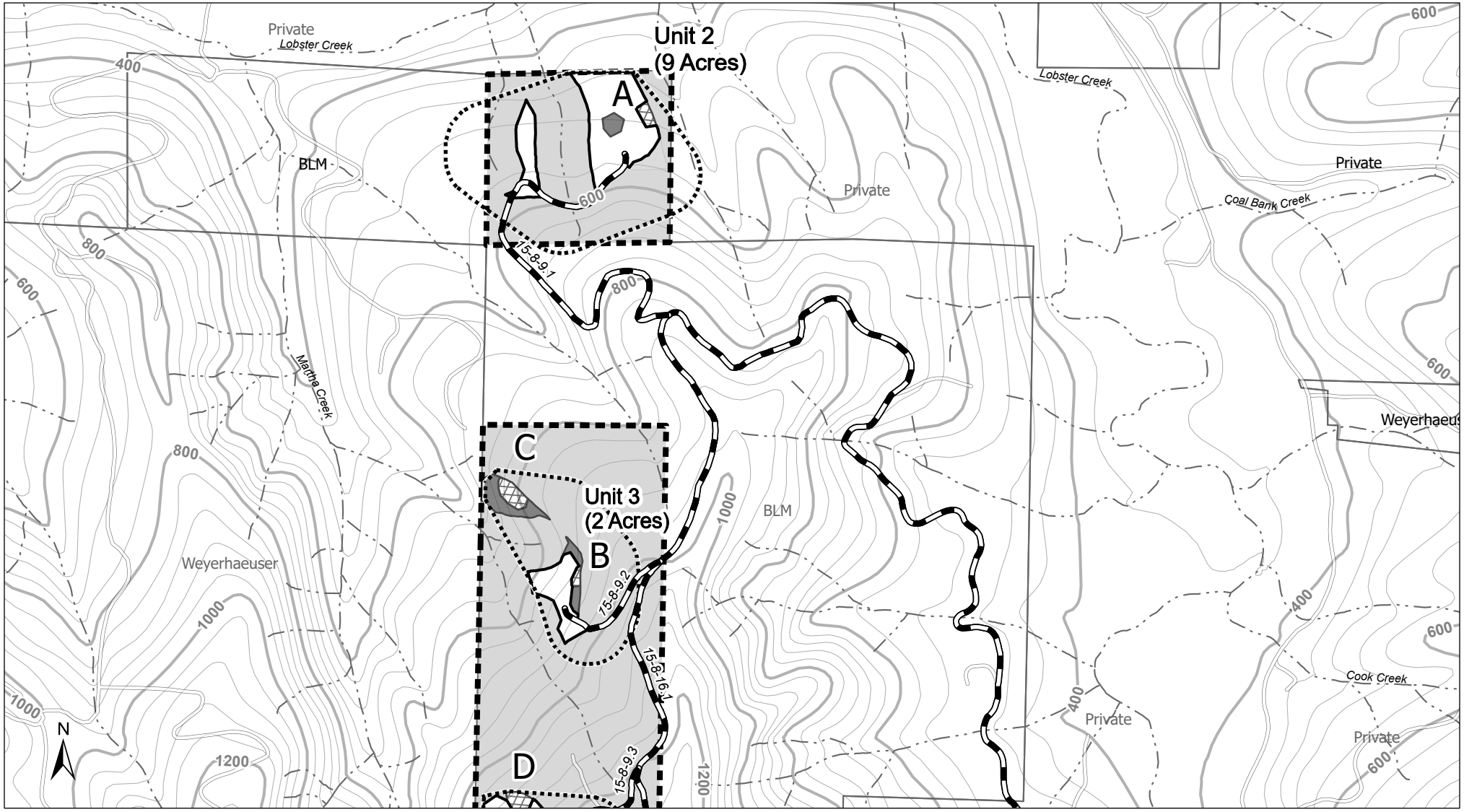
Snag Creation Area	15.94	Acres
Partial Cut Area	167.00	Acres

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Northwest Oregon District

Cefir Miles
EXHIBIT G

TIMBER SALE CONTRACT MAP - ORN02-TS-2023.0203

T. 15 S., R. 8 W., Sections 04, 07, 09, 16, 17 and T. 15 S., R. 9 W., Section 12 W.M.



Existing Road
Road to be Renovated
Stream
Boundary Contract Area
Reserve Area
Partial Cut Area
Snag Creation Areas
Skip
Restricted Operation Area

Contour Interval: 40 ft

Feet
0 1,000

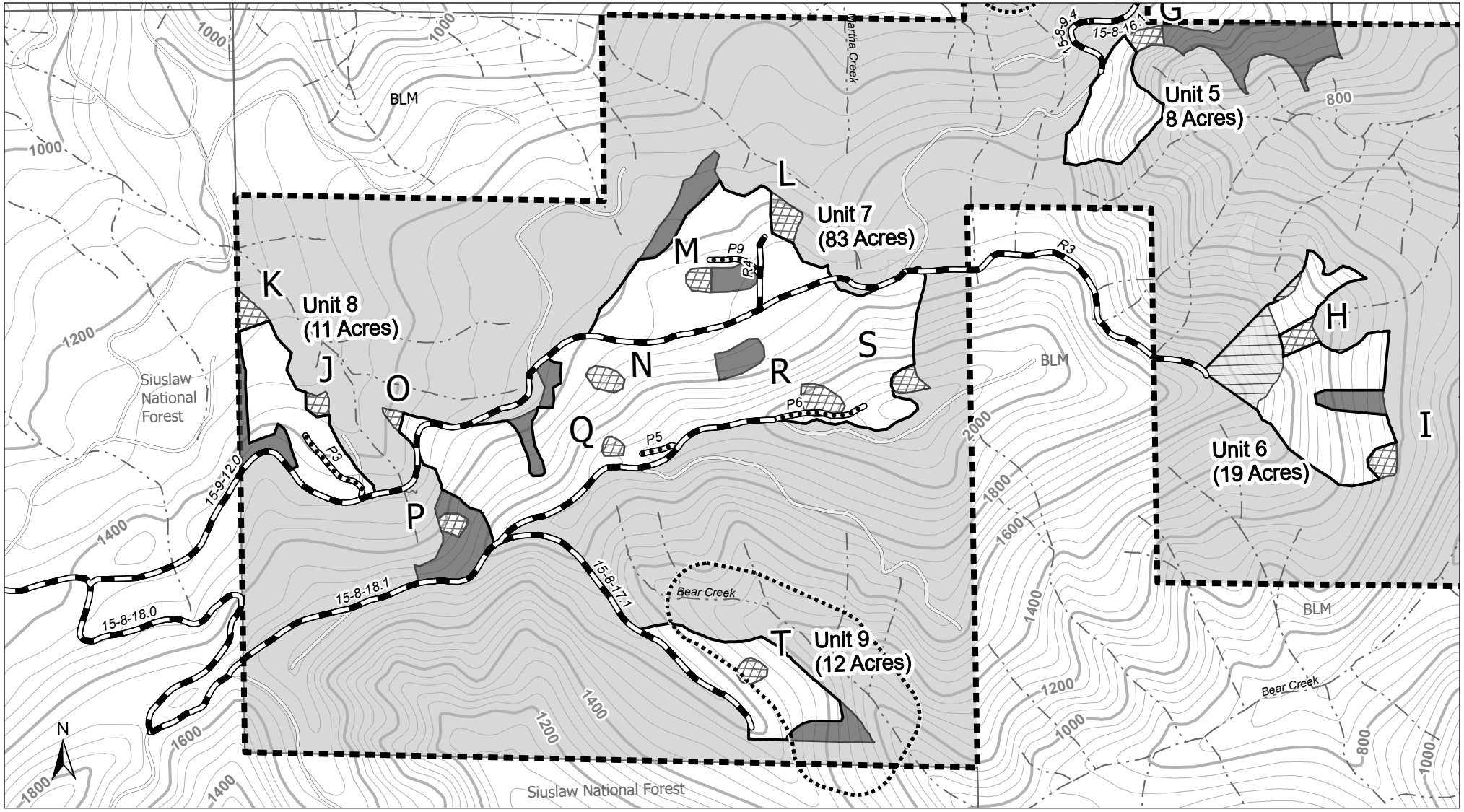
Snag Creation Area	15.94	Acres
Partial Cut Area	167.00	Acres

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Northwest Oregon District

Cefir Miles
EXHIBIT G

TIMBER SALE CONTRACT MAP - ORN02-TS-2023.0203

T. 15 S., R. 8 W., Sections 04, 07, 09, 16, 17 and T. 15 S., R. 9 W., Section 12 W.M.



Existing Road
Road to be Constructed
Road to be Renovated
Stream
Boundary Contract Area
Reserve Area
Partial Cut Area
Snag Creation Areas
Skip
Yarding in Reserve
Restricted Operation Area

Feet
0 1,000

Contour Interval: 40 ft

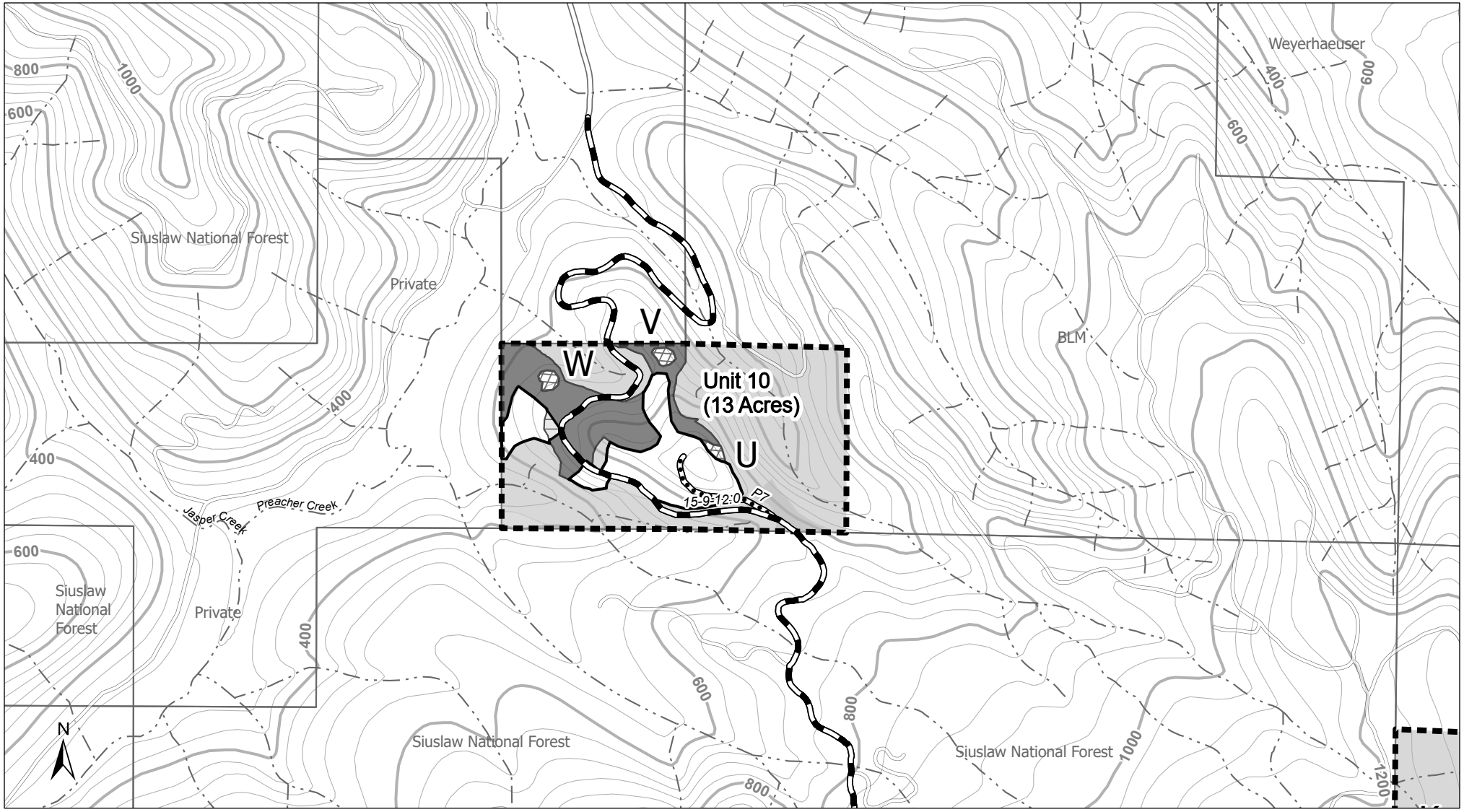
Snag Creation Area	15.94	Acres
Partial Cut Area	167.00	Acres

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Northwest Oregon District

Cefir Miles
EXHIBIT G

TIMBER SALE CONTRACT MAP - ORN02-TS-2023.0203

T. 15 S., R. 8 W., Sections 04, 07, 09, 16, 17 and T. 15 S., R. 9 W., Section 12 W.M.



Existing Road
Road to be Constructed
Road to be Renovated
Stream
Boundary Contract Area
Reserve Area
Partial Cut Area
Snag Creation Areas
Skip
Yarding in Reserve

Feet
0 1,000

Contour Interval: 40 ft

Snag Creation Area	15.94	Acres
Partial Cut Area	167.00	Acres

United States
Department of the Interior
Bureau of Land Management

Timber Appraisal

Sale Name:	Cefir Miles	**Sale Date:**	Wednesday, September 20, 2023
BLM District:	NW Oregon DO	**Unit of Measure:**	16' MBF
Contract #:	ORN02-TS-2023.0203	**Contract Term:**	36 months
Sale Type:	Advertised	**Contract Mechanism:**	5450-004 Scale Sale of Timber and other Wood Products

SBA Set-Aside

Content

Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
O&C	Lane	15S	8W	4	Lot 17	Willamette
O&C	Lane	15S	8W	7	Lot 4	Willamette
O&C	Lane	15S	8W	9	SW1/4 NW1/4, W1/2 SW1/4	Willamette
O&C	Lane	15S	8W	16	NE1/4, N1/2 NW1/4, SE1/4 NW1/4, NE1/4 SW1/4, NW1/4 NE1/4	Willamette
O&C	Lane	15S	8W	17	NE1/4, S1/2 NW1/4, SW1/4, SE1/4	Willamette
O&C	Lane	15S	9W	12	SE1/4 SE1/4,	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
Douglas Fir	2,396.0	2,540.0	2,540.0	55,780	0	13,371
Western Hemlock	188.0	196.0	196.0	3,779	0	1,181
Red Alder	36.0	38.0	38.0	1,231	0	644
Western Redcedar	4.0	5.0	5.0	53	0	18
Bigleaf Maple	3.0	3.0	3.0	110	0	50
Totals	**2,627.0**	**2,782.0**	**2,782.0**	**60,953**	**0**	**15,264**

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
0.0	167.0	5.0	172.0	15.3

Logging Costs

Stump to Truck	$477,194.52
Transportation	$267,072.00
Road Construction	$189,807.21
Maintenance/Rockwear	$2,872.44
Road Use	$0.00
Other Allowances	$141,096.57
Total:	**$1,078,042.74**
Total Logging Cost per MBF:	**$410.37**

Utilization Centers

Location	Distance	% of Net Volume
Eugene OR	65.0 miles	100%

Profit & Risk

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

Tract Features

Quadratic Mean DBH	13.6 in
Average GM Log	46 bf
Average Volume per Acre	15.3 mbf
Recovery	94%
Net MBF volume:	
Green	2,627.0 mbf
Salvage	0 mbf
Export	0 mbf
Ground Base Logging:	
Percent of Sale Volume	45%
Average Yarding Slope	25%
Average Yarding Distance	300 ft
Cable Logging:	
Percent of Sale Volume	55%
Average Yarding Slope	45%
Average Yarding Distance	500 ft
Aerial Logging:	
Percent of Sale Volume	0%
Average Yarding Slope	0%
Average Yarding Distance	0 ft

Cruise

Cruise Completed	March 2023
Cruised By	Brian Barclay

Cruise Method

Variable plot cruise using 20 BAF in units. 100% cruise RS and RW volume.

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Stumpage Adjustment	Appraised Price/MBF		Appraised Value ($)
Douglas Fir	13,371	2,396.0	$633.26	$82.32	$410.37	$0.00	($8.61)	$132.00		$316,272.00
Western Hemlock	1,181	188.0	$446.37	$58.03	$410.37	$0.00	$0.00	$44.70	*	$8,403.60
Red Alder	644	36.0	$263.35	$34.24	$410.37	$0.00	$0.00	$26.40	*	$950.40
Western Redcedar	18	4.0	$712.50	$92.63	$410.37	$0.00	($15.42)	$194.10		$776.40
Bigleaf Maple	50	3.0	$233.34	$30.33	$410.37	$0.00	$0.00	$23.40	*	$70.20
Totals	**15,264**	**2,627.0**								**$326,472.60**

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

Percent of Volume By Log Grade

Species	No. 1 & 2 Peeler	No. 3 Peeler	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Douglas Fir				40.0%	50.0%	10.0%	

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Western Hemlock				52.0%	38.0%	10.0%	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill		Camp Run
Red Alder							100.0%

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill			Camp Run
Western Redcedar							100.0%

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill		Camp Run
Bigleaf Maple							100.0%

Unit: 1

Net Volume/Acre: 14.4 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	68.0	72.0	72.0	380
Western Hemlock	4.0	4.0	4.0	28
Totals:	**72.0**	**76.0**	**76.0**	**408**

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

Unit: 2

Net Volume/Acre: 14.4 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	123.0	130.0	130.0	684
Western Hemlock	7.0	8.0	8.0	50
Totals:	**130.0**	**138.0**	**138.0**	**734**

Regeneration Harvest	0.0
Partial Cut	9.0
Right of Way	0.0
Total Acres:	**9.0**

Unit: 3

Net Volume/Acre: 14.5 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	27.0	29.0	29.0	152
Western Hemlock	2.0	2.0	2.0	11
Totals:	**29.0**	**31.0**	**31.0**	**163**

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

Unit: 4

Net Volume/Acre: 14.4 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	68.0	72.0	72.0	380
Western Hemlock	4.0	4.0	4.0	28
Totals:	**72.0**	**76.0**	**76.0**	**408**

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

Unit: 5

Net Volume/Acre: 14.4 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	109.0	115.0	115.0	608
Western Hemlock	6.0	7.0	7.0	45
Totals:	**115.0**	**122.0**	**122.0**	**653**

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

Unit: 6

Net Volume/Acre: 14.4 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	258.0	274.0	274.0	1,444
Western Hemlock	15.0	16.0	16.0	106
Totals:	**273.0**	**290.0**	**290.0**	**1,550**

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

Unit: 7

Net Volume/Acre: 14.4 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	1,128.0	1,197.0	1,197.0	6,308
Western Hemlock	67.0	69.0	69.0	461
Totals:	**1,195.0**	**1,266.0**	**1,266.0**	**6,769**

Regeneration Harvest	0.0
Partial Cut	83.0
Right of Way	0.0
Total Acres:	**83.0**

Unit: 8

Net Volume/Acre: 14.5 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	150.0	159.0	159.0	836
Western Hemlock	9.0	9.0	9.0	61
Totals:	**159.0**	**168.0**	**168.0**	**897**

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

Unit: 9

Net Volume/Acre: 14.4 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	163.0	173.0	173.0	912
Western Hemlock	10.0	10.0	10.0	67
Totals:	**173.0**	**183.0**	**183.0**	**979**

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

Unit: 10

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	177.0	188.0	188.0	988
Western Hemlock	10.0	11.0	11.0	72
Totals:	**187.0**	**199.0**	**199.0**	**1,060**

Net Volume/Acre: 14.4 MBF

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

Unit: RS

Species	Net	Gross Merch	Gross	# of Trees
Red Alder	28.0	29.0	29.0	533
Douglas Fir	19.0	20.0	20.0	168
Western Hemlock	6.0	7.0	7.0	81
Bigleaf Maple	3.0	3.0	3.0	50
Totals:	**56.0**	**59.0**	**59.0**	**832**

Net Volume/Acre: 56.0 MBF

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

Unit: RW1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	11.0	12.0	12.0	96
Western Redcedar	4.0	5.0	5.0	18
Western Hemlock	1.0	1.0	1.0	2
Totals:	**16.0**	**18.0**	**18.0**	**116**

Net Volume/Acre: 32.0 MBF

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	0.5
Total Acres:	**0.5**

Unit: RW6

Species	Net	Gross Merch	Gross	# of Trees
Red Alder	7.0	8.0	8.0	89
Douglas Fir	5.0	5.0	5.0	23
Western Hemlock	3.0	3.0	3.0	19
Totals:	**15.0**	**16.0**	**16.0**	**131**

Net Volume/Acre: 10.0 MBF

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.5
Total Acres:	**1.5**

Unit: RW7

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	38.0	40.0	40.0	142
Western Hemlock	20.0	20.0	20.0	72
Totals:	**58.0**	**60.0**	**60.0**	**214**

Net Volume/Acre: 58.0 MBF

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

Unit: RW8

Species	Net	Gross Merch	Gross	# of Trees
Western Hemlock	24.0	25.0	25.0	78
Douglas Fir	10.0	10.0	10.0	48
Red Alder	1.0	1.0	1.0	22
Totals:	**35.0**	**36.0**	**36.0**	**148**

Net Volume/Acre: 70.0 MBF

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	0.5
Total Acres:	**0.5**

Unit: RW10

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	42.0	44.0	44.0	202
Totals:	**42.0**	**44.0**	**44.0**	**202**

Net Volume/Acre: 84.0 MBF

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	0.5
Total Acres:	**0.5**

Total Stump To Truck	Net Volume	$/MBF
$477,194.52	2,627.0	$181.65

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

Yarding System	Unit of Measure	# of Units of Measure	$/Unit of Measure	Total Cost	Remarks
Cable: Medium Yarder	GM MBF	1,530.0	$187.44	$286,783.20	4.8 MBF per load at 7 loads per day
Feller Buncher	GM MBF	1,252.0	$146.91	$183,931.32	4.8 MBF per load at 9 loads per day
Subtotal				**$470,714.52**	

Additional Costs

Item	Unit of Measure	# of Units of Measure	$/Unit of Measure	Total Cost	Remarks
Fish log loader time	Hour	8.0	$120.00	$960.00	
Cutting fish logs	Each	184.0	$30.00	$5,520.00	
Subtotal				**$6,480.00**	

Additional Moves

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

Total	Net Volume	$/MBF
$267,072.00	2,627.0	$101.66

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	$/Unit of Measure	Total Cost	% of Sale Volume
Eugene OR	65.0	Saw logs	GM MBF	2,782.0	$96.00	$267,072.00	100%

Engineering Allowances

Total	Net Volume	$/MBF
$192,679.65	2,627.0	$73.35

Cost Item	Total Cost
Road Construction:	$189,807.21
Road Maintenance/Rockwear:	$2,872.44
Road Use Fees:	$0.00

Total	Net Volume	$/MBF
$141,096.57	2,627.0	$53.71

Environmental Protection

Cost item	Total Cost
Grass Seed	$300.00
Grass seed spreading	$336.00
Snag Creation Basal Girdle	$15,372.00
Water bars / Berms	$650.00
Snag creation High Girdle	$39,456.00
Snag Creation Saw Topping	$41,100.00
Equipment washing	$400.00
Snag creation management cost	$9,593.00
Subtotal	**$107,207.00**

Fire Prevention & Control

Cost item	Total Cost
Landing pile and cover	$1,500.00
Machine pile burn	$1,750.00
Landing pile burn	$1,500.00
Lop and scatter	$5,000.00
Machine pile and cover	$5,600.00
Subtotal	**$15,350.00**

Miscellaneous

Cost item	Total Cost
Fish log haul	$760.00
Subtotal	**$760.00**

Road Construction, Maintenance, Use, & Decommissioning

Cost item	Total Cost
Decommissioning	$5,554.06
Purch. Maint.	$12,225.51
Subtotal	**$17,779.57**