NOTICE OF TIMBER SALE

Recovery Timber Sale

NAME/NO.: Cronin Too — TL-341-2026-W01152-01

AUCTION DATE/TIME: May 19, 2026, starting at 2:00 PM

AUCTION LOCATION:
Astoria
92219 HWY 202
ASTORIA OR 97103
(503) 325-5451 FAX: (503) 325-2756

DISTRICT/ OFFICE (MAILING ADDRESS FOR BIDS):
Astoria
92219 HWY 202
ASTORIA, OR 97103
(503) 325-5451 FAX: (503) 325-2756

HARVEST TYPE:

Unit 1 - 88 Acre clearcut, 70 years old, removing approximately 24 MBF/Acre of Douglas-fir, western hemlock, red alder, and bigleaf maple.

Unit 2 - 73 Acre clearcut, 70 years old, removing approximately 24 MBF/Acre of Douglas-fir, western hemlock, red alder, and bigleaf maple.

Unit 3 - 88 Acre clearcut, 84 years old, removing approximately 26 MBF/Acre of Douglas-fir, western hemlock, red alder, and bigleaf maple. Portions of this unit have been previously thinned.

LOCATION: Portions of Section(s) 29, 31, 32, 33 of T4N R7W W.M., Clatsop County, Oregon.

DIRECTIONS TO TIMBER SALE AREA:

From Henry Rierson Spruce Run Campground, Travel east on Spruce Run Road through the ODF/Weyerhaeuser gate for approximately 2 miles and turn right on Four Seven Ridge Road, travel for approximately 2 miles to Unit 1.

From Quartz Creek Road, Travel approximately 6 miles and turn left onto Spruce Run Road. Travel approximately 0.5 miles and turn right onto the unnamed spur road. Travel approximately 1.5 miles to Unit 2.

From Quartz Creek Road, Travel approximately 6 miles and turn left onto Spruce Run Road. Travel approximately 1 mile and turn right onto 108 Road. Travel approximately 2 miles and turn right onto North Fork Cronin Creek Road. Travel approximately 1.5 miles to Unit 3.

APPRAISED VOLUMES AND QUALITY:

Conifer/Hwd	Species Group	Species	Product	AVG DBH	Grade	Volume	UOM	Diam. From	Diam. To	Length From	Length To
Conifers	Douglas-fir	Douglas-fir	Sawlog	19"	2 M	2578	MBF				
Conifers	Douglas-fir	Douglas-fir	Sawlog		3 M	1043	MBF				
Conifers	Douglas-fir	Douglas-fir	Sawlog		4 M	212	MBF				
Conifers	Western hemlock	Western hemlock	Sawlog	14"	2 M	310	MBF				
Conifers	Western hemlock	Western hemlock	Sawlog		3 M	263	MBF				
Conifers	Western hemlock	Western hemlock	Sawlog		4 M	91	MBF				
Hardwood	Red alder	Red alder	Sawlog	15"		386	MBF	12"			
Hardwood	Red alder	Red alder	Sawlog			429	MBF	10"	11"		
Hardwood	Red alder	Red alder	Sawlog			269	MBF	8"	9"		
Hardwood	Red alder	Red alder	Sawlog			398	MBF	6"	7"		
Hardwood	Bigleaf maple	Bigleaf maple	Sawlog	16"	CR	113	MBF				
Sale Total:						6,092	MBF				

MINIMUM BID:

	Species Category	Species Group	Species	Product	Grade	Volume	Diameter From	Diameter To	Length From	Length To	Price	UOM
Bid	Conifers	Douglas-fir	Douglas-fir			3833					$300.00	MBF
Bid	Hardwood	Red alder	Red alder			1482					$165.45	MBF
No-Bid	Conifers					664					$185.75	MBF
No-Bid	Conifers			Pulp		0					$1.00	TON
No-Bid	Conifers			Utility	SC	0					$150.00	MBF
No-Bid	Conifers			Utility	PC	0					$150.00	MBF
No-Bid	Conifers					0	0"	5"		23'	$100.00	MBF
No-Bid	Conifers	Cedar				0					$913.36	MBF
No-Bid	Conifers	Spruce				0					$138.36	MBF
No-Bid	Hardwood					113					$1.96	MBF
No-Bid	Hardwood			Pulp		0					$1.00	TON

All Utility logs are set at price above, which means material will be charged at the highest rate for that species.

In order to compensate PURCHASER for Project Work, ODF will credit PURCHASER's timber account in the amount of $626,382.00 after the project work is completed and accepted, as described in Section 2630, "Credit for Project Work."

The Timber Sale Areas contain negligible volumes of other logs to be paid for at the prices in Section 1740.

PERFORMANCE SECURITY: 20% of bid value (unknown) or the total value of the project work $626,382.00 whichever is greater, not to exceed $500,000. Actual bond amount will be rounded up to an even $1,000 unit.

EXPIRATION DATE: 10/31/2030

BID METHOD: Sealed Bids

BID DEPOSIT: $89,100.00

SALE TYPE: Recovery / BOF: 100.00% CSL: 0.00%

10% of the net appraised value, not to exceed $500,000. Bond amount will be rounded down to an even $100 unit.

INSURANCE: $2,000,000 Commercial General Liability; $2,000,000 Automobile Liability; $2,000,000 Logger's Broad Form.

HARVEST METHOD:
Unit 1: 100% Cable, 0% Ground-based
Unit 2: 100% Cable, 0% Ground-based
Unit 3: 93% Cable, 7% Ground-based

PROJECTS:
1a - Sale Access Road Construction - Surfaced
1b - Sale Access Road Construction - Unsrufaced
2 - Sale Access Road Improvement, Surface Rock Replacement, and Road Maintenance.
3 - Quarry Development and Rock Crushing
4 - Clearing Debris piling and burning

FEES:
$14,144.78 to Weyerhaeuser Company
$2,176.08 to Stimson Lumber Company

ENDANGERED SPECIES ACT COMPLIANCE STATEMENT: Purchasers are required to comply with all federal and state laws, including but not limited to the federal and State Endangered Species Act.

The Oregon Department of Forestry (ODF) is engaged in an active threatened and endangered (T&E) species survey program. ODF surveys its lands on a continuing basis for land management, species protection, research, and other reasons. Surveying efforts may take place in the Timber Sale Area anytime during the term of the Contract. Purchaser acknowledges that T&E survey work or the discovery of a threatened or endangered species within or in the vicinity of a timber sale may affect PURCHASER's Operations under the Contract, and PURCHASER agrees to cooperate with STATE's survey work and other activities designed to identify and protect T&E species. In the event any T&E species is found within or in the vicinity of the Area(s) of Operations, or the State otherwise deems it necessary or expedient to take action in response to any pending or threatened legal action concerning State forest land or any T&E species, PURCHASER agrees that STATE may take steps to protect the interests of the State, including imposing restrictions on PURCHASER's Operations under the Contract to prevent disturbance to T&E species, including Contract modification, suspension, or termination.

PURCHASER also acknowledges that at some point during the Contract term, the STATE may also become subject to terms and conditions of Incidental Take Permits issued by the federal government covering State forest lands. PURCHASER agrees that any Operations that occur following issuance of an Incidental Take Permit, if any, must be carried out consistent with such terms and conditions that include required minimization and mitigation measures proposed in the applicable Habitat Conservation Plan, and PURCHASER further agrees that STATE may take steps to protect the interest of the State, including imposing restrictions on PURCHASER's Operations under the Contract to ensure such compliance, including Contract modification, suspension, or termination.

Prospective purchasers are encouraged to contact the Tillamook ODF District at (503) 842-2545 for further information or questions relative to threatened or endangered species surveys, future planned survey information, or other threatened or endangered species information.

SPECIAL REMARKS:

NO PERSONAL OR COMPANY CHECKS ACCEPTED FOR THE BID DEPOSIT. SEASONAL RESTRICTIONS APPLY - SECTION 2455.

A gate key is required to access the Timber Sale Area and is available at the Astoria District Office.

Per Access/Permit/Agreement (#314.041138) PURCHASER shall enter into a road use agreement which requires a payment by Purchaser to Weyerhaeuser of $14,144.78. (Section 2120. Access)

Per Access/Permit/Agreement (#314.041139) PURCHASER shall enter into a road use agreement which requires a payment by PURCHASER to Stimson Lumber Company of $2,176.08 (Section 2120. Access)

Log hauling out Spruce Run Road to Lower Nehalem County Road shall not be allowed between May 15 and September 15. (Section 2455. Seasonal Restrictions)

During Fire Season, PURCHASER shall provide an engine with at least a 1000-gallon capacity, enough feet of fire hose to reach from the water supply to any location in the operation affected by power driven machinery or 1000 feet, whichever is greater, one gated wye valve, and two adjustable nozzles in constant readiness in the Timber Sale Area. The engine must be self-filling and be able to travel fully loaded, under its own power, on all truck roads providing access to or within the Timber Sale Area. (Section 2540. Fire Equipment)

Hauling will not be allowed when the total rainfall exceeds 1 1/2" in a 24 hour period or 2" in a 48 hour period at a specified rain gauge identified in the Operations Plan or as otherwise specified by STATE. (Section 2130. Road Maintenance).

There is a midpoint payment for this sale of 50% (Section 1751).

All pulp that is yarded to the landing shall be hauled. (Section 2045).

All felling on Unit 1 shall be completed by April 1, 2030 (Section 2455).

The information shown on the Exhibit A map(s) are approximate locations. Exact locations of features represented by map symbols shall be determined on site and shall depend upon the conditions that exist on site. Activities shall be conducted based upon features determined on site rather than features shown on maps.

See inside front cover of Timber Sale Schedule handbook for disclaimer regarding all government regulatory actions.

Form 341-210.1(C)

Rev.05/06

TIMBER SALE NAME: **Cronin Too**

TIMBER SALE NO.: **TL-341-2026-W01152-01**

OPENING DATE: **May 19, 2026**

FORM OF PROPOSAL

The undersigned agrees to accept and perform all of the above terms and conditions as stated in the form of contract for the above-cited timber sale, and bids, and will pay:

BID SPECIES

Douglas-fir, sawmill grade or better, _____

_____ DOLLARS $ _____ per MBF

Red alder, sawmill grade or better, _____

_____ DOLLARS $ _____ per MBF

NO - BID SPECIES:

No-Bid	Conifers					664					$185.75	MBF
No-Bid	Conifers			Pulp		0					$1.00	TON
No-Bid	Conifers			Utility	SC	0					$150.00	MBF
No-Bid	Conifers			Utility	PC	0					$150.00	MBF
No-Bid	Conifers					0	0"	5"		23'	$100.00	MBF
No-Bid	Conifers	Cedar				0					$913.36	MBF
No-Bid	Conifers	Spruce				0					$138.36	MBF
No-Bid	Hardwood					113					$1.96	MBF
No-Bid	Hardwood			Pulp		0					$1.00	TON

Enclosed is a bid deposit as required, consisting of a _____ in the amount of $89,100.00, payable to the Oregon Department of Forestry.

The undersigned agrees to execute and deliver the contract, initial payment, required certificates of insurance, and performance bond, within thirty (30) days of the date of the written notice of intent to award; and that any cash bid deposit may be applied to the first required timber sale payment.

The undersigned understands that the bid is irrevocable and further agrees that if they fail to qualify under the terms of the contract within the thirty-day period, the bid deposit shall become the property of the Oregon Department of Forestry. **If the undersigned fails to qualify within the thirty-day period, STATE may disqualify the undersigned from submitting another bid on this timber sale.**

BIDDER _____

(Name of Individual or Company and Authorized Official)

EMPLOYER IDENTIFICATION NUMBER (EIN) _____

ADDRESS _____

PHONE _____

BY _____

(Signature of Authorized Official & Title) COMPLETE

PURCHASER'S STATUS ON NEXT PAGE

PURCHASER'S STATUS

Purchaser is a corporation Check ( ) Incorporated in the State of

President's Name _____ _____

Secretary's Name _____

Purchaser is: ( ) a partnership ( ) an assumed (business) name ( ) company
( ) an individual

List names of all persons doing business under the partnership or assumed name:

_____ _____

_____ _____

_____ _____

If assumed name is subsidiary to a corporation, fill in data requested of corporation also and write in corporation name here:

_____

CERTIFICATION OF ELIGIBILITY TO BID ON STATE TIMBER

_____ hereby certifies that they:

EXPORT

(a) Will not directly or indirectly export the unprocessed State timber as defined in OAR 629-031-0020 which is the subject of this transaction.

(b) Shall not engage in export of unprocessed timber originating from private lands in Oregon until such time as all interests in contracts for State timber held by the above have terminated, per OAR 629-031-0010(1)(d).

(c) Will not sell, transfer, exchange, or otherwise convey the unprocessed timber as defined above which is the subject of this transaction to any other person that is not a STATE's approved location.

(d) Are not prohibited by OAR's 629-031-0005 through 0045 from bidding for unprocessed State timber as defined above directly from the State Forester.

(e) Understand that falsely entering into this certification is a violation of the Forest Resources Conservation Amendments Act of 1993 and OAR Chapter 629, Division 31, and is subject to any and all penalties contained therein.

(f) Have not directly or indirectly exported unprocessed timber originating from private lands in Oregon in the last 24 months, **or if bidding only on STATE hardwood timber or logs, HAVE** exported unprocessed timber originating from private lands in Oregon in the last 24 months, but **HAVE NOT** exported unprocessed **hardwood** timber originating from private lands in Oregon in the last 24 months and meet the requirements of OAR 629-031-0010(2).

DEFAULT, TERMINATION, OTHER RELATED MATTERS

(a) Are not currently in default status under any timber sale contract sold by the State Forester.

(b) Has not, within a 3-year period preceding this bid, had one or more Federal, State, or local timber sales terminated for cause or default.

(c) If (b) above is Yes, has submitted an explanation, in writing, with this bid for consideration by STATE. Any such explanation shall be submitted at the time of bid on a separate piece of paper.

_____

Signed

_____

Title

_____

Dated

[NOTE: For the purpose of this form, the definition of unprocessed timber is the same as in OAR 629-031-0005.]

Oregon
Tina Kotek, Governor

Department of Forestry
State Forester's Office
2600 State St
Salem, OR 97310-0340
503-945-7200
www.oregon.gov/ODF

"STEWARDSHIP IN FORESTRY"

Biological Survey Report

Project: Cronin Too

Date: November 6, 2025

To: Nick Stumpf

CC: Kate Skinner, District Sale File

From: Digitally signed by Matt Gostin
Date: 2025.11.06 09:41:44 -08'00'

Habitat Suitability

This sale contains potentially suitable habitat for northern spotted owls in all sale Units. This sale contains potentially suitable habitat for marbled murrelets in and adjacent to Unit 1.

Survey Results

This sale was covered by northern spotted owl density surveys in 2024 and 2025[1],[2],[3]. Northern spotted owls were not observed during these years of surveys. Density surveys may be ongoing during the life of the sale contract.

Unit 1 was surveyed for marbled murrelets in 2023/2024 and 2024/2025. These surveys were conducted using a protocol developed by the Pacific Seabird Group[4]. Marbled murrelets were not detected during these surveys.

[1] Oregon Department of Forestry, November 1, 2017. 1.2, Northern Spotted Owl Policy

[2] USDI Fish and Wildlife Service. 2012. Protocol for surveying proposed management activities that may impact northern spotted owls. 42pp.

[3] Forsman, E. D. 1995. Spotted Owl Monitoring Protocols for Demographic Studies. U.S. Department of Agriculture. Pacific Northwest Research Station. Corvallis, OR. 11 pp

[4] Evans Mack, D., W. P. Ritchie, S. K. Nelson, E. Kuo-Harrison, P. Harrison, T. E. Hamer, eds. 2003. Methods for surveying marbled murrelets in forests: a revised protocol for land management and research. Unpublished report for the Pacific Seabird Group Marbled Murrelet Technical Committee. 76 pp.

Known T&E Resources

There are no northern spotted owl activity centers or Marbled Murrelet Management Areas (MMMA) affecting this sale.

Operational Considerations

Due to the presence of barred owls, felling restrictions for spotted owl spot check surveys are not required for this sale at this time.

Northern spotted owl survey results will not expire unless density surveys are discontinued. If density surveys are discontinued at any point during the contract, survey coverage will be valid until March 1, three years following the last full season of surveys.

Marbled Murrelet survey results are valid until April 1, 2030, for Unit 1.

All timber should be felled by April 1, 2030, for Unit 1.

Future Survey Plans

This sale may be covered by northern spotted owl density surveys during the life of the contract. These density surveys provide incidental survey coverage in lieu of spot checks. If density surveys are not conducted, then spot checks may be required. In addition, ODF has an active survey program and surveys for other planned operations and northern spotted owl density surveys may be conducted within 3 miles of this sale during the life of the contract.

Cronin Too **Timber Sale Contract No. TL-341-2026-W01152-01**

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STATE OF OREGON

DEPARTMENT OF FORESTRY

County	BOF	CSL	Tax Codes
Clatsop	100.00%	0.00%	8-01

Oregon Department of Forestry
State Forests Division
2600 State Street, Building D
Salem, Oregon 97310

TIMBER SALE CONTRACT

SALE NAME: Cronin Too

CONTRACT NO: TL-341-2026-W01152-01

ODF DISTRICT: Astoria

SECTION 1000. **Signatures of Contract Parties**. This Contract (the "Contract") is by and between the STATE OF OREGON, acting by and through the State Forester on behalf of the DEPARTMENT OF FORESTRY ("STATE") and NEW PURCHASER ("PURCHASER"). The Contract shall be effective as of the latest date signed below. The parties do hereby agree as follows:

(a) Signature of STATE means he/she is a duly Authorized Representative of the STATE and is authorized by STATE to make all representations, attestations, and certifications contained in this Contract and all addenda, if any, issued, and to execute this Contract document on behalf of STATE;

(b) Signature of PURCHASER means he/she is a duly Authorized Representative of the PURCHASER, has been authorized by PURCHASER to make all representations, attestations, and certifications contained in this bid/proposal document and all addenda, if any, issued, and to execute this bid/proposal document on behalf of PURCHASER;

(c) PURCHASER, acting through its Authorized Representative, has read, understands, and agrees to all Contract instructions, specifications, and terms and conditions contained in this Contract document (including all listed attachments and addenda, if any, issued);

(d) PURCHASER is bound by and shall comply with all requirements, specifications, and terms and conditions contained in this Contract document (including all listed attachments and addenda, if any, issued);

(e) PURCHASER shall furnish the designated item(s) and/or service(s) in accordance with the bid/proposal specifications and requirements, and shall comply in all respects with the terms of the resulting agreement upon award.

IN WITNESS WHEREOF, the State of Oregon hereby awards the Contract to the above Purchaser for the item(s) and/or service(s) contained in the Contract, including all terms, conditions, and specifications. The Parties have affixed their signatures as of the latest date indicated below.

STATE:
State of Oregon, acting by and through
DEPARTMENT OF FORESTRY

_____
Chief, State Forests Division

Date: _____

PURCHASER:
NEW PURCHASER (SEAL)

By:_____
(Signature of Purchaser Authorized Representative)

Printed Name: _____

As its: _____

Date: _____

PART I: SALE OF TIMBER

GENERAL

SECTION 1010. **Definitions of Terms**.
Anchor Stump - a stump used to tie off or wrap a cable or line to firmly secure it.

Archaeological or Historical Resource - those sites, buildings, structures, and artifacts, which possess material evidence of human life and culture of prehistoric and historic past.

Areas of Operations - the locations where PURCHASER performs the Operations described in the Contract. Each Area of Operation usually has specific operating requirements.

At Price Above - material will be charged at the highest rate for that species.

Authorized Representative - a representative of the PURCHASER authorized to receive any notice or instructions from STATE on behalf of PURCHASER and to take any action required in regard to performance of PURCHASER under this Contract.

Basal Area - a measure of the cross-sectional area of a Tree Bole, in square feet, measured 4-1/2 feet above the ground on the uphill side of the tree.

Bidder - is a person, business, corporation, or other entity recognized by the STATE that submits a bid to enter into a contract with the STATE to purchase forest products, and that certifies that the timber will be harvested.

Bunk - a bed for logs with a pair of stakes at each end.

Contract - the entire written agreement between the parties, including but not limited to the Notice of Timber Sale, Invitation to Bid or Request for Proposal, Instructions to Bidders, specifications, terms, and conditions, Exhibits, Operations Plan, change notices, if any, and the accepted bid.

Cultural Resource - an Archaeological or Historical Resource. They may include objects, structures, or sites used by people in the past.

DBH (Diameter at Breast Height) - the diameter of a standing tree inclusive of the bark measured 4-1/2 feet above the ground on the uphill side of the tree.

Down Timber - timber that is down as of the date of this Contract, as determined by STATE.

Down Wood - trees and logs on the ground.

Equipment Restriction Zone - designated areas adjacent to a stream with special management or operational requirements. Equipment Restriction Zones are 35 horizontal feet on either side of both perennial and seasonal streams.

Fire Season - when the State Forester has declared that conditions of fire hazard exist in a forest protection district or any part thereof. The State Forester designates for each district or any part thereof the date of the beginning of a Fire Season for that year. The Fire Season continues for each district or part thereof until ended by order of the State Forester when conditions of fire hazard no longer exist in that district or part thereof.

Fixed Price Product - any specific specie(s) or product(s) that is not the primary material being sold in a timber sale, and is sold at a fixed (lump sum) price. A Fixed Price Product is billed to the PURCHASER based on percentage of harvest completed, as determined by STATE.

Green Tree Retention - the practice of leaving live, growing trees on a site during timber harvest as a future source of Snags, old growth trees, large diameter wood, and native seed.

Group Selection Area (GSA) - an area within the Timber Sale Area that has a unique prescription as described in this Contract. Group Selection Areas are less than five acres in most circumstances and are usually marked on the ground with boundary signs. Prescription trees are marked with paint within the Group Selection Area.

Guy Stump - a stump used to tie off or wrap a cable or line to firmly secure it.

Guyline - a cable or rope attached to something to brace, steady, or guide it.

Hazardous Substances - any substance or material that is hazardous or toxic to health or otherwise regulated or controlled under any applicable federal, state or local statute, regulation, ordinance or law.

Improvements - a permanent addition or change to real property, such as a road, structure, or utility, which increases the value of the property.

Landing - a collecting point for logs; the place to which logs are yarded for loading and transportation from the woods.

Live Crown Ratio - the length of a Tree Bole supporting the growth of live branches compared to total tree height, expressed as a percentage.

"Live" Stream - a stream with water flowing through it.

Log Load Receipt Book - a book issued by the STATE used for log load accountability. In each book there are sequentially numbered multipart pages (tickets). Each page is a four-part form. Each of the four parts, on each page, has the same identifying number. The four parts are:

Woods Receipt
Turned in to the ODF District Office that the timber sale is in.

Trucker Receipt
Retained by the log truck driver.

Load Receipt
Stapled to the log load on the truck before the truck leaves the Timber Sale Area Landing. Stays with the log load until the load is dispersed and processed at the mill.

Scaler Receipt
Stapled to the log load on the truck before the truck leaves the Timber Sale Area Landing. When the load is scaled (measured) the Scaler Receipt is transferred to the Scaling Bureau printout of the log breakdown of the load. This log breakdown (which shows number of logs, species of logs, grades of logs, and board foot volume), along with the Scaler Receipt is sent to ODF headquarters in Salem.

Low Relative Density - an area of heavy thinning where the Relative Density of the residual stand is less than 15.

Major Catastrophes - windstorms, floods, fire, landslides, or other acts of God, which are beyond the control of PURCHASER and in no way connected with negligent acts or omissions of PURCHASER, its officers, employees, agents, or subcontractors.

MBF - thousand board feet.

Operations - all the activities conducted by PURCHASER under this Contract, including Project Work, logging, or post-harvest activities; or the furnishing of all materials, equipment, labor, and incidentals necessary to successfully complete any individual item or the entire Contract.

Operations Plan - the document by which PURCHASER notifies STATE of the plans and schedule for completing the Operations described in the Contract. It also contains the names of the subcontractors, PURCHASER's Authorized Representatives, and STATE's Authorized Representatives.

Patchcut - a small clearcut area; 0.5 to 2 acres in size.

Permit - any Permit required by a federal, STATE, or local government agency before Operations under this Contract may lawfully begin or continue. Permit includes an incidental take Permit under the federal Endangered Species Act.

Pre-Operations Meeting - the initial meeting between the Authorized Representatives of PURCHASER and STATE to discuss operational issues and requirements of the Contract, and to identify the elements to be addressed in the Operations Plan.

Project Location - the points or areas designated as such on Exhibit A and located on the ground by reference to points, stations, natural land features, Improvements, or area boundary signs. The location(s) where project activities occur.

Project Work - work required of the PURCHASER in addition to normal log removal and hauling activities. The PURCHASER is usually compensated for Project Work with Project Work Credits. Project Work can include, but is not limited to, road building, road improvement, rock quarry development, stream enhancement, site preparation, soil stabilization, and water runoff control measures.

Protected Genetic Parent Tree - a seed tree selected for its desirable characteristics that is designated not to be cut or harmed.

Pulp - any log (tops only) that does not meet the minimum requirements for removal in Section 2040 or 2045, Log Removal.

Purchase Price - for each species sold on a recovery basis, "Purchase Price" is defined as the price per MBF listed in Section 1740, "Log Prices." If species is not listed in Section 1740, "Log Prices," the highest price listed in Section 1740, "Log Prices," shall apply. For bid species sold on a lump sum basis, the Purchase Price for each species shall be determined by using STATE's unamortized timber appraisal value, multiplied by the bid-up factor. Bid-up factor shall be calculated by STATE using the following calculation: Bid value all species/appraised value all species = bid-up factor. For no-bid species sold on a lump sum basis, the Purchase Price for each species shall be determined by using STATE's unamortized timber appraisal value.

PURCHASER's Authorized Representatives - the representatives authorized by PURCHASER to receive any notice or instructions from STATE on behalf of PURCHASER and to take any action required in regard to performance of PURCHASER under the Contract. PURCHASER's Authorized Representatives are identified in the Operations Plan.

PURCHASER's Deposit Account - an account where PURCHASER timber sale payments are deposited. This is an account set up by the State of Oregon to accept regular and advance timber sale payments from the PURCHASER. Advance payments are defined in the Payment Schedule section of the Contract.

Relative Density - a measure of the degree of closeness of trees growing side by side in a stand, in relationship with their size. The measure is expressed as a ratio of actual stand density to the maximum stand density attainable in a stand with the same mean tree volume. Relative Density is calculated by dividing the residual Basal Area by the square root of the average residual stand DBH.

Residual Tree - green tree left standing on an Area of Operation or Timber Sale Unit.

Right-of-Way Timber - trees harvested from a strip of land to enable a road to be constructed.

Setting - the area of a logging operation from which logs are yarded to a single Landing.

Slash - all woody Slash resulting from logging Operations, construction of roads, or other Improvements.

Snag - a standing dead tree, or portion of a tree, from which most of the foliage and limbs have fallen.

Stand Density Index - a measure of the degree of closeness of trees growing side by side in a stand, in relationship with their size. Stand Density Index (SDI) is calculated by dividing the average stand diameter by 10 taken to the 1.605 power, multiplied by the average trees per acre (TPA), and divided by the maximum SDI of that species. SDI = TPA x (Diameter/10)1.605

STATE - the Oregon Department of Forestry, State Forester, or a duly Authorized Representative of the State Forester.

Stream Buffer - designated areas adjacent to a stream where timber is left uncut, or there are other special management or operational requirements. Stream Buffer may be marked in the field.

SUB - Submerchantable materials. SUB, as used by STATE, references that material containing at least 10 board feet (net) but less than the lower merchantable net volume limit or grade requirements for other merchantable material, as defined in Section 2045, "Log Removal."

Subcontract - assign responsibility for work required under the Contract to a party other than the PURCHASER.

SUM - lump sum material.

Tailblock - a pulley that is attached to an Anchor Stump, Guy Stump, Tailhold Stump, tree, or other sturdy object, through which a cable is passed and used to return the mainline and chokers to the cutting area from the Landing.

Tailhold - a stump, tree, or other sturdy object to which a Tailblock, cable, or line is attached.

Tailhold Stump - a stump used to tie off or wrap a cable or line to firmly secure it.

Timber Harvesting Operations - activities conducted by the PURCHASER on a timber sale to remove logs from the woods. These activities can include, but are not limited to, felling, bucking, Yarding, loading, and hauling.

Timber Sale Area - the area or areas designated as such on Exhibit A and located on the ground by reference to legal subdivisions, monuments, natural land features, Improvements, or sale boundary signs. It is the entire area encompassing the material that is required to be harvested.

Timber Sale Unit - a sub-area within an Area of Operation. A Timber Sale Unit usually has more operational requirements, in addition to the operational requirements of the Area of Operation.

Total Purchase Price - For sales with species sold on a recovery basis or a combination recovery basis and lump sum, Total Purchase Price is the sum of each recovery basis species' volume multiplied by the price per MBF listed in Section 1740, "Log Prices," and each lump sum basis species' lump sum price. For sales with all species sold on a lump sum basis, Total Purchase Price is the total bid price.

TPSO (Third-Party Scaling Organization) - a scaling organization not affiliated with either the PURCHASER or STATE.

Tree Bole - the trunk of a tree.

Unsurfaced Road - a road in which the running surface consists of the same materials as the surrounding native soils. Unsurfaced roads may also include those roads that have had some minimal surfacing added but are inadequate for use during wet weather as determined by ODF.

Utilization Scale - scaling of logs to account for merchantable material that has been lost due to logs not removed from the harvest area, or from improper logging practices that resulted in breakage or wastage to otherwise merchantable logs.

Written Plan - a plan that describes how an operation will be conducted, including the means to protect resource sites described in ORS 527.710(3)(a) (relating to the collection and analysis of resource site inventories), if applicable.

Yarding - the process of conveying logs from the cutting area to the Landing.

YUM (Yarding Unmerchantable Material) - to yard logging residue to a Landing or other specified location.

SECTION 1020. **Sale of Timber**. Under the terms and conditions of this Contract, STATE sells to PURCHASER, and PURCHASER buys from STATE, that Board of Forestry timber designated and described in Section 2210, "Designated Timber," which for all purposes of this Contract is hereinafter referred to as "timber." The location of Designated Timber is shown on Exhibit A. PURCHASER shall pay STATE the Total Purchase Price for timber set forth in Section 1710, "Purchase Price," or 1740, "Log Prices." The Total Purchase Price shall be paid to STATE in accordance with the payment schedule in Section 1720, 1751, 1752, or 1753, "Payment Schedule.

This is a sale of "State Timber" as defined in OAR 629-031-0005 and timber harvested or sold under this Contract must not be exported from the United States. PURCHASER must comply with the provisions of the Forest Resources Conservation and Shortage Relief Amendments Act of 1993, which authorizes Oregon and other western states to prohibit the export of unprocessed timber from public lands, and with ORS 526.801 through 526.831 and OAR 629-031-0005 through 629-031-0045, in disposing of timber from this timber sale.

SECTION 1030. **Title to Timber**. During the period of this Contract, and any extension, PURCHASER shall have the right to cut and remove the timber. Such right shall be conditioned upon PURCHASER complying with the provisions of this Contract.

The ownership of and title to the timber shall pass to PURCHASER as the timber is paid for following removal from the Timber Sale Area. Any right of PURCHASER to cut and remove the timber shall expire and end at the time this Contract, or any extension, terminates. All rights and interests of PURCHASER in and to timber and logs remaining on the Timber Sale Area shall, at that time, automatically revert to and revest in STATE, without compensation to PURCHASER.

SECTION 1040. **Quality and Quantity of Timber**. STATE makes no guarantee or warranty to PURCHASER as to the quality or quantity of the Designated Timber. PURCHASER shall be liable to STATE for the Total Purchase Price set forth in Section 1710, "Purchase Price," or 1740, "Log Prices," even if the quantity or quality of Designated Timber actually cut, removed, or designated for taking is more or less than that estimated by STATE to be available for harvesting on the Timber Sale Area.

Further, STATE makes no representation, warranty, or guarantee of the accuracy of any information either provided by STATE or made available by STATE under the Public Records Law with respect to this Contract. PURCHASER agrees to bear exclusive responsibility for, and to accept all risks associated with, the actual conditions on the Areas of Operations and PURCHASER's computation of its bid for this Contract.

SECTION 1050. **Examination of Plans, Exhibits, and Areas of Operations**. PURCHASER acknowledges and agrees that, before submitting a bid, PURCHASER: (i) has made a careful examination of the terms and conditions of the Contract; (ii) has become fully informed as to the quality and quantity of materials and the character of the Operations required; and (iii) has made a careful examination of the Areas of Operations and the location and conditions of the Operations, including the sources of supply for materials. STATE will in no case be responsible for any loss or for any unanticipated costs that may be suffered by PURCHASER as a result of PURCHASER's failure to acquire full information in advance in regard to all conditions pertaining to the Operations.

COMMENCEMENT AND COMPLETION OF CONTRACT

SECTION 1110. **Commencement of Work**. PURCHASER shall not commence work under the Contract until STATE provides written notification to PURCHASER that STATE has received and accepted the following:

(a) The performance bond required under Section 1210, "Performance Bond";

(b) The payment bond required under Section 1230, "Payment Bond";

(c) The certificate of insurance required under Section 1240, "Insurance," subpart (i);

(d) The first payment on the Contract specified in Section 1751, or 1752, "Payment Schedule"; and

(e) A fully executed original of the Contract.

Further, PURCHASER shall not commence work under the Contract until PURCHASER has attended the Pre-Operations Meeting and STATE has approved the Operations Plan as specified in Section 1140, "Operations Plan."

SECTION 1120. **Completion Date of Contract**. Time is of the essence in this Contract. PURCHASER shall complete and fully perform all Operations under this Contract no later than **10/31/2030** unless the term of the Contract is extended in accordance with Section 1530, "Extension of Time." PURCHASER may be required to perform uncompleted Contractual obligations at a time later than stated above or in Section 1530, "Extension of Time." STATE shall notify PURCHASER in writing of these obligations and their required completion date. Upon completion of final Operations, PURCHASER shall notify STATE as required under Section 1315, "Inspection and Acceptance." The Contract will not be complete until STATE has inspected, and accepted PURCHASER's performance as specified in Section 1315, "Inspection and Acceptance."

SECTION 1130. **Pre-Operations Meeting**. PURCHASER shall meet with STATE prior to STATE approval of the initial Operations Plan required by Section 1140, "Operations Plan," and prior to commencement of operations, to discuss Contract matters, including Threatened and Endangered Species protection efforts, protection of Timber Sale Area resources, and to identify key issues to be addressed in the Operations Plan.

SECTION 1140. **Operations Plan**. PURCHASER shall prepare an Operations Plan for all Operations to be conducted under this Contract and shall submit the plan to STATE at least fifteen (15) calendar days prior to commencement of any Operations. This plan shall be prepared on a form provided by STATE, and shall be used for all types of Operations, including road maintenance, Project Work, logging, and post-harvest requirements. In addition to the Pre-Operations Meeting required by Section 1130, "Pre-Operations Meeting," STATE may require an on-site meeting prior to approval of the Plan, to be attended by PURCHASER, subcontractor, and STATE representatives. STATE's approval of the Plan must be obtained prior to commencement of any Operations. Upon approval by STATE, the Operations Plan(s) shall automatically be incorporated into, and made part of, this Contract as Exhibit B. Each Operations Plan shall be dated.

PURCHASER shall notify STATE prior to any period of inactivity of Operations for more than three (3) days, and again prior to resumption of Operations.

BONDING AND INSURANCE

SECTION 1210. **Performance Bond**. PURCHASER shall furnish STATE with a performance bond, in an amount of not less than the greater of (a) the value of all Project Work to be completed under the Contract, as specified in Section 2630, "Credit for Project Work," or (b) twenty percent (20%) of the Total Purchase Price, not to exceed $500,000, rounded up to an even $1,000 unit, which bond shall guarantee complete compliance by PURCHASER with the terms and conditions of this Contract and the faithful performance of all required obligations, including payments to all suppliers, materialmen, Contractors, and subcontractors of PURCHASER. PURCHASER's bond may be in the form of one or more of the following: surety bonds, cash, cashier's or certified check, money order, assignment of surety, irrevocable letters of credit, or other securities determined acceptable by the State Forester. Surety bonds must be written by a surety company authorized to do business in the State of Oregon, on a form provided by STATE.

Performance Bond Release. PURCHASER shall keep the performance bond in effect during the term of the Contract, until released by STATE. STATE shall release PURCHASER's bond upon the later of: (a) 180 days after final acceptance of completed Timber harvesting Operations or (b) 180 days after STATE's acceptance of all Project Work required under Section 2610, "Project Work." "Acceptance" under (a) or (b) shall not be provided until STATE has inspected and approved the work and PURCHASER has provided satisfactory evidence of PURCHASER's compliance with all other terms and conditions of the Contract.

Performance Bond Reduction. STATE shall permit PURCHASER to reduce its performance bond under the following circumstances:

180 days after final acceptance of completed Timber harvesting Operations, upon PURCHASER's request and provided no claims are then pending, STATE may permit PURCHASER to reduce the amount of their bond to an amount equal to the value of all Project Work remaining to be performed or accepted.

180 days after STATE has accepted all Project Work required under Section 2610, "Project Work," upon PURCHASER's request and provided no claims are then pending, STATE may permit PURCHASER to reduce the amount of their bond to an amount equal to twenty percent (20%) of the Total Purchase Price.

SECTION 1220. **Claims Against PURCHASER'S Performance Bond**. PURCHASER shall comply with the following requirements:

(a) Claims against PURCHASER's performance bond for failure to make payments when due to suppliers, materialmen, Contractors, and subcontractors of PURCHASER shall be processed in the following manner:

(1) Upon receiving notice from a supplier, materialman, Contractor, or subcontractor of an unpaid obligation of PURCHASER, STATE shall notify PURCHASER and PURCHASER's surety in writing, describing the claim and specifying a date not later than fifteen (15) days from the date of the notice within which PURCHASER shall be expected to respond to the claim.

(2) PURCHASER shall provide, within the time requested by STATE, verification reasonably satisfactory to STATE that the claim has been satisfied or is being addressed in a manner reasonably satisfactory to STATE. If PURCHASER fails to provide such evidence within the time requested, PURCHASER shall be deemed to be in default of the Contract, and STATE shall be entitled to make a claim against PURCHASER's performance bond on behalf of the claimant.

(b) Claims against PURCHASER's performance bond for failure to comply with or perform other obligations under the Contract shall be processed in the following manner:

(1) STATE shall provide notice in writing to PURCHASER and PURCHASER's surety of the nature of the failure to comply or the unperformed obligation, and shall specify a date by which the failure must be remedied.

(2) If PURCHASER fails to remedy the failure or to respond in writing with reasons adequate in STATE's judgment to waive the failure within the time specified in STATE's notice, PURCHASER shall be deemed to be in default and STATE shall be entitled to make a claim against PURCHASER's performance bond on behalf of STATE for an amount deemed reasonably sufficient to cure the failure.

(c) STATE reserves the right to invoke any remedy available to it under the Contract or at law or in equity in the event STATE is required to seek redress from PURCHASER's surety for a Contract violation or default by PURCHASER including, without limitation, termination of the Contract.

SECTION 1230. **Payment Bond**. PURCHASER shall furnish a payment bond (or blanket payment bond for multiple Contracts) acceptable to STATE guaranteeing payment for all monies due STATE through this Contract, including all timber harvested. PURCHASER shall keep the payment bond in effect during the term of the Contract, until released by STATE. Payment bonds may be in the form of one or more of the following: surety bonds, cash, cashier's or certified check, money order, assignment of surety, irrevocable letters of credit, or other securities determined acceptable by the State Forester. Surety bonds (including riders) must be written by a surety company authorized to do business in the State of Oregon, on a form provided by STATE. PURCHASER's bond shall be in an amount at least equal to the value of timber estimated to be removed during a one-month plus 15-day billing period, as determined by STATE. In any event, the amount shall not be less than one installment payment as specified in Section 1751, or 1752, "Payment Schedule," rounded up or down to the nearest $500 unit. Provision of a satisfactory payment bond will permit PURCHASER to remove timber for a 30-day period, after which time, payment for all such removed timber shall be due and owing. PURCHASER shall make cash payment within fifteen (15) days following the end of the monthly period. Upon payment for timber removed in the monthly period, the payment guarantee may be applied as a guarantee for a subsequent period.

A payment bond (or blanket payment bond for multiple Contracts) shall be in an amount at least equal to the value of the timber estimated to be removed from all Contracts covered by the blanket payment bond during a one-month plus 15-day billing period as determined by STATE. PURCHASER shall obtain and furnish STATE with a written consent of surety on forms provided by STATE for coverage of any Contracts to which the blanket payment bond may apply. In no event shall PURCHASER remove timber with a value greater than the amount of the payment guarantee.

SECTION 1240. **Insurance**. PURCHASER shall secure, at PURCHASER's expense, and keep in effect during the term of this Contract, the following insurance coverages, in a policy or policies issued by an insurance company or companies authorized to do business in the State of Oregon. The issuing company or companies shall indicate on the insurance certificates required below that STATE shall be given not less than thirty (30) days' notice of any cancellation, material change, or intent not to renew such policy. Any failure to comply with the reporting provisions of this insurance, except for the potential exhaustion of aggregate limits, shall not affect the coverage(s) provided to the State of Oregon, STATE, and their divisions, officers, and employees. PURCHASER shall be financially responsible for all deductibles included hereunder.

The coverage shall be as follows:

(a) Commercial General Liability insurance covering personal injury, death, and property damage or destruction in an amount not less than $2,000,000 combined single limit per occurrence and an amount not less than $4,000,000 per aggregate, with Contractual liability coverage to include all Contracts involving the work to be performed under this Contract, Premises Operations, Products and Completed Operations, and Independent Contractors. Required coverage shall be for explosion, collapse, and underground damage if blasting or excavation is required or performed under the Contract. **Excess or Umbrella Liability policies may be used in combination with the Commercial General Liability insurance to cover the required liability limits.**

(b) Automobile Liability insurance in an amount not less than $2,000,000 combined single limit per accident. This required insurance coverage shall include Business Automobile, an endorsement for auto pollution, and shall cover pollutants such as fuel tanks carried in vehicles. **Excess or Umbrella Liability policies may be used in combination with the Automobile Liability insurance to cover the required liability limits.**

(c) Loggers Broad Form coverage in an amount not less than $2,000,000 for costs of fire control, losses or damage from fire, and other causes arising or resulting from activities of PURCHASER, employees, Contractors, subcontractors, and others working or acting for PURCHASER.

(d) Worker's Compensation insurance as statutorily required for persons performing work under the Contract.

(e) Primary Coverage. Insurance carried by PURCHASER under this Contract shall be the primary coverage, and the STATE's insurance is excess and solely for damages or losses for which the STATE is responsible.

(f) "Tail" or "Basis of Occurrence" Coverage. If any of the aforementioned liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of this Contract for a duration of 24 months, or the maximum time period reasonably available in the marketplace if less than 24 months. PURCHASER shall furnish certification of "tail" coverage as described or continuous "claims made" liability coverage for 24 months following Contract completion. Continuous "claims made" coverage will be acceptable in lieu of "tail" coverage, provided its retroactive date is on or before the effective date of this Contract. If Continuous "claims made" coverage is used, Contractor shall be required to keep the coverage in effect for a duration of not less than 24 months from the end of the Contract.

(g) The Commercial General Liability insurance and the Automobile Liability insurance required under this Contract shall include the State of Oregon, the Oregon Board of Forestry, the Department of Forestry, the State Forester, their officers, agents, employees, and members as additional insureds. **The following language shall be used for naming additional insureds:**

ADDITIONAL INSURED: The State of Oregon, the Oregon Board of Forestry, the Department of Forestry, the State Forester, their officers, employees, and agents as Additional Insureds, but only with respect to PURCHASER's activities to be performed under this Contract. Coverage shall be primary and non-contributory with any other insurance and self-insurance.

(h) As evidence of the insurance coverage required by this Contract, PURCHASER shall furnish a certificate or certificates of insurance including all of the foregoing coverages to STATE. PURCHASER must provide this proof of insurance to STATE before the Contract period begins and prior to the commencement of work.

(i) All insurance shall be provided by a company with an A or better rating, as determined by A.M. Best Company, unless otherwise approved in writing by STATE.

GENERAL TERMS AND CONDITIONS

SECTION 1310. **Authorized Representatives**. During any period of Operations, PURCHASER shall have a designated representative(s) available to STATE on the Timber Sale Area or Project Location, or both, where such activity is separated. The representative(s) shall be authorized to receive any notice or instructions from STATE on behalf of PURCHASER and to take any action required in regard to performance of PURCHASER under this Contract. STATE shall designate a field representative(s) who shall be authorized to receive notices, inspect progress of the Operations, and issue instructions in regard to plans and schedules under the terms of this Contract. State Forests Division Chief is the Authorized Representative to provide payment instructions. Authorized field representatives of STATE and PURCHASER shall be designated in the Operations Plan required by Section 1140, "Operations Plan."

SECTION 1315. **Inspection and Acceptance**. STATE and its authorized and designated representative shall at all times be allowed access to all parts of the Operations and Areas of Operations of PURCHASER, as STATE may determine to be necessary or desirable to make a complete and detailed inspection of the Operations and PURCHASER's compliance with all terms and conditions of this Contract. STATE shall be furnished operation progress status or other information and assistance by PURCHASER, or the Authorized Representative(s), as STATE may determine necessary to permit STATE to verify PURCHASER's compliance with all terms and conditions of this Contract.

PURCHASER shall notify STATE in writing upon completion of final Operations. STATE will inspect the Operations completed by PURCHASER within twenty (20) business days after receipt of written notification that final Operations are complete. Following inspection, STATE shall notify PURCHASER in writing of STATE's acceptance of PURCHASER's performance of the Contract or, if PURCHASER's Operations are not acceptable to STATE, shall advise PURCHASER in writing of the particular defects to be remedied before final acceptance by STATE can be granted.

SECTION 1320. **Assignment of Contract**. PURCHASER shall not assign, sell, or transfer rights, or delegate responsibilities under this Contract, in whole or in part, without the prior consent of the STATE. STATE will consent only when assignment is consistent with STATE's fiduciary duties. No such written approval shall relieve PURCHASER of any obligations under this Contract, and any transferee shall be considered the agent of the PURCHASER and bound to perform in accordance with the Contract. PURCHASER shall remain liable as between the original parties to the Contract as if no assignment had occurred. PURCHASER agrees to pay STATE a $250 administrative fee for processing each assignment.

SECTION 1325. **Subcontracting**. PURCHASER acknowledges and agrees that if PURCHASER subcontracts all or any part of the Operations, such subcontracting shall in no way relieve PURCHASER of any responsibility under this Contract. PURCHASER shall notify STATE in writing of the names and addresses of each subcontractor prior to the commencement of any Contract work by the subcontractor.

SECTION 1330. **Conditions of Areas of Operations**. Use of Areas of Operations. PURCHASER shall follow the STATE's Authorized Representative(s) instructions, if any, regarding use of the Areas of Operations. STATE reserves the right to issue written authorization to others to use the Areas of Operations when, in the determination of STATE, such use will not materially interfere with the Operations of PURCHASER. During the term of this Contract, STATE reserves the right to sell any products or materials from the Areas of Operations, provided that the products or materials are not timber included in this Contract and that removal will not materially interfere with the Operations of PURCHASER. PURCHASER shall not interfere with the use of roads by other authorized users. PURCHASER shall not be held liable for any acts, omissions, or neglect of authorized simultaneous users.

In an emergency affecting the safety of life or of the Operations or of adjoining property, PURCHASER, without special instruction or authorization from STATE's Authorized Representative, shall act reasonably to prevent threatened loss or injury, and shall so act, without appeal, if instructed by STATE's Authorized Representative. Any compensation claimed by PURCHASER on account of emergency work shall be equitably determined by STATE.

SECTION 1335. **Hazardous Substances Discovered by PURCHASER**. Unless disposition of Hazardous Substances is specifically made a part of PURCHASER's Operations under this Contract, PURCHASER shall immediately notify STATE of any Hazardous Substances which PURCHASER discovers or encounters during performance of Operations. PURCHASER shall immediately cease operating in any part of the Area of Operations where Hazardous Substances have been discovered or encountered, if continued Operations in such area would present a bona fide risk or danger to the environment or to the health or well-being of PURCHASER's or any subcontractor's work force.

Unless disposition of Hazardous Substances is specifically made a part of PURCHASER's Operations under this Contract, upon being notified by PURCHASER of the presence of Hazardous Substances in the Area of Operations, STATE shall arrange for the proper disposition of such Hazardous Substances.

SECTION 1340. **Hazardous Substances Generated/Aggravated by PURCHASER**. PURCHASER shall be held responsible for any and all releases of Hazardous Substances during performance of the Contract which occur as a result of, or are aggravated by, actions of its agents, personnel, or subcontractors. PURCHASER shall immediately notify STATE of any release of Hazardous Substances and, as directed by STATE, shall promptly dispose of, or otherwise remediate such spills or leaks to the satisfaction of STATE and proper regulatory agencies in a manner that complies with applicable federal, state, and local laws and regulations. Remediation shall be at no cost to STATE.

PURCHASER, at all times, shall:

(a) Properly handle, use, and dispose of all Hazardous Substances brought onto the Areas of Operations, in accordance with all applicable federal, state, or local statutes, rules, or ordinances;

(b) Be responsible for any spills, releases, discharges, or leaks of (or from) Hazardous Substances which PURCHASER has brought onto the Areas of Operations; and

(c) Promptly remediate, without cost to STATE, such spills, releases, discharges, or leaks to the STATE's satisfaction and in compliance with all applicable federal, state, or local statutes, rules, or ordinances.

PURCHASER shall report all reportable quantity releases of Hazardous Substances and petroleum products to applicable federal, state, and local regulatory and emergency response agencies. Reportable quantities are found in 40 CFR, Part 302, Table 302.4 for Hazardous Substances and in OAR 340-142 for petroleum products.

SECTION 1350. **Environmental Indemnification**. PURCHASER shall indemnify and hold harmless the STATE from any claims resulting from the use, release or disposal of Hazardous Substances including their removal, encapsulation, transportation, handling, and other disposal, during the performance of this Contract, whether or not such use, release or disposal occurs within or outside the Timber Sale Area.

SECTION 1355. **General Indemnification**. PURCHASER shall indemnify, defend and hold harmless the State of Oregon, the Oregon Board of Forestry, the Department of Forestry, the State Forester, their officers, agents, employees, and members ("Indemnified Parties"), from all claims, suits, actions, or liens of any nature resulting from or arising out of the activities of PURCHASER or its subcontractors, agents, or employees under this Contract, including without limitation any claim based upon an alleged failure to obtain or comply with the terms of any necessary Permit, license, or approval, or any claim of liability for premiums, contributions, or taxes payable under any Workers Compensation, Disability Benefits, Old Age Benefits, including FICA, or tax withholding laws; provided, however, the Oregon Attorney General must give written authorization to any legal counsel purporting to act in the name of, or represent the interests of, any of the Indemnified Parties prior to such action or representation. Further, STATE, acting by and through its Department of Justice, may assume its own defense, including that of its officers, employees, and agents, at any time when in STATE's sole discretion it determines that (i) proposed counsel is prohibited from the particular representation contemplated; (ii) counsel is not adequately defending the interests of STATE; (iii) important governmental interests are at stake; or (iv) the best interests of STATE are served thereby. PURCHASER's obligation to pay for all costs and expenses shall include those incurred by STATE in assuming its own defense. All provisions of this Section shall survive the termination of this Agreement.

SECTION 1360. **Severability**. If any provision of this Contract is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular provision held to be invalid.

SECTION 1365. **Waiver**. Failure of STATE to enforce any provision of this Contract shall not constitute a waiver or relinquishment by STATE of the right to such performance in the future, nor of the right to enforce any other provision of this Contract.

SECTION 1370. **Choice of Law and Venue**. This Contract shall be governed by, construed and enforced in accordance with, the laws of the State of Oregon, without regard to principles of conflicts of law. Any claim, action, suit or proceeding (collectively, “Claim”) between State (or any other agency or department of the State of Oregon) and Purchaser that arises from or relates to the Contract shall be brought and conducted solely and exclusively within the Circuit Court of Marion County for the State of Oregon; provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this Section be construed as a waiver by the State of Oregon of any form or defense or immunity, whether based on sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the United States Constitution, or otherwise. **PURCHASER, BY EXECUTION OF THE CONTRACT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF SAID COURTS.**

SECTION 1375. **Notices**. Any written notice to PURCHASER which may be required under this Contract to be served on PURCHASER by STATE may be served by personal delivery to PURCHASER or designated representative(s) by mailing the notice to the address of PURCHASER as is given in this Contract, or by leaving the notice at said address. Should PURCHASER be required to notify STATE concerning the progress of the Operations, or concerning any matter or complaint which PURCHASER may have regarding the Contract subject matter, or for any other reason, that notification is to be made in writing and delivered or mailed to the designated representative of STATE.

SECTION 1380. **Entire Agreement: No Modification**. This Contract consists of the entire written agreement between the parties, including but not limited to the Notice of Timber Sale, Invitation to Bid or Request for Proposal, Instructions to Bidders, specifications, terms, and conditions, Exhibits, Operations Plan, change notices, if any, and the accepted bid. No waiver, consent, modification, or change of terms of this Contract shall bind either party, unless in writing and signed by both parties. Such waiver, consent, modification, or change, if made, shall be effective only for the specific purpose given. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this Contract. PURCHASER, by the signature of its Authorized Representative in Section 1000, "Signatures of Contract Parties," hereby acknowledges that she/he has read this Contract, understands it, and agrees to be bound by its terms and conditions.

OWNERSHIP OF MATERIALS AND IMPROVEMENTS

SECTION 1410. **Materials from State Property**. PURCHASER shall not take, sell, use, remove, or otherwise dispose of any sand, gravel, rock, earth, or other material obtained or produced from within the limits of rights-of-way, gravel pits, rock quarries, or other property owned by or held by any agency of the State of Oregon, unless authorized by this Contract or separate written consent of STATE.

SECTION 1420. **Materials and Improvements**. Title to materials, Improvements, and other property the Contract requires PURCHASER to provide shall vest in and become the property of STATE at the time such are furnished by PURCHASER and accepted by STATE. All materials, Improvements, and property furnished by PURCHASER shall be free and clear of liens, claims, and encumbrances.

PURCHASER shall keep in good repair all Improvements located on State land and existing at the time of execution of the Contract and any Improvements placed on State land by PURCHASER which become the property of STATE under this Contract. PURCHASER shall promptly repair or replace, without cost to STATE, any Improvement injured, damaged, or removed from the Areas of Operations by PURCHASER or by Contractors of PURCHASER.

SECTION 1430. **Removal of Equipment and Materials**. Within thirty (30) days after completion, and as a condition of final acceptance of PURCHASER's Operations, PURCHASER shall remove from the Areas of Operations and other property owned or controlled by STATE, all equipment, materials, and other property PURCHASER has placed or caused to be placed thereon that is not to become the property of STATE. PURCHASER acknowledges and agrees that any such equipment, materials, and other property that is not removed within thirty (30) days shall become the property of STATE and may be used or otherwise disposed of by STATE without notice or obligation to PURCHASER or to any party to whom PURCHASER may transfer title. Nothing in this section shall be construed as relieving PURCHASER from an obligation to clean up and to burn, remove, or dispose of Slash, waste materials, and such, in accordance with the provisions of this Contract and applicable law. PURCHASER shall indemnify STATE for any cost or expense incurred by STATE as a result of PURCHASER's failure to satisfy this obligation.

CONTRACT CHANGES: EXTENSIONS, MODIFICATIONS, SUSPENSIONS, CANCELLATIONS, DELAYS, AND DEFAULT

SECTION 1510. **Causes Beyond Control**. Neither party of this Contract shall be held responsible for delay or default caused by fire, riot, acts of God, sovereign, public enemy, and/or war which is beyond that party's control. STATE may terminate this Contract upon written notice after determining such delay or default will reasonably prevent successful performance of the Contract.

In the event a cause or causes beyond the control of PURCHASER impact PURCHASER's ability to continue to perform under this Contract, STATE may grant a reasonable extension of time but shall not additionally compensate PURCHASER.

SECTION 1520. **Cooperation With Species Protection Efforts; Compliance with Incidental Take Permit(s), if any**. STATE must comply with federal Endangered Species Act (ESA), including without limitation taking measures necessary to determine the presence of threatened and endangered (T&E) species on State forest lands and to protect such species from disturbance. PURCHASER's agreement under this Section is in addition to, and shall not relieve PURCHASER of, its own independent obligation to comply with all federal and state laws, including the federal ESA, governing T&E species.

(a) PURCHASER acknowledges that legal challenges involving T&E species may occur and may affect PURCHASER's Operations under the Contract, and PURCHASER agrees to cooperate with STATE's efforts to respond, as the STATE deems necessary or expedient, to the listing of new species, or pending and threatened legal action concerning State forest land and any T&E species, including without limitation compliance with terms and conditions of any incidental take Permit(s) that include required minimization and mitigation measures proposed in the applicable Habitat Conservation Plan.

(b) STATE is engaged in an active T&E survey program. As part of the survey program, ODF surveys its lands on a continuing basis for land management, species protection, research, and other reasons. Surveying efforts may take place in the Timber Sale Area any time during the term of the Contract. PURCHASER acknowledges that T&E survey work or the discovery of a T&E species within or in the vicinity of the Timber Sale Area, or both, may affect PURCHASER's Operations under the Contract, and PURCHASER agrees to cooperate with STATE's survey work and other activities designed to identify and protect T&E species. In the event a T&E species is found within or in the vicinity of the Area(s) of Operations, or the STATE otherwise deems it necessary or expedient to take action in response to any pending or threatened legal action concerning State forest land and any T&E species, PURCHASER agrees that STATE may take steps to protect the interests of the State, including imposing restrictions on PURCHASER's Operations under the Contract to prevent disturbance to T&E species, or Contract modification, suspension, or termination.

(c) PURCHASER acknowledges that at this time, or at some point during the Contract term, the STATE is also, or may become, subject to terms and conditions of an incidental take Permit(s) issued by the federal government covering State forests lands or Areas of Operations, or both. PURCHASER agrees that any Operations under the Contract that occur following issuance of an incidental take Permit(s), if any, must be carried out consistent with such terms and conditions that include required minimization and mitigation measures proposed in the applicable Habitat Conservation Plan, and PURCHASER further agrees that STATE may take steps to protect the interests of the STATE, including without limitation imposing restrictions on PURCHASER's Operations under the Contract to ensure such compliance, or Contract modification, suspension, or termination; provided however that this allowance does not relieve PURCHASER of its own independent obligation to comply with all Permits pursuant to Section 1610.

(d) PURCHASER further agrees that in the event of Contract modification, suspension, or termination under this Section 1520, PURCHASER’s sole remedy will be to submit a request for a modification of the Contract under Section 1540, "Contract Modifications" for financial reimbursement for work already completed at time of Notice of Suspension covered under Section 2610, Project Work and Section 2630, Credit for Project Work.

PURCHASER acknowledges and agrees that in no event is PURCHASER entitled to, nor is the STATE under any obligation, contractual or otherwise, to provide, lost profits, attorney fees, replacement cost of timber or other materials, or any other anticipatory losses or consequential damages, such as but not limited to reimbursement for interest or lost market opportunities, suffered by PURCHASER as a direct or indirect result of restrictions on Operations due to T&E species considerations or compliance with terms and conditions of an incidental take Permit(s), or Contract modification, suspension, or termination in accordance with this provision.

SECTION 1530. **Extension of Time**. STATE may extend the time for performance of this Contract upon written request from PURCHASER or at STATE's discretion. A request for extension:

(a) shall be accompanied by the written consent to an extension of the security by PURCHASER's surety;

(b) shall state the date to which the extension is desired, the Area(s) of Operations to be affected, and the reason(s) for the extension; and

(c) must be received by STATE no later than thirty (30) days prior to the expiration date of this Contract unless the need for extension occurred within the thirty (30) days prior to the expiration date, in which case the request must be received prior to the expiration date.

Requests for extension will not be granted solely due to changes in timber market conditions. STATE shall grant a request for an extension only when it determines that extension would be in the best interests of STATE. In no event shall an extension exceed one year.

When STATE grants a request for extension, it may condition that grant upon any condition it determines is necessary to protect the interests of the STATE. Such conditions may include, but may not be limited to, the following:

(1) Payment at time of extension of the full amount of the unpaid balance of the Total Purchase Price. In the case of scale or weight sales, such payment shall be an advance deposit, based on remaining volume, as estimated by STATE.

(2) If PURCHASER is not otherwise in arrears in required payments, STATE may grant additional time for payment of the unpaid balance on the condition that PURCHASER make payments based on removal of Designated Timber as required by Section 1751, or 1752 "Payment Schedule," of this Contract, plus interest on all payments received after the original Contract expiration date, for material harvested, removed, and scaled, after the original Contract expiration date.

(3) Completion of designated requirements of this Contract, such as fire trail construction, Snag felling, Slash preparation Operations on logged portions of the Timber Sale Area, and road construction or maintenance.

(4) There will be a required payment of an Administrative Fee of $250.

(5) Payment of an extension fee in an amount determined by STATE (not less than $50). Such fee shall be based upon the loss of production, extra reforestation costs, brush control costs, Slash disposal costs, or other costs which may be caused by the extension.

(6) Interest will be applied to all advertised volume hauled after the original expiration date, ORS 82.010 mandates the collection of interest at the annualized rate of 9 percent.

(7) Waiver of full payment or payment of interest on the unpaid balance of the Total Purchase Price, if STATE determines that extenuating circumstances warrant waiver or waiver is otherwise in the best interests of STATE.

(8) PURCHASER-funded T&E species surveys by STATE-approved surveyors. STATE may require that Operations on the Timber Sale Area be suspended during the survey season until the completion of surveys, in order to ensure a valid survey. The survey season begins March 15 and ends August 31, or upon completion of survey visits, annually.

SECTION 1540. **Contract Modifications**. PURCHASER and STATE acknowledge that changes are inherent in Operations of the type covered by this Contract. The number of changes, the scope of those changes, and the impact they have on the progress of the original Operations cannot be defined at the outset of the Contract. These changes may include, but are not limited to, changes in project specifications, project completion dates, Exhibit specifications, rock sources, excavator time requirements, seasonal restrictions, Timber Sale Area resource protection requirements, harvest methods, harvest completion dates, thinning prescriptions, tree harvest size limits, removal specifications, Reserved Timber specifications, haul route requirements, scaling requirements, and Timber Sale Area boundaries. PURCHASER acknowledges and agrees that PURCHASER is not entitled to any reduction in the Purchase Price or Total Purchase Price solely due to the number of changes required to be made in the Contract. Each change will be evaluated on its own merit to determine if an extension of the time for performance under the Contract or an increase or decrease in the Purchase Price or Total Purchase Price is warranted.

STATE reserves the right to make, at any time during the Contract, such modifications as are necessary or desirable; provided such modifications shall not change the character of the Operations to be done nor increase the cost to the PURCHASER of performing the Project Work, unless such change in the Operations or cost increase is approved in writing by PURCHASER. Any modifications so made shall not invalidate this Contract nor release PURCHASER from its obligations under the performance bond and payment bond. PURCHASER agrees to complete the modified Operations as if they had been included in the original Contract.

If any change under this section causes an increase or decrease in PURCHASER's cost of performance or the time required for the performance of any part of the Operations for which PURCHASER wishes to claim a reduction in the Purchase Price or Total Purchase Price, PURCHASER must submit a written statement setting forth the nature and specific extent of the claim. Such claim shall include all time and cost impacts against the Contract and must be submitted as soon as possible following the change, but in any event no later than thirty (30) days after receipt of any written notice of modification of the Contract.

If PURCHASER discovers site conditions which differ materially from what was represented in the Contract or from conditions that would normally be expected to exist and be inherent to the activities defined in the Contract, PURCHASER shall notify STATE's Authorized Representative immediately and before the area has been disturbed. STATE's Authorized Representative will investigate the area and make a determination as to whether or not the conditions differ materially from either the conditions stated in the Contract or those which could reasonably be expected in execution of this Contract. If it is determined that a differing site condition exists, any compensation or credit will be determined based on an analysis by STATE's Authorized Representative. If PURCHASER does not concur with the decision of STATE's Authorized Representative and/or believes that it is entitled to additional compensation, PURCHASER may proceed to file a claim.

Claims Review Process. All PURCHASER claims shall be referred to STATE's Authorized Representative for review. All claims shall be made in writing to STATE's Authorized Representative not more than ten (10) days from the date of the occurrence of the event which gives rise to the claim or not more than ten (10) days from the date that the PURCHASER knew or should have known of the problem. Any claim not submitted in accordance with these time requirements shall be waived.

All claims shall be submitted in writing and shall include a detailed, factual statement of the basis of the claim, pertinent dates, Contract provisions which support or allow the claim, reference to or copies of any documents which support the claim, the exact dollar value of the claim, and any specific time extension requested for the claim. If the claim involves Operations to be completed by subcontractors, PURCHASER shall analyze and evaluate the merits of the subcontractors claim. PURCHASER shall forward the subcontractors claim and PURCHASER's evaluation of such claim to STATE's Authorized Representative. STATE's Authorized Representative will not consider direct claims from subcontractors, suppliers, manufacturers, or others not a party to this Contract.

The decision of STATE shall be final and binding unless PURCHASER requests mediation within ten (10) days following notice of STATE's decision.

SECTION 1550. **Adjustment of Contract**. Notwithstanding any other provisions of this Contract, STATE may, pursuant to Oregon law, make adjustments in the Contract when Major Catastrophes or significant changes in state or federal law after the date of this Contract materially affect the volume and value of timber, or Project Work to be done, as specified in Section 2610, "Project Work," under the Contract. Major Catastrophes are defined as windstorms, floods, fire, landslides, or other acts of God, which are beyond the control of PURCHASER and in no way connected with negligent acts or omissions of PURCHASER, its officers, employees, agents, or subcontractors. Issuance of an incidental take Permit(s) is not considered a change in law. Market conditions shall not be considered a reason for Contract adjustments. Adjustments made under this Section, if any, shall be for the sole purpose of placing the parties in their original status under the Contract insofar as possible; provided, however, that no adjustment shall be made in response to any loss or cost to PURCHASER that is recoverable from third parties by PURCHASER. PURCHASER shall make written application to STATE within 30 days after discovery of the damage done by the Major Catastrophe.

If, prior to completion of the Contract, a Major Catastrophe (as defined above) caused by a single event or significant changes in state or federal law results in additional Project Work for PURCHASER involving an additional estimated cost of more than: (1) $1,000 for sales less than one-half million board feet; (2) $1,500 for sales of one-half million to three million board feet; or (3) $3,000 for sales over three million board feet, STATE may adjust the Contract Project Work Credits, in which event STATE will assume responsibility for any additional cost to complete the Project Work which exceeds the original project work amount. Adjustments by STATE shall be based on advertised volumes and may be accomplished by adjusting stumpage prices or payment of such additional costs to PURCHASER or by STATE assuming responsibility for performing that portion of the Project Work in excess of the original project work amount. The estimated cost of additional work shall be calculated by STATE.

If, prior to completion of the Contract, a change in state or federal law, or a Major Catastrophe (as defined above), materially affects the volume and value of timber, STATE may adjust the volume and value accordingly. STATE shall determine the adjustment volume by either an individual tree sample cruise, or a point sample cruise to a 5 percent sampling error of the volume. For purposes of this Contract, "materially affect" shall mean more than $5,000.

Value adjustment shall be calculated by multiplying the volume adjustment times the Purchase Price.

For each species sold on a recovery basis, the Purchase Price is defined as the price per MBF listed in Section 1740, "Log Prices." If species is not listed in Section 1740, "Log Prices," the highest price listed in Section 1740, "Log Prices," shall apply.

For species sold on a lump sum basis, the Purchase Price for each species shall be determined by using STATE's unamortized timber appraisal value, multiplied by the bid-up factor. Bid-up factor shall be calculated by STATE using the following calculation: Bid value of all species/appraised value of all species = bid-up factor.

SECTION 1560. **Violations; Default; Remedies**. Any failure by PURCHASER to comply with the terms and conditions of this Contract is a violation. If PURCHASER commits a violation, STATE may, after giving written notice, suspend any further Operations of PURCHASER under this Contract, except those Operations necessary to remedy any violations.

If PURCHASER fails to remedy a violation within the time allowed and as instructed by STATE, or if PURCHASER fails to complete work as required under any interim Contract completion date or the Contract expiration date, or if PURCHASER injures or severs any timber other than Designated Timber, STATE may declare PURCHASER to be in default by providing notice of the default as required under OAR 629-032-0030. If the default is due to failure of PURCHASER to correct a violation as previously instructed, STATE may terminate the Contract as of the date specified in the earlier instruction. If the default is due to failure by PURCHASER to complete work prior to the expiration date or any interim completion date required under the Contract, or if PURCHASER injures or severs timber that is not Designated Timber, STATE may terminate the Contract without providing PURCHASER an opportunity to cure the default.

As provided in OAR 629-032-0050, within fifteen (15) days following receipt of a notice of default, PURCHASER may request a hearing before the State Forester to determine whether a default has in fact occurred. Hearings shall be governed by ORS 183-413 to ORS 183.497.

The provisions of OAR 629-032-0000 through -0070, and any future amendments, are incorporated into this Contract and made a permanent part hereof by reference as though fully set forth herein. THE PROVISIONS OF OAR 629-032-0000 THROUGH -0070 ARE IN ADDITION TO, AND NOT IN LIEU OF, ANY OTHER REMEDIES STATE MAY HAVE FOR THE PURCHASER'S BREACH OF CONTRACT. In the event of a default STATE may pursue any and all remedies available to STATE. Such remedies include, but are not limited to: (1) making a claim on each bond provided by PURCHASER; (2) suing PURCHASER for all damages STATE incurs as a result of PURCHASER's breach; (3) suing PURCHASER for specific performance of the Contract; or (4) terminating the Contract and reselling the timber.

SECTION 1570. **STATE's Right to Suspend Operations**. STATE and/or STATE's Authorized Representative may suspend portions or all of the Operations due to causes including, but not limited to:

(a) Failure of the PURCHASER to correct unsafe conditions;

(b) Failure of the PURCHASER to carry out any provision of the Contract;

(c) Failure of the PURCHASER to carry out written instructions from STATE's Authorized Representative;

(d) Conditions which, in the opinion of STATE's Authorized Representative, are unsuitable for performing the Operations;

(e) Time required by STATE to investigate differing site conditions;

(f) STATE-ordered identification protection of a state or federally listed threatened or endangered species;

(g) STATE's determination that Operations may reasonably result in a violation of a term or condition of an incidental take Permit(s), which includes noncompliance with any required minimization and mitigation measures proposed in the applicable Habitat Conservation Plan; or

(h) Any reason considered by STATE to be in the public interest.

In the event a suspension of Operations under (d), (e), (f), (g), or (h) above imposes additional costs on PURCHASER, PURCHASER may submit a request for a modification of the Contract under Section 1540, "Contract Modifications"; provided, however, that no claim for a reduction in the Purchase Price or Total Purchase Price will be allowed due to changes in market conditions or lost market opportunities occurring following any suspension of Operations. In addition, in no event shall STATE be liable for any costs incurred by PURCHASER by reason of delay or suspension under this section, including but not limited to costs of additional move-in/move-out of equipment and personnel, extra fire and equipment security, and insurance or bonding expenses.

Extension After Suspension. When a suspension occurs under (d), (e), (f), (g), or (h) above, PURCHASER may request an extension of time for performance of this Contract, for a period not to exceed the period of time during which Operations were suspended. The request for extension must be in writing and:

(1) Shall be accompanied by the written consent to an extension of the security by PURCHASER's surety;

(2) Shall state the date to which the extension is desired, and the Area(s) of Operations affected; and

(3) Shall be received by STATE no later than ten (10) days following notice to PURCHASER that Operations may recommence.

STATE normally will not withhold approval of reasonable extension requests made under this section.

PURCHASER's Responsibilities. For the duration of the suspension, PURCHASER is responsible to continue maintenance at the Area(s) of Operations just as if Operations were in progress. This includes, but is not limited to, protection of completed Operations, maintenance of access, protection of stored materials, temporary facilities, and clean-up.

When Operations re-commence after the suspension, PURCHASER shall replace or renew any Operations damaged during the suspension, remove any materials or facilities used as part of temporary maintenance, and complete Operations in every respect as though prosecution had been continuous and without suspension.

PURCHASER shall not cut or remove any timber under this Contract during any period of suspension. Any such cutting or removing shall be considered a willful trespass and shall render PURCHASER liable for triple damages in accordance with Section 1580, "Trespass."

SECTION 1580. **Trespass**. PURCHASER shall be exclusively responsible for any damage or removal of other than Designated Timber, and for damage to or removal of timber or other property beyond the boundaries of the Area(s) of Operations resulting from any activities of PURCHASER. Any such activity resulting from the activities of PURCHASER shall constitute a trespass, and a violation of the Contract. In addition to, and without limiting in any way any other remedies that may be available to STATE, PURCHASER shall pay to STATE damages for any trespass as follows:

(a) For each species involved in the trespass, triple the Purchase Price if PURCHASER's action is willful or intentional; or

(b) For each species involved in the trespass, double the Purchase Price if PURCHASER's action is not willful or intentional.

As used in this section, the term "willful" or "intentional" includes, but is not limited to: any voluntary or deliberate activity by PURCHASER, its employees, Contractors, subcontractors, or agents which results in the removal or damage to any timber not described under Section 2210, "Designated Timber," including removal or damage arising from a mistake of law or fact concerning the Designated Timber.

COMPLIANCE WITH LAWS AND REGULATIONS

SECTION 1610. **Permits; Licenses; Safety**. PURCHASER shall procure all Permits and licenses, (except incidental take Permits that are obtained by STATE), pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the Operations, and shall maintain and keep such Permits and licenses current throughout the term of the Contract. Provided further that PURCHASER shall comply with all terms and conditions of any Permits and licenses applicable to Areas of Operations, including without limitation any incidental take Permit(s) that include required minimization and mitigation measures proposed in the applicable Habitat Conservation Plan. PURCHASER shall notify STATE immediately if such Permits or licenses are revoked or suspended by the relevant government agency.

STATE may at any time require PURCHASER to satisfy STATE that Operations under this Contract comply with state, federal, and local laws, codes, regulations, and ordinances, including without limitation any Permit(s), license(s), or approval(s) issued thereunder. STATE may require PURCHASER to obtain a Permit, license, or approval from the governmental body or agency responsible for administering applicable laws before PURCHASER may begin or continue Operations under this Contract.

PURCHASER shall comply with all federal, state, and local laws, regulations, and ordinances applicable to this Contract or to PURCHASER's obligations under this Contract, as those laws, regulations, and ordinances may be adopted or amended from time to time. Without limiting the generality of the foregoing, PURCHASER expressly agrees to comply with the following laws and regulations to the extent they are applicable to the Contract: (i) the Oregon Forest Practices Act and all regulations promulgated pursuant thereto; (ii) all rules and regulations of the Oregon State Board of Health; (iii) all rules and regulations of the Oregon Environmental Quality Commission relating to the protection of soil, air, and water resources, and (iv) compliance with updated Federal Law Worker Protection Standards and applicable federal regulations related to the protection of workers, handlers and other persons from agricultural pesticides, including all required training for workers on state forestland.

Regarding pesticide application, it is the responsibility of the PURCHASER to ensure sufficient actions are taken to prevent any and all individuals from entering an Application Exclusion Zone. This includes federal regulations that require handlers of pesticides to temporarily suspend applications of pesticides if any worker or any person is in the treated area or an Application Exclusion Zone (zone or area surrounding pesticide application equipment). And includes federal requirements to display, maintain, and provide access to pesticide safety information and pesticide application and hazard information in accordance with federal regulations if workers or handlers are on an application area and within the last 30 days a pesticide product has been used or a restricted-entry interval for such pesticide has been in effect on an application area. PURCHASER shall bear the burden/costs associated with any such pesticide related delays.

In the performance of the Operations, PURCHASER shall use every reasonable and practicable means to avoid damage to property and injury to persons. The responsibility of PURCHASER stated herein shall cease upon the Operations being accepted as complete by STATE.

PURCHASER shall take all necessary precautions for the safety of all personnel in the Area(s) of Operations, and shall comply with the Contract and all applicable provisions of federal, state, and municipal safety laws or regulations designed to prevent accidents or injury to persons on, about, or adjacent to the Area(s) of Operations. PURCHASER shall erect and properly maintain at all times, as required by the conditions and progress of PURCHASER's Operations, all necessary safeguards for protection of workers and the public against any hazards created by the Operations. The STATE's Authorized Representative has no responsibility for safety in the Area(s) of Operations. Safety in the Area(s) of Operations is the sole responsibility of PURCHASER.

SECTION 1620. **Workers Compensation Insurance (ORS 279.320)**. PURCHASER shall perform the Operations in accordance with the requirements of the Workers Compensation Law of the State of Oregon during the term of this Contract. In addition, PURCHASER, its subcontractors, if any, and all employers providing work, labor, or materials under this Contract are subject employers under the Oregon Workers Compensation Law and shall comply with ORS 656.017 and 656.029, which requires them to provide workers compensation coverage that satisfies Oregon law for all their subject workers, unless such employers are exempt under ORS 656.126.

SECTION 1630. **Threatened and Endangered Species**. PURCHASER shall at all times observe and comply with all federal and state laws, including the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1536, 1538-1540), ORS 496.172 to 496.192 (Threatened and Endangered Wildlife Species), and ORS 564.100 to 564.135 (Threatened and Endangered Plants), and including lawful regulations and permits or approvals issued thereunder, as well as local bylaws, ordinances, and regulations, which relate to threatened or endangered plant or animal species while performing Operations under this Contract. PURCHASER understands and agrees that the obligations in this Section include an obligation to comply with the specific terms and conditions of any incidental take Permit(s) that has been issued to the STATE, and any incidental take Permit(s) that may be issued to the STATE during the term of this Contract.

SECTION 1640. **Identification and Protection of Cultural Resources**. PURCHASER acknowledges that Archeological or Historical Resources may exist within the Timber Sale Area, including within an Area of Operations, and that the existence and location of such Resources may be unknown at the time this Contract is executed. PURCHASER shall exercise due care in its Operations to ensure that in the event any such Resources are discovered in the course of or as a result of PURCHASER's Operations such Resources shall be preserved in accordance with the requirements of ORS Chapter 358. Upon discovery of any material suspected to be of Archeological or Historical significance within an Area of Operations, PURCHASER shall immediately halt Operations and shall notify STATE of the potential existence of such material. PURCHASER shall not remove or disturb the material, or resume Operations in the vicinity of the material, until instructed by STATE to do so.

SECTION 1650. **Protection of Soil, Air, and Water Resources**. PURCHASER shall comply with Oregon law, including the Oregon Forest Practices Act and rules promulgated thereunder, and with rules and regulations of the Oregon State Board of Health, the Environmental Quality Commission and other agencies relating to the protection of soil, air, and water resources.

SECTION 1660. **Tax Liability**. STATE makes no representations concerning tax liability or consequences arising from this sale of State timber. It is PURCHASER's sole responsibility to determine what tax liability may be incurred as a result of purchasing State timber, regardless of whether the State timber is growing or located on State-owned land or elsewhere. PURCHASER shall be responsible for paying all applicable timber harvest or severance taxes and shall indemnify and hold harmless the STATE against any tax claims arising from the purchase of State timber.

SECTION 1670. **Compliance with Tax Laws**. By execution of this Contract, the person signing this Contract on behalf of PURCHASER certifies, under penalty of perjury, that to the best of his or her knowledge, PURCHASER is not in violation of any Oregon tax laws. For purposes of this section, "Oregon tax laws" means those programs listed in ORS 305.380(4). Examples include the state inheritance tax, personal income tax, withholding tax, corporation income and excise taxes, amusement device tax, timber taxes, cigarette tax, other tobacco tax, 9-1-1 emergency communications tax, the elderly rental assistance program and local taxes administered by the Department of Revenue (Lane Transit District Self-Employment Tax, Lane District Employer Payroll Tax, Tri-Metropolitan Transit District Employer Payroll Tax, and Tri-Metropolitan Transit District Self-Employment Tax).

PAYMENTS

SECTION 1740. **Log Prices**. The following price schedule shall be designated as the "Purchase Price" and shall apply to all logs removed from Designated Timber. Payment shall be for net log scale, unless noted.

Log prices shall be:

MINIMUM BID:

	Species Category	Species Group	Species	Product	Grade	Volume	Diameter From	Diameter To	Length From	Length To	Price	UOM
Bid	Conifers	Douglas-fir	Douglas-fir			3833					$300.00	MBF
Bid	Hardwood	Red alder	Red alder			1482					$165.45	MBF
No-Bid	Conifers					664					$185.75	MBF
No-Bid	Conifers			Pulp		0					$1.00	TON
No-Bid	Conifers			Utility	SC	0					$150.00	MBF
No-Bid	Conifers			Utility	PC	0					$150.00	MBF
No-Bid	Conifers					0	0"	5"		23'	$100.00	MBF
No-Bid	Conifers	Cedar				0					$913.36	MBF
No-Bid	Conifers	Spruce				0					$138.36	MBF
No-Bid	Hardwood					113					$1.96	MBF
No-Bid	Hardwood			Pulp		0					$1.00	TON

All Utility logs are set at price above, which means material will be charged at the highest rate for that species.

Contingent Price Adjustment. As provided in Section 1020, "Sale of Timber," it is the policy of the State of Oregon, in accordance with the terms of current federal law and the Constitution and the laws of the State of Oregon, that unprocessed timber shall not be exported from lands owned or managed by the State or any of its political subdivisions or agencies. PURCHASER specifically agrees that Section 1020, "Sale of Timber," is a material term of this Contract and is part of the consideration offered to STATE in return for STATE's performance. In the event that any federal law or state constitutional provision or law or any provision of this Contract concerning export of unprocessed timber is declared invalid by any court or administrative tribunal, PURCHASER agrees to pay to STATE, in addition to the Purchase Price, an incremental amount equal to the difference between the Purchase Price set forth in this section and any higher price obtained by PURCHASER for the exported unprocessed timber.

The default provisions of OAR 629-032-0000 through 629-032-0070 shall not apply to exported unprocessed timber. In the event that timber made available under this Contract is exported in violation of this Contract, PURCHASER shall be in material breach of the Contract. In such event, STATE shall be entitled to cease performance of the Contract and bar PURCHASER from the Timber Sale Area, and shall recover, in addition to the Purchase Price and additional increment set out above, a further sum estimated by STATE to compensate for administrative expense and the economic impact of the violation upon the State and its citizens. In no case shall this additional amount be less than $10,000 per incident.

SECTION 1751. **Payment Schedule**. The Total Purchase Price for timber sold under this Contract shall be paid in advance as follows:

The first payment shall be paid within 30 days of the notice of intent to award or before beginning Operations, whichever occurs first. The first payment shall be 10 percent of the Total Purchase Price. The total estimated bid value shall be the sum obtained by multiplying the estimated timber volumes or weights by the Purchase Prices given in Section 1740, "Log Prices," less the value of the Project Work. Cash bid deposits shall be applied to the initial payment.

Subsequent payments shall be made in advance of timber removal when log hauling begins. Each payment shall be made before the value of timber removed equals one-half of an advance payment or within the time period stated on the billing if PURCHASER is more than one-half of a payment in advance. The amount of each advance payment shall be calculated by dividing the total estimated bid value less the initial payment by 15 with the total estimated bid value being the sum obtained by multiplying the estimated timber volumes by the Purchase Prices given in Section 1740, "Log Prices," less the value of the Project Work.

In addition, and notwithstanding the above schedule, a minimum of 50.00 percent of the estimated bid value is required and shall be paid on or before 07/22/2028.

STATE may accept partial payment, upon written request, if logging is inactive. However, the full amount of advance payment must be paid before Operations resume. Partial payment must be sufficient to maintain a payment deposit equal to one-half of a regular advance payment.

The Total Purchase Price shall be calculated after all log scale or weight is reported by multiplying prices in Section 1740, “Log Prices, “ by the scaled or weighed volume. STATE shall refund any advance payment in excess of the Total Purchase Price, or PURCHASER shall pay any deficit within thirty (30) days of notice. PURCHASER’s Deposit Account shall not accrue interest payable to PURCHASER.

SECTION 1760. **Payments and Interest**. Payments required of PURCHASER by this Contract or modifications of this Contract must be received by STATE within the time period stated on the instrument requesting payment from PURCHASER.

Payments received after the due date stated on the billing instrument may be subject to an interest charge. The interest rate shall not be less than the established minimum state rate on delinquent accounts. The interest rate applied to overdue payments shall be in accordance with ORS 82.010. ORS 82.010 mandates the collection of interest at the annualized rate of 9 percent. Interest shall be calculated from the original billing due date to the date payment is received by the State Forester.

PART II: SPECIFICATIONS

ACCOUNTABILITY

SECTION 2015. **Log Accountability and Log Load Receipts - Sawlogs**.

Load Receipt Books. STATE shall issue to PURCHASER sufficient books of serially numbered pink Log Load Receipts to cover up to 30 days of operation, as determined by STATE. PURCHASER shall sign a receipt for each book of receipts and be fully accountable for all serially numbered Woods Receipt and Scaler Receipt tickets. PURCHASER shall retain all Woods Receipts in each book for 60 days after use. Unused books or portions of books shall be returned to STATE during periods of inactivity lasting over 30 days, and at the completion of timber removal from the Timber Sale Area.

Completion of Load Receipts. PURCHASER shall completely and accurately fill out all portions of the Log Load Receipt before each truck leaves the Landing area. PURCHASER shall require the truck driver of each load of logs to sign the Woods Receipt. PURCHASER shall staple the Load Receipt and Scaler Receipt parts to the load as instructed on the Log Load Receipt directions and as directed by STATE before each truck leaves the Landing area.

PURCHASER shall require the scaler to record the Log Load Receipt number on the scale ticket that is signed by the scaler, attach the Scaler Receipt part to a copy of the scale ticket, and mail the scale ticket with the attached receipt to STATE on the date scaled.

PURCHASER shall account for each and every serially numbered Log Load Receipt. For all Log Load Receipts not accounted for by proof of scaling, STATE shall determine if unaccounted tickets are to be voided or if PURCHASER shall pay damages to STATE. Damages shall consist of full value for each missing receipt, on the basis of the average value of the 10 highest value loads of logs scaled from the Timber Sale Area, or Scaling Location, as determined by STATE.

PURCHASER shall not intermingle STATE timber or logs designated by this Contract with any other timber or logs before log scaling occurs, unless otherwise approved by STATE.

Delivery Destination and Transfer of State Timber. Prior to conveying unprocessed timber sold under this Contract to a delivery destination or prior to selling, trading, exchanging, or otherwise conveying unprocessed timber sold under this Contract to any other person, PURCHASER must first complete an Exhibit C form selecting a delivery destination from the STATE approved scaling locations. All STATE approved scaling locations are eligible to receive unprocessed STATE timber by adhering to the terms and conditions contained in OAR 629-031-0005 through 629-031-0045.

SECTION 2016. **Log Accountability and Log Load Receipts - Pulp Logs**.

Load Receipt Books. STATE shall issue to PURCHASER sufficient books of serially numbered yellow Log Load Receipts to cover up to 30 days of operation, as determined by STATE. PURCHASER shall sign a receipt for each book of receipts and be fully accountable for all serially numbered Woods Receipt and Scaler Receipt tickets. PURCHASER shall retain all Woods Receipts in each book for 60 days after use. Unused books or portions of books shall be returned to STATE during periods of inactivity lasting over 30 days, and at the completion of timber removal from the Timber Sale Area.

Completion of Load Receipts. PURCHASER shall completely and accurately fill out all portions of the Log Load Receipt before each truck leaves the Landing area. PURCHASER shall require the truck driver of each load of logs to sign the Woods Receipt. PURCHASER shall staple the Load Receipt and Scaler Receipt parts to the load as instructed on the Log Load Receipt directions and as directed by STATE before each truck leaves the Landing area.

PURCHASER shall require the weigher to sign the machine-printed weight receipt and record the Log Load Receipt number on the weight receipt. The weigher shall mark the delivery location identification on the Scaler Receipt part, attach the weight receipt to it and mail it to the designated Third-Party Scaling Organization (TPSO) weekly.

PURCHASER shall account for each and every serially numbered Log Load Receipt. For all Log Load Receipts not accounted for by proof of scaling, STATE shall determine if unaccounted tickets are to be voided or if PURCHASER shall pay damages to STATE. Damages shall consist of full value for each missing receipt, on the basis of the average value of the 10 highest value loads of logs weighed, from the Timber Sale Area, or Scaling Location, as determined by STATE.

PURCHASER shall not intermingle STATE timber or logs designated by this Contract with any other timber or logs before log weighing occurs, unless otherwise approved by STATE.

Delivery Destination and Transfer of State Timber. Prior to conveying unprocessed timber sold under this Contract to a delivery destination or prior to selling, trading, exchanging, or otherwise conveying unprocessed timber sold under this Contract to any other person, PURCHASER must first complete an Exhibit C form selecting a delivery destination from the STATE approved scaling locations. All STATE approved scaling locations are eligible to receive unprocessed STATE timber by adhering to the terms and conditions contained in OAR 629-031-0005 through 629-031-0045.

SECTION 2020. **Log Measurement - Sawlogs**.
Scaling Locations, Rules, and Organizations: All saw logs from timber sold under this Contract shall be: (1) scaled at a location approved in writing by STATE; (2) scaled by a Third-Party Scaling Organization that is a party to a current agreement with STATE; and (3) scaled using the Official Log Scaling and Grading Rules (as adopted by the Northwest Log Rules Advisory Group) and STATE special service scaling instructions in effect at the time the logs are scaled. Utilization scale shall be handled in accordance with Section 2055, "Utilization Scale."

Upon loading at the Timber Sale Area, a log load shall be directly hauled to an approved scaling location, if required to be scaled. Log loads shall not be stored for late delivery without written approval from STATE.

PURCHASER shall enter into a written agreement with a Third-Party Scaling Organization for the scaling of saw logs removed from the Timber Sale Area (the "Scaling Agreement"). PURCHASER shall furnish STATE with a copy of the Scaling Agreement upon request. If logs are delivered when a TPSO scaler is not present, PURCHASER must provide STATE with a method to assure protection and accountability.

Unless other arrangements have been made through a Log Yard Agreement between PURCHASER and STATE, PURCHASER shall provide STATE with remote check scaling opportunities for logs scaled or weighed under this Contract. The last two loads at each delivery point shall be continuously available for checking. They shall remain available for a minimum of 48 hours unless replaced by other STATE loads. They shall be available as originally presented for scaling; i.e., if truck scaled or if the load was weighed, they shall be presented in bunks.

In the event scaling is suspended for any reason, hauling Operations shall be immediately suspended until approved alternate scaling services are provided, or service by the scaling organization is resumed.

Accountability Violations - Scaling Ramp Requirement. If PURCHASER violates any of the log accountability requirements of this Contract, STATE may require all logs from timber sold under this Contract to be scaled at a ramp provided by PURCHASER, in a location designated by STATE. All costs associated with this additional scaling requirement shall be paid by PURCHASER.

Cost of Scaling. All costs of scaling and all costs in connection with reports furnished to STATE shall be paid by PURCHASER.

The Scaling Agreement shall provide, and PURCHASER shall require, that the scaling organization furnish copies each week to STATE, of all scaled certificates showing gross and net volumes, by species and grade, of all logs scaled during the week. Upon request by STATE, PURCHASER shall also require the scaling organization to furnish and attach a log detail listing to each weekly scale certificate showing all STATE logs included on the certificate.

Scaling Instructions. The Scaling Agreement shall authorize STATE to provide instructions to the approved Third-Party Scaling Organization for the scaling practices to be used for timber removed from the Timber Sale Area. Instructions shall conform to the terms of this Contract, including special scales, as necessary. PURCHASER shall acknowledge and sign such instructions and shall be provided a copy.

Minimum Products Specifications and Special Scale information are shown on Exhibit C.

Logs Damaged During Handling. Mechanical damage to logs shall be prevented during log handling. Deductions for handling damage shall not be allowed.

Add-Back Volume. Scaling deduction for deterioration due to delay in removal of logs from the Timber Sale Area shall not be allowed in determining net volume. Volume of material deteriorated due to delay in removal shall be reported to STATE and paid for at the Purchase Price. Any cost for separate reports shall be paid by PURCHASER.

Special Scaling Instructions. Segment scaling or grading of logs in excess of 40 feet in gross scaling length shall use actual taper. Procedures are set forth in "Segment Scaling and Grading of Long Logs - All Species - State Forestry Department Scaling Instructions" (Westside).

Weight Scale Sample. STATE may approve weight scale sample of hardwood and/or conifer logs in lieu of 100% roll out log scaling to measure the timber sold by this Contract. Sample shall be by delivery location and have a minimum volume of 500 MBF. If weight scale sample is selected for a location, mixed loads shall be 100% scaled and all loads of the sample species delivered from this contract to that location shall be on sample until the sample is cancelled. Weight scale sample scale loads shall be ground scaled. Multiple sample sorts per delivery location may be approved by STATE. All loads shall be weighed. The scales shall be STATE certified and sealed. The gross weight and the truck tare weight for each load shall be machine printed on the weight receipt. When a gross or tare weight is missing damages shall consist of full value of each load, on the basis of the average value of the 10 highest value loads of logs scaled from the Timber Sale Area, or the average value of the 10 highest value loads of logs scaled at a Scaling Location, as determined by STATE.

The sample scale rate shall be 1 in 5. Sample selection shall be by electronic sample selection or frequency cards. Electronic sample selection may be used if approved by STATE. Frequency cards shall be provided by PURCHASER and shall be operated by a Third-Party Scaling Organization or PURCHASER appointed weighmaster as approved by STATE. PURCHASER shall ensure that STATE approved electronic sampling system or frequency cards matching Log Load Receipt Books are in place prior to hauling. The expansion load list size shall be 20 loads. Load expansion shall be performed by a Third-Party Scaling Organization that is a party to a current agreement with STATE.

An expansion load list shall be established before sampling begins. For each load that is weighed and not scaled before an expansion load list is established damages shall consist of full value for each load weighed and not scaled, on the basis of the average value of the 10 highest value loads of logs scaled from the Timber Sale Area, or the average value of the 10 highest value loads of logs scaled at a Scaling Location, as determined by STATE.

STATE may cancel weight scale sample at any time.

SECTION 2025. **Log Measurement - Pulp Logs**. All pulp logs shall be weighed at a location approved in writing by STATE. PURCHASER shall require the gross weight and the truck tare weight for each load to be machine printed on the weight receipt. PURCHASER shall also require the weigher to sign the weight receipt and record the Log Load Receipt number on the weight receipt. PURCHASER shall require that the Pulp facility furnish copies of all weight receipts to STATE on a weekly basis, with summaries for all truck loads delivered.

Upon loading at the Timber Sale Area, a log load shall be directly hauled to an approved Pulp facility. Log loads shall not be stored for late delivery without written approval from STATE.

Accountability Violations: If PURCHASER violates the STATE definition of approved Pulp sort in Exhibit C, STATE may require a TPSO to inspect each Pulp load prior to weighing.

PURCHASER shall enter into an agreement with a Third-Party Scaling Organization for the processing of the weight receipts.

Unless other arrangements have been made through an agreement between PURCHASER and STATE, PURCHASER shall provide STATE with remote check scaling opportunities for logs weighed under this Contract. The last two loads at each delivery point shall be continuously available for checking. They shall remain available for a minimum of 48 hours unless replaced by other STATE loads. They shall be available as originally presented; i.e., if the load was weighed, they shall be presented in bunks.

Weighing Instructions. STATE will provide instructions to the approved Pulp facility for the practices to be used for Pulp logs removed from the Timber Sale Area. Instructions will conform to the terms of this Contract. PURCHASER shall acknowledge and sign such instructions and shall be provided a copy.

Minimum Products Specifications and Weight information are shown on Exhibit C.

SECTION 2030. **Log Branding and Painting - Sawlogs**. Unless approved in writing in advance by STATE, at least one end of every saw log removed from the Timber Sale Area shall be both clearly hammer branded and painted with a minimum 2-inch diameter spot of orange paint. PURCHASER shall use only those brands issued by STATE for use on timber sold under this Contract. Only those brands issued by STATE for use on timber sold under this Contract shall be allowed on the Areas of Operations at any time.

In addition, PURCHASER shall brand and paint all logs left singly or in decks along rights-of-way, and shall brand and paint one end of all logs yarded and left on Landings after termination of Operations each day.

PURCHASER shall make every effort to remove logs from roads and Landings within a reasonable period of time, and agrees to notify STATE in advance if it intends to leave logs decked along roads or on Landings for more than 96 hours. STATE may scale such decked logs, and PURCHASER shall be responsible for the costs of such scaling and for any loss due to theft or deterioration. STATE may issue PURCHASER one or more branding hammers registered to STATE. PURCHASER shall sign a receipt for all branding hammers registered to STATE and issued to PURCHASER, and will return them in good condition within 14 calendar days following completion of log hauling. PURCHASER shall pay a fee of $100 to STATE for each branding hammer returned to STATE in damaged or repairable condition, or $500 for each branding hammer not returned within the time specified by STATE, or returned in unrepairable condition. PURCHASER may replace damaged branding hammer handles, but only with 24" wooden handles, or with handles approved by STATE.

If properly marked timber is subdivided into smaller pieces for any other purpose than immediate processing, each piece shall be branded with a STATE brand specifically used for this purpose, signifying the logs are State timber and ineligible for export. Additional branding hammers registered to STATE, to be used for this purpose, may be obtained from STATE upon request, at cost.

SECTION 2031. **Log Branding - Pulp Logs**. At least 4 logs on each Pulp load removed from the Timber Sale Area shall be clearly hammer branded. PURCHASER shall use only those brands issued by STATE for use on timber sold under this Contract. Only those brands issued by STATE for use on timber sold under this Contract shall be allowed on the Areas of Operations at any time.

Logs that do not meet the Contract definition for Pulp and do not meet the definition of a saw log in the Official Log Scaling and Grading Rules published by the Northwest Log Rules Advisory Group shall be decked separately from all other logs for inspection by STATE. Utility logs approved for removal as Pulp will be marked by STATE with blue paint. **PURCHASER shall not possess any blue paint on the Timber Sale Area.**

STATE may issue PURCHASER one or more branding hammers registered to STATE. PURCHASER shall sign a receipt for all branding hammers registered to STATE and issued to PURCHASER, and will return them in good condition within 14 calendar days following completion of log hauling. PURCHASER shall pay a fee of $100 to STATE for each branding hammer returned to STATE in damaged and repairable condition, or $500 for each branding hammer not returned within the time specified by STATE, or returned in unrepairable condition. PURCHASER may replace damaged branding hammer handles, but only with 24" wooden handles, or with handles approved by STATE.

SECTION 2035. **Hauling and Operating Time Restrictions**. PURCHASER shall comply with the following requirements for hauling and operating time restrictions, unless otherwise approved in writing by STATE:

PURCHASER shall not haul logs from the Timber Sale Area on weekends, the following State-observed holidays: New Year's Day, Independence Day, Thanksgiving Day, and Christmas Day, or outside the hours of 3:00 a.m. to 6:00 p.m. daily without notification to and prior approval by STATE.

SECTION 2045. **Log Removal**. All logs defined below, except those specified in Sections 2220 through 2250, "Reserved Timber," shall be removed as Designated Timber under this Contract, at prices given in Section 1740, "Log Prices":

(a) Any conifer log that conforms with grading rules for peeler or sawmill grades and meets or exceeds both of the following minimum requirements: 6 inches in gross scaling diameter, containing 20 board feet (net).

(b) Any hardwood log that conforms with grading rules for No. 4 Alder log grade or better and meets or exceeds both of the following minimum requirements: 6 inches in gross scaling diameter, containing 20 board feet (net).

(c) Any Pulp log that is yarded to the Landing.

For purposes of log removal requirements, minimum net log volume shall be determined by the net volume of the full log length rather than the volume of individual segments.

Other logs may be removed from Designated Timber under this Contract at prices given in Section 1740, "Log Prices."

Log grades are defined in the Official Log Scaling and Grading Rules published by the Northwest Log Rules Advisory Group in effect at the time logs are scaled.

PURCHASER shall not deliberately buck logs to reduce log sizes to less than minimum requirements for log removal, and shall take reasonable precautions to prevent breakage losses in felling and Yarding.

SECTION 2055. **Utilization Scale**. STATE shall scale logs or portions of logs that are broken, wasted, or not removed by PURCHASER due to: (1) improper felling or bucking of the logs; (2) failure to remove the logs prior to deterioration; and (3) logs remaining on the Timber Sale Area after completion of logging, provided the logs were merchantable prior to breakage or wastage. Material used to meet down material requirements in Sections 2220 through 2250, "Reserved Timber," shall not be considered for Utilization Scale. PURCHASER shall pay for the logs at the Purchase Price designated in Section 1740, "Log Prices." STATE shall notify PURCHASER of the volume of logs so scaled. Payment shall be considered due on such volume as if the logs were removed on the date of said notification.

In the event PURCHASER disagrees with the findings made by STATE under this section, PURCHASER may furnish scaling by a Third Party Scaling Organization acceptable to STATE. Costs and expenses of such third party shall be paid for by PURCHASER, and the findings of the third party shall be final.

SECTION 2060. **Special Products**. "Special products" are any products not in log form manufactured from material having a price, or listed as "No Charge," under the Contract. PURCHASER shall not sell special products from the Timber Sale Area, or allow firewood, shake, or post cutting, or any other special product manufacturing on the Timber Sale Area without prior written approval of STATE.

ACCESS AND ROAD MAINTENANCE

SECTION 2120. **Access**. PURCHASER shall use the roads shown on Exhibit A for access to the Timber Sale Area and Project Locations. If gate keys are required to access the Timber Sale Area, they can be obtained at the ODF District Office by a designated PURCHASER's Authorized Representative. Any keys not returned at the completion of all operations under this contract shall be subject to a fee of $250 per key not returned. If PURCHASER desires to use an alternative route, it shall be PURCHASER's responsibility to secure that access and obtain STATE approval for the route. The use of access roads shall be limited to that necessary to carry out the terms and provisions of this Contract. Except as otherwise provided for in this Contract, PURCHASER shall have the right of access over, in, and through the Timber Sale Area for the purpose of cutting and removing timber or performing other Operations. PURCHASER, in so using, improving, or constructing roads, shall at no time have an interest in the land, other than the temporary right of access during the term of the Contract.

PURCHASER shall comply with all applicable terms and conditions, including payment of any fees, of any access documents set forth in the provisions of this Contract, which are by this reference made a part of this Contract. The following access documents pertain to this Contract.

Access Easement. PURCHASER's use of any road listed below is subject to an easement by and between the parties named below; which may include requirements to furnish evidence of insurance coverage, performance bond, entering into a third party agreement, maintenance, or other actions. STATE shall provide copies of easements or agreements when this Contract is executed.

Portions of Spruce Run Road, Quartz Creek Road, North Fork Cronin Creek Road, and 108 Road. Easement (#311.37080) dated October 31 1979, by and between the State of Oregon, Board of Forestry, Ruth Realty Company, and Burling Northern Inc., as amended November 25, 1986. This Easement requires maintenance, insurance, and notification to the landowner not less than 15 days prior to commencement of use with approximate dates of use, approximate volumes of haul, and notification of completion of use. Current landowner: Weyerhaeuser Timber Holdings, Inc.

Access Permit/Agreement PURCHASER's use of portions of Spruce Run Road, Quartz Creek Road, North Fork Cronin Creek Road, 108 Road, Four Seven Ridge Road, and construction of new spur roads and landings is subject to a Permit/agreement (#314.041138), which PURCHASER shall complete with WEYERHAEUSER TIMBER HOLDINGS, INC. STATE shall provide a sample form and PURCHASER shall furnish a copy of the executed document to STATE within 10 days of its completion. This Permit/agreement requires maintenance, insurance, and payment of $14,144.78.00 as a road use fee.

Access Permit/Agreement PURCHASER's use of portions of Spruce Run Road and Four Seven Ridge Road is subject to a Permit/agreement (#314.041139), which PURCHASER shall complete with Stimson Lumber Company. STATE shall provide a sample form and PURCHASER shall furnish a copy of the executed document to STATE within 10 days of its completion. This Permit/agreement requires maintenance, insurance, and a payment of $2,176.08 as a road use fee.

Log haul is restricted to the Designated Haul Route as shown on the Exhibit "A", unless otherwise approved in writing by STATE.

Log haul from Units 2 and 3 are not permitted to haul out Spruce Run Road to Lower Nehalem County Road and must haul out Quartz Creek Road to Highway 26.

SECTION 2130. **Road Maintenance**. PURCHASER is responsible for normal road maintenance on roads used for any activity under this Contract. Normal road maintenance shall provide for safe forest driving conditions, continuous access and road use, protection of roads from damage, water quality, and compliance with all applicable laws.

PURCHASER's responsibility for normal road maintenance commences with PURCHASER's first use of a road for any activity under the Contract period and shall continue until final acceptance of the maintenance is made by STATE. In addition, PURCHASER is responsible for normal road maintenance needs that are caused by public use of the roads.

If other parties are authorized under Section 1330, "Conditions of Areas of Operations," to use roads in the Timber Sale Area, PURCHASER and each party so authorized shall be responsible for a proportionate share of normal maintenance, based upon the ratio of each party's use to total road use, as determined by STATE.

STATE will determine when maintenance is needed and will issue instructions to PURCHASER specifying work to be done and the date by which it must be completed.

"Normal road maintenance" shall include any action needed to prevent and protect the road from soil contamination, seasonal weather damage, protect water quality, repair damage caused by road use, and restore the road to at least the road condition at commencement of use, including, but not limited to:

(a) Cut Banks and Fill Slopes.

(1) Remove Slash created by Operations.

(2) Remove obstructions and fallen timber.

(3) Restore stability impacted by Operations.

(4) All cut bank and fill slope maintenance work shall be performed in such a manner that soil and vegetative material does not contaminate the road surface.

(b) Ditches.

(1) Remove bank slough, minor slides, and obstructions.

(2) Remove Slash created by Operations.

(3) Restore to functional drainage.

(4) Minimize erosion and/or sediment delivery by placement and maintenance of filtering systems.

(5) Soil and vegetative material shall not be pulled across the road surface.

(c) Drainage Systems.

(1) Clear all culverts, including inlets, outlets, half rounds, rocked ditch filters, and sediment catching basins.

(2) Maintain waterbars, drainage dips, and other water diversion measures.

(3) During active use, patrol and maintain functional drainage.

(4) Repair damaged culvert ends.

(d) Road Surfaces.

(1) Grade, shape, crown, and/or outslope surface and shoulders at such time that the moisture content will bind the rock surfacing. Rip potholes prior to grading, then compact in accordance with Exhibit D "Compaction and Processing Requirements."

(2) Provide leveling, patching, and/or reinforcement rock for restoring purposes.

(3) Prevent contamination of road surface materials with soil and vegetative material.

(4) Prevent road surface materials from being bladed off the road.

(5) Temporarily cease road use to prevent and/or protect the road during adverse weather conditions. Examples of adverse weather conditions are freezing and thawing cycles, high soil moisture caused by rainfall events, and accumulation of snow that requires removal to continue hauling activity.

(6) Hauling will not be allowed when the total rainfall exceeds 1 1/2" in a 24 hour period or 2" in a 48 hour period at a specified rain gauge identified in the Operations Plan or as otherwise specified by STATE.

At the conclusion of Project Work as well as log hauling Operations, PURCHASER shall process and compact crushed rock surfacing on all roads used for hauling under this Contract, unless otherwise determined in writing by STATE.

For maintenance on STATE roads, PURCHASER may use rock obtained from stockpiles on STATE land, or other locations as specified by STATE. Prior to any rock spreading, PURCHASER shall obtain approval from STATE.

“Adverse maintenance” is defined as repair work of damage resulting from PURCHASER’s failure to comply with “normal road maintenance,” as determined by STATE. STATE may require PURCHASER to perform “adverse maintenance.” STATE will specify rock type needed for repairs. The required rock shall be from STATE approved, private rock sources, at PURCHASER’s expense. “Adverse maintenance” is determined by STATE, and shall not be subject to Section 1550, “Adjustment of Contract.”

"Extraordinary maintenance" is defined as major repair work and/or damage caused by acts of God or causes beyond the control of PURCHASER, as defined in Section 1550, "Adjustment of Contract." STATE may require PURCHASER to perform extraordinary maintenance in addition to normal road maintenance. STATE shall describe the amount and specifications of work to be done in writing and make adjustments in the Contract in accordance with Section 1550, "Adjustment of Contract."

TIMBER SALE AREA

SECTION 2210. **Designated Timber**. The timber is located on the Timber Sale Area designated on Exhibit A.

In accordance with Section 1020, "Sale of Timber," the following is Designated Timber, except as excluded by Sections 2220 through 2250, "Reserved Timber," and may be removed by PURCHASER in accordance with the terms and conditions of this Contract:

(a) All timber cut in accordance with the specifications in Section 2310, "Felling," within the Timber Sale Area and for Project Work in Section 2610.

(b) PURCHASER shall not use or possess any blue paint on the Timber Sale Area.

SECTION 2220. **Reserved Timber**. Reserved Timber is that timber, including trees, Snags, and logs, on the Timber Sale Area which is not sold to PURCHASER. Reserved Timber shall not be damaged, cut, or removed by PURCHASER, unless otherwise approved in writing by STATE. Failure to leave the required Reserved Timber shall be handled as described in Section 2260, "Reserved Timber - Damages."

SECTION 2230. **Reserved Timber - Down Material**. PURCHASER shall comply with the following requirements for reserved timber - down material, unless otherwise approved in writing by STATE:

(a) Down trees and logs, except those meeting the removal requirements in Sections 2045. "Log Removal."

(b) In each clearcut unit, retain at least 600 cubic feet of hard conifer logs per acre. Logs shall contain a minimum of 10 cubic feet of volume, and be no shorter than 6 feet in length, to be selected by PURCHASER. Two logs per acre shall be at least 24 inches in diameter, at the large end where available. Conifer logs must be in Decay Class 1 or 2 condition as indicated by intact bark and original wood color. Trees and/or logs shall be well distributed across the Timber Sale Units.

SECTION 2240. **Reserved Timber - Trees and Snags**. PURCHASER shall comply with the following requirements for reserved timber - trees and snags, unless otherwise approved in writing by STATE:

(a) All Snags unless determined to be a safety hazard. Felled Snags shall not be yarded or removed.

(b) Trees less than 6 inches DBH and not meeting the removal requirements in Section 2045. "Log Removal."

(c) Trees within Stream Buffers. Trees may be felled in cable corridors but not removed.

(d) All Cedar trees except those within rights-of-way, skid roads, cable corridors, waste areas, and landings.

(f) Trees and Snags within the Reserve Tree Areas shown on Exhibit A.

(e) All conifer trees within the Conifer Retention Area shown on Exhibit A.

(g) Trees and Snags marked "W" with blue paint.

SECTION 2250. **Reserved Timber - Boundary Trees and Markings**. PURCHASER shall comply with the following requirements for reserved timber - boundary trees, unless otherwise approved in writing by STATE:

(a) Trees posted with "Timber Sale Boundary" or "Buffer Zone" signs are reserved from cutting.

(b) Trees posted with "Right-of-Way Boundary" signs within Unit 4 R/W shall not be cut until road subgrade construction is accepted by STATE.

Boundary marking are as follows:

(1) The Timber Sale Area is posted with "Timber Sale Boundary" signs, and pink "Timber Harvest Boundary" flagging.

(2) Unit 4 R/W is posted with "Right-of-Way Boundary" signs.

(3) The Stream Buffer is posted with "Buffer Zone" signs and pink flagging.

(4) Reserve Tree Areas are posted with "Reserve Tree Area" signs and pink flagging.

SECTION 2260. **Reserved Timber - Damages**. PURCHASER shall be exclusively responsible for any damage to, or removal of, Reserved Timber. If damage to Reserved Timber occurs and is determined unavoidable by STATE, no charge will be made for damage.

If PURCHASER's activities result in avoidable damage to Reserved Timber as determined by STATE, PURCHASER shall pay for such damage at the following rates:

(a) The Purchase Price shall be paid when:

(1) "Minor damage" to Reserved Timber occurs during the course of normal logging. Minor damage is defined as bark removed down to the cambium layer of a tree, such removal affecting at least 24 square inches, but less than damage defined as "major damage."

(2) Trees must be cut in order to facilitate Operations, or for safety around Landings, as approved in writing by STATE.

(b) Double the Purchase Price or $50, whichever is greater, shall be paid when:

(1) "Major damage" to Reserved Timber is caused by Operations of PURCHASER. Major damage is defined as follows:

Bark removed down to the cambium layer over an area of the bole which has one dimension greater than the diameter of the tree, or any visible bark removal on the tree roots.

(2) More than 50 percent of live crown is removed.

(3) Tree is knocked down or leaning more than 10 degrees from vertical.

(c) Triple the Purchase Price or $100, whichever is greater, shall be paid when:

(1) Reserved Timber is intentionally cut or removed.

(2) Reserved Timber is intentionally damaged.

(3) Repeated major damage occurs to Reserved Timber.

(4) Any intentional "notching" or undercutting of Reserved Timber with an axe or saw occurs.

STATE may direct damaged timber to be left. In that case, payment for damage shall be reduced by the Purchase Price of such timber.

Payment for damage to or removal of Reserved Timber shall not release PURCHASER from liability for other damage to property of STATE.

If more than 5 reserved trees on any acre suffer "minor damage," or if any Reserved Timber suffers "major damage" as defined above, STATE reserves the right to Suspend felling and/or Yarding until corrective measures have been agreed upon by STATE and PURCHASER.

HARVESTING OPERATIONS

SECTION 2310. **Felling**. PURCHASER shall comply with the following requirements for felling, unless otherwise approved in writing by STATE:

(a) Prior to felling in the Timber Sale Area, PURCHASER shall arrange to have all the fallers who will work in the Timber Sale Area meet with STATE to review the requirements specified in Section 2310, "Felling," and Sections 2220 through 2250, "Reserved Timber." PURCHASER shall give STATE 48 hours advance notice before starting a new faller on the Timber Sale Area to allow STATE the opportunity to brief the faller on these sections.

(b) Fell all trees and Snags within "Right-of-Way Boundary" signs or marked "C" with orange paint.

(c) Bearing witness trees in modified clearcut units shall be cut above any scribing or as marked.

(d) Fell all trees on the Timber Sale Area which contain a log segment that meets or exceeds the minimum removal specifications in Section 2045, "Log Removal," except those designated as "Reserved Timber" in Sections 2220 through 2250. This requirement also applies to brushy species such as vine maple, cascara, cherry, and willow.

(e) Trees and Snags that will damage roads shall be felled prior to road construction or improvement.

Trees shall not be felled across Timber Sale Unit boundaries, unless authorized in writing by STATE. Any trees that fall across Timber Sale Unit boundaries shall be yarded back into the Timber Sale Unit prior to limbing or topping.

PURCHASER shall employ the following timber cutting practices on the Timber Sale Area(s), unless otherwise approved by STATE:

(1) Trees shall be felled to the longest lay, using the necessary means (wedging, jacking, etc.), favoring a quartering uphill lead.

(2) Trees shall not be felled across draws, over ridges, or across previously felled trees.

(3) Maximum stump height shall be 10 inches or 60 percent of stump diameter, whichever is greater, unless otherwise approved by STATE. Heights shall be measured on the uphill side.

(4) For the purposes of slash management, all logs being yarded to Landing 1B shall be limbed and topped prior to yarding unless a plan is submitted in writing by PURCHASER to otherwise mitigate slash accumulations that has been approved by STATE.

Section 2330. Controlled Felling Area.
In addition to the felling requirements in Section 2310, “Felling,” PURCHASER shall use controlled felling in the “Controlled felling Area” shown on Exhibit A. Controlled felling may include line felling, tree jacking with hydraulic rams, or any other method approved by STATE.

SECTION 2345. **Substitution of Trees**. PURCHASER shall leave acceptable substitute trees as approved by STATE for any Reserved Timber which must be cut to facilitate logging (i.e., cable corridors, Landings, or skid trails) or to resolve safety problems pursuant to Section 1610, "Permits; Licenses; Safety" (i.e., danger trees, Guyline trees, hang-ups).

An acceptable substitute tree is defined as any sound, live-topped tree that is similar in characteristics (species, diameter class, height, etc.) to a Reserved tree that must be cut.

STATE reserves the right to require PURCHASER to:

(a) Leave substitute trees of a different species; and

(b) Leave substitute snags for painted or posted reserved snags that must be cut.

Substitution of trees without approval of STATE is prohibited. Any Reserved Timber cut without approval by STATE shall be paid for in accordance with Section 2260, "Reserved Timber- Damages."

SECTION 2350. **Cable Yarding Specifications**. Yarding systems shall be designed to minimize soil disturbance and damage to Reserved Timber. PURCHASER shall use cable Yarding, except as approved by STATE in the Operations Plan. PURCHASER shall comply with the following when Yarding the Timber Sale Area, except as approved by STATE in the Operations Plan:

(a) Logs shall have at least one end suspended when Yarding.

(b) Logs shall be fully suspended when Yarding over Equipment Restriction Zones.

(c) When cables pass through or over the Stream Buffers shown on Exhibit A, all necessary precautions shall be taken to protect all Stream Buffer components.

Necessary measures include, but are not limited to, the following:

(1) Pull cables out of the Reserved Timber prior to rigging the next Yarding road.

(2) Yarding roads shall be at least 100 feet apart and no more than 15 feet wide where they extend over or through the buffer.

(d) Soil gouging shall be limited to a depth of one foot.

(e) If Tailhold or Guyline trees outside of the Timber Sale Area are necessary to facilitate Yarding Operations, PURCHASER shall acquire written approval from STATE prior to their use. Upon approval, PURCHASER shall clearly mark each tree and take precautions to prevent damage to said trees including, but not limited to:

1) Using trees near the timber sale boundary that can be felled and yarded without causing damage to Reserved Timber.

2) Using tree plates, tires, or other suitable materials between cable straps and the tree to prevent scarring the tree.

3) Limiting notching of the tree – to prevent strap slippage – to less than 25 percent of the circumference of the tree, unless the tree has been approved to be cut and removed.

If the above precautions are followed, payment for such tree shall not be required, except for trees removed per Item 1 above, which shall be paid for at single the Purchase Price, as specified in Section 2260, “Reserved Timber – Damages.”

If the above precautions are not followed and activities result in damaging 50 percent or more of the circumference of such trees, damage shall be considered avoidable. Payment shall be at the rate of triple the Purchase Price, as specified in Section 2260, “Reserved Timber – Damages.”

In addition, if Operations of PURCHASER threaten or cause excessive damage to the soil or Reserved Timber, STATE may require PURCHASER to comply with one or more of the following:

(i) Use a carriage or a skyline Yarding system.

(ii) Reduce the length of logs.

(iii) Reduce the number of logs in each Yarding turn.

SECTION 2355. **Ground-Based Operations**. Timber Sale Units, or portions thereof, where ground Yarding has been approved in the Operations Plan are subject to the following restrictions, unless otherwise approved in writing by STATE:

(a) PURCHASER shall limit skid roads and trails, and all other locations where soil is compacted or displaced, to less than 10 percent of the ground yarded unit.

(b) Preexisting skid roads and trails shall be used whenever possible, and soil disturbance or construction of new skid roads and trails shall be limited to that necessary to log the unit.

(c) Operations shall not be conducted under conditions where soils are rutted or excavated to a depth of 12 inches or more.

(d) Equipment shall not operate on slopes greater than 35 percent. Written approval may be granted for short distances on slopes exceeding 35 percent when, in the opinion of STATE, it would be unreasonable to yard by pulling line.

(e) Yarding shall not be permitted on haul roads.

(f) Ground Yarding equipment shall not be operated within Equipment Restriction Zones.

(g) PURCHASER shall suspend ground Yarding during periods of high soil moisture as determined by STATE.

(h) Operations shall be designed to minimize soil disturbance and damage to Reserved Timber.

If the above conditions are not met by PURCHASER, STATE at its option, may require PURCHASER to suspend Yarding activities until corrective measures have been agreed upon by STATE and Purchaser.

Time lost while STATE exercises any of the above options shall not constitute grounds for Contract extension.

SECTION 2360. **Non-Project Roads and Landings**. Improvement or construction of roads or Landings not required in Section 2610, "Project Work," shall be approved in the Operations Plan.

(a) Prior to felling, PURCHASER shall mark Right-of-Way clearing limits and obtain STATE approval.

(b) Subgrade shall not exceed 14 feet in width for unsurfaced roads and 16 feet for surfaced.

(c) Landings shall be constructed no more than 70 feet wide. The surface shall be crowned for drainage.

(d) Roads shall be waterbarred according to the specifications in the Waterbar Exhibit and blocked to vehicular traffic as directed by STATE by October 1 annually or upon completion of use, whichever occurs first.

(e) Seed and mulch all areas of disturbed soil as directed by STATE.

SECTION 2365. **Progressive Operations**. PURCHASER shall complete the following requirements on each Setting prior to moving to a new Setting, unless otherwise approved in writing by STATE:

(a) Remove all logs as described under Section 2045, "Log Removal."

(b) Construct cross-drainage ditches or waterbars as directed by STATE.

(c) In Modified Clearcut Units, PURCHASER shall place debris from Yarding (tops, limbs, cull logs, etc.) in a stable location approved by STATE prior to moving to another Landing area. Debris that contains a log segment at least 3 inches in diameter at the small end and at least 10 feet in length shall be decked separately from smaller debris and hauled as Pulp; the smaller debris shall be piled in a manner suitable for burning. The lower one third of completed piles shall be covered to prevent water from reaching the Slash. Debris shall not be left within 75 feet of standing trees or 150 feet from property lines.

(d) Block roads and skid trails to vehicular traffic as directed by STATE.

(e) Upon completion of use of road segment 3B to 3C, all culverts shall be removed and hauled to an approved refuse site off of STATE land.

(f) Logs shall be removed from each landing before moving to the next landing. This may require "bumping" logs forward to the next landing on a truck or with the log loader, unless otherwise approved by STATE.

In addition, PURCHASER shall complete the following requirements within the following time frames on a Unit basis, unless otherwise approved in writing by STATE:

(3) Complete all felling requirements as required by Section 2310, "Felling," within 14 calendar days after completion of yarding activities.

(1) Complete Slash piling within 30 calendar days after completion of Yarding Operations on a Timber Sale Area. If logging operations are completed during the Slash piling seasonal restriction period, then piling will start/resume May 1, weather dependent, as determined by STATE.

(2) Remove all trash from the Timber Sale Area at the end of each day and wildlife is not to be fed.

(4) Complete road maintenance requirements of Section 2120, "Access," and Section 2130, "Road Maintenance," within 30 calendar days after completion of log hauling activities.

PROTECTION DURING OPERATIONS

SECTION 2410. **Damage to Reforested Areas**. PURCHASER shall take all necessary precautions to avoid damage to reforested areas adjacent to, within, or near the Timber Sale Area. If PURCHASER's Operations damage reforestation areas, STATE shall determine the extent of the damage and PURCHASER shall reimburse STATE at the calculated value of the damaged reforestation as determined by STATE.

SECTION 2415. **Protection of Watershed**. PURCHASER shall take all necessary precautions to prevent damage to stream banks, any stream course, lake, reservoir, or forested wetland within or adjacent to the Timber Sale Area. Definitions of Type F, Type D, and Type N streams contained in the Forest Practices Act apply to this Contract.

When water drafting the PURCHASER will follow the following requirements:

(a) Water drafting will only occur in free-flowing streams or human-created ponds and impoundments that are disconnected from streams at the time of drafting.

(b) When water is drafted directly out of the stream the stream must be deep enough that the intake screen can be fully submerged and the water level cannot be reduced such that the intake screen becomes exposed.

(c) The existing stream depth shall not have more than a 10% reduction during the period of drawdown. If reduction in depth approaches 10% drafting will cease until volume recovers to pre-drafting levels.

(d) When drafting from a human-created connected pond or impoundment that is hydrologically connected to the stream at the time of drafting, there would not be more than a 10% reduction in the depth of the connected stream during the period of drawdown, and it would not become disconnected as a result of the drawdown.

(e) Drafting will not occur in locations where a temporary dam is needed to create a pool to allow drafting.

(f) Any intake used for water drafting will be screened according to NMFS Juvenile Fish Screen Criteria for Pump Intake for salmonid fry.

(g) Any portion of the pipe or pump that will be in the water will be disinfected between uses, unless the uses are from the same drafting location, at a different drafting location in the same stream, or occurs at least 48 hours after that last drafting event.

STATE has on file at the Astoria District, Oregon Department of Forestry Office, the required region Water Resources Department (OWRD) Road Water Registration permit (RW-86342) for water use at Registered Water Use Sites as shown on Exhibit A, for the purpose of road maintenance, construction, and reconstruction associated with this timber sale. In order for PURCHASER to meet work requirements of Section 2130, "Road Maintenance," and Section 2610, "Project Work," that require the diversion and use of water, while still meeting the requirements of Section 1610, "Permits, Licenses, and Safety" and Section 1650, "Protection of Soil, Air, and Water Resources," the following conditions must be adhered to.

PURCHASER shall notify the OWRD District Watermaster responsible for the area the operation is within. The Watermaster requires 10-day written notice prior to use and also a notification on the day of use, to verify stream flow. The notification shall include the anticipated amount of water to be diverted, a map showing the diversion points, and an Oregon Department of Fish and Wildlife Small Pump Screen Self Certification form.

If multiple projects will be going at the same time, the Watermaster notification can include those projects in one notification.

The Watermaster may restrict the amount of water that can be used, as streamflow falls during the season.

Use shall not exceed 30,000 gallons from a single source during any 24-hour period.

No dam, reservoir, or other impoundment facility may be constructed within a designated scenic waterway.

A pump screen that complies with the Oregon Department of Fish and Wildlife, Small Pump Screen-Self Certification form, which is on file at the Astoria District, Oregon Department of Forestry office, shall be used at all times during water diversion.

Only registered diversion points on ODF managed lands as shown on Exhibit A or other Registered Water Use Sites as approved by STATE shall be used.

In addition, PURCHASER shall perform all measures necessary to protect the stream banks, streambed, and vegetation within the Equipment Restriction Zones and Stream Buffer(s).

Necessary measures include, but are not limited to, the following, unless otherwise approved in writing by STATE:

(1) Operations will be suspended when sediment delivery occurs on Waters of the State.

(2) Fell adjacent trees and Snags away from or parallel to the buffer to prevent them from entering the buffer.

(3) Do not operate ground-based equipment within the buffer.

(4) Do not fell trees within the buffer, except in cable corridors. Felled trees shall not be removed.

(5) Ground yarding equipment shall not be operated within the Equipment Restriction Zone for all streams

(6) Retain existing trees under 6 inches and existing vegetation within the Equipment Restriction Zone associated with seasonal streams.

(7) Storage and staging areas for materials and fueling purposes will be sited outside of stream buffers and Equipment Restriction Zones and hydrologically disconnected from any streams, unless otherwise approved by STATE.

(8) Trees that fall or slide into the Type F streams shall not be removed without prior approval from STATE.

PURCHASER shall comply with the following instructions for removal of Slash that enters stream channels and seasonal Equipment Restriction Zones as a result of PURCHASER's Operations:.

Avoid excessive slash accumulation in stream channels and seasonal Equipment Restriction Zones

All removed debris shall be placed in a stable location outside of the Equipment Restriction Zones.

In addition to other protective measures required, PURCHASER shall discontinue all or part of its Operations under this Contract if there is potential for sediment delivery to waters of the State or upon notice from STATE that Operations will cause excessive damage to the watershed.

SECTION 2416. **Protection from Invasive Plants and Noxious Weeds**. PURCHASER shall ensure all ground-based yarding, earth disturbing, road constructing, and road maintenance equipment moved onto state land or between state land sites is free of soil, seeds, vegetative matter, or other Slash that could contain, or hold, seeds. PURCHASER shall employ cleaning methods necessary to ensure compliance with the terms of this section. PURCHASER shall notify STATE's Authorized Representative at least 24 hours prior to moving each piece of equipment onto state land or between state land sites unless otherwise agreed in writing. Notification shall include identification of the equipment's most recent operation.

Equipment shall be inspected by STATE; arrangements shall be made by PURCHASER for STATE inspection of each piece of equipment prior to entry upon State Forest Land or movement between State Forest Land sites to verify that the equipment has been reasonably cleaned prior to operation on lands managed by ODF.

This section does not apply to log trucks, service trucks, water trucks, pickup trucks, cars, and other passenger vehicles, used in the daily transport of personnel.

SECTION 2420. **Protection of Utility Lines**. In accordance with OAR 952-001-0020: "*ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center." (Note: The telephone number for the Oregon Utility Notification Center is (503) 232-1987/1-800-332-2344.)*

SECTION 2430. **Protection of Markings and Monuments**. PURCHASER shall not remove, alter, damage, or destroy any signs, posters, markings, land survey markers and corners, witness trees, seed trees, or corner reference tags pertaining to the timber sale or land survey. Should such damage or disturbance occur, PURCHASER shall report it to STATE within 24 hours of the incident and shall prevent any further damage or disturbance from occurring. PURCHASER shall, in a manner or method as directed by STATE, re-establish legal subdivision markers or monuments damaged by PURCHASER's activities. STATE may re-establish such markers or monuments and bill PURCHASER for the expense incurred.

In the event it is necessary to disturb any legal land survey corner in order to conduct any activity under this Contract, PURCHASER shall notify STATE. PURCHASER shall not disturb any corner until STATE has referenced or otherwise preserved the corner.

SECTION 2455. **Seasonal Restrictions**. PURCHASER shall adhere to the following restrictions, unless otherwise approved in writing by STATE:

(a) Ground-based Operations shall not be allowed from November 1 through April 30.

(b) Unsurfaced and non-project roads shall be waterbarred according to the specification in the Exhibits and blocked to vehicular traffic as directed by STATE by October 1 annually, or upon completion of use, whichever occurs first.

(c) In addition to waterbarring road segment 3A to 3B upon completion of use, remove and dispose of culverts off of STATE land.

(d) Slash piling shall not be allowed from November 1 through April 30.

(e) Activity in "Live" Streams shall not be allowed from September 16 through June 30.

(f) Log hauling on unsurfaced roads shall not be allowed from October 1 through April 30.

(g) Log hauling out Spruce Run Road to Lower Nehalem County Road shall not be allowed between May 15 and September 15.

(h) All felling on Unit 1 shall be completed by April 1, 2030.

(i) Seeding shall be performed only from March 1 through June 15 and August 15 through October 31.

SECTION 2460. **Repair of Injury or Damage**. Prior to the completion and as a condition of final acceptance by STATE of PURCHASER's Operations, PURCHASER shall repair or correct any injury or damage to the Areas of Operations or any part of the Timber Sale Area arising from PURCHASER's Operations, unless adjustment is made pursuant to Section 1550, "Adjustment of Contract."

PROTECTION FROM FIRE

SECTION 2510. **Precautions Against Fire**. PURCHASER acknowledges that their Operations under this Contract may cause extraordinary fire risk in the Areas of Operations. PURCHASER covenants and agrees that it will use the highest degree of care to prevent forest fires from starting on or from spreading to or from the Areas of Operations. PURCHASER shall require its employees and Contractors and the employees of such Contractors to employ a similar degree of care. STATE may, at any time during the term of the Contract, require PURCHASER to prepare and submit to STATE for approval a Fire Plan for the Areas of Operations. The plan shall set forth the resources and required actions to be taken by PURCHASER and Contractors of PURCHASER for the prevention and suppression of fire in the Areas of Operations. The plan must meet with the approval of STATE and STATE reserves the right to require revisions to the plan as STATE, in its sole discretion, may determine to be necessary.

SECTION 2520. **Efforts on Fire**. If a fire occurs in any part of the Areas of Operations, notwithstanding the origin, PURCHASER shall require its employees and Contractors and the employees of such Contractors to immediately proceed to extinguish the fire. PURCHASER acknowledges and agrees that the provisions of this section may impose obligations on PURCHASER that are separate from or in addition to any duty or responsibility required by law. However, in no event shall the requirements of this section be construed as relieving PURCHASER of the duty and responsibility under Oregon law to fight, control, and suppress fire on forestland.

SECTION 2530. **Indemnification**. In addition to the general indemnification contained in Section 1355, "General Indemnification," PURCHASER shall indemnify, defend and hold STATE harmless from any and all loss, costs, damage, and expense that STATE may incur as a result of any fire caused by the Operations of PURCHASER, employees and Contractors of PURCHASER, and employees of such Contractors.

SECTION 2540. Fire Equipment
During Fire Season, PURCHASER shall provide an engine with at least a 1,000-gallon capacity, enough feet of fire hose to reach from the water supply to any location in the operation affected by power driven machinery or 1,000 feet, whichever is greater, one gated wye valve, and two adjustable nozzles in constant readiness in the Timber Sale Area. The engine must be self-filling and be able to travel fully loaded, under its own power, on all truck roads providing access to or within the Timber Sale Area. Such equipment shall be credited toward the requirements of OAR 629-043-0020 for water supply, hose and nozzle, subject to STATE approval. PURCHASER shall comply with all other Fire Season requirements as established by the ODF District in which the Timber Sale Area is located.

SECTION 2555. **STATE to Assume Additional Fire Hazard Obligations**. If, following completion of harvesting operations on any unit of the timber sale, a determination is made under ORS 477.580, that an additional fire hazard has been created, then, upon completion of all provisions of this Contract, STATE shall assume all obligations for the disposal or reduction of any additional fire hazard determined to exist, and issue a release pursuant to ORS 477.580 (6) relieving PURCHASER of such obligations.

SECTION 2560. Slash Disposal.

PURCHASER shall comply with the following requirements for Slash disposal unless otherwise approved in writing by STATE:

Slash piling shall not be allowed from November 1 through April 30, unless otherwise approved in writing by STATE. Slash piling outside of this designated period requires the use of a "clamshell-style bucket with rake arms" with a 360-degree continuous rotation, and tooth length on rake arm shall be greater than 14 inches long. "Clamshell-style bucket with rake arms" shall be hydraulically controlled to operate bucket in a vertical position (free swinging) for piling Slash.

Brush, logging Slash, and other debris shall be cleared from planting sites and piled in windrows or piled so that 50 percent or more of the soil organic layer is exposed. All woody vegetation (other than conifer trees) is defined as brush.

All Slash near openings and Landings shall be piled no closer than 75 feet to any Residual Trees.

In Modified Clearcut Units, PURCHASER shall place debris from Yarding (tops, limbs, cull logs, etc.) in a stable location approved by STATE prior to moving to another Landing area. Debris that contains a log segment at least 3 inches in diameter at the small end and at least 10 feet in length shall be decked separately from smaller debris and hauled as Pulp; the smaller debris shall be piled in a manner suitable for burning. The lower one third of completed piles shall be covered to prevent water from reaching the Slash. Debris shall not be left within 75 feet of standing trees or within 150 feet of property lines. Material suitable for firewood cutting shall be piled separately from other slash and staged in an accessible area for firewood cutting on all settings accessed by surfaced roads, as directed by STATE.

PURCHASER shall supply covering for Slash piling as specified 4MIL Clear Polyethylene Plastic.

Logs and chunks which are suitable for firewood shall be piled from Slash, near roads and landings and alongside the road in locations designated by STATE.

Leave down material scattered throughout sale units as specified in Section 2230, "Reserved Timber – Down Material."

Trees and Snags as specified in Section 2240, "Reserved Timber - Trees and Snags," shall be protected during slash disposal operations.

Skid trails shall be waterbarred according to the specifications in the Waterbar Exhibit and blocked to vehicular traffic as directed by STATE.

Work shall be accomplished only during dry weather conditions, and started within 14 calendar days after completion of yarding activities on Unit. Operations shall provide for continual operation until contract work is completed.

PROJECTS

SECTION 2610. **Project Work**. PURCHASER shall complete the following Projects in accordance with the specifications provided in Exhibits and written instructions from STATE. Project locations are shown on Exhibit A unless otherwise described. PURCHASER shall furnish all material unless otherwise specified.

Project Period. Work on Project Nos. 1, 2, and 3 shall not be allowed from November 1 through April 30, unless otherwise approved in writing by STATE.

Activity in "Live" Streams shall not be allowed from September 16 through June 30, unless otherwise approved in writing by STATE.

Project No. 1. Sale Access Road Construction and Landing Construction. Construct roads between the following road points according to the specifications in Exhibits:

(a) Construct: 1A to 1B, 1C to 1D, 1E to 1F, 1G to 1H, 1I to 1J, 1K to 1L, 2A to 2B, 2C to 2D, 2E to 2F, 2G to 2H, 3B to 3C, 3D to 3E, 3F to 3G, 3H to 3I, and 3J to 3K.

(b) Landings: 1B to 1D, 1F, 1H, 1J, 1L, 2B, 2D, 2E to 2F (Sta. 3+00) 2F, 2H, 3A, 3C, 3D to 3E (Sta. 2+80), 3F to 3G (Sta. 2+20), 3G, 3I, and 3K.

Project No. 2. Sale Access Road Improvement, Surface Rock Replacement, and Road Maintenance. Improve roads between the following road points according to the specifications in Exhibits:

Improve:I1 to I2, I3 to I4, I5 to I6, I7 to I8, I9 to I10, I11 to I12, and I13 to I14.

Project No. 3. Sterling Ridge Quarry Development, Rock Crushing, and Stockpile Site Construction. According to the specifications in Exhibits; develop and crush the following quantities of rock:

a) Sufficient quantities of 1 1/2"-0" and 4"-0" crushed rock to meet the requirements of Project Nos.1 and 2.

b) 2,000 cubic yards of 4 “-0” crushed rock and 2,000 cubic yards of 1 ½”-0”, truck measure, and stockpile at the Sterling Ridge Quarry Stockpile Site.

c) 2,000 cubic yards of 1 ½”-0” crushed rock, truck measure, and stockpile at the Sterling Ridge Quarry Stockpile Site.

Project No. 4. Clearing Debris Piling and Burning. Pile and burn all clearing and grubbing debris in accordance with Exhibit J.

Unit 2: 2A to 2B, 2C to 2D, 2E to 2F, 2G to 2H, I7 to I8, and I9 to I10 clearing and grubbing debris shall be piled and burned onsite or in a location approved by STATE.

Cronin Waste Area (Waste Area 5): 3B to 3C, 3J to 3K, and I5 to I6 clearing and grubbing debris and existing stumps and woody debris at waste area site shall be piled and burned.

Rock Source. The road rock may be obtained from state land at the location shown as "Rock Quarry" and "Stockpile Site" on Exhibit A, or from other locations acceptable to STATE, as follows:

Unit 1 associated construction and improvement:

(a) The required 1 1/2"-0" and 4"-0" crushed rock may be obtained from the Lost Lake Stockpile Site and 4"-0" crushed rock may be obtained from the Lost Lake Quarry, located in the SW 1/4, Section 17, T4N, R7W, W.M. Crushed rock from Lost Lake Quarry shall be used first and remaining rock obtained from Lost Lake Stockpile Site.

(b) The required 6”-0” pit-run rock shall be produced with Project No. 1 and may be obtained at any location requiring drilling, shooting or use of a rock hammer. All the required pit-run and riprap rock shall be developed and meet specifications in Exhibit F.

Units 2 and 3 associated construction and improvement:

(c) The required ¾”-0” crushed rock shall be utilized for culvert bedding and backfill and may be obtained at the Quartz Creek Stockpile Site, located in the SW 1/4, Section 15, T4N, R7W, W.M.

(d) The required 1 1/2"-0" and 4"-0" crushed rock shall be produced with Project No. 3 and may be obtained at the Sterling Ridge Quarry, located in the SE 1/4, Section 22, T4N, R7W, W.M.

(e) The required 6"-0" pit-run rock for Unit 2 shall be produced with Project No. 1 and may be obtained at any location requiring drilling, shooting or use of a rock hammer. All the required pit-run and riprap rock shall be developed and meet specifications in Exhibit F.

(f) The required 6"-0" pit-run for Unit 3 shall be obtained at the Round About Quarry, located in the SE 1/4, Section 31, T4N, R7W, W.M., or from locations requiring drilling, shooting, or use of rock hammer with Project No.1. All the required pit-run and riprap rock shall be developed and meet specifications in Exhibit F.

(g) 24"-6" riprap rock may be obtained at the Sterling Ridge Quarry or from locations requiring drilling, shooting, or use of rock hammer with Project No.1. All the required pit-run and riprap rock shall be developed and meet specifications in Exhibit F.

(h) Development and use of the rock quarry shall be in accordance with the specifications in Exhibit F.

Right-of-Way Hauling. Prior to approval to rock constructed roads, PURCHASER shall haul all right-of-way logs on those portions of road to be rocked, unless otherwise directed by STATE.

SECTION 2620. **Completion of Projects**. PURCHASER shall complete the Project Work in the preceding section as follows:

(a) Projects 1, 2, and 3 - Prior to October 31, 2028

(b) Project 4 - Prior to December 31, 2028

Complete all Projects on a road section prior to log hauling on that section.

If the logging operation will cause damage to a project, STATE may waive the completion date requirement until logging in that area is completed. Right-of-Way logs shall be removed from the road section before completion of the Project.

SECTION 2630. **Credit for Project Work**. In order to compensate PURCHASER for Project Work that PURCHASER agrees to complete under Section 2610, "Project Work," of this Contract, STATE agrees to credit PURCHASER's timber account in the sum of $626,382.00 upon completion of and STATE's acceptance of all work, unless otherwise approved in writing by STATE.

STATE will release partial credit for Project Work completed, on a monthly basis, upon inspection and acceptance of the completed Project Work.

EXHIBIT "A"
VICINITY MAP

OF TIMBER SALE CONTRACT
NO. TL-341-2026-W01152-01
CRONIN TOO
PORTIONS OF SECTIONS 29, 31, 32, & 33, T4N, R7W, W.M.,
CLATSOP COUNTY, OREGON

Legend

- Ownership Boundary
- Timber Sale Area
- Section Line
- Paved Road
- Surfaced Road
- Designated Haul Route
- Gate
- Rock Quarry
- Ⓢ Stockpile Site
- Ⓦ Waste Area
- Registered Water Use Site
- Campground

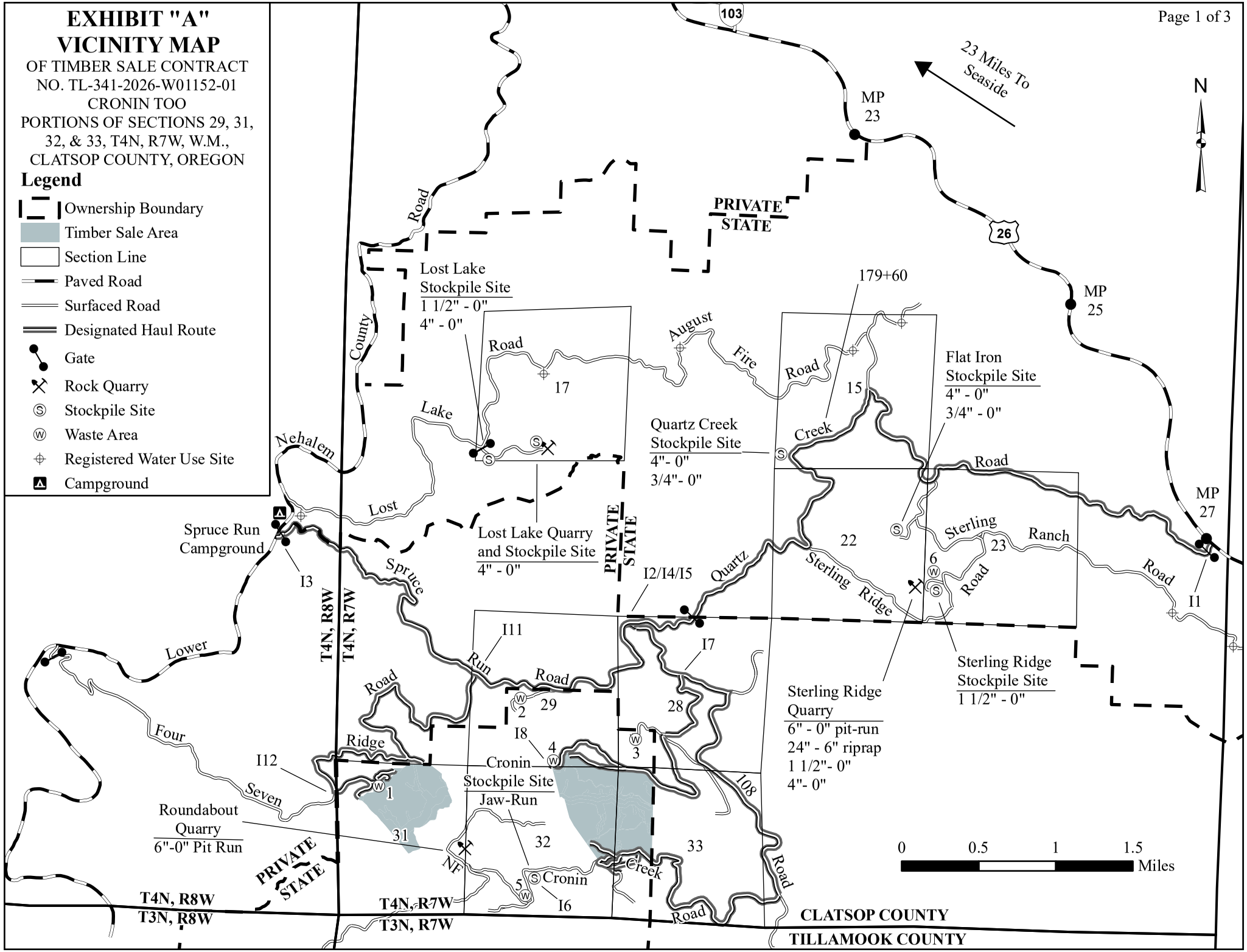


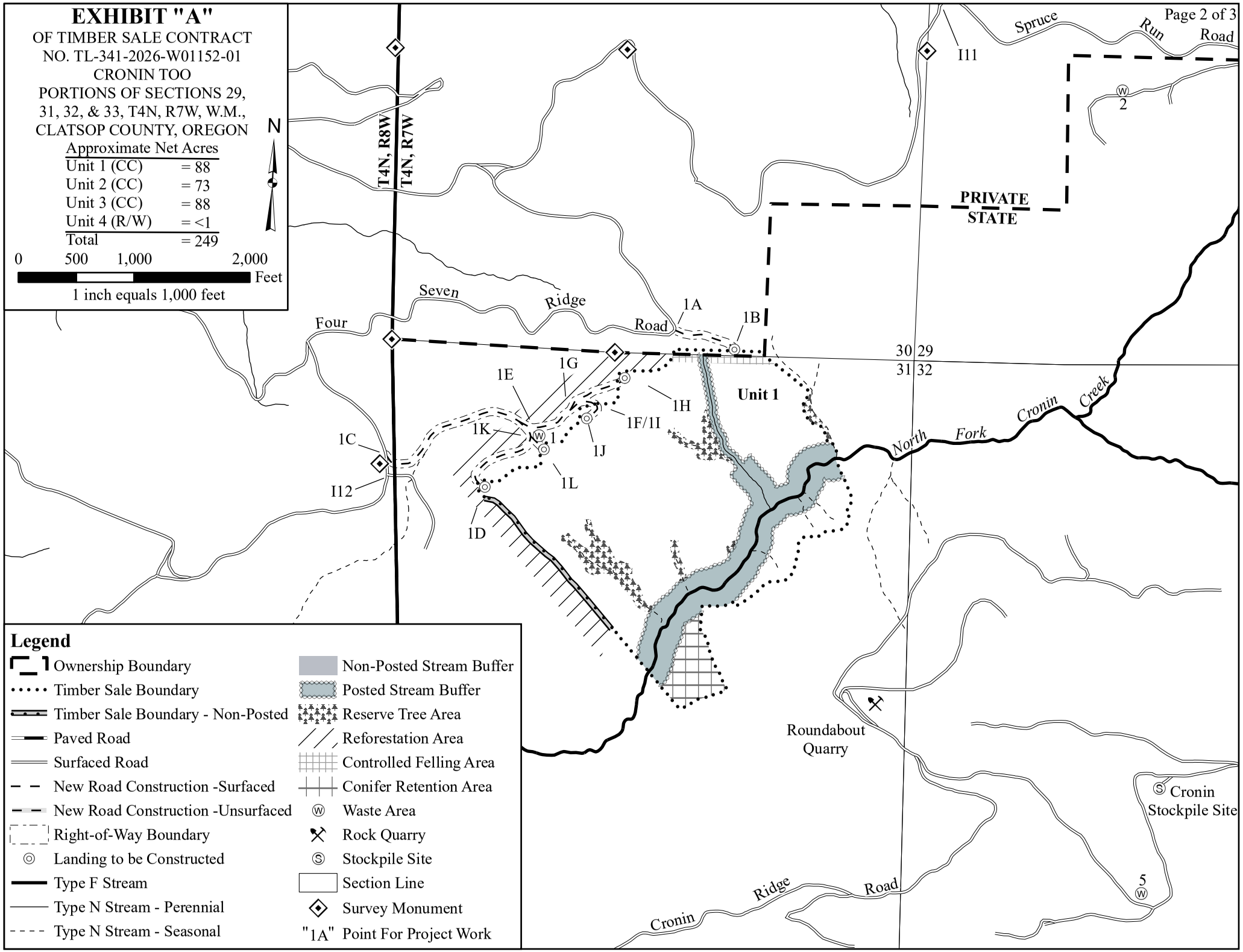
EXHIBIT "A"

OF TIMBER SALE CONTRACT
NO. TL-341-2026-W01152-01
CRONIN TOO
PORTIONS OF SECTIONS 29, 31, 32, & 33, T4N, R7W, W.M.,
CLATSOP COUNTY, OREGON

Approximate Net Acres	
Unit 1 (CC)	= 88
Unit 2 (CC)	= 73
Unit 3 (CC)	= 88
Unit 4 (R/W)	= <1
Total	= 249

0 500 1,000 2,000 Feet

1 inch equals 1,000 feet



Legend

- Ownership Boundary
- Timber Sale Boundary
- Timber Sale Boundary - Non-Posted
- Paved Road
- Surfaced Road
- New Road Construction -Surfaced
- New Road Construction -Unsurfaced
- Right-of-Way Boundary
- Landing to be Constructed
- Type F Stream
- Type N Stream - Perennial
- Type N Stream - Seasonal
- Non-Posted Stream Buffer
- Posted Stream Buffer
- Reserve Tree Area
- Reforestation Area
- Controlled Felling Area
- Conifer Retention Area
- Waste Area
- Rock Quarry
- Stockpile Site
- Section Line
- Survey Monument
- "1A" Point For Project Work

EXHIBIT "A"

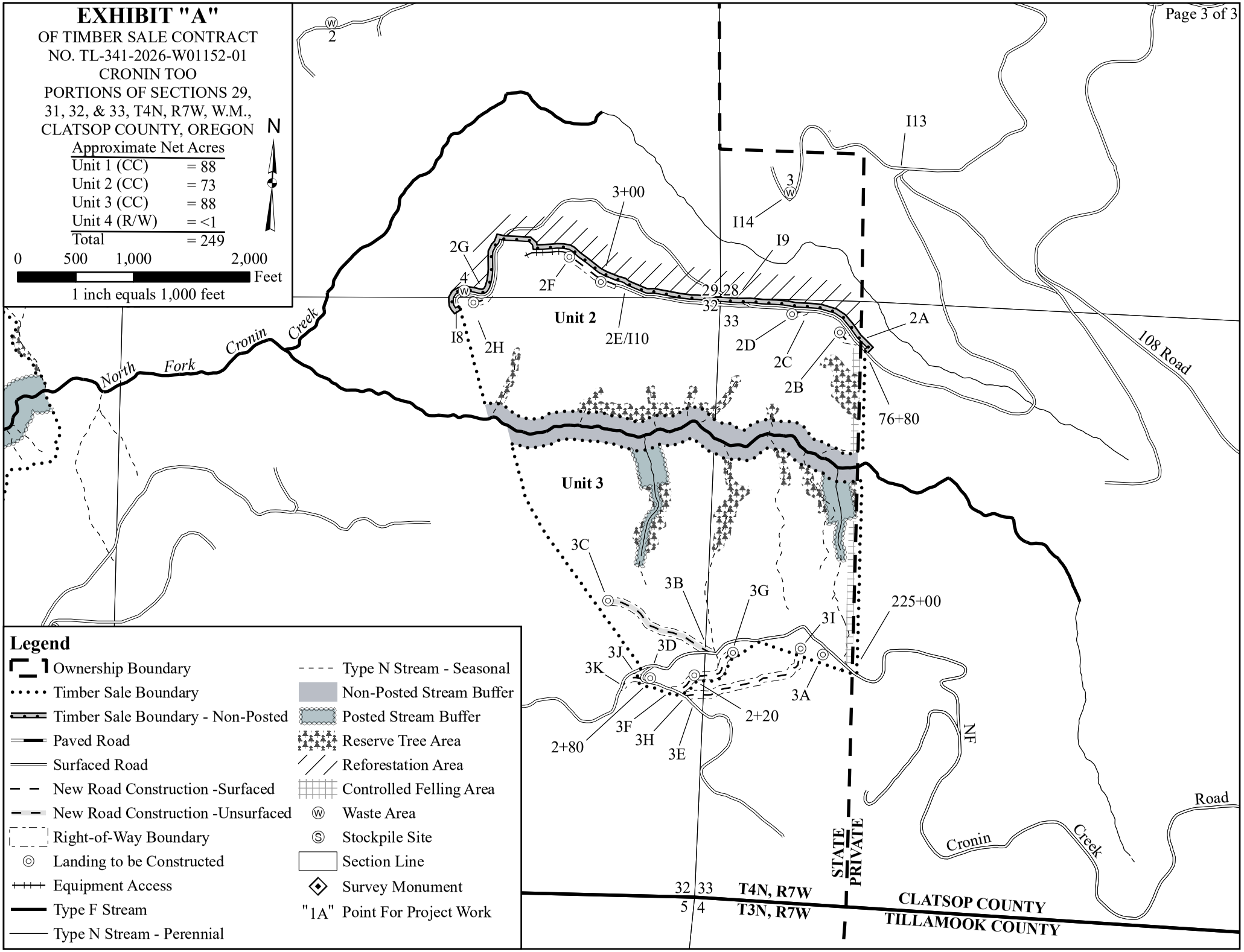
OF TIMBER SALE CONTRACT
NO. TL-341-2026-W01152-01
CRONIN TOO
PORTIONS OF SECTIONS 29, 31, 32, & 33, T4N, R7W, W.M.,
CLATSOP COUNTY, OREGON

Approximate Net Acres	
Unit 1 (CC)	= 88
Unit 2 (CC)	= 73
Unit 3 (CC)	= 88
Unit 4 (R/W)	= <1
Total	= 249

N

0 500 1,000 2,000 Feet

1 inch equals 1,000 feet



Legend

- Ownership Boundary
- Timber Sale Boundary
- Timber Sale Boundary - Non-Posted
- Paved Road
- Surfaced Road
- New Road Construction -Surfaced
- New Road Construction -Unsurfaced
- Right-of-Way Boundary
- Landing to be Constructed
- Equipment Access
- Type F Stream
- Type N Stream - Perennial
- Type N Stream - Seasonal
- Non-Posted Stream Buffer
- Posted Stream Buffer
- Reserve Tree Area
- Reforestation Area
- Controlled Felling Area
- Ⓦ Waste Area
- Ⓢ Stockpile Site
- Section Line
- Survey Monument
- "1A" Point For Project Work

Oregon Department of Forestry
2600 State St Salem OR 97310
PART III: EXHIBITS

EXHIBIT B
TIMBER SALE OPERATIONS PLAN

(See page 2 for instructions)

Date Received by State: _____

(1) Contract Number: TL-341-2026-W01152-01

(2) Sale Name: Cronin Too

(3) Contract Expiration Date: 10/31/2030

(4) Purchaser Name: _____

(5) State Brand Information (Complete)

(6) State Representatives:

Name	Circle One	Phone No.	Cell No.	Alt Phone
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			

(7) Purchaser Representatives:

Name	Circle One	Phone No.	Cell No.	Alt Phone
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			

(8) Name of Subcontractors and Start Dates:

Project No.	Subcontractor Name.	Start Date	Completion Date	Cell No.	Alt Phone

	Subcontractor Name.	Start Date	Cell No.	Alt Phone
FELLING				
YARDING				

(9) Comments:

_____

_____

_____

(10) Operations Map: Attach a copy of timber sale Exhibit A or other suitable map which plainly shows the items listed on the instruction sheet.

Oregon Department of Forestry
2600 State St Salem OR 97310

PART III: EXHIBITS

EXHIBIT B
INSTRUCTION SHEET FOR OPERATIONS PLAN

SUBMIT ONE COPY OF PLAN TO STATE

Operations shall be limited to the work shown in the plan until a revised plan or supplemental plan is submitted covering additional work. Compliance with this plan is not in lieu of compliance with any federal requirements related to the federal Endangered Species Act including without limitation PURCHASER'S independent obligation to avoid take of a T&E species and PURCHASER'S obligation to comply with terms and conditions of any incidental take Permit(s) that include required minimization and mitigation measures in any applicable Habitat Conservation Plan. If STATE has prepared a required Forest Practices Act (FPA) "Written Plan" for operations, PURCHASER shall comply with all provisions of the Written Plan.

Explanation of Item No.(from Page 1)

(5) All sales require you to use a brand furnished by STATE. If the State brand has not been assigned when the plan is submitted, it will be furnished and assigned later. Complete drawing. If more than one brand is assigned to the sale, complete both drawings.

(6) The contract requires you to have a designated representative available on the sale area or work location who is authorized to receive in your behalf any notice or instruction given by STATE and to take action in regard to performance under the contract. If logging and project work is widely separated, a representative is required for each.

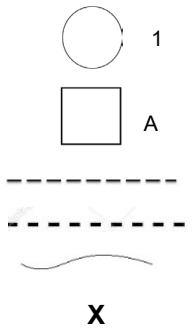
(7) The STATE representative will be designated when your plan is approved and is the person who will inspect and issue instructions regarding performance.

(8) Show names of subcontractors to be used for any or all phases of the operations. If subcontractors are not Known, or are changed later, give notification to the STATE representative prior to commencement of work by subcontractor.

(9) Show projected dates for commencement of both projects and logging. If projected dates need to be changed at a later date, notification must be given to the STATE representative by supplemental plan or otherwise, prior to commencement of such operations.

(10) The STATE representative will furnish extra copies of Exhibit A of the contract for your use in preparing the operations map. The map shall use the following legend and show:

1. Landing locations, approximate setting boundaries, and probable sequence of logging the settings. Number the settings in sequence.
2. Locations of spur roads planned for construction, other than required by the timber sale contract. Provide spur road specifications
3. Locations of proposed tractor yarding roads. Show if and how marked on the ground.
4. Locations of temporary stream crossings.
5. List the sequence of performing project work.
6. Location of rock sources - attach pit development plans.



Cable Landing, with numbers for sequence.

Tractor Landing with alphabetical sequence.

Approximate setting boundary.

Spur truck roads.

Tractor yarding roads.

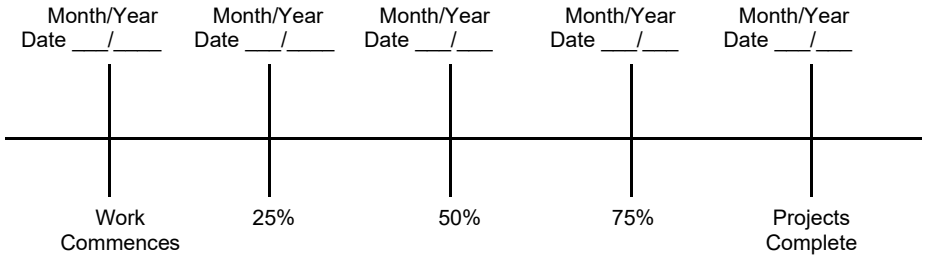
Temporary stream crossings.

Oregon Department of Forestry
2600 State St Salem OR 97310
PART III: EXHIBITS
EXHIBIT B
OPERATIONS PLAN

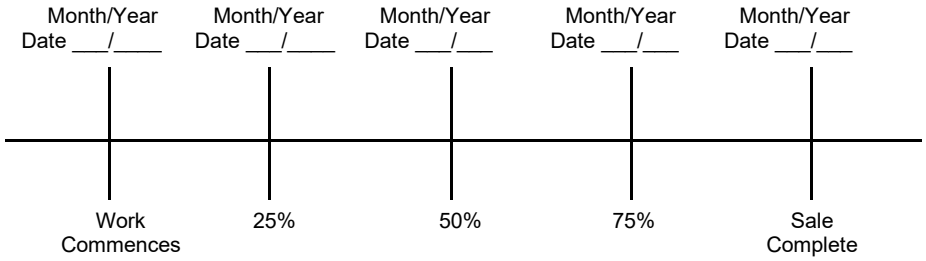
Completion Timeline

Indicate on the appropriate timeline below, the dates by which you plan to complete the work as required under this contract. The purpose of this section is to develop a plan that will ensure you complete the work as required, and meet the interim completion date(s) and contract expiration date. This plan is incorporated and made a part of the contract. When, in the opinion of STATE, operations are not commencing in a manner that meets the intent of this plan, you may be placed in violation of contract and your operations suspended until an amended plan is submitted and approved by STATE.

Projects



Harvest & Other Requirements



The Federal Endangered Species Act (ESA) prohibits a person from taking any federally listed threatened or endangered species. Taking under the federal ESA may include alteration of habitat. STATE's approval of this plan does not certify that PURCHASER's operation under the plan is lawful under the federal ESA or that the plan is consistent with the terms and conditions of any applicable incidental take Permit(s) including any required minimization and mitigation measures proposed in the applicable Habitat Conservation Plan. As provided in the timber sale contract, PURCHASER's must comply with all applicable state, federal, and local laws, including without limitation any Permit(s) issued thereunder.

PURCHASER's compliance with this plan is not in lieu of compliance with any federal requirements related to the federal Endangered Species Act.

APPROVED; Date: _____

STATE OF OREGON - DEPARTMENT OF FORESTRY

_____

Title _____

SUBMITTED BY:
PURCHASER

_____

Title _____

Oregon Department of Forestry

EXHIBIT C - SAWMILL GRADE (WESTSIDE SCALE)
SCALING INSTRUCTIONS - LOCATION APPROVAL - BRAND INFORMATION
Astoria - NWOA

(1) ORIGINAL REGISTRATION ☐ Date _____
REVISION NUMBER 000 ☐ Date _____
CANCELLATION ☐ Date _____

(2) TO: _____
(Third Party Scaling Organization)

(3) FROM: Astoria Phone (503) 325-5451
(State Forestry District)
Address: 92219 HWY 202
ASTORIA,OR 97103

(4) PURCHASER: _____
Mailing Address: _____

Phone Number: _____

(5) **MINIMUM SCALING SPECIFICATIONS**	
SPECIES	MINIMUM NET VOLUME
Conifers	10
Hardwoods	10

*Apply minimum volume test to whole logs over 40' Westside

(6) WESTSIDE SCALE:
Use Region 6 actual taper rule. Logs over 40'.

	YES	NO
(7) Weight Scale Sample	☐	☑

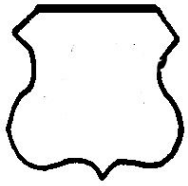
(8) **APPROVED SCALING LOCATIONS** (as shown on the ODF Approved Locations web-site)	Species	Yard	Truck	Weight

(9) **SALE NAME:** Cronin Too
COUNTY: Clatsop

(10) **STATE CONTRACT NUMBER:**
TL-341-2026-W01152-01

(11) STATE BRAND REGISTRATION NUMBER:

(12) **STATE BRAND INFORMATION:**



(13) PAINT REQUIRED: YES ☑
COLOR: Orange

(14) **SPECIAL REQUESTS** (Check applicable)

PEELABLE CULL (all species)..... ☑
NO DEDUCTIONS ALLOWED FOR MECHANICAL DAMAGE..... ☑
ADD-BACK VOLUME - Deductions due to delay... ☑

OTHER :

(15) **REMARKS:**

"Mule Trains"
1. Loads are required to have load tickets for each set of bunks.
2. If truck and pup are to be weighed, weigh and process separately for gross and tare weights.

Operator's Name (Optional inclusion by District): _____

(16) SIGNATURES:

_____
Purchaser or Authorized Representative Date

_____
State Forester Representative Date

_____
State Forester Representative PRINT NAME

Notify the District within one hour when branding or painting is inadequate for quick identification, the receipts are missing, not correctly or completely filled out, and/or when logs presented for scaling are impossible to scale accurately.
General Distribution: TPSO, Approved Scaling Locations and Purchaser.

Oregon Department of Forestry
EXHIBIT C - SAWMILL GRADE
INSTRUCTIONS FOR EXHIBIT C
Astoria - NWOA

(1) Check appropriate box. REVISION NUMBER requires comments. CANCELLATION requires logging and hauling to be complete, recall branding hammers.

(2) Designate Third Party Scaling Organization (TPSO).

Columbia River Log Scaling & Grading Bureau
P.O.Box 7002, Eugene, OR 97401
Phone: (541) 342-6007 Fax: (541) 342-2631
Email: services@crls.com

Pacific Rim Log Scaling Bureau, Inc.
8288 28th Court North East, Lacey, WA 98516
Phone: (360) 528-8710 Fax: (360) 528-8718
Email: office@prlsb.com

Mountain Western Log Scaling & Grading Bureau
2560 NW Medical Park Drive, OR 97471
Phone: (541) 673-5571 Fax: (541) 672-6381
Email: info@mountainwestern.com

Yamhill Log Scaling & Grading Bureau
P.O.Box 709, Forest Grove, OR 97116
Phone: (503) 359-4474 Fax: (503) 359-4476
Email: yamhilllog@frontier.com

Northwest Log Scalers Inc.
6137 NE 63rd St, Vancouver, WA, 98661
Phone: (360) 553-7212 ext. 4 Fax:(360) 553-7213
Email: info@nwlogscalers.com

(3) State District office, address and phone.

(4) Enter Purchaser's business name, address, and phone number as it appears on the Contract.

(5) Minimum Scaling Specifications.

(6) Westside - Region 6 actual taper segment scale. Check Yes or No. Special Service Rules on file with TPSO. See: Segment Scaling and Grading of Long Logs - All Species - State Forestry Department Scaling Practices (Westside).

(7) Weight Scale Sample - Check box if sale is to be a Weight Scale Sample. All specifies for handling, scaling and processing will be attached or explained in the Remarks section item (15).

(8) Show scaling locations only applicable to TPSO. Location name should appear as it does on the ODF Approved Scaling Location web site: https://apps.odf.oregon.gov/Divisions/management/asset_management/scalinglocation.asp Locations with scaling and processing directions specific to their location should be on a separate form. Species should be identified if not capable of receiving "all" species. Check appropriate box for either: yard, truck scale, or weight. Refer to the web site listed above for the locations approval status.

(9) Enter sale name and county.

(10) Enter sale Contract number.

(11) Enter Oregon's State Brand Registry Number (**REQUIRED**).

(12) Show brand assigned to timber sale. One brand only. If more than one brand is assigned to the sale: (1) make a separate form for each brand and (2) on each form, explain and show other brand(s) in the Remarks section item (15).

(13) Check yes for Paint Required and designate "Orange" for color. Non required removal volumes may sometimes require blue paint.

(14) Special Requests. These are requests that will be applied to ODF timber sales. All boxes applicable to the timber sales designated in the Exhibit C form must be "marked". If "Other" is indicated, it must contain a description and any necessary comments.

(15) Use this space to designate any weight scale sample instructions or any other explanations to clarify scaling, processing and/or mailing requirements. If additional scaling locations are approved, revise original or current form showing all (old and new) locations. Check REVISION box at top of form and explain under remarks. Route as indicated.

(16) Require purchaser to sign and date completed form in addition to State Forester Representative, sign and print name on the form. Signatures not required on revisions.

Oregon Department of Forestry
EXHIBIT C - PULP SORT
PROCESSING INSTRUCTIONS - LOCATION APPROVAL
BRAND INFORMATION

Astoria NWOA

(1) ORIGINAL REGISTRATION ☐ Date _____

REVISION NUMBER 000 ☐ Date _____

CANCELLATION ☐ Date _____

(2) TO: _____

(Approved Pulp Processing Facility)

(3) FROM: Astoria Phone (503) 325-5451
(State Forestry District)
Address: 92219 HWY 202
ASTORIA ,OR 97103

(4) PURCHASER: _____

(5) Scaling Bureau **(TPSO)** Processing Weight receipts:

Mailing Address: _____
,

Phone Number: _____

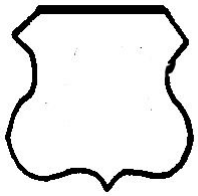
(9) **SALE NAME:** Cronin Too

COUNTY: Clatsop

(10) **STATE CONTRACT NUMBER:**
TL-341-2026-W01152-01

(11) STATE BRAND REGISTRATION NUMBER: _____

(12) STATE BRAND INFORMATION:



(13) **REMARKS:**

"Mule Trains"

1. Loads are required to have load tickets for each set of bunks.
2. Truck and pup are to be weighed and processed separately for gross and tare weights.

(6) **STATE Definition of Approved Pulp Sort:**

- Top portion of the tree (tops).
- All logs with a diameter (Big End) greater than 8 inches marked with blue paint.

Operator's Name (Optional inclusion by District):

(14) SIGNATURES:

Purchaser or Authorized Representative Date

State Forester Representative Date

State Forester Representative PRINT NAME

(7) PULP FACILITY PROCESSING INSTRUCTIONS:

- Pulp loads shall be weighed in lieu of scaling.
- One Ton = 2000 lbs (Short Ton).
- Pulp loads shall have a yellow Log Load Receipt attached.
- Gross weight and truck tare weight for each load shall be machine printed on the weight receipt.
- Weigher shall sign the weight receipt.
- Weigher shall record the Log Load Receipt number on the weight receipt.
- Weigher shall attach the Weight receipt to the Log Load Receipt and mail them weekly to the TPSO processing the Weight receipt.

(8) TPSO PROCESSING INSTRUCTIONS

- Submit data files daily (or each day of activity).
- Mail or deliver scale tickets weekly to ODF Headquarters in Salem.

Notify the District within one hour when branding is inadequate for quick identification, the logs are marked with orange paint, the receipts are missing, not correctly or completely filled out, and/or logs do not meet the specifications of the STATE definition of Approved Pulp Sort.

General Distribution: TPSO, Approved Scaling Locations and Purchaser.

Oregon Department of Forestry
EXHIBIT C - PULP SORT
INSTRUCTIONS FOR EXHIBIT C

Astoria, NWOA

(1) Check appropriate box. REVISION NUMBER requires comments. CANCELLATION requires logging and hauling to be complete, recall branding hammers.

(2) Approved Pulp Processing Facility. Write in as written in the Approved Log Delivery Location
https://apps.odf.oregon.gov/Divisions/management/asset_management/scalinglocation.asp

(3) State District office, address and phone.

(4) Enter Purchaser's business name, address, and phone number as it appears on the Contract.

(5) Third Party Scaling Organization that will be processing the weight tickets, mailing address, and phone number.

Columbia River Log Scaling & Grading Bureau
P.O.Box 7002, Eugene, OR 97401
Phone: (541) 342-6007 Fax: (541) 342-2631
Email: services@crls.com

Pacific Rim Log Scaling Bureau, Inc.
8288 28th Court North East, Lacey, WA 98516
Phone: (360) 528-8710 Fax: (360) 528-8718
Email: office@prlsb.com

Mountain Western Log Scaling & Grading Bureau
2560 NW Medical Park Drive, Roseburg, OR 97471
Phone: (541) 673-5571 Fax: (541) 672-6381
Email: info@mountainwestern.com

Yamhill Log Scaling & Grading Bureau
P.O.Box 709, Forest Grove, OR 97116
Phone: (503) 359-4474 Fax: (503) 359-4476
Email: yamhilllog@frontier.com

Northwest Log Scalers Inc.
6137 NE 63rd St, Vancouver, WA, 98661
Phone: (360) 553-7212 ext. 4 Fax:(360) 553-7213
Email: info@nwlogscalers.com

(6) Big end of log is not to exceed 2 inches greater than the minimum removal specifications in the contract. Example: Minimum removal specifications 6 inches and 20 board feet, then the Big end of log not to exceed 8 inches. When conifer and hardwood removal specifications are different, use the smaller removal diameter to determine this specification.

(9) Enter sale name and county.

(10) Enter sale Contract number.

(11) Enter Oregon's State Brand Registry Number **(REQUIRED).**

(12) Show brand assigned to timber sale. One brand only, if more than one brand is assigned to the sale: (1) make a separate form for each brand and (2) on each form, explain and show other brand(s) in the Remarks section Item (13).

(13) Use this section to list any special instructions or the reason for any revisions in section item (1).

(14) Require purchaser to sign and date completed form in addition to State Forester Representative, sign and print name on the form. Signatures not required on revisions.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

SUBGRADE WIDTH	SURFACED WIDTH	POINT TO POINT	STATION TO STATION	DRAINAGE
16 feet	12 feet	1A to 1B	0+00 to 6+20	Crowned/Ditch
16 feet	12 feet	1C to 1D	0+00 to 24+00	Crowned/Ditch
16 feet	12 feet	1E to 1F	0+00 to 8+80	Crowned/Ditch
16 feet	12 feet	1G to 1H	0+00 to 6+00	Crowned/Ditch
16 feet	12 feet	1I to 1J	0+00 to 1+80	Crowned/Ditch
16 feet	12 feet	1K to 1L	0+00 to 1+80	Crowned/Ditch
16 feet	12 feet	2A to 2B	0+00 to 1+00	Crowned/Ditch
16 feet	12 feet	2C to 2D	0+00 to 1+90	Crowned/Ditch
16 feet	12 feet	2E to 2F	0+00 to 7+60	Crowned/Ditch
16 feet	12 feet	2G to 2H	0+00 to 3+60	Crowned/Ditch
N/A	N/A	3A	N/A	Outslope
14 feet	N/A	3B to 3C	0+00 to 10+60	Crowned/Ditch
16 feet	12 feet	3D to 3E	0+00 to 6+60	Crowned/Ditch
16 feet	12 feet	3F to 3G	0+00 to 6+40	Crowned/Ditch
16 feet	12 feet	3H to 3I	0+00 to 11+70	Crowned/Ditch
16 feet	12 feet	3J to 3K	0+00 to 2+00	Crowned/Ditch
16 feet	12 feet	I1 to I2	0+00 to 326+55	Crowned/Ditch
16 feet	12 feet	I3 to I4	0+00 to 197+95	Crowned/Ditch
16 feet	12 feet	I5 to I6	0+00 to 271+20	Crowned/Ditch
16 feet	12 feet	I7 to I8	0+00 to 117+90	Crowned/Ditch
16 feet	12 feet	I9 to I10	0+00 to 8+80	Crowned/Ditch
16 feet	12 feet	I11 to I12	0+00 to 143+20	Crowned/Ditch
16 feet	12 feet	I13 to I14	0+00 to 16+40	Crowned/Ditch

CLEARING. This work shall consist of clearing, removing, and disposing of all trees, Snags, Down Timber, brush, surface objects, and protruding obstructions within the clearing limits.

All danger trees, leaners, and Snags outside the clearing limits which could fall and hit the road shall be felled.

CLEARING CLASSIFICATION.

New Construction - Where clearing limits have not been marked, the clearing limits shall extend 10 feet back of the top of the cutslope and 10 feet out from the toe of the fill slope, or as directed by STATE.

Improvement - Where clearing limits have not been marked, the clearing limits shall extend 5 feet back of the top of the cutslope and 10 feet out from the toe of the fill slope, or as directed by STATE.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

Waste Areas – Within flagged or posted limits.

GRUBBING. This work shall consist of the removal or digging out of stumps and protruding objects.

All stumps shall be completely removed within the limits of required grubbing. Stumps overhanging cut slopes shall be removed. Grubbing debris shall not be placed or permitted to remain in or under any road embankment sections.

GRUBBING CLASSIFICATION.

New construction - from the top of the cut slope to the toe of the fill.

Improvements and reconstructions - 4 feet back from the shoulder of the subgrade or ditch, whichever is widest, or as marked in the field.

Waste areas – all stumps and debris within clearing limits.

CLEARING AND GRUBBING DISPOSAL. Clearing and grubbing debris shall not be placed or permitted to remain in or under any road embankment sections. Clearing and grubbing debris shall be left in a stable location, and not left lodged against standing trees. Clearing and grubbing debris may be scattered through openings in the timber outside of the cleared right-of-way, except for the following areas where debris shall be fully contained and hauled to a designated waste area:

- Where end-haul is required
- On side slopes exceeding 50 percent
- On unstable areas
- In any stream channel (Type F, N or D) or where material may enter the stream channel.
- Clearing debris from 2A to 2B, 2C to 2D, 2E to 2F, 2G to 2H, 3B to 3C, 3J to 3K, I5 to I6, I7 to I8 and I9 to I10 and all Waste Areas shall be end hauled, piled and burned onsite or in a location approved by STATE with Project No. 4.
- Stumps and debris shall not be placed below a landing. Material shall be end hauled or piled and scattered in a stable location outside of the working area of the landing.

Clearing, grubbing, and associated disposal shall be completed prior to subgrade approval.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

EXCAVATION. Excavation and grading shall not be done when weather and/or ground conditions are such that damage will result to existing subgrade or cause excessive erosion.

Excavation shall conform to STATE-specified lines, grades, dimensions, and plans when provided. Plans are provided between points 1A to 1B, 1G to 1H, 1I to 1J, 2C to 2D, 2G to 2H, 3B to 3C, 3F to 3G, and 3H to 3I.

Unless road plans show otherwise, all roads shall be on a balanced cross section, except when the slope is over 50 percent, the road shall be on full bench for the width specified.

Suitable excavated material shall be used for the formation of fills, shoulders, and drainage structure backfills. Embankment materials shall be free of woody debris, brush, muck, sod, frozen material, and other deleterious materials.

Sidecast includes any road generated excess excavation material which is not essential as part of the road prism, is not compacted, and is below the roadway. Sidecast shall not be placed where it will enter a stream course. Leaving sidecast below the road is only permissible if specifically allowed in "Full Bench and End Haul Requirements" in this Exhibit.

All fills shall be machine compacted according to the "Compaction and Processing Requirements" in this Exhibit.

ROAD WIDTH LIMITATIONS. PURCHASER shall obtain advance written approval from STATE to construct the road to a greater width than specified. Extra subgrade width shall be required for:

Fill Widening. Add to each fill shoulder 1 foot for fills 3 feet to 6 feet high; 2 feet for fills over 6 feet high.

Curve Widening. Widen the inside shoulder of all curves as specified in the plans or as follows: 400 divided by the radius of the curve equals the amount of extra width.

DRAINAGE

Subgrade. Subgrade shall be crowned, outsloped, or insloped at 4 to 6 percent as shown on the "Forest Road Specifications" table in this Exhibit.

Ditch. Construct V shaped ditch 3 feet wide and to a depth of 1 foot below subgrade.

Ditchouts. Construct ditchouts to drain away from subgrade at locations marked in the field or as directed by STATE.

TURNOUTS. Increase roadbed width an additional 8 feet for both subgrade and surfacing. Length shall be at least 50 feet, or as staked on the ground, plus 25-foot approaches at each end.

Location: Intervisible but not greater than 750 feet apart and as marked in the field.

SLOPES	Cut Slopes	Fill Slopes
Solid Rock	Vertical to ¼ :1	
Fractured Rock	½ :1	
Soil - side slopes 50% and over	¾ :1	1½:1
Soil - side slopes less than 50%	1 :1	1½:1

Top of cut slope shall be rounded.

LANDINGS. Landings shall be constructed as posted in the field, no less than 50 feet wide and no more than 70 feet wide unless otherwise specified in specific instructions, or as approved by STATE. Surface is to be crowned for drainage with general grade no more than 3 percent. Surface as shown in the "Road Surfacing" table in this Exhibit.

TURNAROUNDS. Increase subgrade width an additional 20 feet for a length of 20 feet at locations marked in the field.

SEASONAL WINTERIZATION. All unsurfaced roads or unfinished subgrades shall be waterbarred in accordance with the specifications in Exhibit H and blocked from vehicular traffic prior to October 1, annually and as directed by STATE.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

GENERAL ROAD CONSTRUCTION INSTRUCTIONS:

(1) Timber Removal. Remove all trees within posted Right-of-Way Boundary or individually marked with an orange "C", as specified in Section 2210, Designated Timber. Unposted road shall have all trees removed to meet the clearing limits in accordance with Exhibit D CLEARING CLASSIFICATION.

(2) Excavated Materials. Excavated materials shall be utilized for road construction and hauled in where necessary. Surplus excavation materials shall be hauled to the waste areas as marked in the field and/or designated on Exhibit A or used for fill on other road segments. Surplus excavated materials and waste materials shall be sloped and compacted for drainage. Fills shall be thoroughly compacted in accordance with this Exhibit.

(3) Drainage Ditches. Construct ditchlines, including ditchouts, as directed by STATE. Cut slopes of ditchlines and ditchouts shall not exceed a 1:1 slope. Construct culvert sediment basins. Waste materials from drainage ditches and sediment basins shall be placed in nearby waste areas and uniformly sloped and compacted for drainage, as directed by STATE.

(4) Culvert Installation. Culverts in live streams shall be installed with the inlet and outlet on grade with the stream bottom, unless otherwise specified in writing. Fill construction backfill shall consist of select materials and may be obtained from borrow pits, as directed by STATE. Backfill materials shall be hauled in where necessary and thoroughly compacted in accordance with this Exhibit. STATE may require the use of crushed rock for culvert bedding.

(5) Fill Armor and Energy Dissipator Construction. Where rock is specified for fill armor, rock shall be machine placed and tamped at a 1½:1 slope, beginning at the toe of the fill. Where rock is used for an energy dissipator, rock shall be placed below the culvert outlet and embedded for a minimum of 3 feet, in accordance with Exhibit G.

(6) Equipment. All excavation and riprap placement shall be performed using a minimum 1½ cubic-yard, track-mounted excavator.

(7) Controlled Blasting. Drilling and shooting operations are anticipated on road segments 1I to 1J, 2A to 2B, 2C to 2D, 2E to 2F Station 3+00 to 4+00, and 2G to 2H. Controlled blasting techniques shall be utilized for any blasting operations, and shall be accomplished using timing devices, delayed charges, low intensity shots, or other suitable means to contain material within the road prism.

(8) Hydraulic Rock Hammer. Use of an on-site hydraulic rock hammer may be required for the breaking of rock strata encountered during construction and improvement activities. Rock hammers shall be utilized in accordance with manufacturer recommendations. Material shall be contained within the road prism and measures taken to contain material such as establishment of temporary berms, or barriers. Material shall be end hauled to approved waste area locations, utilized on-site for road and landing construction, pit-run, riprap, or road fill for other project areas.

(9) Waste Area Construction and Improvement. Develop waste areas to accommodate waste materials from new road construction and road improvement. This includes scattering and piling woody debris and stumps and/or end hauling and burning to create room and leveling the access roads for dump truck access. Amount of material in waste areas shall not exceed allowable limits as specified in FULL BENCH AND END HAUL of Exhibit D.

(10) Subgrade Preparation and Application of Surfacing Rock.

(a) Complete culvert installations, drainage ditches, ditchouts, fill construction, and other specified work prior to the application of surfacing rock.

(b) Subgrade shall be crowned, outsloped, or insloped at 4 to 6 percent.

(c) Upon completion of above required work, apply, process, and compact surfacing rock in accordance with specifications in the “Compaction and Processing Requirements” in this Exhibit. Final road surface shall be crowned, outsloped, or insloped at 4 to 6 percent.

SPECIFIC ROAD CONSTRUCTION INSTRUCTIONS

Segment	Station	Work Description
1A to 1B		
	0+00	End haul waste to 1K to 1L to use as fill material for construction. Any excess waste should be hauled to designated Waste Area 1. Scatter clearing and grubbing debris in stable locations or end haul clearing and grubbing debris to designated Waste Area 1.
	1+65	Construct turnout.
	2+40	Install culvert. Install culvert marker. Install culvert energy dissipator.
	4+90	Construct turnaround.
	5+50	Construct ditchout.
	6+20	Construct landing.
1C to 1D		
	0+00	Road is unposted and shall be cleared and grubbed in accordance with Exhibit D CLEARING CLASSIFICATION. Begin end haul clearing and grubbing debris to designated Waste Area 1
	4+40	Install culvert. Install culvert marker.
	5+00	End of end haul clearing and grubbing debris. Begin scatter clearing and grubbing debris in stable locations.
	8+00	Construct ditchout.
	9+80	Install culvert. Install culvert marker.
	14+00	Install culvert at junction of 1E to 1F. Install culvert marker.
	15+70	Install culvert. Install culvert marker.
	19+60	Install culvert. Install culvert marker.
	20+30	Begin end haul of clearing and grubbing debris to designated Waste Area 1.
	22+00	Construct turnaround.
	24+00	Clear and grub existing 100 foot wide landing. Utilize space outside the landing to pile clearing and grubbing debris out of the road prism. End of end haul clearing and grubbing debris.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

Segment	Station	Work Description
1E to 1F		
	0+00	Road is unposted and shall be cleared and grubbed in accordance with Exhibit D CLEARING CLASSIFICATION.
	4+90	Clear existing landing. Install culvert. Install culvert marker.
	5+50 to 7+70	Excavate cutbank and widen existing road surface. End haul material to designated waste area.
	7+00	Construct turnout.
	8+80	Clear and grub existing landing. Utilize space outside the landing to pile clearing and grubbing debris out of the road prism.
1G to 1H		
	0+00	Begin end haul of clearing and grubbing debris to designated waste area.
	2+00	Install culvert. Install culvert marker. Install culvert energy dissipator.
	2+90	Begin scattering clearing and grubbing debris in stable locations.
	4+00	Install culvert. Install culvert marker.
	4+45	Construct turnaround.
	6+00	Construct landing 90 feet wide by 90 feet long.
1I to 1J		
	1+80	Drill/shoot 12 feet to construct a landing 100 feet wide by 100 feet long. Excess material used to construct landing shall be utilized as pit-run/riprap rock for Unit 1 new road construction. Clearing debris shall be end hauled prior to drilling and shooting and burned as part of Project No. 4.
1K to 1L		
	1+80	Construct landing.
2A to 2B		
	1+00	Drill/shoot 7 feet to road level to construct a landing 90 feet wide by 90 feet long. Excess material used to construct landing shall be utilized as pit-run/riprap rock for Unit 2 new road construction. Clearing debris shall be end hauled prior to drilling and shooting and burned as part of Project No. 4.
2C to 2D		
	1+00	Construct ditchout.
	1+90	Drill/shoot 10 feet to construct a landing. Excess material used to construct landing shall be utilized as pit-run/riprap rock for Unit 2 new road construction. Clearing debris shall be end hauled prior to drilling and shooting and burned as part of Project No. 4.
2E to 2F		
	0+00	STATE will issue instructions for a waste area and road and landing widening outside posted right-of-way. Clearing debris shall be end hauled and burned as part of Project No. 4. Utilize the clearing area for waste material generated from new road construction and improvement to designated waste area.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

Segment	Station	Work Description
2E to 2F		
	3+00	Drill/shoot 13 feet to construct a landing 70 feet wide and 100 feet long. Landing will incorporate existing road and up to 10 feet of opposite road shoulder. Clearing debris shall be end hauled prior to drilling and shooting and burned as part of Project No. 4. Maintain existing road grade to 2F and taper landing as needed. Excess material used to construct landing shall be utilized as pit-run/riprap rock for Unit 2 new road construction. Begin daylighting existing cutbank and utilize material to construct 2F.
	7+60	End daylighting existing cutbank. Utilize excess material to construct a landing 50 feet wide by 70 feet long.
2G to 2H		
	0+00	End haul all clearing and grubbing debris to designated waste area.
	0+20	Construct ditchout.
	1+40	Begin landing construction. Drill/shoot 18 feet to existing road level to construct a landing 100 feet wide by 100 feet long. Excess material used to construct landing shall be utilized as pit-run/riprap rock for Unit 2 new road construction. Clearing debris shall be end hauled prior to drilling and shooting and burned as part of Project No. 4.
	2+60	Begin filling existing landing.
	3+20	End landing construction.
	3+60	End filling existing landing.
3A		
	N/A	Construct landing. Construct ditch across junction.
3B to 3C		
	0+00	Begin cutslope rounding and utilize material for road construction. End haul all clearing and grubbing debris to designated Waste Area 5.
	2+60	End cutslope rounding.
	1+65	Construct turnout.
	2+30	Install culvert. Install culvert marker.
	4+50	Install culvert. Install culvert marker.
	6+70	Install culvert. Install culvert marker. Begin cutslope rounding and utilize material for road construction.
	8+70	End cutslope rounding.
	8+85	Construct turnaround.
	10+60	Construct landing.
3D to 3E		
	2+80	Construct a roadside landing 70 feet wide by 50 feet long.
	3+50	Install culvert. Install culvert marker. Install culvert energy dissipator.
	6+60	Construct waterbar at end of road.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

Segment	Station	Work Description
3F to 3G		
	0+00 to 1+40	Utilize end haul material as fill from I5 to I6 (Sta. 237+80 to 239+50) to construct junction. Begin fill armoring
	1+40	End of fill armoring.
	1+80	Install culvert. Install culvert marker. Begin cutslope rounding and utilize material for road construction.
	2+20	Construct a roadside landing 60 feet wide by 60 feet long.
	3+70	Begin fill armoring
	3+90	Install culvert. Install culvert marker.
	4+60	End of fill armoring.
	5+00	End cutslope rounding.
	6+40	Construct a landing 60 feet wide by 60 feet long.
3H to 3I		
	0+00	Begin cutslope rounding and utilize material for road construction.
	4+00	Install culvert Install culvert marker.
	8+30	Construct turnout.
	9+00	Install culvert Install culvert marker.
	10+10	Construct turnaround.
	10+40	End cutslope rounding.
	11+70	Construct a landing 70 feet wide by 70 feet long.
3J to 3K		
	0+00	Reconstruct both junctions. End haul all clearing and grubbing debris and old waste material to designated Waste Area 5.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

GENERAL ROAD IMPROVEMENT, SURFACE ROCK REPLACEMENT, AND ROAD MAINTENANCE INSTRUCTIONS:

(1) Timber Removal. Remove all trees within posted Right-of-Way Boundary or individually marked with an orange "C", as specified in Section 2210, Designated Timber.

(2) Excavated Materials. Excavated materials shall be utilized for road and fill construction and hauled in where necessary. Surplus excavation materials shall be hauled to the waste areas as marked in the field and/or designated on Exhibit A or used for fill on other road segments. Surplus excavated materials and waste materials shall be sloped and compacted for drainage. Fills shall be thoroughly compacted in accordance with this Exhibit.

(3) Bank Slough Removal. Excavate all bank slough. Bank slough material shall not be pulled across existing surfacing rock. Excavated material shall be hauled to the designated waste areas as marked in the field and/or designated on Exhibit A.

(4) Culvert Replacement, Culvert Installation, Fill Reconstruction, and Fill Removal. Existing culvert geometry shall be modified to provide for optimum drainage and culvert performance. Modifications may include, skewing the culvert and/or installing the culvert at gradients equal to or exceeding the drainage (or ditch) gradient. Where fill reconstruction or culvert replacement is specified, fills shall be excavated to natural stream course levels. All woody debris encountered during fill excavation shall be removed. Fill reconstruction backfill shall consist of select materials and may be obtained from borrow pits, as directed by STATE. Unsuitable backfill material shall be hauled to the designated waste areas as marked in the field and/or designated on Exhibit A. Backfill materials shall be hauled in where necessary and thoroughly compacted in accordance with this Exhibit.

(5) Culvert Cleaning and Repairs. Remove all debris from inside all existing culverts on the road improvement segment, as directed by STATE. Damaged culvert inlets and/or outlets shall be repaired by opening them with a hydraulic jack, or cutting off the culvert end to allow for free passage of water at peak flow levels.

(6) Drainage Ditches. Restore or construct ditchlines, including ditchouts, and remove debris from cutbanks, fill slopes and the road prism, as directed by STATE. Clean out all culvert inlets and outlets for a 10-foot radius. Re-establish or construct culvert sediment basins. Waste materials from drainage ditches and sediment basins, cutbanks, fill slopes and the road prism shall not be pulled across existing surfacing rock, but shall be placed in nearby waste areas.

(7) Fill Armor and Energy Dissipator Construction. Where rock is specified for fill armor, rock shall be machine placed and tamped at a 1½:1 slope, beginning at the toe of the fill. Where rock is used for an energy dissipator, rock shall be placed below the culvert outlet and embedded for a minimum of 3 feet, in accordance with Exhibit G.

(8) Sod Removal. Remove/separate sod from crushed rock surfacing as directed by STATE. Sod material shall be scattered in stable locations through openings in the timber outside of the cleared right-of-way. In areas where sod cannot be scattered in a stable location, material shall be end hauled to designated waste areas as shown on Exhibit A, or other stable locations as directed by STATE.

(9) Equipment. All excavation and riprap placement shall be performed using a minimum 1½ cubic yard, track-mounted excavator.

(10) Controlled Blasting. Drilling and shooting operations are anticipated on road segments 1I to 1J, 2A to 2B, 2C to 2D, 2E to 2F Station 3+00 to 4+00, and 2G to 2H. Controlled blasting techniques shall be utilized for any blasting operations, and shall be accomplished using timing devices, delayed charges, low intensity shots, or other suitable means to contain material within the road prism.

(11) Hydraulic Rock Hammer. Use of an on-site hydraulic rock hammer may be required for the breaking of rock strata encountered during construction and improvement activities. Rock hammers shall be utilized in accordance with manufacturer recommendations. Material shall be contained within the road prism and measures taken to contain material such as establishment of temporary berms, or barriers. Material shall be end hauled to approved waste area locations, utilized on-site for road and landing construction, pit-run, riprap, or road fill for other project areas.

(12) Waste Area Construction and Improvement. Develop waste areas to accommodate waste materials from new road construction and road improvement. This includes scattering and piling woody debris and stumps and/or end hauling and burning to create room and leveling the access roads for dump truck access. Amount of material in waste areas shall not exceed allowable limits as specified in FULL BENCH AND END HAUL of Exhibit D.

(13) Subgrade Preparation and Application of Surfacing Rock.

(a) Complete culvert installations, drainage ditches, fill reconstruction, ditchouts, and other specified work prior to the application of new surfacing rock.

(b) Cut out all potholes and/or washboard sections from the existing surfacing.

(c) Apply required patching and leveling rock, as directed by STATE.

(d) Process (grade and mix) the existing surface and added base rock. Provide for a crown, outslope, or inslope of 4 to 6 percent, and compact in accordance to the “Compaction and Processing Requirements” in this Exhibit.

(e) Upon completion of above required work, apply, process, and compact surfacing rock in accordance to this Exhibit.

(f) Spot grading and grade, shape, and ditch: Includes items (a), (b), and (c) above. Provide for a crown, outslope, or inslope of 4 to 6 percent. Compaction is not required unless specified in specific instructions.

SPECIFIC SALE ACCESS ROAD IMPROVEMENT, SURFACE ROCK REPLACEMENT, AND ROAD MAINTENANCE INSTRUCTIONS

Segment	Station	Work Description
I1 to I2		
	0+00	Begin spot grading.
	166+85	Clear debris from road prism.
	179+60	End spot grading. Begin three inch lift of 1½”-0” of crushed rock.
	272+05	Begin ditch reestablishment.
	282+90	End ditch reestablishment.
	297+35	Begin ditch reestablishment.
	298+90	Install culvert marker
	303+50	End ditch reestablishment. Begin ditch construction.
	326+55	End three inch lift of 1½”-0” crushed rock. End ditch construction.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

Segment	Station	Work Description
I3 to I4		
	0+00 to 108+15	Reestablish drainage where needed, end haul material to designated Waste Area 2, as directed by STATE.
	108+15 to 197+95	Continue reestablish drainage as needed, scatter material in stable locations, as directed by STATE.
I5 to I6		
	0+00	Begin grade, shape, and compaction.
	19+20	Excavate contaminated surfacing and contaminated subgrade. End-haul to waste area designated by STATE. Excavate ditches so that bottom of ditch is 1 foot deeper than subgrade and end-haul to waste area designated by STATE. Apply and compact 44 cubic yards of 4”-0” crushed rock for subgrade reinforcement and cap with 22 cubic yards of 1 ½”-0” crushed rock.
	30+00	Excavate contaminated surfacing and contaminated subgrade. End-haul to waste area designated by STATE. Excavate ditches so that bottom of ditch is 1 foot deeper than subgrade and end-haul to waste area designated by STATE. Apply and compact 44 cubic yards of 4”-0” crushed rock for subgrade reinforcement and cap with 22 cubic yards of 1 ½”-0” crushed rock.
	40+20	Excavate contaminated surfacing and contaminated subgrade. End-haul to waste area designated by STATE. Excavate ditches so that bottom of ditch is 1 foot deeper than subgrade and end-haul to waste area designated by STATE. Apply and compact 44 cubic yards of 4”-0” crushed rock for subgrade reinforcement and cap with 22 cubic yards of 1 ½”-0” crushed rock.
	48+00	End grade, shape, and compaction. Begin spot grading and compaction of applied surface rock locations only.
	122+00	Remove blowdown from road and ditch.
	179+60	End spot grading and compaction of applied surface rock locations only. Begin grade, shape, and compaction.
	194+10	Begin slough removal and end-haul to waste area designated by STATE.
	200+00	End slough removal and end-haul to waste area designated by STATE.
	225+00 to 271+20	Property line. Begin four inch lift of 4”-0” of crushed rock. Begin sod removal, ditch reestablishment, and debris removal from road prism. Utilize rock hammering as needed to widen road to specified widths and to construct ditches for positive drainage. Remove all debris and vegetation from cutslopes and banks, remove all back slough, restore and reestablish cutslopes including rounding and removal of overhanging and undermined material as necessary. Suitable rock generated may be used for dissipator and landing rock. STATE will determine areas where waste materials and woody debris may be scattered in openings and stable areas. Remaining materials shall be end hauled to Waste Area 5. Woody debris to be end hauled shall be separated and disposed of at waste area by burning in accordance with Project No. 4.
	230+00	Clean culvert inlet and outlet. Install culvert marker.
	233+60	Install culvert marker.
	236+80	Utilize usable material generated from road widening and ditch reestablishment to widen and construct turnout.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

Segment	Station	Work Description
I5 to I6		
	237+80	Install culvert marker. Begin road realignment. Utilize rock hammer as needed to widen road approximately 12 feet into rock bank to straighten curve and align with junction of 3B to 3C. Clear and round finished cutslopes of overhanging, undermined, and loose debris. End haul useable material for construction of junction 3E to 3F and landing on 3D to 3E (Sta. 2+80), waste materials shall be hauled to Waste Area 5. Woody debris shall be separated and disposed of at Waste Area 5 by burning in accordance with Project No. 4.
	238+10	Remove existing culvert. Backfill with useable material generated from realignment.
	239+50	End road realignment.
	241+20	Utilize usable material generated from road widening and ditch reestablishment to widen and construct turnout.
	242+30	Install culvert marker.
	243+60	Install new culvert. Install culvert marker.
	246+00	Install new culvert. Install culvert marker.
	248+90	Install new culvert. Install culvert marker. Install energy dissipator.
	256+50	Install culvert marker.
	257+30	Install new culvert. Install culvert marker. Install energy dissipator.
	262+50	Install new culvert. Install culvert marker.
	268+10	Construct drivable ditch to keep access to stockpile site.
	269+20	Install new culvert. Install culvert marker.
	271+20	End four inch lift of 4”-0” of crushed rock. End sod removal, ditch reestablishment, and debris removal from road prism
I7 to I8		
	0+00	Begin sod removal, ditch reestablishment, and debris removal from road prism. STATE will determine areas where ditch reestablishment is necessary to reopen drainage and locations where waste materials and woody debris may be scattered in openings and stable areas. Minimize disturbance to existing re-prod outside of work area. Remaining materials shall be end hauled to a waste area designated by STATE. Woody debris shall be separated and disposed of at waste areas by burning in accordance with Project No. 4.
	63+25	End sod removal. Continue ditch reestablishment, and debris removal from road prism.
	76+80	Property line. Begin three inch lift of 1½”-0” of crushed rock.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

Segment	Station	Work Description
I7 to I8		
	87+20 to 115+10	Begin sod removal, ditch reestablishment, and debris removal from road prism. Utilize rock hammering as needed to widen road to specified widths and to construct ditches for positive drainage. Remove all debris and vegetation from cutslopes and banks, remove all bank slough, restore and reestablish cutslopes including rounding and removal of overhanging and undermined material as necessary. Suitable rock generated may be used for dissipator and landing rock. STATE will determine areas where waste materials and woody debris may be scattered in openings and stable areas. Remaining materials shall be end hauled to Waste Area 5. Woody debris to be end hauled shall be separated and disposed of at waste area by burning in accordance with Project No. 4.
	93+55	Clean culvert and install culvert marker.
	98+55	Widen catch basin of existing culvert utilizing rock hammer. Install culvert marker.
	98+85	Construct turnaround.
	102+25	Begin widening road approximately 6 feet. Construct turnaround.
	103+35	Begin widening road approximately 6 feet into rock bank. Use a combination of inslope, outslope, or construct ditch to establish drainage. STATE will issue instructions for completion of drainage work. Utilize suitable rock material from road widening and drilling and shooting from other project areas to armor banks where constructed drainage features will outlet.
	105+30	End widening road approximately 6 feet into rock bank.
	106+20	Install culvert Install culvert marker. Install energy dissipator.
	107+00	Upon removal of debris, bank slough, and cutslope restoration, establish positive drainage through spring area using a combination of inslope, outslope, ditch construction, widening or deepening of ditch, or construction of drivable dip. STATE will issue instructions for completion of drainage work. Utilize suitable rock material from road widening or drilling and shooting from other project areas to armor banks where constructed drainage features will outlet or to buttress undermined cutslopes.
	109+60	Begin widening road approximately 12 feet into rock bank. Use a combination of inslope, outslope, or construct ditch to establish drainage. STATE will issue instructions for completion of drainage work. Utilize suitable rock material from road widening and drilling and shooting from other project areas to armor banks where constructed drainage features will outlet.
	113+10	End widening road approximately 12 feet into rock bank to widen road.
	115+10	Install culvert. Install culvert marker. Install energy dissipator. End ditch reestablishment.
I9 to I10		
	0+00	Begin sod removal.
	1+45	Improve existing landing utilizing material from 2C to 2D to expand and level to a minimum 50 foot width.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

Segment	Station	Work Description
I9 to I10	8+80	End sod removal. Improve existing landing utilizing material from 2C to 2D to expand and level to a minimum 70 foot width. STATE will issue instructions for a waste area and road and landing widening. Clearing debris shall be end hauled and burned as part of Project No. 4. Utilize the clearing area for waste material generated from new road construction and improvement to designated waste area.
I11 to I12		
	0+00 to 143+20	Remove debris within road prism and reestablish drainage where needed, as directed by STATE.
	70+10	Begin two inch lift of 1½”-0” crushed rock.
	143+20	End two inch lift of 1½”-0” crushed rock.
I13 to I14		
	0+00 to 16+40	Remove debris within road prism and reestablish drainage where needed, as directed by STATE.
	11+80	Property line. Install culvert marker.
	16+40	Clear and open waste area. Woody debris shall be burned with Project No. 4.

EXHIBIT D

FULL BENCH AND END-HAUL REQUIREMENTS

POINT TO POINT	STA. TO STA.	CONTAINMENT - SIDECAST
1A to 1B	0+00 to 6+20	1
1C to 1D	0+00 to 5+00 and 20+30 to 24+00	1
1E to 1F	5+50 to 7+70	2
1G to 1H	0+00 to 2+90	1
2E to 2F	0+00 to 7+60	1
2G to 2H	0+00 to 3+60	1
3B to 3C	0+30 to 5+40	1
3F to 3G	2+50 to 4+00	1
3J to 3K	0+00 to 2+00	1
I3 to I4	0+00 to 108+15	1
I5 to I6	19+20, 30+00, 40+20, 194+10 to 200+00, and 225+00 to 271+20	1
I7 to I8	87+20 to 115+10	1

Full Bench and End-Haul Areas General Requirements

Sidecast includes any road generated excess excavation material which is not essential as part of the road prism, is not compacted, and is below the roadway. Material shall not be sidecast unless specified above.

Clearing and grubbing debris shall be end-hauled.

When controlled blasting is required, it shall be accomplished using timing devices, delayed charges, low intensity shots, or other suitable means to contain material within the road prism.

Containment/Sidecast

(1) Full: No excavated material remains below the road.

(2) Normal/Incidental: The amount of excavated material lost over the outside edge of the road shall not exceed 1 foot in depth.

(3) Sidecast: Material shall be spread evenly below the road so that it does not build up behind trees, snags or other debris, and shall not exceed 3 feet in depth.

Any amount of material exceeding the containment requirements shall be removed by whatever means necessary and end-hauled to a designated waste area.

EXHIBIT D

FULL BENCH AND END-HAUL REQUIREMENTS

WASTE AREAS

Waste Area Location

WASTE AREA NUMBER	MAXIMUM ALLOWABLE YARDAGE	BURNING REUIRED UNDER PROJECT NO.4
1	N/A	N
2	N/A	N
3	2,500	Y
4	1,000	Y
5	N/A	Y
6	N/A	Y

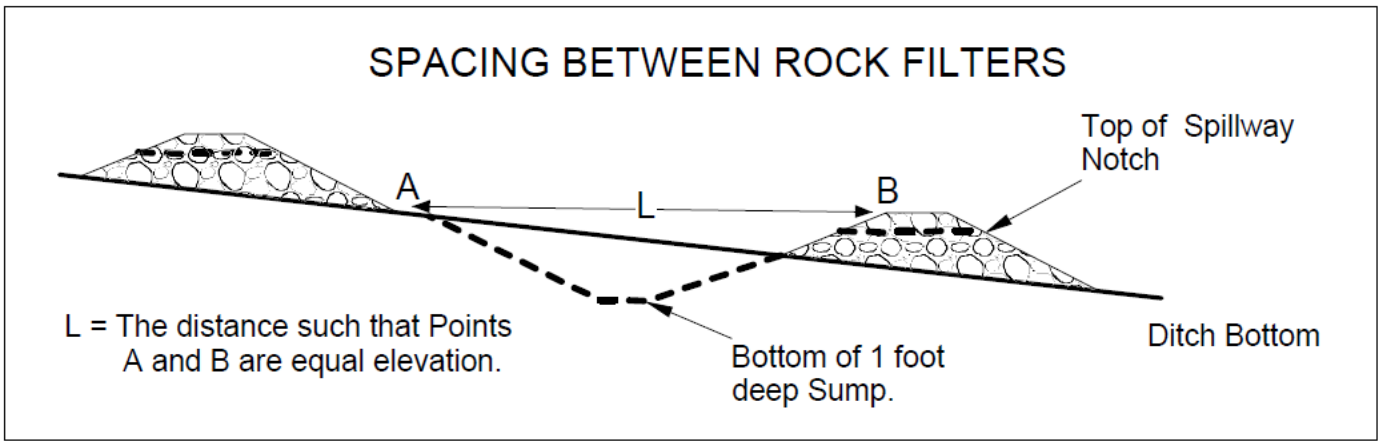
- As shown on Exhibit A and as marked in the field.
- Setback from slope break shall be a minimum of 20 feet horizontal measurement.
- Fill material for new road and landing construction.
- Useable rock material for landing rock, dissipators, and fill armor.

Waste Area Treatment

- Clear and grub within flagged or marked areas, level and prepare for use.
- Pile and burn all clearing and grubbing debris from waste area development including existing material and end hauled debris as specified in Exhibit J and as required with Project No. 4, as directed by STATE.
- At waste areas that do not require disposal by burning under Exhibit J and Project No. 4, pile woody debris separate from other waste material, as directed by STATE.
- Deposit at waste area, spread evenly, compact, and provide adequate drainage. STATE will provide instructions and mark toe of fill for waste area locations.
- If material hauled to waste areas reaches maximum allowable yardage under the waste area table, material shall be hauled to the next nearest waste area. Load records shall be kept by PURCHASER for volumes hauled and provided to STATE. Measurements will be used by STATE to account for volumes hauled and placed in waste areas.
- STATE may issue instructions to haul waste materials and useable rock material to separate waste area locations. Useable rock material shall be placed separate from waste materials in a location accessible for future loading and hauling.
- Mulch and seed all waste areas in accordance with Exhibit I.

EXHIBIT D

TYPICAL ROCK DITCH FILTER



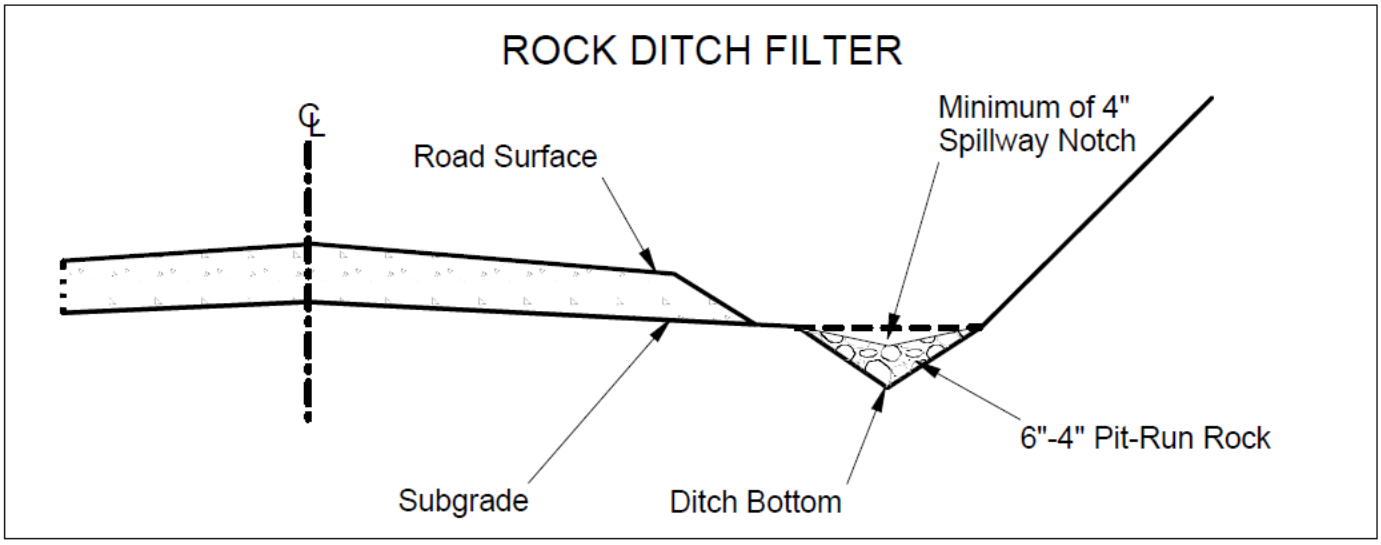


EXHIBIT D

ROAD SURFACING

ROAD SEGMENT: 1A to 1B				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	1A to 1B		0+00 to 6+20		
				Volume (CY) Per		Number of		
Junction Rock	1 1/2"-0" crushed	N/A	N/A	junctions	11	junctions	1	11
Base Rock	4"-0" crushed	0+00 to 6+20	8	station	50	stations	6.2	310
Turnouts	4"-0" crushed	1+65	N/A	turnout	22	turnouts	1	22
Culvert Energy Dissipator	24"-6" riprap	2+40	N/A	dissipator	11	dissipators	1	11
Turnarounds	4"-0" crushed	4+90	N/A	turnaround	33	turnarounds	1	33
Landings	6"-0" pit-run	6+20	N/A	landing	110	landings	1	110
Total Rock for Road Segment:			1A to 1B					497

ROAD SEGMENT: 1C to 1D				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	1C to 1D		0+00 to 24+00		
				Volume (CY) Per		Number Of		
Base Rock	4"-0" crushed	0+00 to 24+00	8	station	50	stations	24.00	1,200
Junction Rock	1 1/2"-0" crushed	0+00	N/A	junctions	11	junctions	1	11
Traction Rock	1 1/2"-0" crushed	0+00 to 5+40, 8+90 to 14+40, 16+00 to 23+00	2	station	13	stations	17.90	233
Subgrade Reconstruction	4"-0" crushed	1+30, 4+40, 8+00, 8+90, 9+80, 15+00, 17+00, 19+00, 22+00	N/A	load	11	loads	9	99
Turnouts	4"-0" crushed	5+40, 12+50	N/A	turnout	22	turnouts	2	44
Turnarounds	4"-0" crushed	12+50, 22+00	N/A	turnaround	33	turnarounds	2	66
Landings	6"-0" pit-run	24+00	N/A	landing	110	landings	1	110
Total Rock for Road Segment:			1C to 1D					1,763

ROAD SEGMENT: 1E to 1F				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	1E to 1F		0+00 to 8+80		
				Volume (CY) Per		Number Of		
Base Rock	4"-0" crushed	0+00 to 8+80	8	station	50	stations	8.80	440
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11
Turnouts	4"-0" crushed	2+40, 4+90	N/A	turnout	22	turnouts	2	44
Turnarounds	4"-0" crushed	7+00	N/A	turnaround	33	turnarounds	1	33
Landings	6"-0" pit-run	8+80	N/A	landing	77	landings	1	77
Total Rock for Road Segment:			1E to 1F					605

EXHIBIT D

ROAD SURFACING

ROAD SEGMENT: 1G to 1H				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	1G to 1H		0+00 to 6+00		
				Volume (CY) Per		Number Of		
Base Rock	4"-0" crushed	0+00 to 6+00	8	station	50	stations	6.00	300
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11
Traction Rock	1 1/2"-0" crushed	1+40 to 5+00	2	station	13	stations	3.6	47
Culvert Energy Dissipator	24"-6" riprap	2+00	N/A	dissipator	11	dissipators	1	11
Turnarounds	4"-0" crushed	4+45	N/A	turnaround	33	turnarounds	1	33
Landings	6"-0" pit-run	6+00	N/A	landing	77	landings	1	77
Total Rock for Road Segment:			1G to 1H					479
ROAD SEGMENT: 1I to 1J				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	1I to 1J		0+00 to 1+80		
				Volume (CY) Per		**Number Of**		
Base Rock	4"-0" crushed	0+00 to 1+80	8	station	50	stations	1.80	90
Turnarounds	4"-0" crushed	0+15	N/A	turnaround	33	turnarounds	1	33
Landings	6"-0" pit-run	1+80	N/A	landing	110	landings	1	110
Total Rock for Road Segment:			1I to 1J					233
ROAD SEGMENT: 1K to 1L				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	1K to 1L		0+00 to 1+80		
				Volume (CY) Per		**Number Of**		
Base Rock	4"-0" crushed	0+00 to 1+80	8	station	50	stations	1.80	90
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11
Landings	6"-0" pit-run	1+80	N/A	landing	110	landings	1	110
Total Rock for Road Segment:			1K to 1L					211
ROAD SEGMENT: 2A to 2B				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	2A to 2B		0+00 to 1+00		
				Volume (CY) Per		**Number Of**		
Base Rock	4"-0" crushed	0+00 to 1+00	8	station	50	stations	1.00	50
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11
Landings	6"-0" pit-run	1+00	N/A	landing	110	landings	1	110
Total Rock for Road Segment:			2A to 2B					171

EXHIBIT D

ROAD SURFACING

ROAD SEGMENT: 2C to 2D				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	2C to 2D		0+00 to 1+90		
				Volume (CY) Per		Number Of		
Base Rock	4"-0" crushed	0+00 to 1+90	8	station	50	stations	1.90	95
Junction Rock	1 1/2"-0" crushed	0+00	N/A	junctions	11	junctions	1	11
Traction Rock	1 1/2"-0" crushed	0+00 to 1+00	2	station	13	stations	1.00	13
Landings	6"-0" pit-run	1+90	N/A	landing	77	landings	1	77
Total Rock for Road Segment:			2C to 2D					196
ROAD SEGMENT: 2E to 2F				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	2E to 2F		0+00 to 7+60		
				Volume (CY) Per		**Number Of**		
Base Rock	4"-0" crushed	4+00 to 7+60	8	station	50	stations	3.60	180
Junction Rock	4"-0" crushed	3+00	N/A	junctions	11	junctions	1	11
Traction Rock	1 1/2"-0" crushed	4+00 to 7+60	2	station	13	stations	3.60	47
Landings	6"-0" pit-run	3+00, 7+60	N/A	landing	77	landings	2	154
Total Rock for Road Segment:			2E to 2F					392
ROAD SEGMENT: 2G to 2H				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	2G to 2H		0+00 to 3+60		
				Volume (CY) Per		**Number Of**		
Base Rock	4"-0" crushed	0+00 to 3+60	8	station	50	stations	3.60	180
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11
Landings	6"-0" pit-run	3+60	N/A	landing	110	landings	1	110
Total Rock for Road Segment:			2G to 2H					301
ROAD SEGMENT: 3A				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	3A		N/A		
				Volume (CY) Per		**Number Of**		
Junction Rock	1 1/2"-0" crushed	N/A	N/A	junctions	11	junctions	1	11
Landings	6"-0" pit-run	N/A	N/A	landing	110	landings	1	110
Total Rock for Road Segment:			3A					121
ROAD SEGMENT: 3B to 3C				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	3B to 3C		0+00 to 10+60		
				Volume (CY) Per		**Number Of**		
Base Rock	4"-0" crushed	0+00 to 1+00	8	station	50	stations	1.00	50
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11
Total Rock for Road Segment:			3B to 3C					61

EXHIBIT D

ROAD SURFACING

ROAD SEGMENT: 3D to 3E				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	3D to 3E		0+00 to 6+60		
				Volume (CY) Per		Number Of		
Base Rock	4"-0" crushed	0+00 to 6+60	8	station	50	stations	6.60	330
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11
Traction Rock	1 1/2"-0" crushed	0+00 to 6+60	2	station	13	stations	6.60	86
Landings	6"-0" pit-run	2+80	N/A	landing	110	landings	1	110
Culvert Energy Dissipator	24"-6" riprap	3+50	N/A	dissipator	11	dissipators	1	11
Total Rock for Road Segment:			3D to 3E					548
ROAD SEGMENT: 3F to 3G				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	3F to 3G		0+00 to 6+40		
				Volume (CY) Per		**Number Of**		
Base Rock	4"-0" crushed	0+00 to 6+40	8	station	50	stations	6.40	320
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11
Fill Armoring	24"-6" riprap	0+00 to 1+40, 3+70 to 4+60	N/A	load	11	loads	20	220
Traction Rock	1 1/2"-0" crushed	1+00 to 5+70	2	station	13	stations	4.70	61
Landings	6"-0" pit-run	2+20, 6+40	N/A	landing	110	landings	2	220
Total Rock for Road Segment:			3F to 3G					832
ROAD SEGMENT: 3H to 3I				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	3H to 3I		0+00 to 11+70		
				Volume (CY) Per		**Number Of**		
Base Rock	4"-0" crushed	0+00 to 11+70	8	station	50	stations	11.70	585
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11
Turnouts	4"-0" crushed	8+30	N/A	turnout	22	turnouts	2	44
Turnarounds	4"-0" crushed	10+10	N/A	turnaround	33	turnarounds	1	33
Traction Rock	1 1/2"-0" crushed	6+50 to 10+50	2	station	13	stations	4	52
Turnouts	1 1/2"-0" crushed	8+60	2	turnout	22	turnouts	1	22
Landings	6"-0" pit-run	11+70	N/A	landing	110	landings	1	110
Total Rock for Road Segment:			3H to 3I					857
ROAD SEGMENT: 3J to 3K				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	3J to 3K		0+00 to 2+00		
				Volume (CY) Per		**Number Of**		
Base Rock	4"-0" crushed	0+00 to 2+00	8	station	50	stations	2.00	100
Junction Rock	4"-0" crushed	0+00, 2+00	N/A	junctions	11	junctions	2	22
Total Rock for Road Segment:			3J to 3K					122

EXHIBIT D

ROAD SURFACING

ROAD SEGMENT: I1 to I2				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	I1 to I2		0+00 to 326+55		
				Volume (CY) Per		Number Of		
Surface Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	3	33
Surfacing	1 1/2"-0" crushed	179+60 to 326+55	3	station	19	stations	146.95	2,792
Turnouts	1 1/2"-0" crushed	214+50, 220+35, 230+25, 238+00, 256+85, 270+35, 286+70, 290+00, 294+10, 297+35	N/A	turnout	11	turnouts	10	110
Junctions	1 1/2"-0" crushed	203+60, 228+45, 233+75, 247+90 (2), 265+35 (3), 296+25	N/A	load	11	loads	9	99
Total Rock for Road Segment:				I1 to I2				3,034
ROAD SEGMENT: I3 to I4				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	I3 to I4		0+00 to 197+95		
				Volume (CY) Per		**Number Of**		
Surface Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	55	605
Total Rock for Road Segment:				I3 to I4				605
ROAD SEGMENT: I5 to I6				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	I5 to I6		0+00 to 271+20		
				Volume (CY) Per		**Number Of**		
Surface Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	21	231
Surface Leveling Rock	4"-0" crushed	225+00 to 271+20	N/A	load	11	loads	15	165
Subgrade Base Reconstruction	4"-0" crushed	19+20, 30+00, 40+20	N/A	location	44	locations	3	132
Subgrade Surface Reconstruction	1 1/2"-0" crushed	19+20, 30+00, 40+20	N/A	location	22	locations	3	66
Surfacing	4"-0" crushed	225+00 to 271+20	4	station	25	stations	46.2	1,155
Base Rock	4"-0" crushed	237+80 to 239+50	8	station	50	stations	1.7	85
Turnouts	4"-0" crushed	230+00, 236+80, 241+20	N/A	turnout	22	turnouts	3	66

EXHIBIT D

ROAD SURFACING

ROAD SEGMENT: I5 to I6 Cont.				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	I5 to I6 Volume (CY) Per		0+00 to 271+20 Number Of		
Culvert Bedding and Backfill	3/4"-0" crushed	243+60 (3), 246+00 (4), 248+90 (3), 257+30 (4), 262+50 (5), 269+20 (3)	N/A	load	11	loads	22	242
Culvert Energy Dissipator	24"-6" riprap	248+90, 257+30	N/A	dissipator	11	dissipators	2	22
Total Rock for Road Segment:			I5 to I6					2,164
ROAD SEGMENT: I7 to I8				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	I7 to I8 **Volume (CY) Per**		0+00 to 117+90 **Number Of**		
Surface Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	25	275
Junctions	1 1/2"-0" crushed	0+00	N/A	load	11	loads	2	22
Surfacing	1 1/2"-0" crushed	76+80 to 117+90	3	station	19	stations	41.1	781
Turnouts	1 1/2"-0" crushed	85+80, 98+85, 102+25	N/A	turnout	22	turnouts	3	66
Turnaround	1 1/2"-0" crushed	98+85, 102+25	N/A	turnaround	22	turnaround	2	44
Culvert Bedding and Backfill	3/4"-0" crushed	106+20, 115+10	N/A	culvert	44	culverts	2	88
Culvert Energy Dissipator	24"-6" riprap	106+20, 115+10	N/A	dissipator	11	dissipators	2	22
Total Rock for Road Segment:			I7 to I8					1,298
ROAD SEGMENT: I9 to I10				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	I9 to I10 **Volume (CY) Per**		0+00 to 8+80 **Number Of**		
Junctions	1 1/2"-0" crushed	0+00	N/A	load	11	loads	2	22
Surfacing	1 1/2"-0" crushed	0+00 to 8+80	2	station	13	stations	8.8	114
Landings	6"-0" pit-run	1+45 (18), 8+80 (9)	N/A	load	11	loads	27	297
Total Rock for Road Segment:			I9 to I10					433
ROAD SEGMENT: I11 to I12				**POINT TO POINT**		**Sta. to Sta.**		**TOTAL VOLUME (CY)**
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	I11 to I12 **Volume (CY) Per**		0+00 to 143+20 **Number of**		
Subgrade Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	25	275
Surfacing	1 1/2"-0" crushed	70+10 to 143+20	2	station	13	stations	73.1	950
Total Rock for Road Segment:			I11 to I12					1,225

EXHIBIT D

ROAD SURFACING

ROAD SEGMENT: I13 to I14				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size And Type	Location	Depth of Rock (inches)	I13 to I14		0+00 to 16+40		
				Volume (CY) Per		Number Of		
Subgrade Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	6	66
Total Rock for Road Segment:				I13 to I14				66

ROCK SOURCES	4”-0”	1½”-0”	¾”-0”	24”-6”	6”-0”
Lost Lake Stockpiles	2,870	2,131	0	0	0
Sterling Ridge Quarry – Crushing for Project 1 and 2	3,792	5,013	0	0	0
Sterling Ridge Quarry – Crushing Stockpiles for Project 3	2,000	2,000			
Quartz Creek Stockpiles	0	0	330	0	0
Round About Quarry	0	0	0	0	220
Onsite Sources	0	0	0	297	1,592

ROCK TOTALS (CY)	4”-0”	1½”-0”	¾”-0”	24”-6”	6”-0”
20,245	8,662	9,144	330	297	1,812

Roads shall be uniformly graded, shaped and approved by STATE prior to rocking.

EXHIBIT D

ROCK ACCOUNTABILITY

PURCHASER shall obtain subgrade approval from STATE prior to rocking. Rocking shall be limited to periods when weather conditions are acceptable to STATE and when sediment will not enter streams. Additional surfacing needed because of construction season or construction practice is not included in the preceding ROAD SURFACING table, and shall be furnished at PURCHASER expense.

Rock accountability shall be determined by the following methods, as directed by STATE. STATE shall be given 24 hours' notice prior to rocking.

Rock Checking. All rock spreading shall be done only when a STATE representative is present. STATE shall issue a receipt for each load delivered, and rock shall be measured without allowance for shrinkage or shakedown during hauling. Total truck measure volume for each road segment shall be as shown on Exhibit D. Deliver at least 500 cubic yards per 8-hour shift, unless otherwise approved by STATE. A penalty of $10 for each 10 cubic yards which are not delivered during a single shift shall be billed, and payment shall be required prior to final acceptance of the project by STATE.

Depth Measurement. Rock shall be spread and compacted according to the depths specified in Exhibit D. Truck measure volumes are given, but shall not limit the amount of rock spread.

Depth shall be determined in the most compacted area of the surface cross section. The depth of compacted aggregates shall not vary more than 1 inch from the depth specified in the "Road Surfacing" table in Exhibit D. The average depth for each road segment shall be the specified depth or greater. If additional rock is required because of insufficient depth, the locations and volumes to be added shall be determined by STATE.

Load Records. Notify STATE before spreading the rock and maintain a record of all rock delivered for spreading. Make the record available for STATE inspection. A report listing the amount of rock delivered the prior month must be submitted no later than the 15th of each month.

COMPACTION AND PROCESSING REQUIREMENTS

Moisture Content: Compaction must take place when moisture content of the materials being compacted is favorable for effective compaction as determined by STATE.

Compaction Pass: A pass is defined as traveling a road section forward and then backward over that same section.

Subgrade. Subgrade surfaces of the road segments listed below shall be graded and compacted. Compaction shall be accomplished by traveling all surfaces from shoulder to shoulder until the surface is smooth and hard and visible deformation ceases. At least 3 passes shall be made over the entire width and length of the road. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

Subgrade shall be crowned, outsloped, or insloped at 4 to 6 percent as specified in the "Forest Roads Specifications" table in Exhibit D.

ROAD SEGMENT	SUBGRADE COMPACTION OPTIONS
All road segments.	1

Fills. Embankments and fills shall be placed in (approximately) horizontal layers not more than 8 inches in depth. Each layer shall be separately, and thoroughly, compacted. Compaction equipment shall be operated over the entire width of each layer until visible deformation of the layers ceases. At least 3 passes shall be made over the entire width and length of each layer.

Placing individual rocks or boulders with more depth than the allowed layer thickness shall be permitted, provided the embankment will accommodate them. Such rocks and boulders shall be at least 6 inches below the subgrade. They shall be carefully distributed and the voids filled with finer material, forming a dense and compacted mass. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

ROAD SEGMENT	FILLS COMPACTION OPTIONS
All road segments.	1 or 2

Crushed Rock. The rock shall be uniformly mixed and spread in layers on the approved roadbed. Each layer of crushed rock shall be moistened or dried to uniform moisture content suitable for maximum compaction and compacted in layers not to exceed 6 inches in depth. When more than 1 layer is required, each shall be shaped, compacted, and approved by STATE before the succeeding layer is placed. Any 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 material until the surface is smooth and uniform. Each layer shall be compacted with a minimum of 3 passes over the entire width and length of the road until the surface is smooth and hard and visible deformation ceases. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

Rock shall be compacted and processed during the same project period it is spread, unless otherwise approved in writing by STATE.

Rock shall be crowned, outsloped, or insloped at 4 to 6 percent as specified in the "Forest Roads Specifications" table in Exhibit D.

EXHIBIT D

COMPACTION AND PROCESSING REQUIREMENTS

ROAD SEGMENT	CRUSHED COMPACTION OPTIONS
All road segments requiring crushed rock.	1

Pit-Run Rock. The rock shall be uniformly mixed and spread in layers on the approved roadbed. Each layer of pit-run rock shall be moistened or dried to uniform moisture content suitable for maximum compaction and compacted in layers not to exceed 8 inches in depth. When more than 1 layer is required, each shall be shaped and compacted before the succeeding layer is placed. Any 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 material until the surface is smooth and uniform. Each layer shall be compacted with a minimum of 3 passes over the entire width and length of the road. Compaction shall be accomplished by using one or more of the approved equipment options listed below:)

Rock shall be crowned, outsloped, or insloped at 4 to 6 percent as specified in the “Forest Roads Specifications” table in Exhibit D.

ROAD SEGMENT	PIT-RUN COMPACTION OPTIONS
All road segments requiring pit-run rock.	1 or 4

EXHIBIT D

COMPACTION EQUIPMENT OPTIONS

(1) Vibratory Rollers. The drum shall have a smooth surface, a diameter not less than 48 inches, a width not less than 58 inches, and a turning radius of 15 feet or less. Vibration frequency shall be regulated in steps to 1400, 1500, and 1600 VPM, corresponding to engine speeds of 1575, 1690, and 1800 RPM. The centrifugal force developed shall be 7 tons at 1600 VPM. It shall be activated by a power unit of not less than 25 horsepower. The vibratory roller shall be self-propelled and operated at speeds ranging from 0.9 miles to 1.8 miles per hour, as directed by STATE.

(2) Rubber-Tired Skidders. A rubber-tired skidder weighing a minimum of 20,000 pounds shall be operated over the fill layers so that the entire layered surface comes in contact with the tires. Skidders with oversized tires (high flotation) are not acceptable for compaction.

(3) Vibratory Hand-Operated or Backhoe-Mounted Tamper. Vibratory hand-held or hydraulic tampers shall be used for compaction of backfill materials around culverts and/or bridge approach embankment materials around abutments. The tamper shoe dimensions shall be a minimum of 10" X 13" and capable of a centrifugal force of 2,250 pounds.

(4) Dozer. A dozer/track-type tractor weighing a minimum of 45,000 pounds as directed by STATE shall be operated over the pit-run rock so that the entire surface comes in contact with the tracks.

EXHIBIT E

CULVERT SPECIFICATIONS

All culvert materials shall be furnished and installed by PURCHASER, unless otherwise specified in the Contract.

Culverts 36 inches in diameter and smaller shall be constructed of corrugated polyethylene, unless otherwise specified in the Contract. Culverts larger than 36 inches in diameter shall be constructed of corrugated aluminized Type 2 steel, unless otherwise specified in the Contract. Polyethylene culverts shall be double-walled and meet the requirements of AASHTO M-294-11, Type S, or ASTM F2648. Aluminized (Type 2) steel culverts shall meet the requirements of AASHTO M-36-03[1]."

Polyethylene joints shall be made with split couplings, corrugated to engage the culvert corrugations, and shall engage a minimum of 4 corrugations, 2 on each side of the culvert joint.

Culverts shall be located according to the alignment and grade as shown on the Plan and Profile, and/or as staked in the field, or as specified in special instructions.

The STATE Representative shall determine final culvert locations and stake the locations in the field prior to installation.

Culverts in live streams shall be installed with the inlet and outlet on grade with the stream bottom, unless otherwise specified in writing.

Cross Drain Culverts

Cross drain culverts on road grades in excess of 3 percent shall be skewed at least 30 degrees from perpendicular to the road centerline, except that cross drain culverts at the low point of dips in roads shall not be skewed. Cross drains shall be skewed to fit the required culvert length to the road prism.

Cross drain culverts shall be installed at a slope steeper than the incoming ditch grade, but not less than 3 percent or greater than 10 percent.

Disconnect Culverts

The culvert inlet shall be located as close to the channel that it is disconnecting, while the culvert outlet shall be located as far from the channel as possible; discharge culvert outflow on the forest floor, allowing for filtration before the water enters the disconnected channel.

The foundation and trench walls for all culverts shall be free from logs, stumps, limbs, stones, and other objects which would dent or damage the culvert. The culvert trench shall be excavated 3 culvert diameters wide to permit compaction and working on each side of the culvert. Tamping shall be done in 6-inch lifts, 1 culvert diameter each side of the culvert. Bedrock shall be excavated as required to provide a uniform foundation for the full length of the culvert.

A bedding of crushed rock as specified shall be placed to provide a wide band of support and to transmit the load from above evenly over the entire length of the culvert for all culverts on road improvement segments.

Backfill shall consist of crushed rock on improvement segments and job-excavated soil free of stumps, limbs, rocks, or other objects which would damage the culvert on new construction segments.

Transporting of the culvert shall be done carefully. Dragging or allowing free fall from trucks or into trenches shall not be permitted.

Minimum height of cover over top of culvert to subgrade when road is to be rocked shall be as follows: 12" for culverts 18" to 36" and 18" for culverts 42" to 96" add 6" for roads which will not be rocked. Minimum vertical cover for other designs shall be as specified by STATE.

EXHIBIT E

CULVERT SPECIFICATIONS

Lengths of individual culvert sections shall be not less than 10 feet, unless otherwise provided for in special instructions. The shortest culvert section length shall be placed at the inlet end.

The ends of each culvert shall be free of logs and debris which would restrict the free flow of water.

The intake end of cross drain and disconnect culverts shall be provided with a sediment catching basin 3 feet in diameter at the bottom. The outlet end of any culvert which would allow water to erode embankment soil shall be provided with an energy dissipator, half round, or other approved slope protection device. Construct lead-off ditches away from culvert outlets where the slope gradients restrict the free flow of water.

Culverts 24 inches in diameter or larger shall have 1:1 step beveled inlets.

Compaction by tamping utilizing a Vibratory Hand-Operated or Backhoe-Mounted Tamper is required for all culverts.

All culverts scheduled for replacement shall become property of the PURCHASER and be removed from STATE land and hauled to an approved refuse site in the same project period in which replacement occurred. Damaged culvert inlets and/or outlets shall be repaired by opening them with a hydraulic jack, or cutting off the culvert end to allow for free passage of water at peak flow levels.

The intake ends of culverts in fills less than 3 feet to the top of the culvert shall be marked by driving white fiberglass posts within 6 inches of the downgrade side. Posts shall be a minimum of 6 feet long and 2½ inches wide, with the spade driven 2 feet into the ground. Install a culvert marker at each existing culvert that is missing a marker that could be reached by a grader blade.

Energy Dissipators shall be installed within 72 hours of culvert installation, unless otherwise approved in writing by STATE. Steel posts used with half round installation shall be painted with rust preventative paint.

A manufacturer's certification that the product was manufactured, tested, and supplied in accordance with this specification shall be furnished to STATE upon request.

Following are the minimum standard gauges for steel culvert and coupling bands. Some culverts may require different gauges and may be found in the culvert listing.

	Steel Culvert	Thickness			Band Widths (")	
Dia.	Gauge	Uncoated	Coated	Band Gauges	Annular	Helical
18-36	16	(0.0598")	(0.064”)	16	12	12
42-54	14	(0.0747")	(0.079”)	16	12	12
60-84	12	(0.1046")	(0.109”)	16	24	24
90-120	12	(0.1046")	(0.109”)	16	26	26

Culverts larger than 60” in diameter shall have 3” x 1” corrugations.

EXHIBIT E

CULVERT LIST

CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	MATERIAL TYPE	GAUGE	ROAD SEGMENT POINT TO POINT	STATION
1	18	30	CPP	N/A	1A to 1B	2+40
2	18	30	CPP	N/A	1C to 1D	4+40
3	18	40	CPP	N/A	1C to 1D	9+80
4	18	30	CPP	N/A	1C to 1D	14+00
5	18	30	CPP	N/A	1C to 1D	15+70
6	18	30	CPP	N/A	1C to 1D	19+60
7	18	40	CPP	N/A	1E to 1F	4+90
8	18	30	CPP	N/A	1G to 1H	2+00
9	18	30	CPP	N/A	1G to 1H	4+00
10	18	30	CPP	N/A	3B to 3C	2+30
11	18	30	CPP	N/A	3B to 3C	4+50
12	18	30	CPP	N/A	3B to 3C	6+70
13	18	30	CPP	N/A	3D to 3E	3+50
14	18	30	CPP	N/A	3F to 3G	1+80
15	24	40	CPP	N/A	3F to 3G	3+90
16	18	30	CPP	N/A	3H to 3I	4+00
17	18	30	CPP	N/A	3H to 3I	9+00
18	18	30	ACSP	N/A	I5 to I6	243+60
19	18	40	ACSP	N/A	I5 to I6	246+00
20	18	30	ACSP	N/A	I5 to I6	248+90
21	18	40	ACSP	N/A	I5 to I6	257+30
22	18	50	ACSP	N/A	I5 to I6	262+50
23	18	30	CPP	N/A	I5 to I6	269+20
24	18	40	CPP	N/A	I7 to I8	106+20
25	18	40	ACSP	N/A	I7 to I8	115+10

TOTAL LENGTHS BY DIAMETER		
CPP 18 INCH	CPP 24 INCH	ACSP 18 INCH
570	40	230

ACSP = Aluminized, CPP = Polyethylene

EXHIBIT F

ROCK QUARRY DEVELOPMENT AND USE

1. PURCHASER shall prepare a written development plan for the quarry area. The plan shall be submitted to STATE for approval prior to conducting any operation in quarry area. The plan shall include, but not be limited to:

   (a) Location of benches and roads to benches.
   (b) Disposal site for woody debris, overburden and reject material.
   (c) Time lines for rock quarry use.
   (d) Erosion Control measures.

2. PURCHASER shall schedule and coordinate quarry and stockpile usage with other existing or planned activity requiring quarry or stockpile usage. PURCHASER shall notify STATE 5 days prior to the start of quarry development activities.

3. At the Sterling Ridge Quarry, fall all timber within the posted right-of-way boundary and remove all merchantable timber. Non-merchantable timber shall be removed as pulp or decked in a location approved by STATE. All woody debris, including stumps and Slash shall be hauled to the designated disposal areas, piled and disposed of by burning as directed by STATE.

4. Overburden shall be removed for a distance of 20 feet beyond the developed rock source. All overburden and reject material shall be hauled to the designated waste area as directed by STATE.

5. Construct new quarry access road to access the rock source from the quarry floor as identified in the exhibit.

6. PURCHASER shall conduct the operations relative to the disposal of waste material in such manner that sediment, rock, or debris shall not be washed, conveyed, or otherwise deposited in any stream.

7. PURCHASER shall obtain a FPA Burn Permit prior to debris disposal for the Sterling Ridge Quarry.

8. The STATE shall be notified 24 hours prior to the beginning of blasting operations. Working days shall be defined as Monday through Friday, 7:30 a.m. to 3 p.m.

9. PURCHASER shall identify a Blaster in Charge (BIC) for all blasting operations. The BIC will be qualified by experience to oversee all phases of the blasting operations. The BIC shall provide direct supervision at all times when blasting and explosives handling activities are occurring on STATE LANDS.

10. Controlled blasting techniques shall be utilized for any blasting operations, and shall be accomplished using timing devices, delayed charges, low intensity shots, or other suitable means to contain as much material as possible within the quarry development area. Each shot shall also have a “tattle-tale” end cap so that it is known if all charges were detonated. The PURCHASER shall detonate or remove all non-detonated explosives from STATE LANDS. PURCHASER shall maintain a comprehensive blasting log that contains all pertinent data for all blasting operations. The blasting log shall be submitted to the STATE after the completion of all blasting activity. The blasting log is intended for STATE record keeping purposes only.

11. Benches shall be maintained/constructed at intervals of 40 feet or less in height and shall be a minimum of 20 feet in width. Any gravel or talus slopes shall be left with a working face at an angle of 60 percent or less. There shall be a minimum of one bench with an access road to it. Said bench shall be easily accessible with tractors.

12. Quarry face shall be developed in a uniform manner. All quarry backslopes shall be left in a stable condition.

13. Oversized material that is produced or encountered during development shall be broken down and utilized for crushing.

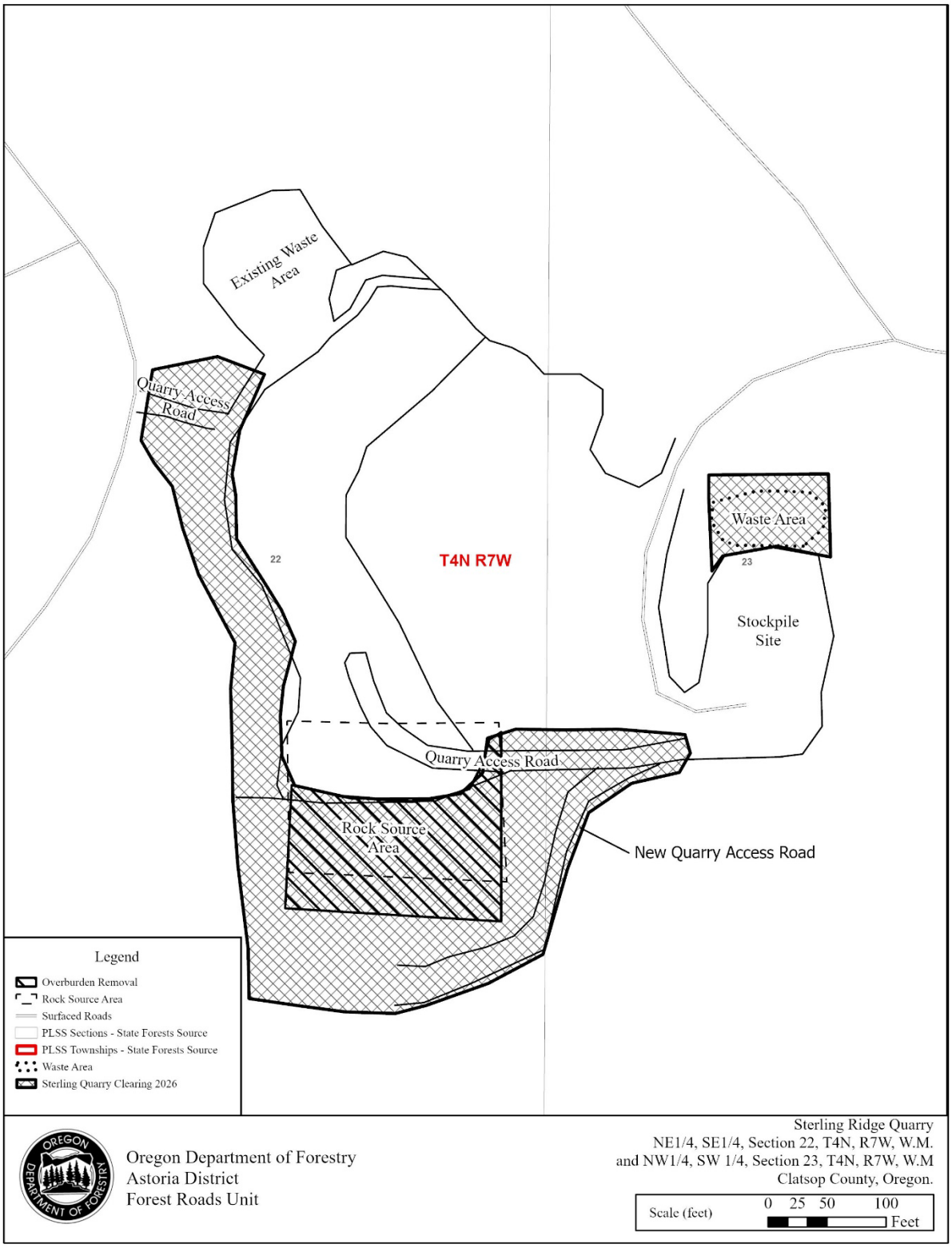
14. The quarry site shall be left in a condition free from overburden and debris. Access roads to the quarry, and the quarry floor, shall be cleared at the termination of use. Unused shot rock material that is produced shall be piled in the vicinity of the rock pit as directed by STATE. Dirt, overburden, and reject material shall be hauled to designated waste area.

15. The quarry floor shall be developed to provide for drainage away from the quarry. All quarry and stockpile site drainage ditches shall be maintained. Ditches, culverts, waterbars and other direct conveyances of water from the quarry or stockpile site(s) shall be constructed to drain to the forest floor in locations that will provide filtration. Quarry access roads shall be cleared and blocked upon completion of quarry use as directed by STATE.

16. Proper winterization and storm-water control measures such as waterbarring, drainage, utilization of filter bales, mulching and/or blocking access shall be constructed and maintained to protect the watershed and Project Work, as directed by STATE.

EXHIBIT F

ROCK QUARRY DEVELOPMENT AND USE



CRUSHED ROCK SPECIFICATIONS

Materials. The material shall be fragments of rock crushed to the required size. The material shall be free from vegetation and lumps of clay. STATE may require screening and/or rejecting of materials utilized for production of crushed rock for the purpose of removing excess fine material. Excess fines are present, when greater than 5 percent of a total rock sample weight, passes a #200 sieve. Rock crushing shall be limited to periods when weather conditions are acceptable to STATE.

Quality and Grading Requirements. The base material shall be rock. River gravel shall not be used. Crushed rock shall meet the grading requirements that follow:

Hardness - Aggregate Hardness - Test Method AASHTO T 96: 30% Maximum

Durability – Test Method ODOT TM 208
Passing No. 20 Sieve: 30% Maximum

For the purpose of crushing rock specified under the projects in Section 2610, “Project Work,” PURCHASER shall utilize a three-stage rock crusher, or equivalent, unless otherwise approved by STATE.

The rock crusher shall be calibrated to produce rock as specified in this exhibit. Prior to the commencement of production crushing, PURCHASER shall sample, test, and provide rock test results meeting STATE specifications. STATE may then sample and test crushed rock for approval to proceed. PURCHASER shall take one sample of each 2,000 cubic yards of crushed rock material produced thereafter, using approved AASHTO sampling procedures. PURCHASER shall submit samples to a certified laboratory or shall 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 STATE. Each sample and the results of PURCHASER testing shall be made available to STATE within 24 hours of sampling. Any rock crushed prior to STATE approval to proceed shall not be credited to the required rock quantity. Any subsequent rock tests not meeting STATE specifications shall be reason for rejection of that portion of crushed rock produced after that test and shall not be credited to the required rock quantity. STATE may sample the crushed rock at any time during the operation. Results of STATE’s tests shall prevail over all other test results.

CRUSHED ROCK SPECIFICATIONS

Grading Requirements

For 1½"-0”	Passing	2" sieve	100%
	Passing	1½" sieve	90-100%
	Passing	3/4" sieve	60-90%
	Passing	1/4" sieve	30-50%
	Passing	No. 10 sieve	15-30%
	Passing	No. 40 sieve	7-15%
For 4”-0”	Passing	5" sieve	100%
	Passing	4" sieve	90-100%
	Passing	2" sieve	60-90%
	Passing	3/4" sieve	35-60%
	Passing	1/4" sieve	15-35%
	Passing	No. 10 sieve	0-20%

JAW-RUN, PIT-RUN, AND RIPRAP ROCK SPECIFICATIONS

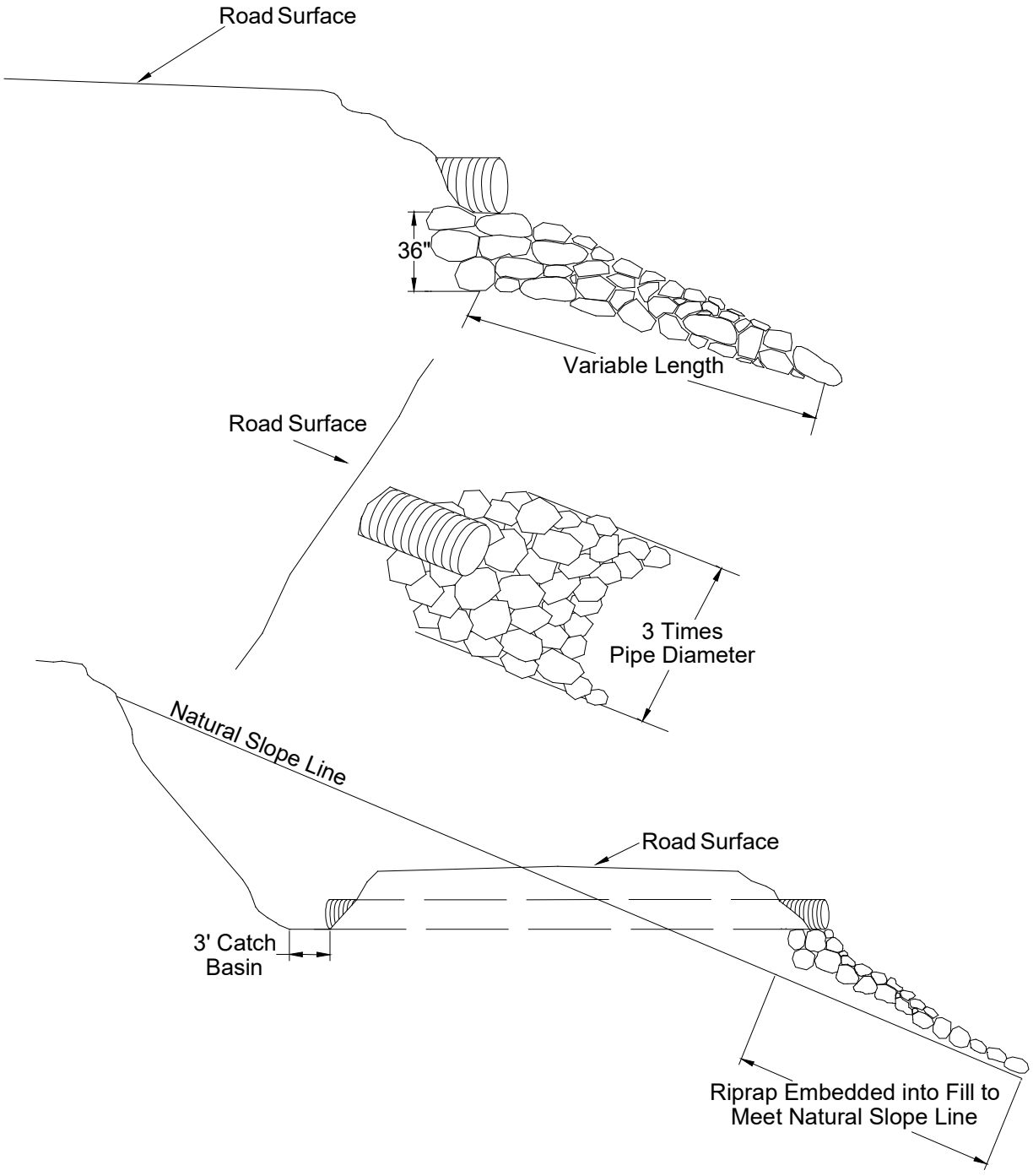
For 6”-0 Jaw-Run	Passing	6" sieve	100%
	Passing	3" sieve	45-65%
	Passing	¼" sieve	0-10%
For Pit-Run	Passing	10" sieve	100%
	Passing	6" sieve	60-85%
	Passing	3" sieve	30-50%
	Passing	¼" sieve	0-10%

For 24"-6" Riprap A minimum of 50 percent of the material shall measure a minimum of 24 inches, measured in one dimension. Material shall be clean, well graded, and free of 2"-0" fines.

Control of gradation shall be by visual inspection by STATE.

EXHIBIT G

TYPICAL EMBEDDED ENERGY DISSIPATOR



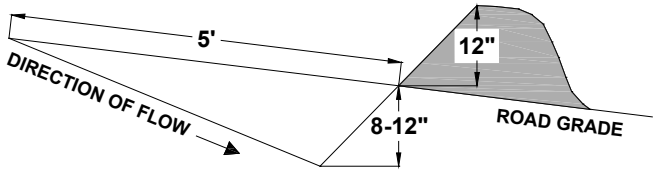
Dissipator shall be installed prior to the installation of the culvert, unless approved by STATE.

EXHIBIT H

WATERBAR SPECIFICATIONS

PROFILE

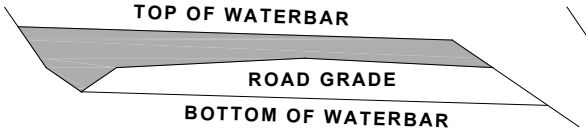
DITCHED AND OUTSLOPED



SPACING OF WATERBARS	
ROAD GRADE	DISTANCE
< 6 %	400'
6 - 10 %	200'
11 - 15 %	150'
> 15 %	100'

CROSS SECTION

DITCHED



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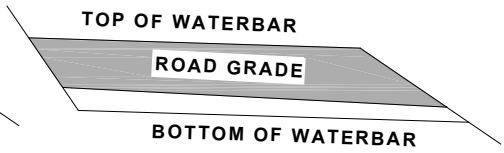
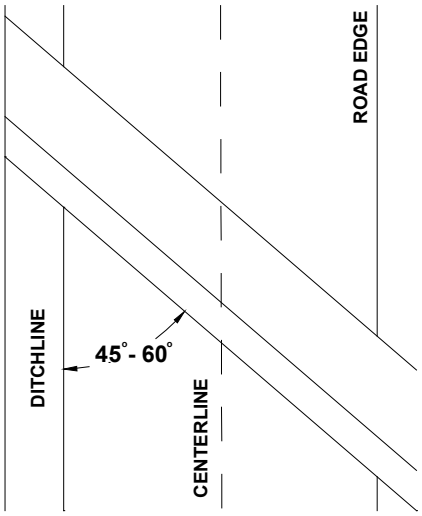


CONSTRUCT DITCHOUT THRU ANY EXISTING BERM.
CROSS DRAINAGE GRADIENT MINIMUM 3%.

PLAN VIEW

DITCHED



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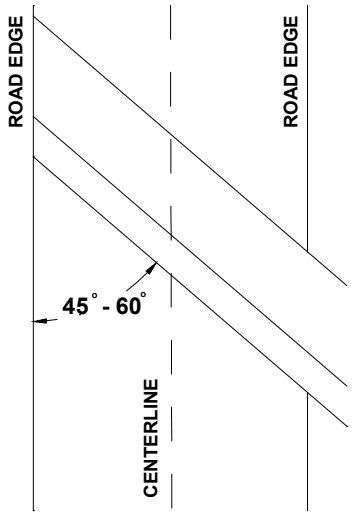


EXHIBIT I

SEEDING AND MULCHING

This work shall consist of preparing seedbeds and furnishing and placing required seed, and straw mulch. Straw mulch shall consist of straw that is free of noxious weeds. Apply seed, and straw mulch to all waste areas.

Seeding Seasons. Seeding shall be performed only from March 1 through June 15 and August 15 through October 31. Seeding materials shall not be applied during windy weather or when the ground is excessively wet or frozen. Areas of disturbed soil shall be seeded by the end of the project period in which work was started. CONTRACTOR shall notify STATE within 24 hours of seeding application.

APPLICATION METHODS FOR SEED

Dry Method. Mechanical seeders, seed drills, landscape seeders, cultipacker seeders, or other approved mechanical seeding equipment shall be used to apply the seed in the amounts and mixtures specified. Hand-operated seeding devices may be used when seed is applied in dry form.

APPLICATION RATES FOR SEED

Any mixture of the native seed species listed below shall be applied at the recommended rates shown in the table. At least 50% of the mixture shall include species recommended for Erosion control.

NATIVE SPECIES	**Coverage ft^2/lb**	**Broadcast Rate lbs/acre**	**Recommended for Erosion Control**
Barley – Meadow	1,740	50-62.5	Yes
Bentgrass – Spike	43,560	2-2.5	
Brome – California	1,740	50-62.5	Yes
Fescue – Native Red	2,200	20-25	
Fescue – Sand	3,110	28-35	Yes
Hairgrass – Slender	7,260	12-15	Yes
Hairgrass – Tufted	10,890	8-10	
Junegrass – Prairie	43,560	2-2.5	Yes
Wheatgrass – Slender	2,180	20	Yes
Wildrye Blue	2,175	40-50	

Mulching Period. Straw mulch shall be applied within 24 hours of spreading grass seed.

APPLICATION RATES FOR MULCH

Place weed free straw mulch to a reasonably uniform thickness of 1½ to 2½ inches. This rate requires between 2 and 3 tons of dry mulch per acre.

Application Locations:

Location
All Waste Areas

EXHIBIT J

CLEARING DEBRIS PILING AND BURNING SPECIFICATIONS

GENERAL SLASH PILE BURNING INSTRUCTIONS:
Conduct slash pile burning as specified in this Exhibit, for portions pf Projects 1, 2, 3, and 4. Material shall be end hauled to waste areas as shown on Exhibit A, or at other locations approved by STATE.

SLASH PILE BURNING REQUIREMENTS:
Reduce slash, stumps, and woody debris by burning. Burning shall be performed in accordance with STATE issued burning permits.

FPA BURN PERMIT
PURCHASER shall obtain an FPA Burn Permit prior to debris disposal. A map will be submitted with specific burning locations approved by STATE.

MONITORING
Operator will monitor burned piles after completion of burning to ensure no potential control issues are present or foreseeable. Periodic checks on burned piles will be conducted within the first day or two after burning and continue periodic intervals as dictated by observed conditions on burned piles and weather forecasts dictate, and in accordance with FPA Burn Permit requirements.

EQUIPMENT.
All burning shall be performed using a minimum 1½ cubic yard, track-mounted excavator. Fire suppression equipment shall be provided in accordance with FPA Burn Permit requirements.

CLEAN-UP and DEBRIS MULCHING:
Debris resulting from the Slash Pile Burning operation shall be scattered as to not block, ditches, water courses, culvert inlets/outlets, and sediment catch basins. Debris shall be mulched or scattered. Large debris, 3 inches or larger in diameter, shall be mulched or cut into lengths 3 feet or less to facilitate rapid decay, unless otherwise approved by STATE. Dirt and debris shall be removed from roots of stumps prior to burning. Upon completion of burning all areas shall be uniformly sloped and compacted for drainage. Any residual debris within a road prism or landing will be end hauled to a waste area or scattered in a location approved by STATE.

CULVERT AND ROAD MARKER DAMAGES:
Culvert and road markers damaged, or any portion of a marker damaged from PURCHASER activities shall be replaced.
SPECIFIC SLASH PILE BURNING INSTRUCTIONS:

Project No. 1	All clearing and grubbing debris from 2A to 2B, 2C to 2D, 2E to 2F, and 2G to 2H, shall be end hauled, piled, and burned at Waste Area 4, or at a location approved by STATE. 3B to 3C, and 3J to 3K shall be end hauled, piled, and burned at Waste Area 5 in conjuncture with Project No. 4.
Project No. 2	All clearing and grubbing debris from I7 to I8 and I9 to I10, shall be end hauled, piled, and burned at Waste Area 4, or at a location approved by STATE. I5 to I6 shall be end hauled, piled, and burned at Waste Area 5 in conjuncture with Project No. 4.
Project No. 3	All piling and burning for Sterling Ridge Quarry shall be in accordance with Exhibit F.
Project No. 4	Clear, grub, pile, and burn all woody debris within the Right-of-Way posted boundary. All existing and new stumps and woody debris within or hauled to waste area site shall be broken up, piled, and burned. All residual material after burning shall be scattered in a stable location, as directed by STATE.

OREGON DEPARTMENT of FISH and WILDLIFE

FISH SCREENING PROGRAM

SMALL PUMP SCREEN SELF CERTIFICATION

The Oregon Water Resources Department in coordination and cooperation with the Oregon Department of Fish and Wildlife includes screen requirements on pumps to protect fish as a condition of many surface water and/or reservoir water right permits. This is done in accordance with ORS 537.153.

The Oregon Department of Fish and Wildlife does not usually inspect small pump screens at **pumped diversions less than 225 gpm** (gallons per minute), but furnishes the following fish screening criteria information to the water right permit holder:

Screen material open area must be at least 27% of the total wetted screen area.

Perforated plate: Openings shall not exceed 3/32 or 0.0938 inches (2.38 mm).

Mesh/Woven wire screen: Square openings shall not exceed 3/32 or 0.0938 inches (2.38 mm) in the narrow direction, e.g., 3/32 inch x 3/32 inch open mesh.

Profile bar screen/Wedge wire: Openings shall not exceed 0.0689 inches (1.75 mm) in the narrow direction.

Screen area must be large enough not to cause fish impact. Wetted screen area depends on the water flow rate and the water approach velocity. **Approach velocity** is the water velocity perpendicular to and approximately three inches in front of any part of the screen face.

An Active pump screen is a self-cleaning screen that has a proven cleaning system. The **screen approach velocity for active pump screens** shall not exceed 0.4 fps (feet per second) or 0.12 mps (meters per second). The wetted screen area in square feet is calculated by dividing the maximum water flow rate in cubic feet per second (1 cfs = 449 gpm) by 0.4 fps.

A Passive pump screen is a screen that has no cleaning system other than periodic manual cleaning. **Screen approach velocity for passive pump screens** shall not exceed 0.2 fps or 0.06 mps. The wetted screen area in square feet is calculated by dividing the maximum water flow rate by 0.2 fps.

For further information on fish screening please contact:

Oregon Department of Fish and Wildlife, Statewide Fish Screening Coordinator: 503.947.6229
Oregon Department of Fish and Wildlife, Screening Program Administrative Specialist: 503.947.6224

As evidence of having met fish screen installation requirements, please sign the certification and send to: **Oregon Water Resources Department, Water Rights Section, 725 Summer Street NE, Suite A, Salem, OR 97301-1271.**

Certification: I certify that my small pumped diversion of less than 225 gpm meets fish screening criteria, and that I will maintain it to comply with regulatory criteria. I also understand that should fish screening standards change, I may be required to modify my installation to meet applicable standards.

Applicant Signature: _____ Date: __/__/___ WRD File #: _____

Printed Name and Address: _____

Phone: (___)_____ Fax: (___) _____

Timber Sale Appraisal
Cronin Too

Sale TL-341-2026-W01152-01

District: Astoria

Date: December 31, 2025

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$1,273,238.00	$245,418.38	$1,518,656.38
		Project Work:	($626,382.00)
		Advertised Value:	$892,274.38

Timber Sale Appraisal
Cronin Too
Sale TL-341-2026-W01152-01

"STEWARDSHIP IN FORESTRY"

District: Astoria **Date: December 31, 2025**

Timber Description

Location:

Stand Stocking: 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	19	0	97
Western Hemlock / Fir	14	0	95
Alder (Red)	15	0	95
Maple	16	0	95

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	10" - 11"	12"+	6" - 7"	Camprun	Total
Douglas - Fir	2,578	1,255	0	0	0	0	0	3,833
Western Hemlock / Fir	310	354	0	0	0	0	0	664
Sitka Spruce	0	0	0	0	0	0	0	0
Red Cedar	0	0	0	0	0	0	0	0
Alder (Red)	0	0	269	429	386	398	0	1,482
Maple	0	0	0	0	0	0	113	113
Total	2,888	1,609	269	429	386	398	113	6,092

Comments: Pond Values Used: Local Pond Values, November, 2025.

Expected Log Markets: Tillamook, Warrenton, Forest Grove, Mist, Willamina, Wauna, Longview, WA, and Chehalis, WA.

PRICING:

Western redcedar stumpage = pond value - (Douglas-fir) logging cost.

$913.36/MBF = $1,300.00/MBF - $386.64/MBF

Sitka spruce stumpage = pond value - (Douglas-fir) logging cost.

$138.36/MBF = $525.00/MBF - $386.64/MBF

Other Costs (with Profit & Risk to be added):

Machine Washing for Invasive Weed Compliance = $2,000

Ditch Filters:
5 bales of straw @ $12/bale = $60.00
2 hours of labor (installation/removal) @ $50/hr = $100

Deadman anchor for guylines:
$1,005 for excavator move in (C315)
20 anchors @ 3 hrs/anchor = 60 hrs
$127/hr for excavator operation (C315)
$127/hr x 60 hrs + $1,005X2 = $9,630

Dozer (D7) mobilization for tailhold/guyline anchor:
2 move-inS @ $1,005/move in = $2,010

Waterbar and block 3B-3C:
Move in C315 Excavator @ $1,005/move in = $1,005
4 hrs w/C315 to construct 8 to 10 waterbars @ $127/hr = $508

Total Other Costs (with Profit & Risk to be added): $15,313.00

ADDITIONAL FIRE EQUIPMENT (1,000 Gal Fire Truck): $40/Day x 90 days x 3 Fire Seasons (Logging) = $10,800

Weyerhaeuser Road Use Permit: $14,144.78

Stimson Road Use Permit: $2,176.08

Other Costs (without Profit & Risk): $27,120.86

SLASH PILING
(See attached appraisal. Includes move-in and pile materials) = $24,094

ROAD MAINTENANCE
(See attached Road Maintenance Cost Summary Sheet)
TOTAL Road Maintenance (including culvert removal and disposal fro 3A-3B): $58,914/6,092 MBF = $9.67/MBF

Logging Conditions

Combination#: 1

Douglas - Fir	98.00%
Western Hemlock / Fir	98.00%
Alder (Red)	98.00%
Maple	98.00%

Logging System: Cable: Large Tower >=70 **Process:** Manual Falling/Delimbing

yarding distance: Long (1,500 ft) **downhill yarding:** No

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 9 **bd. ft / load:** 5000

cost / mbf: $190.65

machines: Log Loader (A)
Tower Yarder (Large)

Combination#: 2

Douglas - Fir	2.00%
Western Hemlock / Fir	2.00%
Alder (Red)	2.00%
Maple	2.00%

Logging System: Shovel **Process:** Manual Falling/Delimbing

yarding distance: Short (400 ft) **downhill yarding:** No

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 13 **bd. ft / load:** 5000

cost / mbf: $153.85

machines: Shovel Logger

Timber Sale Appraisal
Cronin Too
Sale TL-341-2026-W01152-01

"STEWARDSHIP IN FORESTRY"

District: Astoria **Date: December 31, 2025**

Logging Costs

Operating Seasons:	3.00	**Profit Risk:**	12%
Project Costs:	$626,382.00	**Other Costs (P/R):**	$15,313.00
Slash Disposal:	$24,094.00	**Other Costs:**	$27,120.86

Miles of Road **Road Maintenance:** $9.67

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Hauling Costs

Species	$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	$0.00	2.0	4.9
Western Hemlock / Fir	$0.00	3.0	4.5
Alder (Red)	$0.00	2.0	4.8
Maple	$0.00	2.0	4.5

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Cronin Too

Sale TL-341-2026-W01152-01

District: Astoria

Date: December 31, 2025

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
$189.91	$9.96	$2.16	$131.38	$2.51	$40.31	$3.96	$2.00	$4.45	$386.64
Western Hemlock / Fir									
$189.91	$10.15	$2.16	$97.22	$2.51	$36.23	$3.96	$2.00	$4.45	$348.59
Alder (Red)									
$189.91	$10.15	$2.16	$136.72	$2.51	$40.97	$3.96	$2.00	$4.45	$392.83
Maple									
$189.91	$10.15	$2.16	$145.83	$2.51	$42.07	$3.96	$2.00	$4.45	$403.04

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$686.64	$300.00	$0.00
Western Hemlock / Fir	$0.00	$534.34	$185.75	$0.00
Alder (Red)	$0.00	$558.28	$165.45	$0.00
Maple	$0.00	$405.00	$1.96	$0.00

Timber Sale Appraisal
Cronin Too
Sale TL-341-2026-W01152-01

"STEWARDSHIP IN FORESTRY"

District: Astoria **Date: December 31, 2025**

Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	$0.00	$0.00
Western Hemlock / Fir	0	$0.00	$0.00
Alder (Red)	0	$0.00	$0.00
Maple	0	$0.00	$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	3,833	$300.00	$1,149,900.00
Western Hemlock / Fir	664	$185.75	$123,338.00
Alder (Red)	1,482	$165.45	$245,196.90
Maple	113	$1.96	$221.48

Gross Timber Sale Value

Recovery: $1,518,656.38

Prepared By: Michele Huffman **Phone:** 503-325-5451

Site Prep Appraisal

Sale Number: TL-341-2026-W01152-01
Sale Name: Cronin Too
Date: 12/01/2025

Vegetation Type/Zone	Vegetation Type/Zone Code	Production Rate (hr/ac)	Estimated Piles/Acre	Landing Production Rate (hrs/30 acres)
Doug-fir	A	0.5	0.5	6
Hemlock/Fir	B	1.3	4.5	8
Hemlock/Spruce	C	1.8	6.0	10
Hemlock	D	1.8	6.0	8
Conifer/Hardwood	E	1.0	2.0	8
Whole Tree Yarding	F	0.5	0.5	12

Sale Area	Harvest Type	Veg Type/Zone	Ground Based Yarding Acres	Estimated Piling Hours/Area	Cost/Hour	Total Cost/Area	
1	MC	F	0	0	$145.00	$0.00	
2	MC	F	0	0	$145.00	$0.00	
3	MC	F	6	3	$145.00	$435.00	
					In-unit Piling	**Sub Total =**	$435.00

Sale Area	Number of Landings to be Piled	# cable acres per area	Total Cost/Area	Number of In-Unit Piles	Material Cost/Pile	Total Cost/Area	
1	5	88	$5,104.00	5	$5.00	$25.00	
2	7	73	$4,234.00	7	$5.00	$35.00	
3	6	82	$4,756.00	9	$5.00	$45.00	
*Cost includes separating firewood					Materials	**Sub Total =**	$105.00

Additonal Move-in allowance

Move-In Allowance	Number of Move-In's	Total Move-In Allowance				
$1,290.00	1	$1,290.00	Brush Piler			
					Move-In	**Sub Total =**	$1,290.00

Slash Endhaul

Dump Truck hrs	Cost/Hour	Total	Loader hrs	Cost/Hour	Total	
50	$99.00	$4,950.00	20	$161.00	$3,220.00	
					Sub Total =	$8,170.00
					Grand Total =	**$24,094.00**

Road Maintenance Cost Summary (Interim and Post Harvest)

Sale:	Cronin Too	**MBF:**	6,092
Date:	December 1, 2025	**$$/MBF:**	$9.67
By:	Michele Huffman		

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost	
Interim Road Maintenance + Snow Plowing	Grader 14G	$972	1	16	$126	$2,988	
Interim Road Maintenance + Snow Plowing	Grader 14G	$972	1	16	$126	$2,988	
	Dump Truck 12CY	$205	1	16	$99	$1,789	
	Rubber tired backhoe	$401	1	8	$97	$1,177	
Interim Road Maintenance + Snow Plowing	Grader 14G	$972	1	16	$126	$2,988	
	Dump Truck 12CY	$205	1	16	$99	$1,789	
	Rubber tired backhoe	$401	1	8	$97	$1,177	
Final Road Maintenance including culvert removal and disposal (3A-3B)	Grader 14G	$972	1	112	$126	$15,084	
	Dump Truck 12CY	$205	2	56	$99	$5,954	
	Front End Loader C966	$972	1	25	$105	$3,597	
	Vibratory Roller	$972	1	96	$97	$10,284	
	Water Truck 2,500 gallon	$238	1	48	$113	$5,662	
	C315 Excavator	$1,005	1	16	$127	$3,037	
	Labor			8	$50	$400	
Total							**$58,914**

Interim Operations Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader x3	3.0	6.0	2.0	16

Final Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	1.5	17.8	11.9	95
Vibratory Roller	1.5	17.8	11.9	95
Grader (Grade Only)	2.0	4.6	2.3	18

	Process and compact:	Grade Only (Private):
Quartz Creek Road	6.4 Miles	
Spruce Run Road	1.5 Miles	3.2 Miles
108 Road	1.8 Miles	
NF Cronin Creek Road	3.9 Miles	
Four Seven Ridge Road	1.4 Miles	1.4 Miles
Unnamed Spurs	2.8 Miles	

	Grade & Process Total = 17.8 Miles	Grade Only Total: 4.6 Miles
	Total = 22.4 Miles	

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Cronin Too

Project No. 1: SALE ACCESS ROAD CONSTRUCTION and LANDING CONSTRUCTION:

Road segment	*Length (Sta)*	*Length (Mile)*	*Cost*	
Surfaced				
1A to 1B, 1C to 1D, 1E to 1F, 1G to 1H, 1I to 1J, 1K to 1L, 2A to 2B, 2C to 2D, 2E to 2F, 2G to 2H, 3A, 3D to 3E, 3F to 3G, 3H to 3I, & 3J to 3K	89.40	1.69	$182,066	
Unsurfaced				
3B to 3C	10.60	0.20	$17,136	
Road Maint.			$3,527	
Move-In			$6,525	
TOTALS	100.00	1.89		$209,256

Project No. 2: SALE ACCESS ROAD IMPROVEMENT, SURFACE ROCK REPLACEMENT, AND ROAD MAINTENANCE:

Road segment	*Length (Sta)*	*Length (Mile)*	*Cost*	
I1 to I2, I3 to I4, I5 to I6, I7 to I8, I9 to I10, I11 to I12, & I13 to I14	1082.00	20.49	$229,671	
Road Maint.			$4,067	
Move-In			$7,524	
TOTALS	1,082.00	20.49		$241,261

SPECIAL PROJECTS (Move-In and Road Maint. are included separetly as needed, for each Special Project)**:**

Description	*Length/Vol.*	*Cost*	
Proj. 3 Sterling Ridge Rock Crushing		$158,752	
Proj. 4 Piling and Burning		$17,113	
TOTAL			$175,865

GRAND TOTAL **$626,382**

Compiled By: C. Hatcher Date: 01/08/2026

Move In and Maintenance Calculator for Construction and Improvement

SALE NAME: Cronin Too

Project No. 1: ROAD CONSTRUCTION:

Road segment	Length/Sta	Length/Mile	Cost	
Surfaced				
1A to 1B, 1C to 1D, 1E to 1F, 1G to 1H, 1I to 1J, 1K to 1L, 2A to 2B, 2C to 2D, 2E to 2F, 2G to 2H, 3A, 3D to 3E, 3F to 3G, 3H to 3I, & 3J to 3K	89.40	1.69	$182,066.37	
Unsurfaced				
3B to 3C	10.60	0.20	$17,136.43	
TOTALS	100.00	1.89		$199,203

Project No. 2: ROAD IMPROVEMENT:

Road segment	Length/Sta	Length/Mile	Cost	
I1 to I2, I3 to I4, I5 to I6, I7 to I8, I9 to I10, I11 to I12, & I13 to I14	1082.00	20.49	$229,671	
TOTALS	1,082.00	20.49		$229,671

MOVE IN (Construction & Improvement Only)

Equipment	Length/Mile	Cost	
Vibratory Roller		$972.00	
C315 Excavator		$1,005.00	
C330 Excavator		$1,755.00	
C966 Loader		$972.00	
14 G Grader		$972.00	
Water Truck (2,500 gal)		$238.00	
Dump Truck 10cy (x5)		$1,025.00	
Dump Truck 20cy (x2)		$478.00	
C518 Backhoe		$401.00	
24 yd3 Off Highway Dump		$966.00	
D8 Dozer		$1,755.00	
Drill and Compressor		$1,755.00	
D8 Dozer		$1,755.00	
TOTAL			$14,049.00

ROAD MAINTENANCE (Construction & Improvement Only)

	Length/Mile	Cost	
Final Project Road Maintenance	4.49	$7,594.00	
TOTAL			$7,594.00

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Cronin Too **NEW CONSTRUCTION:** 100.00 **STATIONS** 1.89 **MILES**

ROAD: 1A to 1B (6.2), 1C to 1D (24.0), 1E to 1F (8.8), 1G to 1H (6.0), 1I to 1J (1.8)
1K to 1L (1.8), 2A to 2B (1.0), 2C to 2D (1.9), 2E to 2F (7.6), 2G to 2H (3.6), 3A (N/A), 3B to 3C (10.6),
3D to 3E (6.6), 3F to 3G (6.4), 3H to 3I (11.7), 3J to 3K (2.0)

CLEARING & GRUBBING

	Method		Acres/amount	x	Rate	=	Cost
1C to 1D (5+00 to 20+30), 1E to 1F, 1G to 1H, 1I to 1J, 1K to 1L, 3A, 3B to 3C (5+40 to 10+60), 3D to 3E, 3F to 3G, and 3H to 3I	Scatter outside of right of way	($/ac)	5.93	x	$1,669.00	=	$9,900.59
1A to 1B, 1C to 1D (0+00 to 5+00, 20+30 to 24+00), 3B to 3C (0+00 to 5+40), and 3J to 3K	End haul to waste area (C330 and Dump)	($/hr)	32.00	x	$305.00	=	$9,760.00
2A to 2B, 2C to 2D, 2E to 2F, and 2G to 2H	Pile only and burn with Project No. 4	($/ac)	1.29	x	$1,551.00	=	$2,008.18

SUB TOTAL FOR CLEARING & GRUBBING $21,669

EXCAVATION

	Material		Cy/amount	x	Rate	=	Cost
1A to 1B							
0+00 to 2+00	Common drift (<50%)	($/cy)	300	x	$2.25	=	$675.00
2+00 to 6+20	Common drift (>50%)	($/cy)	1000	x	$2.62	=	$2,620.00
0+00 to 4+70	Additional drift	($/cy)	400	x	$3.50	=	$1,400.00
0+00 to 6+20	End-haul excavation	($/cy)	750	x	$4.99	=	$3,742.50
0+00 to 6+20	Embankment compaction	($/cy)	1700	x	$0.87	=	$1,479.00
2+10 to 5+50	Cutslope rounding	($/sta.)	3.4	x	$54.39	=	$184.93
	Waste material compaction	($/cy)	750	x	$0.50	=	$375.00
1C to 1D							
0+00 to 24+00	Balanced construction	($/sta)	24.0	x	$154.00	=	$3,696.00
5+40	Construct turnout (C330)	($/hr)	1.0	x	$195.00	=	$195.00
8+00	Construct ditchout (C330)	($/hr)	1.0	x	$195.00	=	$195.00
12+50, 22+00	Construct turnaround (C330)	($/hr)	1.0	x	$195.00	=	$195.00
24+00	Landing construction	($/ldg)	1	x	$487.00	=	$487.00
1E to 1F							
0+00 to 8+80	Balanced construction	($/sta)	8.8	x	$154.00	=	$1,355.20
5+50 to 7+70	End haul waste material (C330 & Dump)	($/hr)	4.0	x	$305.00	=	$1,220.00
7+00	Construct turnaround (C330)	($/hr)	1	x	$195.00	=	$195.00
1G to 1H							
0+00 to 6+00	Embankment compaction	($/cy)	2250	x	$0.87	=	$1,957.50
0+00 to 6+00	Common drift (>50%)	($/cy)	1350	x	$2.62	=	$3,537.00
2+00 to 6+00	Additional drift	($/cy)	900	x	$3.50	=	$3,150.00
0+00 to 4+20	Cutslope rounding	($/sta.)	4.2	x	$54.39	=	$228.44
1I to 1J							
0+00 to 1+60	Embankment compaction	($/cy)	630	x	$0.87	=	$548.10
0+00 to 1+60	Additional dozer time (D8) - Landing and spread	($/hr)	8	x	$198.00	=	$1,584.00
0+00 to 1+60	Road prism drilling and shooting	($/cy)	990	x	$6.50	=	$6,435.00
1K to 1L							
0+00 to 1+80	Balanced construction	($/sta)	1.8	x	$154.00	=	$277.20
1+80	Landing construction	($/ldg)	1	x	$487.00	=	$487.00
2A to 2B							
1+00	Additional dozer time (D8) - Landing and spread	($/hr)	5.0	x	$198.00	=	$990.00
1+00	Landing drilling and shooting	($/sta)	500.0	x	$6.50	=	$3,250.00
2C to 2D							
0+00 to 1+90	Embankment compaction	($/cy)	41	x	$0.87	=	$35.67
0+00 to 1+90	Road prism drilling and shooting	($/cy)	560	x	$6.50	=	$3,640.00
0+00 to 1+00	Cutslope rounding	($/sta.)	1.0	x	$54.39	=	$54.39
2E to 2F							
3+00 to 7+60	Drift earth up to 200'	($/sta)	4.6	x	$238.00	=	$1,094.80
3+00 to 7+60	Daylighting and material handling (C330)	($/hr)	8.0	x	$195.00	=	$1,560.00
3+00	Landing drilling and shooting	($/cy)	250	x	$6.50	=	$1,625.00
2G to 2H							
0+00 to 3+60	Rock handling and landing construction C330	($/hr)	8	x	$195.00	=	$1,560.00
0+00 to 3+60	Rock handling and landing construction D8	($/hr)	8	x	$198.00	=	$1,584.00
0+00 to 3+60	Road prism drilling and shooting	($/cy)	2060	x	$6.50	=	$13,390.00
3A							
	Landing construction	($/ldg)	1	x	$487.00	=	$487.00
3B to 3C							
0+00 to 3+60	Embankment compaction	($/cy)	2120	x	$0.87	=	$1,844.40
0+00 to 10+60	Common drift (<50%)	($/cy)	1540	x	$2.25	=	$3,465.00
0+30 to 5+40	End-haul excavation	($/cy)	580	x	$4.99	=	$2,894.20
1+20 to 2+60, 6+70 to 8+70	Cutslope rounding	($/sta.)	3.4	x	$54.39	=	$184.93
3D to 3E							
0+00 to 6+60	Balanced construction	($/sta)	6.6	x	$154.00	=	$1,016.40
2+80	Landing construction	($/ldg)	1	x	$487.00	=	$487.00

3F to 3G								
0+00 to 6+40	Embankment compaction	($/cy)	1670	x	$0.87	=	$1,452.90	
1+00 to 4+00, 5+50 to 6+40	Common drift (<50%)	($/cy)	1190	x	$2.25	=	$2,677.50	
0+00 to 1+00, 4+00 to 5+50	Common drift (>50%)	($/cy)	250	x	$2.62	=	$655.00	
2+50 to 4+00	End-haul excavation material to fill	($/cy)	70	x	$4.99	=	$349.30	
1+80 to 5+00	Cutslope rounding	($/sta.)	3.2	x	$54.39	=	$174.05	
3H to 3I								
0+00 to 6+50	Balanced construction	($/sta)	6.5	x	$154.00	=	$1,001.00	
0+00	Improve junction approach both directions (C33C	($/hr)	6.0	x	$195.00	=	$1,170.00	
6+50 to 11+60	Embankment compaction	($/cy)	1425.0	x	$0.87	=	$1,239.75	
6+50 to 11+60	Common drift (<50%)	($/cy)	1425.0	x	$2.25	=	$3,206.25	
0+00 to 10+40	Cutslope rounding	($/sta.)	10.4	x	$54.39	=	$565.66	
3J to 3K								
0+00 to 2+00	Balanced construction	($/sta)	2.0	x	$154.00	=	$308.00	
0+00 to 2+00	End haul waste material (C330 & Dump)	($/hr)	10.0	x	$305.00	=	$3,050.00	

SUB TOTAL FOR EXCAVATION $91,231

CULVERT MATERIALS AND INSTALLATION

Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
1A to 1B					**3B to 3C**				
2+40	18" CPP	30	$29.73	$891.90	2+30	18" CPP	30	$29.73	$891.90
1C to 1D					4+50	18" CPP	30	$29.73	$891.90
4+40	18" CPP	30	$29.73	$891.90	6+70	18" CPP	30	$29.73	$891.90
9+80	18" CPP	40	$29.73	$1,189.20	**3D to 3E**				
14+00	18" CPP	30	$29.73	$891.90	3+50	18" CPP	30	$29.73	$891.90
15+70	18" CPP	30	$29.73	$891.90	**3F to 3G**				
19+60	18" CPP	30	$29.73	$891.90	1+80	18" CPP	30	$29.73	$891.90
1E to 1F					3+90	24" CPP	40	$41.98	$1,679.20
4+90	18" CPP	40	$29.73	$1,189.20	**3H to 3I**				
1G to 1H					4+00	18" CPP	30	$29.73	$891.90
2+00	18" CPP	30	$29.73	$891.90	9+00	18" CPP	30	$29.73	$891.90
4+00	18" CPP	30	$29.73	$891.90					

	Description	Quantity	Rate	Cost
Other/miscellaneous:	Dissipator Construction	3.00	$225.33	$675.99
Culvert stakes & markers:	6' X 2½" white fiberglass (Carsonite) post	17	$25.53	$434.01

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION $17,654

Subtotal of Clearing, Exc.,Culv. ***$130,554***

SURFACING

Subgrade prep:	Description	Stations/ amount	x	Rate/ sta/amt	Cost
All segments	Grade, Shape and Ditch 14' & 16'	100.00	x	$30.98	$3,098.00
All segments	Subgrade Compaction	100.00	x	$25.19	$2,519.00

ROAD SEGMENT	1A to 1B			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (inches)	1A to 1B Volume (CY) per		0+00 to 6+20 Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Junction Rock	1 1/2"-0" crushed	N/A	N/A	junctions	11	junctions	1	11	$10.30	$113	
Base Rock	4"-0" crushed	0+00 to 6+20	8	station	50	stations	6.2	310	$10.30	$3,193	
Turnouts	4"-0" crushed	1+65	N/A	turnout	22	turnouts	1	22	$10.30	$227	
Culvert Energy Dissipator	24"-6" riprap	2+40	N/A	dissipator	11	dissipators	1	11	$4.21	$46	
Turnarounds	4"-0" crushed	4+90	N/A	turnaround	33	turnarounds	1	33	$10.30	$340	
Landings	6"-0" pit-run	6+20	N/A	landing	110	landings	1	110	$4.21	$463	
Total Rock for Road Segment:			1A to 1B					497			$4,382

ROAD SEGMENT	1C to 1D			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (inches)	1C to 1D Volume (CY) per		0+00 to 24+00 Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" crushed	0+00 to 24+00	8	station	50	stations	24.00	1,200	$10.30	$12,360	
Junction Rock	1 1/2"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	$10.30	$113	
Traction Rock	1 1/2"-0" crushed	0+00 to 5+40, 8+90 to 14+40, 16+00 to 23+00	2	station	13	stations	17.90	233	$10.30	$2,397	
Subgrade Reconstruction	4"-0" crushed	1+30, 4+40, 8+00, 8+90, 9+80, 15+00, 17+00, 19+00, 22+00	N/A	load	11	loads	9	99	$10.30	$1,020	
Turnouts	4"-0" crushed	5+40, 12+50	N/A	turnout	22	turnouts	2	44	$10.30	$453	
Turnarounds	4"-0" crushed	12+50, 22+00	N/A	turnaround	33	turnarounds	2	66	$10.30	$680	
Landings	6"-0" pit-run	24+00	N/A	landing	110	landings	1	110	$4.21	$463	
Total Rock for Road Segment:			1C to 1D					1,763			$17,486

ROAD SEGMENT	1E to 1F			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (inches)	1E to 1F Volume (CY) per		0+00 to 8+80 Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" crushed	0+00 to 8+80	8	station	50	stations	8.80	440	$10.30	$4,532	
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	$10.30	$113	
Turnouts	4"-0" crushed	2+40, 4+90	N/A	turnout	22	turnouts	2	44	$10.30	$453	
Turnarounds	4"-0" crushed	7+00	N/A	turnaround	33	turnarounds	1	33	$10.30	$340	
Landings	6"-0" pit-run	8+80	N/A	landing	77	landings	1	77	$4.21	$324	
Total Rock for Road Segment:			1E to 1F					605			$5,763

ROAD SEGMENT	1G to 1H			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (inches)	1G to 1H Volume (CY) per		0+00 to 6+00 Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" crushed	0+00 to 6+00	8	station	50	stations	6.00	300	$10.30	$3,090	
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	$10.30	$113	
Traction Rock	1 1/2"-0" crushed	1+40 to 5+00	2	station	13	stations	3.6	47	$10.30	$484	
Culvert Energy Dissipator	24"-6" riprap	2+00	N/A	dissipator	11	dissipators	1	11	$4.21	$46	
Turnarounds	4"-0" crushed	4+45	N/A	turnaround	33	turnarounds	1	33	$10.30	$340	
Landings	6"-0" pit-run	6+00	N/A	landing	77	landings	1	77	$4.21	$324	
Total Rock for Road Segment:			1G to 1H					479			$4,398
ROAD SEGMENT	1I to 1J			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (inches)	1I to 1J Volume (CY) per		0+00 to 1+80 Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" crushed	0+00 to 1+80	8	station	50	stations	1.80	90	$10.30	$927	
Turnarounds	4"-0" crushed	0+15	N/A	turnaround	33	turnarounds	1	33	$10.30	$340	
Landings	6"-0" pit-run	1+80	N/A	landing	110	landings	1	110	Generated onsite		
Total Rock for Road Segment:			1I to 1J					233			$1,267
ROAD SEGMENT	1K to 1L			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (inches)	1K to 1L Volume (CY) per		0+00 to 1+80 Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" crushed	0+00 to 1+80	8	station	50	stations	1.80	90	$10.30	$927	
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	$10.30	$113	
Landings	6"-0" pit-run	1+80	N/A	landing	110	landings	1	110	$4.21	$463	
Total Rock for Road Segment:			1K to 1L					211			$1,503
ROAD SEGMENT	2A to 2B			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (inches)	2A to 2B Volume (CY) per		0+00 to 1+00 Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" crushed	0+00 to 1+00	8	station	50	stations	1.00	50	$8.81	$441	
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	$8.81	$97	
Landings	6"-0" pit-run	1+00	N/A	landing	110	landings	1	110	Generated onsite		
Total Rock for Road Segment:			2A to 2B					171			$537
ROAD SEGMENT	2C to 2D			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (inches)	2C to 2D Volume (CY) per		0+00 to 1+90 Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" crushed	0+00 to 1+90	8	station	50	stations	1.90	95	$8.81	$837	
Junction Rock	1 1/2"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	$8.81	$97	
Traction Rock	1 1/2"-0" crushed	0+00 to 1+00	2	station	13	stations	1.00	13	$8.81	$115	
Landings	6"-0" pit-run	1+90	N/A	landing	77	landings	1	77	Generated onsite		
Total Rock for Road Segment:			2C to 2D					196			$1,048

ROAD SEGMENT	2E to 2F			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (inches)	2E to 2F Volume (CY) per		0+00 to 7+60 Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" crushed	4+00 to 7+60	8	station	50	stations	3.60	180	$8.81	$1,586	
Junction Rock	4"-0" crushed	3+00	N/A	junctions	11	junctions	1	11	$8.81	$97	
Traction Rock	1 1/2"-0" crushed	4+00 to 7+60	2	station	13	stations	3.60	47	$8.81	$412	
Landings	6"-0" pit-run	3+00, 7+60	N/A	landing	77	landings	2	154	Generated onsite		
Total Rock for Road Segment:			2E to 2F					392			$2,095
ROAD SEGMENT	2G to 2H			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (inches)	2G to 2H Volume (CY) per		0+00 to 3+60 Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" crushed	0+00 to 3+60	8	station	50	stations	3.60	180	$8.81	$1,586	
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	$8.81	$97	
Landings	6"-0" pit-run	3+60	N/A	landing	110	landings	1	110	Generated onsite		
Total Rock for Road Segment:			2G to 2H					301			$1,683
ROAD SEGMENT	3A			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (inches)	3A Volume (CY) per		N/A Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Junction Rock	4"-0" crushed	N/A	N/A	junctions	11	junctions	1	11	$8.81	$97	
Landings	6"-0" pit-run	N/A	N/A	landing	110	landings	1	110	$4.21	$463	
Total Rock for Road Segment:			3A					121			$560
ROAD SEGMENT	3B to 3C			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (inches)	3B to 3C Volume (CY) per		0+00 to 10+60 Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" crushed	0+00 to 1+00	8	station	50	stations	1.00	50	$8.81	$441	
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	$8.81	$97	
Total Rock for Road Segment:			3B to 3C					61			$537
ROAD SEGMENT	3D to 3E			POINT TO POINT		Sta. to Sta.					
Application	Rock Size and Type	Location	Depth of Rock (inches)	3D to 3E Volume (CY) per		0+00 to 6+60 Number of		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Base Rock	4"-0" crushed	0+00 to 6+60	8	station	50	stations	6.60	330	$8.81	$2,907	
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	$8.81	$97	
Traction Rock	1 1/2"-0" crushed	0+00 to 6+60	2	station	13	stations	6.60	86	$8.81	$756	
Landings	6"-0" pit-run	2+80	N/A	landing	110	landings	1	110	Generated I5 to I6 - costed in end haul		
Culvert Energy Dissipator	24"-6" riprap	3+50	N/A	dissipator	11	dissipators	1	11	Generated I5 to I6 - costed in end haul		
Total Rock for Road Segment:			3D to 3E					548			$3,760

ROAD SEGMENT	3F to 3G			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	3F to 3G Volume (CY) per		0+00 to 6+40 Number of					
Base Rock	4"-0" crushed	0+00 to 6+40	8	station	50	stations	6.40	320	$8.81	$2,819	
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	$8.81	$97	
Fill Armoring	24"-6" riprap	0+00 to 1+40, 3+70 to 4+60	N/A	load	11	loads	20	220	Generated I5 to I6 - costed in end haul		
Traction Rock	1 1/2"-0" crushed	1+00 to 5+70	2	station	13	stations	4.70	61	$8.81	$538	
Landings	6"-0" pit-run	2+20, 6+40	N/A	landing	110	landings	2	220	Generated I5 to I6 - costed in end haul		
Total Rock for Road Segment:			3F to 3G					832			$3,454
ROAD SEGMENT	3H to 3I			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	3H to 3I Volume (CY) per		0+00 to 11+70 Number of					
Base Rock	4"-0" crushed	0+00 to 11+70	8	station	50	stations	11.70	585	$8.81	$5,154	
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	$8.81	$97	
Turnouts	4"-0" crushed	8+30	N/A	turnout	22	turnouts	2	44	$8.81	$388	
Turnarounds	4"-0" crushed	10+10	N/A	turnaround	33	turnarounds	1	33	$8.81	$291	
Traction Rock	1 1/2"-0" crushed	6+50 to 10+50	2	station	13	stations	4	52	$8.81	$458	
Turnouts	1 1/2"-0" crushed	8+60	2	turnout	22	turnouts	1	22	$8.81	$194	
Landings	6"-0" pit-run	11+70	N/A	landing	110	landings	1	110	$4.21	$463	
Total Rock for Road Segment:			3H to 3I					857			$7,044
ROAD SEGMENT	3J to 3K			POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	3J to 3K Volume (CY) per		0+00 to 2+00 Number of					
Base Rock	4"-0" crushed	0+00 to 2+00	8	station	50	stations	2.00	100	$8.81	$881	
Junction Rock	4"-0" crushed	0+00, 2+00	N/A	junctions	11	junctions	2	22	$8.81	$194	
Total Rock for Road Segment:			3J to 3K					122			$1,075

Processing:

Description	No.sta	Rate/sta	Cost
Water, Process & Compact Base Rock (4"-0"):	43.2	$70.47	$3,044.30
Process & Compact Base Rock (4"-0"):	43.2	$30.29	$1,308.53
Traction Rock Water, Process & Compact	20.70	$70.47	$1,458.73
Traction Rock Process & Compact	20.70	$30.29	$627.00

	24"-6"rr	6"-0"pr	4"-0" crushed	1 1/2"-0" crushed		Total	
SUB TOTAL FOR SURFACING	253	1,595	4,947	593		7,388	**$68,649**

SPECIAL PROJECTS

Description	Cy/Amount	Rate	Cost

SUB TOTAL FOR SPECIAL PROJECTS $0

Subtotal of Surfacing & Spec. Proj. *$68,649*
Subtotal of Clearing, Exc., Culv. *$130,554*

GRAND TOTAL **$199,203**

Compiled By: C. Hatcher Date: 01/08/2026

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Cronin Too
ROAD: I1 to I2 (326.55), I3 to I4 (197.95), I5 to I6 (271.2), I7 to I8 (117.9), I9 to I10 (8.8), I11 to I12 (143.2), & I13 to I14 (16.4)

IMPROVEMENT: 1,082.00 STATIONS 20.49 MILES

CLEARING & GRUBBING

Method	Acres/amount	x	Rate	=	Cost

SUB TOTAL FOR CLEARING & GRUBBING $0

EXCAVATION

	Material		Cy/amount	x	Rate	=	Cost
I1 to I2							
166+85	Clear debris from road prism (C330)	($/hr)	1.0	x	$195.00	=	$195.00
272+05 to 282+90, 297+35 to 303+50	Ditch reestablishment (C315)	($/hr)	6.0	x	$127.00	=	$762.00
I3 to I4							
0+00 to 197+95	Ditch reestablishment (C315)	($/hr)	12.0	x	$127.00	=	$1,524.00
0+00 to 108+15	End haul ditch waste material (12cy Dump)	($/hr)	8.0	x	$110.00	=	$880.00
I5 to I6							
19+20, 30+00, 40+20	Excavation contaminated surfacing and reestablish ditch (C315)		10.0	x	$127.00	=	$1,270.00
122+00	Remove blowdown (C315)	($/hr)	0.5	x	$127.00	=	$63.50
194+10 to 200+00, 225+00 to 271+20	Ditch reestablishment (C315)	($/hr)	28.0	x	$127.00	=	$3,556.00
3+00 to 48+00, 194+10 to 200+00, 225+00 to 271+20	End haul ditch waste material (12cy Dump)	($/hr)	30.0	x	$110.00	=	$3,300.00
225+00 to 271+20	Ditch reconstruction rock hammering (C315)	($/hr)	12.0	x	$183.00	=	$2,196.00
236+80, 241+20	Construct turnout (C315)	($/hr)	1.0	x	$127.00	=	$127.00
237+80 to 239+50	Realign road. Rock hammer rock face back 12 feet (C330)	($/hr)	8.0	x	$240.00	=	$1,920.00
237+80 to 239+50	Realign road. End haul waste material or to fill armor/landings.	($/cy)	570.0	x	$4.99	=	$2,844.30
268+10	Construct driveable ditch across junction (C315)	($/hr)	0.5	x	$127.00	=	$63.50
243+60, 246+00, 248+90, 257+30, 262+50, 269+20	Additional culvert installation time (C315)	($/hr)	6.0	x	$127.00	=	$762.00
243+60, 246+00, 248+90, 257+30, 262+50	Culvert installation hammer time (C315)	($/hr)	8.0	x	$183.00	=	$1,464.00
I7 to I8							
0+00 to 87+20	Scatter debris and ditch reestablishment (C315)	($/hr)	8.0	x	$127.00	=	$1,016.00
87+20 to 115+10	Ditch reestablishment (C315)	($/hr)	24.0	x	$127.00	=	$3,048.00
107+00 to 109+60	Debris removal, ditch/drainage reestablishment, cutslope restoration, butressing (C330)	($/hr)	8.0	x	$195.00	=	$1,560.00
109+60 to 115+10	Clearing and grubbing, bank material, cutslope restoration, dirt/ravel removal (C330)	($/hr)	16.0	x	$195.00	=	$3,120.00
87+20 to 115+10	End haul clearing debris, ditch, and cutbank waste material (12cy Dum	($/hr)	36.0	x	$110.00	=	$3,960.00
87+20 to 115+10	Ditch reconstruction rock hammering (C330)	($/hr)	8.0	x	$240.00	=	$1,920.00
98+25 to 105+30	Rock hammer rock face back 6 feet (C330)	($/hr)	20.0	x	$240.00	=	$4,800.00
98+85, 102+25	Construct turnout/turnaround (C330)	($/hr)	2.0	x	$195.00	=	$390.00
109+60 to 113+10	Rock hammer rock face back 12 feet (C330)	($/hr)	30.0	x	$240.00	=	$7,200.00
98+25 to 113+10	End haul rock hammer material (C330 & 12cy Dump)	($/hr)	32.0	x	$305.00	=	$9,760.00
106+20, 115+10	Culvert installation hammer time (C330)	($/hr)	2.0	x	$240.00	=	$480.00
I9 to I10							
1+45	Level landing with shot rock from 2C to 2D (C315)	($/hr)	4.00	x	$127.00	=	$508.00
1+45, 8+80	Clear and grub landing (C315)	($/hr)	4.00	x	$127.00	=	$508.00

SUB TOTAL FOR EXCAVATION $59,197

CULVERT MATERIALS AND INSTALLATION

Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
I5 to I6					**I7 to I8**				
243+60	18" ASCP	30	$47.36	$1,420.80	106+20	18" CPP	40	$29.73	$1,189.20
246+00	18" ASCP	40	$47.36	$1,894.40	115+10	18" ASCP	40	$47.36	$1,894.40
248+90	18" ASCP	30	$47.36	$1,420.80					
257+30	18" ASCP	40	$47.36	$1,894.40					
262+50	18" ASCP	50	$47.36	$2,368.00					
269+20	18" CPP	30	$29.73	$891.90					

	Description	Quantity	Rate	Cost
Other/miscellaneous:	Dissipator Construction	4	$225.33	$901.32
Culvert stakes & markers:	6' X 2½" white fiberglass (Carsonite) posts	14	$25.53	$357.42

SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION $14,233

Subtotal of Clearing, Exc., Culv. ***$73,430***

SURFACING

Subgrade prep:	Description	Stations/ amount	x	Rate/ sta/amt	Cost
I1 to I2 (179+60 to 326+55), I3 to I4 (0+00 to 108+15), I5 to I6 (0+00 to 48+00, 225+00 to 271+20), I7 to I8, I9 to I10, & I11 to I12, & I13 to I14	Grade, Shape and Ditch 16'	635.60	x	$30.98	$19,690.89
I5 to I6 (146+00 to158+20)	Grade, Shape and Outslope 14'	12.20	x	$22.89	$279.26
I1 to I2 (179+60 to 326+55), I5 to I6 (0+00 to 48+00, 225+00 to 271+20), I7 to I8 (76+80 to 117+90), I9 to I10, & I11 to I12 (70+10 to	Subgrade Compaction	364.15	x	$25.19	$9,172.94
I7 to I8 (0+00 to 63+25, 87+20 to 117+90)	Sod removal	93.95	x	$29.08	$2,732.07
I1 to I2 (0+00 to 179+60), I3 to I4 (108+15 to 197+95), I5 to I6 (48+00 to 142+80)	Spot Grade (14G)	20.00	x	$126.00	$2,520.00

ROAD SEGMENT	**I1 to I2**			**POINT TO POINT**		**Sta. to Sta.**				
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	I1 to I2 **Volume (CY) per**		0+00 to 326+55 **Number of**		**TOTAL VOLUME (CY)**	**Rate/ Sta./ amt.**	**Cost**
Surface Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	3	33	$8.81	$291
Surfacing	1 1/2"-0" crushed	326+55	3	station	19	stations	146.95	2,792	$8.81	$24,598
Turnouts	1 1/2"-0" crushed	214+50, 220+35, 230+25, 238+00, 256+85, 270+35, 286+70, 290+00, 294+10, 297+35	N/A	turnout	11	turnouts	10	110	$8.81	$969
Junctions	1 1/2"-0" crushed	203+60, 228+45, 233+75, 247+90 (2), 265+35 (3), 296+25	N/A	load	11	loads	9	99	$8.81	$872
Total Rock for Road Segment:			I1 to I2					3,034		$26,730

ROAD SEGMENT	**I3 to I4**			**POINT TO POINT**		**Sta. to Sta.**				
Application	**Rock Size and Type**	**Location**	**Depth of Rock (inches)**	I3 to I4 **Volume (CY) per**		0+00 to 197+95 **Number of**		**TOTAL VOLUME (CY)**	**Rate/ Sta./ amt.**	**Cost**
Surface Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	55	605	$10.30	$6,232
Total Rock for Road Segment:			I3 to I4					605		$6,232

ROAD SEGMENT	I5 to I6			POINT TO POINT		Sta. to Sta.				
				I5 to I6		0+00 to 271+20		TOTAL		
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		VOLUME (CY)	Rate/ Sta./ amt.	Cost
Surface Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	21	231	$8.81	$2,035
Surface Leveling Rock	4"-0" crushed	225+00 to 271+20	N/A	load	11	loads	15	165	$8.81	$1,454
Subgrade Base Reconstruction	4"-0" crushed	19+20, 30+00, 40+20	N/A	location	44	locations	3	132	$8.81	$1,163
Subgrade Surface Reconstruction	1 1/2"-0" crushed	19+20, 30+00, 40+20	N/A	location	22	locations	3	66	$8.81	$581
Surfacing	4"-0" crushed	271+20	4	station	25	stations	46.2	1,155	$8.81	$10,176
Base Rock	4"-0" crushed	239+50	8	station	50	stations	1.7	85	$8.81	$749
Turnouts	4"-0" crushed	230+00, 236+80, 241+20	N/A	turnout	22	turnouts	3	66	$8.81	$581
Culvert Bedding and Backfill	3/4"-0" crushed	243+60 (3), 246+00 (4), 248+90 (3), 257+30 (4), 262+50 (5), 269+20 (3)	N/A	load	11	loads	22	242	$8.81	$2,132
Culvert Energy Dissipator	24"-6" riprap	248+90, 257+30	N/A	dissipator	11	dissipators	2	22	Generated Onsite	
Total Rock for Road Segment:			I5 to I6					2,164		$18,871

ROAD SEGMENT	I7 to I8			POINT TO POINT		Sta. to Sta.				
				I7 to I8		0+00 to 117+90		TOTAL		
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		VOLUME (CY)	Rate/ Sta./ amt.	Cost
Surface Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	25	275	$8.81	$2,423
Junctions	1 1/2"-0" crushed	0+00	N/A	load	11	loads	2	22	$8.81	$194
Surfacing	1 1/2"-0" crushed	76+80 to 117+90	3	station	19	stations	41.1	781	$8.81	$6,880
Turnouts	1 1/2"-0" crushed	85+80, 98+85, 102+25	N/A	turnout	22	turnouts	3	66	$8.81	$581
Turnaround	1 1/2"-0" crushed	98+85, 102+25	N/A	turnaround	22	turnaround	2	44	$8.81	$388
Culvert Bedding and Backfill	3/4"-0" crushed	106+20, 115+10	N/A	culvert	44	culverts	2	88	$8.81	$775
Culvert Energy Dissipator	24"-6" riprap	106+20, 115+10	N/A	dissipator	11	dissipators	2	22	Generated Onsite	
Total Rock for Road Segment:			I7 to I8					1,298		$11,241

ROAD SEGMENT	I9 to I10			POINT TO POINT		Sta. to Sta.				
				I9 to I10		0+00 to 8+80		TOTAL		
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		VOLUME (CY)	Rate/ Sta./ amt.	Cost
Junctions	1 1/2"-0" crushed	0+00	N/A	load	11	loads	2	22	$8.81	$194
Surfacing	1 1/2"-0" crushed	0+00 to 8+80	2	station	13	stations	8.8	114	$8.81	$1,008
Landings	6"-0" pit-run	1+45 (18), 8+80 (9)	N/A	load	11	loads	27	297	Generated from I7 to I8 - costed in end haul	
Total Rock for Road Segment:			I9 to I10					433		$1,202

ROAD SEGMENT	I11 to I12			POINT TO POINT		Sta. to Sta.					
				I11 to I12		0+00 to 143+20		TOTAL	Rate/	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		VOLUME (CY)	Sta./ amt.		
Subgrade Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	25	275	$10.30	$2,833	
Surfacing	1 1/2"-0" crushed	70+10 to 143+20	2	station	13	stations	73.1	950	$10.30	$9,788	
Total Rock for Road Segment:			I11 to I12					1,225			$12,621
ROAD SEGMENT	I13 to I14			POINT TO POINT		Sta. to Sta.					
				I13 to I14		0+00 to 16+40		TOTAL	Rate/	Cost	
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		VOLUME (CY)	Sta./ amt.		
Subgrade Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	6	66	$8.81	$581	
Total Rock for Road Segment:			I13 to I14					66			$581

Processing:

Description	No.sta	Rate/sta	Cost
Water, Process & Compact:	368.80	$ 70.47	$25,989.34
Process & Compact:	368.80	$ 30.29	$11,170.95

	24"-12" rr	24"-6" rr	12"-6" rr	6"-4" pr	6"-0"pr	4"-0" crushed	1 1/2"-0" crushed	2"-1" drainrock	3/4"-0" crushed	Total	
SUB TOTAL FOR SURFACING	0	44	0	0	297	1,603	6,552	0	330	8,826	**$149,032**

SPECIAL PROJECTS

Description	Cy/Amount	Rate	Cost
Waste Area Prep C330	16	$195.00	$3,120.00
Straw Bales	150	$13.39	$2,008.50
Seed	40	$2.00	$80.00
Labor for spreading seed and mulch	40	$50.00	$2,000.00

SUB TOTAL FOR SPECIAL PROJECTS **$7,209**

Subtotal of Surfacing & Spec. Proj. *$156,241*
Subtotal of Clearing, Exc., Culv. *$73,430*

GRAND TOTAL **$229,671**

Compiled By: C. Hatcher Date: 01/08/2026

SUMMARY OF ROCK DEVELOPMENT AND CRUSHING COSTS

PROJECT NO. Project No. 3 **Timber Sale Name: Cronin Too**

Quarry: Sterling Ridge Swell:

Location: SW 1/4, SE 1/4, See. 14, T4N, R9W Shrink: 16%

County: Clatsop

By: B. Lampa Loading Hopper: No

Date: 01/08/2026

ROCK SIZE	REJECT	GRADATION	STOCKPILE CU. YDS.	TRUCK MEAS CU. YDS.	TOTAL CU. YDS.
3/4"-0"		CR			
1-1/2"-0"	2%	CR	2,000 Truck Msr	5,013	7,333
4"-0"	2%	CR	2,000 Truck Msr	3,792	6,112
6"-0"		PR			
24"-6"		RR			
36"		RR			
TOTAL CUBIC YARDS OF ROCK:			4,000	8,805	**13,445**

1) MOBILIZATION & SET UP:

EQUIPMENT	QUANTITY	RATE	COST	EQUIPMENT	QUANTITY	RATE	COST
Dump Trucks	1	$205	$205				
Screening Plants	2	$691	$1,382				
Excavator	1	$1,755	$1,755				
D6 Cat	1	$972	$972				
Drill & Compressor	1	$1,755	$1,755				
Powder	1	$439	$439				
2 Stage Crusher	1	$3,608	$3,608				
Loader	1	$1,005	$1,005				

SUB TOTAL FOR MOBILIZATION $11,121

EQUIPMENT SET UP	TIMES	RATE	COST
2 Stage Crusher	1	$2,714	$2,714
Screening Plants	2	$367	$734
Original Calibration	1	$680	$680

SUB TOTAL FOR SET UP COSTS $4,495

TOTAL MOBILIZATION & SET UP COSTS $15,616

2) CLEARING & GRUBBING

DESCRIPTION	QUANTITY	UNIT	RATE	COST
Clear Slash and Stumps (1 exc.)	24.0	hr	$195	$4,680
Pile & Burn Slash and Stumps(1 exc)	24.0	hr	$127	$3,048
Move-in Fire Truck for the burning of	1.0	ea	$238	$238
the Clearing Debris				

TOTAL CLEARING & GRUBBING COSTS $7,966

3) EXCAVATION

MATERIAL DESCRIPTION	QUANTITY	UNIT	RATE	COST
Overburden Removal (excavate, load haul, spread)	1,500	CY	$4.99	$7,485

TOTAL EXCAVATION COSTS $7,485

4) DEVELOP ROCK

ROCK SUMMARY

Type	Cu. yd. Vol.	Weight
crushed	13,445	100%
pit run	0	0
rip rap	0	0
Total	13,445	
reject	269	2.0%

METHOD	%	QUANTITY	RATE	COST
Ripping	50%	6,723	$3.80	$25,546
Drill & shoot	50%	6,857	$3.90	$26,742
Oversize red	2%	269	$7.70	$2,071
Other				

TOTAL ROCK DEVELOPMENT COSTS $54,358

5) CALIBRATION & TESTING

DESCRIPTION	NO.	$/TEST	COST
Calibrate	1	$558.00	$558
Calibrate			
Test	6	$63.60	$382
Test			

TOTAL CALIBRATION & TESTING COSTS $940

6) FEEDING & LOADING

DESCRIPTION	CU. YD. QUANTITY		COST CU. YD.		TOTAL COST
Dig & Feed Rock	13,714		$1.06		$14,554

TOTAL FEEDING & LOADING COSTS $14,554

7) ROCK CRUSHING

ROCK SIZE	ROCK TYPE	CU. YD. QUANTITY	CRUSHER TYPE	HOURLY PRODUCTION	RATE CU. YD.	TOTAL COST
3/4"-0"	crushed		3 stage w/s	110		
1-1/2"-0"	crushed	7,333	3 stage w/s	120	$4.02	$29,454
4"-0"	crushed	6,112	2 stage w/s	140	$3.07	$18,773

TOTAL ROCK CRUSHING COSTS $48,227

8) STOCKPILING

STOCKPILE SITE PREPARATION

Equipment	Hours	Rate	Total
Dozer	2	$180.00	$360.00
Compactor		$97.00	
Grader		$126.00	
Excavator		$195.00	

Rock for Floor (CY)	$/CY Haul	Total

$360.00

SUB TOTAL $360

HAUL & STOCKPILE STOCKPILE LOCATION	SIZE	# of TRUCKS	CU. YDS.	RATE	COST
1. Sterling Ridge Quarry	4"-0" Crushed	1	2,000	$1.42	$2,840
2. Sterling Ridge Quarry	1 1/2"-0" Crushed	1	2,000	$1.42	$2,840
3.					
4.					
5.					
6.					

SUB TOTAL $5,681

TOTAL STOCKPILING COSTS $6,041

9) MISCELLANEOUS COSTS

DESCRIPTION	COST
Load, Haul, and Spread the reject material at the waste area.	$538
$2.00 /CY 269 CY	
Final Quarry Dev., Access Road Const., Waterbarring, Drainage,	$2,340
Block Quarry Access	
Waste Area Seed and Mulch	$688
20 straw bales, 10lbs of seed, 8hrs of labor to spread	

TOTAL MISCELLANEOUS COSTS $3,566

10) GRAND TOTAL: **$158,752**

$/Cubic Yard $11.81

Footnotes:

HAUL and STOCKPILE COST

SALE NAME: Cronin Too
QUARRY: Sterling Ridge ROCK TYPE: Crushed

Location 1. Sterling Ridge Qı
4"-0" Crushed

ONE WAY HAUL IN MILES						
50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH
						0.02

Truck type: D20 No. trucks:
Delay min.: 8 Efficiency: 85%
Truck type: D12 No. trucks: 1
Delay min.: 5 Efficiency: 85%
Truck type: No. trucks:
Delay min.: 5 Efficiency: 85%

Ave haul: $0.85 /cy
Load: $0.00 /cy
Stockpile: $0.57 /cy
Production: cy/day = 1,035

Location 1. Sterling Ridge Quarry Haul and Stockpile Cost $1.42 /cy

Location 2. Sterling Ridge Qı
1 1/2"-0" Crushed

ONE WAY HAUL IN MILES						
50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH
						0.02

Truck type: D20 No. trucks:
Delay min.: 8 Efficiency: 75%
Truck type: D12 No. trucks: 1
Delay min.: 5 Efficiency: 85%
Truck type: D10 No. trucks:
Delay min.: 5 Efficiency: 85%

Ave haul: $0.85 /cy
Load: $0.00 /cy
Stockpile: $0.57 /cy
Production: cy/day = 1,035

Location 2. Sterling Ridge Quarry Haul and Stockpile Cost $1.42 /cy

Location 3. 0
0

ONE WAY HAUL IN MILES						
50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH

Truck type: D20 No. trucks:
Delay min.: 15 Efficiency: 75%
Truck type: D12 No. trucks:
Delay min.: 12 Efficiency: 75%
Truck type: D10 No. trucks:
Delay min.: 10 Efficiency: 75%

Ave haul: /cy
Load: /cy
Stockpile: /cy
Production: cy/day = 0

Location 3. 0 Haul and Stockpile Cost /cy

Timber Sale		
Piling and Burning Costs		
Work Description	C330	Labor
Cronin Waste Area Site	50.00	24.00
Unit 2	20.00	8.00
Total Quantity (Hours)	70.00	32.00
Mobilization	$1,755.00	$108.00
Rates	$195.00	$50.00
Total Dollars	$15,405	$1,708

Total Cost	$17,113

CRUSHED ROCK COST

SALE NAME: Cronin Too
PROJECT: Project No. 1 & 2
Stockpile: Lost Lake

MATERIAL: 1 1/2"-0" & 4"-0"

DATE: 01/08/2026
BY: C. Hatcher

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES 50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	Total Haul
1A to 1B	6.20	376			1.00	1.45	3.00	0.50	0.30	6.25
1C to 1D	24.00	1,653			1.00	3.50	2.00	0.50	0.30	7.30
1E to 1F	8.80	528			1.00	3.50	2.25	0.50	0.30	7.55
1G to 1H	6.00	391			1.00	3.50	2.30	0.50	0.30	7.60
1I to 1J	1.80	123			1.00	3.50	2.30	0.50	0.30	7.60
1K to 1L	1.80	101			1.00	3.50	2.25	0.50	0.30	7.55
I3 to I4	197.95	605			1.00	1.00	1.55	0.50	0.30	4.35
I11 to I12	143.20	1,231			1.00	1.00	1.55	0.50	0.30	4.35
TOTAL	389.75	5,008								AVERAGE HAUL
	STA./NO.	CU. YD.								
CUBIC YARD WEIGHTED HAUL					**1.00**	**2.43**	**1.97**	**0.50**	**0.30**	**6.20**
							Average Round Trip Distance (miles)		12.40	

ROCK HAUL:

Truck type: D20 No. trucks: 2
Delay min.: 8 Efficiency: 85%

Truck type: D12 No. trucks: 5
Delay min.: 6 Efficiency: 85%

Truck type: D10 No. trucks:
Delay min.: 5 Efficiency: 85%

Ave haul: $8.51 /cy
Load: $0.59 /cy
Spread: $1.20 /cy

Production: cy/day = 753

CRUSHED ROCK HAUL COSTS 5,008 cy @ **$10.30 /cy**

CRUSHED ROCK COST

SALE NAME: Cronin Too

DATE: 01/08/2026

PROJECT: Project No. 1 & 2

MATERIAL: 3/4"-0", 1 1/2"-0", & 4"-0"

BY: C. Hatcher

Stockpile: Quartz and Sterling

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES 50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	Total Haul
2A to 2B	1.00	61			1.5	2.0	1.0	0.3	0.2	5.00
2C to 2D	1.90	119			1.5	2.0	1.2	0.3	0.2	5.20
2E to 2F	7.60	238			1.5	2.0	1.4	0.3	0.2	5.40
2G to 2H	3.60	191			1.5	2.0	2.0	0.3	0.2	6.00
3A		11			3.30	2.50	1.00	0.30	0.20	7.30
3B to 3C	10.60	61			3.30	3.00	1.10	0.50	0.20	8.10
3D to 3E	6.60	427			3.30	3.00	1.50	0.50	0.20	8.50
3F to 3G	6.40	392			3.30	3.00	1.50	0.60	0.20	8.60
3H to 3I	11.70	747			3.30	3.00	1.50	0.65	0.20	8.65
3J to 3K	2.00	122			3.30	3.00	1.50	0.60	0.20	8.60
I1 to I2	326.55	3,034			2.0	2.0	0.8	0.3	0.2	5.30
I5 to I6	271.20	1,887			2.5	2.0	0.6	0.3	0.2	5.60
I7 to I8	117.90	1,276			2.0	1.3	0.8	0.3	0.2	4.60
I9 to I10	8.80	136			2.0	1.5	1.2	0.3	0.2	5.20
I13 to I14	16.40	66			2.0	1.1	1.0	0.5	0.2	4.80
TOTAL	792.25	8,768								AVERAGE HAUL
	STA./NO.	CU. YD.								
CUBIC YARD WEIGHTED HAUL					**2.33**	**2.08**	**0.95**	**0.36**	**0.20**	**5.93**
							Average Round Trip Distance (miles)		11.86	

ROCK HAUL:

Truck type: D20 No. trucks: 2
Delay min.: 8 Efficiency: 85%

Truck type: D12 No. trucks: 5
Delay min.: 6 Efficiency: 85%

Truck type: D10 No. trucks:
Delay min.: 5 Efficiency: 85%

Ave haul: $7.26 /cy
Load: $0.48 /cy
Spread: $1.07 /cy

Production: cy/day = 883

CRUSHED ROCK HAUL COSTS 8,768 cy @ **$8.81 /cy**

PIT RUN ROCK COST

SALE NAME: Cronin Too
PROJECT: Project No.1
BORROW: 1I to 1J, Area 2 drill/shoot, Roundabout Quarry

MATERIAL: Pit Run and Riprap

DATE: 01/08/2026
BY: C. Hatcher

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES 50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	Total Haul
1A to 1B	6.20	120			0.25	0.50	0.25	0.30	0.20	1.50
1C to 1D	24.00	110						0.30	0.20	0.50
1E to 1F	8.80	77						0.30	0.20	0.50
1G to 1H	6.00	77						0.30	0.20	0.50
1K to 1L	1.80	110						0.30	0.20	0.50
3A		110				0.20	0.30	0.30	0.20	1.00
3H to 3I	11.70	110				0.20	0.30	0.30	0.20	1.00
TOTAL	58.50	714								AVERAGE HAUL
	STA./NO.	CU. YD.								
CUBIC YARD WEIGHTED HAUL					**0.0**	**0.1**	**0.1**	**0.3**	**0.2**	**0.82**

Average Round Trip Distance (miles) 1.64

ROCK HAUL:

Truck type:	D20	No. trucks:	
Delay min.:	8	Efficiency:	85%
Truck type:	D12	No. trucks:	4
Delay min.:	6	Efficiency:	85%
Truck type:	D10	No. trucks:	
Delay min.:	5	Efficiency:	85%

Ave haul:	$2.81	/cy
Load:	$0.53	/cy
Spread:	$0.87	/cy

Production: cy/day = 1,251

PIT RUN ROCK HAUL COSTS 714 cy @ **$4.21 /cy**

Projects Road Maintenance Cost Summary

Sale: Cronin Too
Date: 08-Jan-26
By: Cole Hatcher

Type	Equipment/Rationale			Hours	Rate	Cost	
Project Work	Grader 14G			30	$126	$3,780	
Final Haul	Vibratory Roller			30	$97	$2,910	
Road Maintenance	Water Truck 2,500 gallon			8	$113	$904	
Total							$7,594

Production Rates	Miles/day	Distance(miles)	Days
Grader	1.5	4.49	3.0
Vibratory Roller	1.5	4.49	3.0

NOTE:

Sterling Ranch Road	1.57	Miles
Lost Lake Roads	2.92	Miles
		Miles
		Miles
TOTAL=	4.49	Miles

Cronin Too
TIMBER CRUISE REPORT
FY 2026

1. **Sale Area Location:** Portions of Sections 29, 31, 32, & 33 of T4N, R7W, W.M., Clatsop County, OR.

2. **Fund Distribution:** BOF 100% Tax Code: 8-01 (100%)

3. **Sale Acreage by Area:**

Unit	Harvest Type	Gross Acres	Non-Stocked Area	Stream Buffer Acres	Reserve Tree Area	Existing R/W Acres	New R/W	Net Acres	Survey Method
1	Clearcut	120	3	22	7	<1	-	88	GIS
2	Clearcut	96	5	10	7	1	-	73	GIS
3	Clearcut	114	4	15	6	1	-	88	GIS
4	R/W	<1	-	-	-	-	<1	<1	LxW
TOTAL		**330**	**12**	**47**	**20**	**2**	**<1**	**249**	

4. Cruisers and Cruise Dates: Avery Petersen, Ryan Simpson, John Czarnecki, Kevin Berry, and Michele Huffman (10/09/2025-10/21/2025)

5. Cruise Method and Computation:

Unit 1 and Unit 2: Unit 1 and Unit 2 were variable plot cruised with a 40 BAF for conifers and a 33.61 BAF for hardwoods. A total of 73 plots were sampled on a 7.5 by 3 chain spacing with a count to grade ratio of 2:1, resulting in 29 grade plots and 44 count plots. Four count plot were dropped due either to inaccessibility or being on or over the timber sale boundary.

Unit 3: Unit 3 was variable plot cruised with a 40 BAF for conifers and a 33.61 BAF for hardwoods. A total of 42 plots were sampled on a 7 by 3 chain spacing with a count to grade ratio of 2:1, resulting in 15 grade plots and 27 count plots. One count plot was dropped due to it landing on an existing road. Plot numbers differ from those in the statistics due to three zero-tree plots as well as minor species being graded on two count plots.

Unit 4 (R/W) consists of approximately 5 acres of non-stocked right-of-way and less than one acre of timber similar to U3.

Data was collected on Allegro 2 data collectors and downloaded to the Atterbury SuperACE 2008 program for computing. See the attached Cruise Designs for more details on the cruise method. The cruise calculations were processed in the Astoria District office.

UNIT(s)	CRUISE	TRACT	TYPE	ACRES
Units 1 & 2	CRONINT	U12	00CC	161
Unit 3	CRONINT	U3	00CC	88

6. Timber Description:

Unit 1 and Unit 2 are clearcuts with an average age of 70 years. The stands consist of Douglas-fir, western hemlock, and red alder, with minor components of bigleaf maple. The average take Douglas-fir is approximately 19 inches DBH and 58 feet to a merchantable top. The average take western hemlock is approximately 21 inches DBH and 63 feet to a merchantable top. The average take red alder is approximately 16 inches DBH and 50 feet to a merchantable top. The average take bigleaf maple is approximately 17 inches DBH and 40 feet to a merchantable top. Average net volume to be harvested per acre is 24 MBF. All trees were cruised to a merchantable top of six inches DIB, 40% of form point, or an otherwise anticipated break point.

Unit 3 is a clearcut with an average age of 84 years. The stand consists of Douglas-fir, western hemlock, and red alder, with minor components of bigleaf maple. The average take Douglas-fir is approximately 20 inches DBH and 78 feet to a merchantable top. The average take western hemlock is approximately 13 inches DBH and 37 feet to a merchantable top. The average take red alder is approximately 15 inches DBH and 48 feet to a merchantable top. The average take bigleaf maple is approximately 14 inches DBH and 38 feet to a

merchantable top. Average net volume to be harvested per acre is 26 MBF. All trees were cruised to a merchantable top of six inches DIB, 40% of form point, or an otherwise anticipated break point.

7. Statistical Analysis and Stand Summary:

Statistics for Stand B.F. volumes

Type	Estimated CV	Target SE%	Actual CV	Actual SE%
U12	55%	13%	44.1%	5.2%
U3	55%	13%	54.3%	8.4%

8. Volumes by Species and Log Grade:

Volumes by Species and Grade for All Sale Areas: (MBF) Volumes do not include "in-growth."

Conifer

Species	DBH	Net Vol.	2 Saw	3 Saw	4 Saw	% D & B	% Sale
Douglas-fir	19"	3,833	2,578	1,043	212	0.5%	63%
Western hemlock	14"	664	310	263	91	1.6%	11%
TOTALS	--	**4,497**	**2,888**	**1,306**	**303**	--	--

Hardwood

Species	DBH	Net Vol.	12"+	10"-11"	8"-9"	6"-7"	% D & B	% Sale
Red alder	15"	1,482	386	429	269	398	0.9%	24%
Bigleaf maple	16"	113	45	30	25	13	0.3%	2%
TOTALS	--	**1,595**	**431**	**459**	**294**	**411**	--	--

TOTAL VOLUME	6,092 MBF

9. Approvals:

Prepared by: Michele Huffman **Date:** 11/04/2025

Unit Forester Approval: [signature] **Date:** 11/12/2026

10. Attachments:

Cruise Design and Maps (5 pages)
Volume Reports (3 pages)
Statistics Report (10 pages)
Log Stock Table (3 pages)
Stand Table Summary (2 pages)

Revised August, 2002

CRUISE DESIGN
ASTORIA DISTRICT

Sale Name: Cronin Too **Units** U12

Harvest Type: Modified Clearcut

Approx. Cruise Acres: 161 **Estimated CV%** 55 Net BF/Acre **SE% Objective** 13% Net BF/Acre

Planned Sale Volume: 3,718 MBF **Estimated Sale Area Value/Acre:** $4,798/Acre

A. Cruise Goals: (a) Grade minimum 80 conifer trees.
(b) Sample 73 plots (29 grade/44 count); (c) Other goals (____ Determine "automark" thinning standards; X Determine log grades for sale value; _____ Determine snag and leave tree species and sizes.

B. Cruise Design:

1. Plot Cruises: Conifer BAF: **40**
Hardwood BAF: **33.61**

Cruise Line Direction: U1: 140°/320°
U2: 0°/180°
Cruise Line Spacing 7.5 (chains) 495 (Feet)
Cruise Plot Spacing 3 (chains) 198 (Feet)
Grade/Count Ratio 1:2

Take plots as marked on cruise map.

Grade minor species (true fir, spruce, cedar, maple, etc.) on count plots if encountered.

DO NOT: record any 22' log lengths, or any 12', 24', or 32' log lengths for hardwoods.

DO NOT: record snags < 15" DBH or record snag measurements on count plots.

C. Tree Measurements:

1. Diameter: Minimum DBH to cruise is 8" for conifers and 8" for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16" - 24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

2. Bole Length: Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.

3. Top Cruise Diameter (TCD): Minimum top outside bark is 7" for conifers and 7" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 20" dbh and 40% of dob @ FP for conifer trees > 20" dbh.

4. Form Factors: (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

5. Tree Segments: Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull

segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree. Hardwoods shall be recorded in 8' and 10' multiples.

6. Species, Sort, and Grade Codes:

A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); GF (Grand fir); SF (Silver fir); A (Red alder); M (Bigleaf maple); SN (Snag). For "leave trees", add an "L" to the species code (such as DL, HL, CL, etc.).

B. Sort: Use code "1" (Domestic).

C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull
Hardwoods: Alder Grades: 12" + = 1 Sawmill; 10"-12" = 2 Sawmill; 10"-8" = 3 Sawmill; and 8"-6" 4 Sawmill, or R = Camp Run; 0 = Cull.
All Maple Camp Run = R

- **Oversize Spruce 2 saw or better- measure bole height to 27" outside bark. Record separately.**
  Bars = : 4"at 66', 3"at 50', and 2"at 33'.

  Grade oversized 3-SAW (DIB ≥ 12", knots > 2½" inside scaling cylinder affecting > 50% of log)

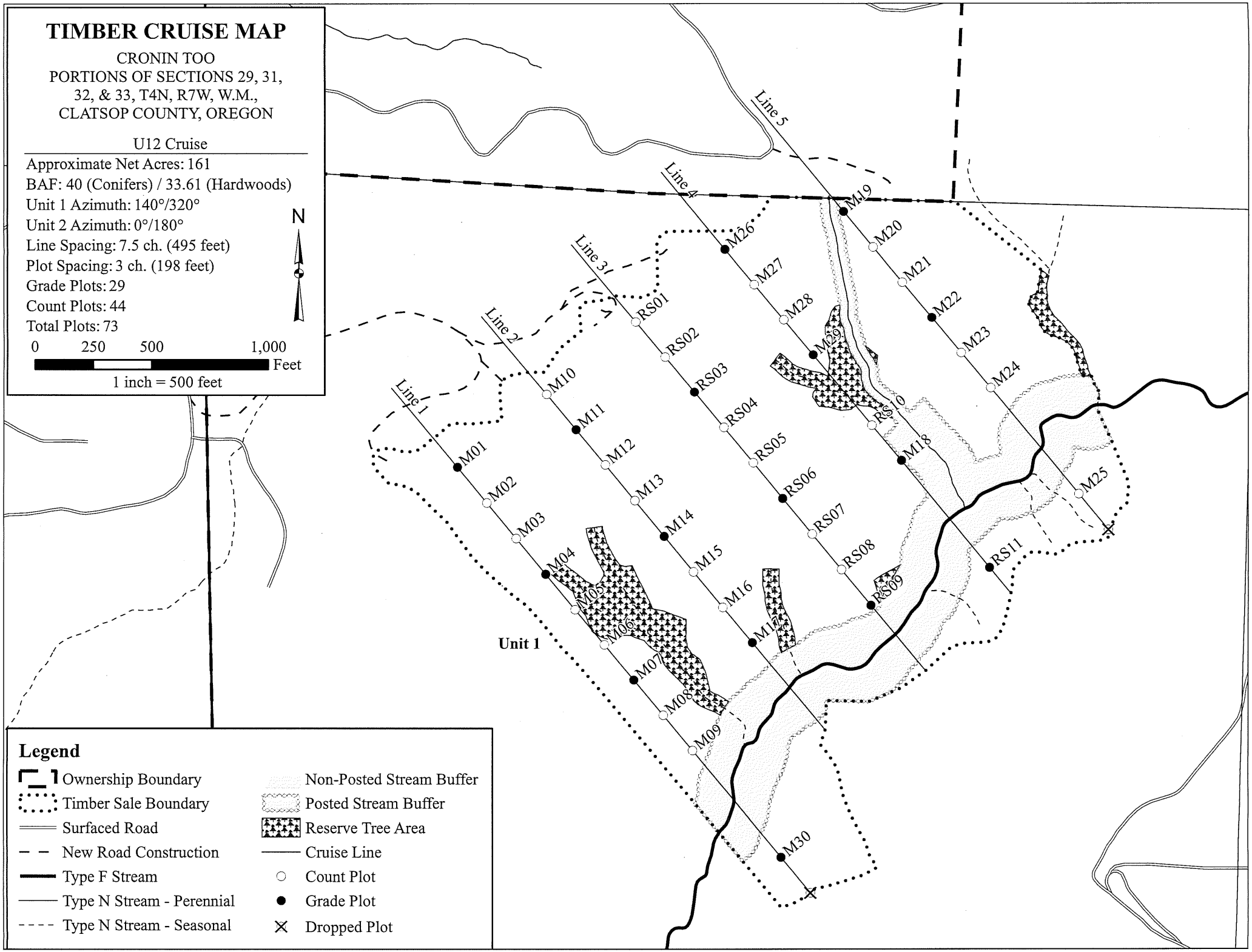
7. Deductions: Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

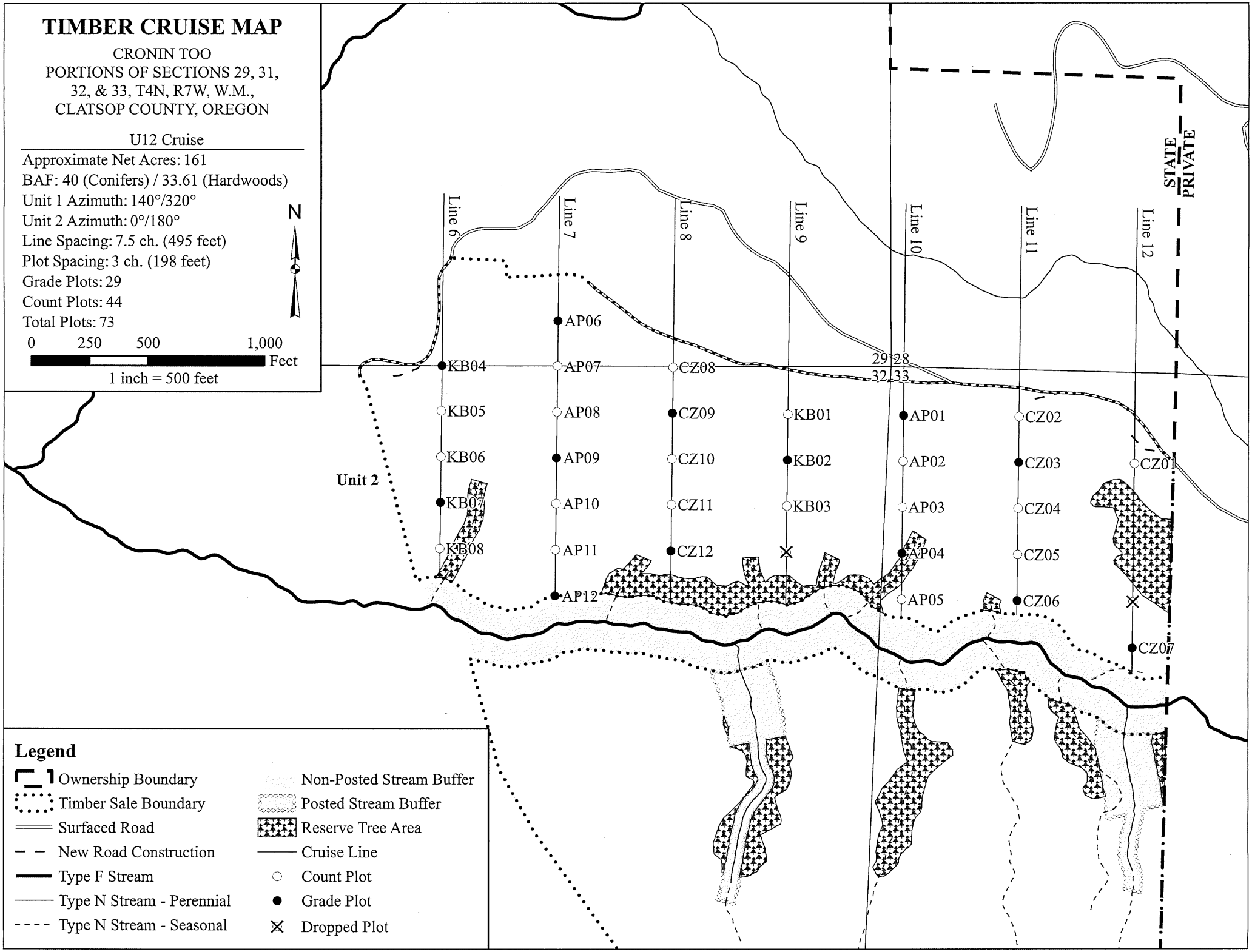
8. Standard Field Procedures: Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at inter-visible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.

9. Cruising Equipment: Relaskop, Rangefinder, Logger's Tape (with dbh on back), Compass, Allegro II Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint, Permanent Marker.

10. Attachments: A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Michele Huffman
Approved by: [signature]
Date: 10/9/2025


TIMBER CRUISE MAP
CRONIN TOO
PORTIONS OF SECTIONS 29, 31, 32, & 33, T4N, R7W, W.M., CLATSOP COUNTY, OREGON
U12 Cruise
Approximate Net Acres: 161
BAF: 40 (Conifers) / 33.61 (Hardwoods)
Unit 1 Azimuth: 140°/320°
Unit 2 Azimuth: 0°/180°
Line Spacing: 7.5 ch. (495 feet)
Plot Spacing: 3 ch. (198 feet)
Grade Plots: 29
Count Plots: 44
Total Plots: 73
N
0 250 500 1,000 Feet
1 inch = 500 feet
Line 1
Line 2
Line 31
Line 4
Line 5
M01
M02
M03
M04
M05
M06
M07
M08
M09
M10
M11
M12
M13
M14
M15
M16
M17
M18
M19
M20
M21
M22
M23
M24
M25
M26
M27
M28
M29
M30
RS01
RS02
RS03
RS04
RS05
RS06
RS07
RS08
RS09
RS10
RS11
Unit 1
Legend
Ownership Boundary
Timber Sale Boundary
Surfaced Road
New Road Construction
Type F Stream
Type N Stream - Perennial
Type N Stream - Seasonal
Non-Posted Stream Buffer
Posted Stream Buffer
Reserve Tree Area
Cruise Line
Count Plot
Grade Plot
Dropped Plot


TIMBER CRUISE MAP
CRONIN TOO
PORTIONS OF SECTIONS 29, 31, 32, & 33, T4N, R7W, W.M., CLATSOP COUNTY, OREGON
U12 Cruise
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Line Spacing: 7.5 ch. (495 feet)
Plot Spacing: 3 ch. (198 feet)
Grade Plots: 29
Count Plots: 44
Total Plots: 73
N
0 250 500 1,000 Feet
1 inch = 500 feet
Line 6
Line 7
Line 8
Line 9
Line 10
Line 11
Line 12
STATE
PRIVATE
29 28
32 33
Unit 2
KB04
KB05
KB06
KB07
KB08
AP06
AP07
AP08
AP09
AP10
AP11
AP12
CZ08
CZ09
CZ10
CZ11
CZ12
KB01
KB02
KB03
AP01
AP02
AP03
AP04
AP05
CZ02
CZ03
CZ04
CZ05
CZ06
CZ01
CZ07
Legend
Ownership Boundary
Timber Sale Boundary
Surfaced Road
New Road Construction
Type F Stream
Type N Stream - Perennial
Type N Stream - Seasonal
Non-Posted Stream Buffer
Posted Stream Buffer
Reserve Tree Area
Cruise Line
Count Plot
Grade Plot
Dropped Plot

Revised August, 2002

CRUISE DESIGN
ASTORIA DISTRICT

Sale Name: Cronin Too **Units** U3

Harvest Type: Modified Clearcut

Approx. Cruise Acres: 88 **Estimated CV%** 55 Net BF/Acre **SE% Objective** 13% Net BF/Acre

Planned Sale Volume: 2,002 MBF **Estimated Sale Area Value/Acre:** $4,798/Acre

A. Cruise Goals: (a) Grade minimum 80 conifer trees.
(b) Sample 43 plots (15 grade/ 28 count); (c) Other goals (____ Determine "automark" thinning standards; X Determine log grades for sale value; _____ Determine snag and leave tree species and sizes.

B. Cruise Design:

1. Plot Cruises: **Conifer** BAF: **40**
Hardwood BAF: **33.61**

Cruise Line Direction:
U3: 360°/180°
Cruise Line Spacing 7 (chains) 462 (Feet)
Cruise Plot Spacing 3 (chains) 198 (Feet)
Grade/Count Ratio 1:2

Take plots as marked on cruise map.

Grade minor species (true fir, spruce, cedar, maple, etc.) on count plots if encountered.

DO NOT: record any 22' log lengths, or any 12', 24', or 32' log lengths for hardwoods.

DO NOT: record snags < 15" DBH or record snag measurements on count plots.

C. Tree Measurements:

1. Diameter: Minimum DBH to cruise is 8" for conifers and 8" for hardwoods.
Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16" - 24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

2. Bole Length: Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.

3. Top Cruise Diameter (TCD): Minimum top outside bark is 7" for conifers and 7" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 20" dbh and 40% of dob @ FP for conifer trees > 20" dbh.

4. Form Factors: (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

5. Tree Segments: Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull

segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree. Hardwoods shall be recorded in 8' and 10' multiples.

6. Species, Sort, and Grade Codes:

A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); GF (Grand fir); SF (Silver fir); A (Red alder); M (Bigleaf maple); SN (Snag). For "leave trees", add an "L" to the species code (such as DL, HL, CL, etc.).

B. Sort: Use code "1" (Domestic).

C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull
Hardwoods: Alder Grades: 12" + = 1 Sawmill; 10"-12" = 2 Sawmill; 10"-8" = 3 Sawmill; and 8"-6" 4 Sawmill, or R = Camp Run; 0 = Cull.
All Maple Camp Run = R

- **Oversize Spruce 2 saw or better- measure bole height to 27" outside bark. Record separately.**
  Bars = : 4"at 66', 3"at 50', and 2"at 33'.

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7. Deductions: Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

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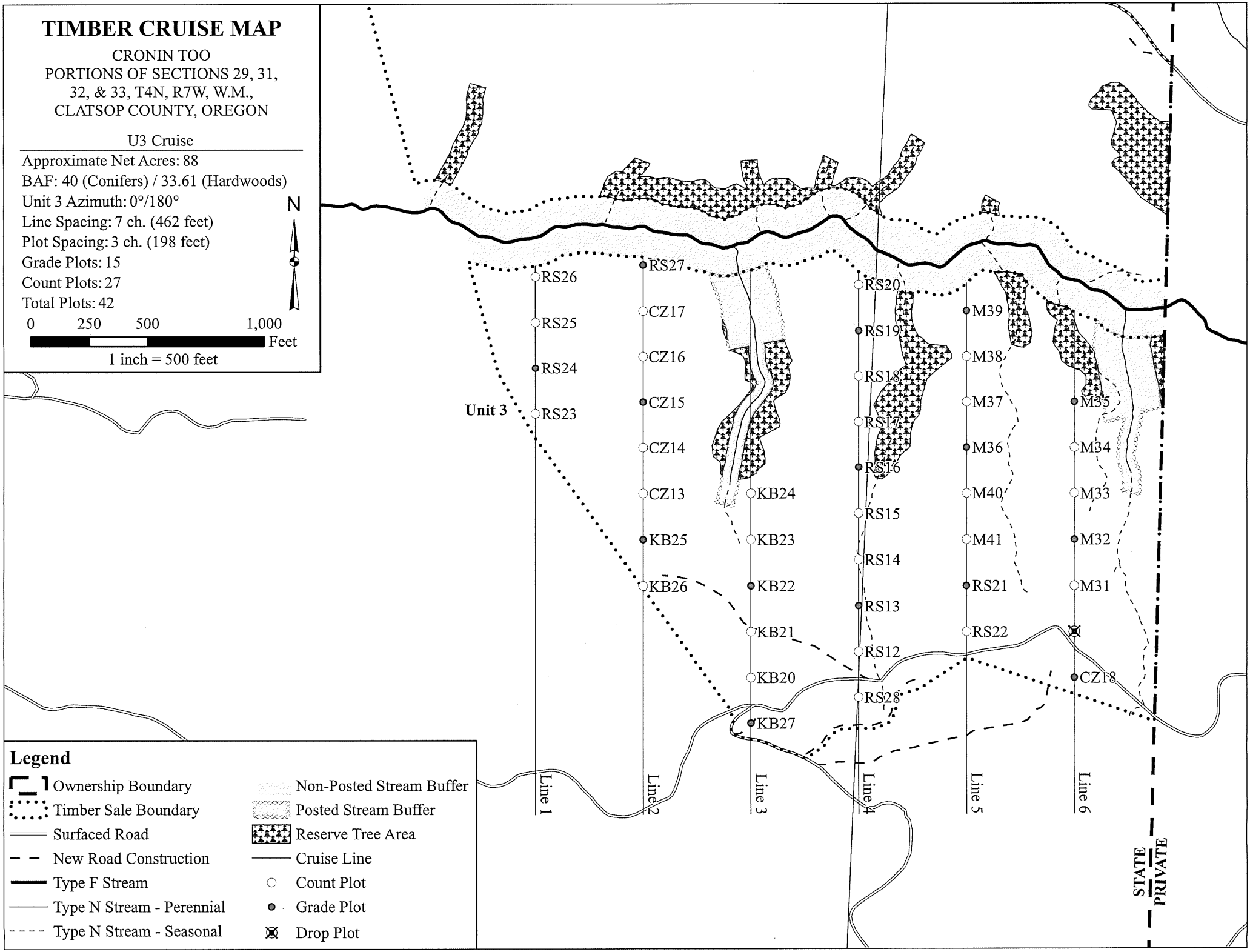
9. Cruising Equipment: Relaskop, Rangefinder, Logger's Tape (with dbh on back), Compass, Allegro II Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint, Permanent Marker.

10. Attachments: A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Michele Huffman
Approved by: _____
Date: 10/9/2025


TIMBER CRUISE MAP
CRONIN TOO
PORTIONS OF SECTIONS 29, 31, 32, & 33, T4N, R7W, W.M., CLATSOP COUNTY, OREGON
U3 Cruise
Approximate Net Acres: 88
BAF: 40 (Conifers) / 33.61 (Hardwoods)
Unit 3 Azimuth: 0°/180°
Line Spacing: 7 ch. (462 feet)
Plot Spacing: 3 ch. (198 feet)
Grade Plots: 15
Count Plots: 27
Total Plots: 42
N
0 250 500 1,000
Feet
1 inch = 500 feet
Unit 3
RS26
RS25
RS24
RS23
RS27
CZ17
CZ16
CZ15
CZ14
CZ13
KB25
KB26
KB24
KB23
KB22
KB21
KB20
KB27
RS20
RS19
RS18
RS17
RS16
RS15
RS14
RS13
RS12
RS28
M39
M38
M37
M36
M40
M41
RS21
RS22
M35
M34
M33
M32
M31
CZ18
Line 1
Line 2
Line 3
Line 4
Line 5
Line 6
STATE
PRIVATE
Legend
Ownership Boundary
Timber Sale Boundary
Surfaced Road
New Road Construction
Type F Stream
Type N Stream - Perennial
Type N Stream - Seasonal
Non-Posted Stream Buffer
Posted Stream Buffer
Reserve Tree Area
Cruise Line
Count Plot
Grade Plot
Drop Plot

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T04N R07W S31 Ty00CC 88.00
T04N R07W S32 Ty00CC 161.00

Project: CRONINT
Acres 249.00

Page 1
Date 11/3/2025
Time 2:20:17PM

Spp	S T	So Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log: Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
D		DO2S	67	.3	10,389	10,355	2,578		1	49	50		3	1	95	39	15	382	2.25	27.1
D		DO3S	27	.3	4,202	4,188	1,043		93	4	3	2	13	20	66	35	9	96	0.83	43.5
D		DO4S	6	3.4	881	852	212		100			55	41	5		21	6	27	0.48	31.1
D	**Totals**		63	.5	15,472	15,395	3,833		31	34	34	3	8	6	82	32	10	151	1.22	101.7
H		DO2S	46	.5	1,253	1,246	310			51	49			12	88	39	15	387	2.30	3.2
H		DO3S	40	3.4	1,094	1,057	263		87	13		2	19	24	55	34	9	94	0.89	11.2
H		DO4S	14		364	364	91		100			70	30			19	6	23	0.40	15.6
H	**Totals**		11	1.6	2,710	2,666	664		48	29	23	10	12	15	63	27	8	89	0.92	30.1
M		DOCU														30	10		0.00	1.0
M		DO1S	39	.8	181	180	45			100		25	42	12	21	26	14	179	1.78	1.0
M		DO2S	27		119	119	30		100			35		36	29	26	10	95	0.93	1.3
M		DO3S	22		99	99	25		100			16	16	57	11	26	8	62	0.86	1.6
M		DO4S	12		54	54	13		100			46	24		30	22	6	30	0.55	1.8
M	**Totals**		2	.3	452	451	113 ~~112~~		60	40		28	23	27	22	26	9	68	0.79	6.6
A		DOCU														9	9		0.00	1.3
A		DO1S	26	1.0	1,564	1,548	386			95	5	4	23	20	53	33	13	200	1.66	7.7
A		DO2S	28	1.3	1,744	1,722	429		100				10		90	37	10	150	1.15	11.5
A		DO3S	19	.5	1,085	1,080	269		100			4	16	13	68	34	9	87	0.80	12.4
A		DO4S	27	.8	1,614	1,600	398		100			29	20	17	34	25	7	38	0.57	42.2
A	**Totals**		24	.9	6,007	5,951	1,482		74	25	1	9	17	12	61	29	8	79	0.85	75.2
Totals				0.7	24,642	24,463	6,082 ~~6,091~~		44	31	24	6	11	9	74	30	9	115	1.05	213.6

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: CRONINT

Date 11/3/2025

Time 2:20:17PM

T04N R07W S32 T00CC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
04N	07W	32	U12TAKE	00CC	161.00	73	153	1	W

T04N R07W S32 T00CC

Spp	St	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
D		DO	2S	65	.5	10,909	10,860	1,748		1	48	51		5	2	94	39	15	375	2.27	28.9
D		DO	3S	28	.2	4,748	4,737	763		90	5	5	2	14	22	62	35	9	97	0.86	48.7
D		DO	4S	7	4.2	1,097	1,051	169		100			45	50	6		22	6	28	0.50	37.1
D	**Totals**			70	.6	16,755	16,648	2,680		33	32	35	3	10	8	79	32	10	145	1.21	114.8
A		DO	CU														5	10		0.00	1.2
A		DO	1S	33		1,911	1,911	308			100		4	27	18	50	32	13	190	1.62	10.0
A		DO	2S	22	2.2	1,295	1,266	204		100				15		85	36	10	143	1.16	8.9
A		DO	3S	15		833	833	134		100			7	11	14	68	32	9	86	0.82	9.7
A		DO	4S	30	1.2	1,705	1,685	271		100			24	22	9	45	27	7	40	0.61	42.3
A	**Totals**			24	.9	5,744	5,695	917		66	34		10	20	11	59	29	8	79	0.88	72.2
M		DO	CU														30	10		0.00	1.5
M		DO	1S	43	1.0	206	204	33			100		27	58	16		25	14	193	1.98	1.1
M		DO	2S	28		131	131	21		100			50		50		23	10	83	0.91	1.6
M		DO	3S	20		93	93	15		100			18		64	18	29	8	66	0.86	1.4
M		DO	4S	9		38	38	6		100			100				17	6	22	0.46	1.7
M	**Totals**			2	.5	468	465	75		56	44		38	25	34	4	25	9	63	0.75	7.3
H		DO	2S	45		416	416	67				100				100	40	23	975	4.50	.4
H		DO	3S	51	2.2	483	472	76		60	40			34	8	58	34	11	146	1.33	3.2
H		DO	4S	4		35	35	6		100			100				17	6	20	0.52	1.8
H	**Totals**			4	1.2	934	923	149		35	20	45	4	17	4	75	29	10	170	1.52	5.4
Type Totals					.7	23,900	23,732	3,821		41	32	26	6	13	9	72	30	9	119	1.09	199.7

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: CRONINT

Page 1
Date 11/3/2025
Time 2:20:17PM

T04N R07W S31 T00CC

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
04N	07W	31	U3TAKE	00CC	88.00	42	91	1	W

T04N R07W S31 T00CC

Spp	St	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log: Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
D		DO	2S	71	.1	9,437	9,431	830			53	47		1		99	40	16	396	2.19	23.8
D		DO	3S	25	.6	3,203	3,185	280		100			1	10	14	75	36	8	94	0.77	33.9
D		DO	4S	4		486	486	43		100			93	7			18	7	24	0.43	20.1
D	**Totals**			51	.2	13,126	13,101	1,153		28	38	34	4	4	3	89	33	10	168	1.25	77.8
A		DO	CU														16	6		0.00	1.4
A		DO	1S	13	4.9	930	885	78			74	26		9	26	65	37	14	250	1.85	3.5
A		DO	2S	40	.4	2,566	2,556	225		100				6		94	39	10	157	1.15	16.3
A		DO	3S	24	.9	1,547	1,533	135		100				20	12	68	36	8	88	0.78	17.5
A		DO	4S	23		1,445	1,445	127		100			41	17	33	9	23	7	34	0.49	42.0
A	**Totals**			25	1.1	6,488	6,419	565		86	10	4	9	12	14	65	30	8	80	0.81	80.7
H		DO	2S	47	.7	2,784	2,764	243			65	35			15	85	39	15	332	2.09	8.3
H		DO	3S	36	3.8	2,212	2,127	187		97	3		3	12	31	54	34	8	83	0.79	25.8
H		DO	4S	17		965	965	85		100			68	32			20	6	24	0.39	41.0
H	**Totals**			23	1.8	5,961	5,856	515		52	31	17	12	10	19	60	27	8	78	0.84	75.1
M		DO	1S	32		136	136	12			100		20			80	26	13	150	1.37	.9
M		DO	2S	23		98	98	9		100						100	40	10	150	0.97	.7
M		DO	3S	25		109	109	10		100			12	41	47		23	9	57	0.87	1.9
M		DO	4S	20		82	82	7		100				44		56	31	6	44	0.64	1.9
M	**Totals**			2		424	424	37		68	32		9	19	12	59	28	9	80	0.88	5.3
Type Totals					.8	26,000	25,801	2,270		49	30	22	7	7	10	76	30	9	108	0.98	239.0

TC PSTATS

PROJECT STATISTICS

PROJECT CRONINT

DATE 12/11/2025

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	07	31	U3TAKE	00CC	249.00	115	591	1	W
04N	07W	32	U12TAKE	00CC					

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	115	591	5.1		
CRUISE	45	244	5.4	31,822	.8
DBH COUNT					
REFOREST					
COUNT	67	336	5.0		
BLANKS	3				
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	115	54.6	18.7	63	24.0	103.9	15,472	15,395	3,979	3,979
R ALDER	85	46.8	15.3	49	15.3	59.9	6,007	5,951	1,868	1,868
WHEMLOCK	27	21.8	13.8	39	6.1	22.7	2,710	2,666	749	749
BL MAPLE	17	4.5	16.1	40	1.6	6.5	452	451	134	134
TOTAL	*244*	*127.8*	*16.6*	*53*	*47.3*	*193.0*	*24,642*	*24,463*	*6,729*	*6,729*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	SAMPLE TREES - BF LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DOUG FIR	87.8	8.2	452	492	533			
R ALDER	55.0	6.0	144	153	162			
WHEMLOCK	140.3	27.5	224	309	393			
BL MAPLE	78.4	19.6	98	122	146			
TOTAL	*112.9*	*7.2*	*304*	*328*	*352*	*509*	*127*	*57*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	TREES/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	106.6	9.9	49	55	60			
R ALDER	127.3	11.9	41	47	52			
WHEMLOCK	265.8	24.8	16	22	27			
BL MAPLE	320.8	29.9	3	5	6			
TOTAL	*62.6*	*5.8*	*120*	*128*	*135*	*156*	*39*	*17*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	BASAL AREA/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	92.4	8.6	95	104	113			
R ALDER	124.7	11.6	53	60	67			
WHEMLOCK	229.5	21.4	18	23	28			
BL MAPLE	300.8	28.0	5	6	8			
TOTAL	*44.9*	*4.2*	*185*	*193*	*201*	*81*	*20*	*9*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	NET BF/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	89.9	8.4	14,105	15,395	16,685			
R ALDER	127.7	11.9	5,243	5,951	6,659			
WHEMLOCK	229.3	21.4	2,097	2,666	3,236			
BL MAPLE	356.8	33.2	301	451	601			
TOTAL	*48.2*	*4.5*	*23,366*	*24,463*	*25,560*	*93*	*23*	*10*

TC TSTATS

STATISTICS

PAGE 1

PROJECT CRONINT

DATE 12/11/2025

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	07W	32	U12TAKE	00CC	161.00	73	380	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	73	380	5.2		
CRUISE	28	153	5.5	18,791	.8
DBH COUNT					
REFOREST					
COUNT	45	227	5.0		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	88	65.7	18.5	58	28.4	122.2	16,755	16,648	4,418	4,418
R ALDER	50	43.7	15.9	50	15.0	59.9	5,744	5,695	1,833	1,833
BL MAPLE	11	4.7	16.9	40	1.8	7.4	468	465	136	136
WHEMLOCK	4	2.6	20.6	63	1.3	6.0	934	923	238	238
TOTAL	*153*	*116.7*	*17.5*	*55*	*46.7*	*195.4*	*23,900*	*23,732*	*6,625*	*6,625*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 % COEFF — **SAMPLE TREES - BF** — # OF TREES REQ. — INF. POP.

SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	95.3	10.1	413	459	506			
R ALDER	51.8	7.3	141	152	163			
BL MAPLE	80.6	25.5	91	123	154			
WHEMLOCK	139.2	79.5	141	688	1,234			
TOTAL	*116.3*	*9.4*	*309*	*341*	*373*	*540*	*135*	*60*

CL: 68.1 % COEFF — **TREES/ACRE** — # OF PLOTS REQ. — INF. POP.

SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	90.2	10.5	59	66	73			
R ALDER	126.8	14.8	37	44	50			
BL MAPLE	290.2	33.9	3	5	6			
WHEMLOCK	323.6	37.8	2	3	4			
TOTAL	*47.1*	*5.5*	*110*	*117*	*123*	*88*	*22*	*10*

CL: 68.1 % COEFF — **BASAL AREA/ACRE** — # OF PLOTS REQ. — INF. POP.

SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	81.5	9.5	111	122	134			
R ALDER	126.7	14.8	51	60	69			
BL MAPLE	276.8	32.4	5	7	10			
WHEMLOCK	325.7	38.1	4	6	8			
TOTAL	*39.9*	*4.7*	*186*	*195*	*205*	*64*	*16*	*7*

CL: 68.1 % COEFF — **NET BF/ACRE** — # OF PLOTS REQ. — INF. POP.

SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	82.8	9.7	15,036	16,648	18,261			
R ALDER	130.8	15.3	4,824	5,695	6,566			
BL MAPLE	313.2	36.6	295	465	636			
WHEMLOCK	343.3	40.1	552	923	1,293			
TOTAL	*44.3*	*5.2*	*22,501*	*23,732*	*24,962*	*79*	*20*	*9*

TC TSTATS

STATISTICS

PROJECT CRONINT

DATE 12/11/2025

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	07W	31	U3TAKE	00CC	88.00	42	211	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	42	211	5.0		
CRUISE	17	91	5.4	13,030	.7
DBH COUNT					
REFOREST					
COUNT	22	109	5.0		
BLANKS	3				
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	27	34.1	19.5	78	16.0	70.5	13,126	13,101	3,176	3,176
R ALDER	35	52.7	14.5	48	15.8	60.0	6,488	6,419	1,931	1,931
WHEMLOCK	23	57.0	13.1	37	14.7	53.3	5,961	5,856	1,682	1,682
BL MAPLE	6	4.2	14.4	38	1.3	4.8	424	424	132	132
TOTAL	*91*	*148.1*	*15.3*	*50*	*48.3*	*188.6*	*26,000*	*25,801*	*6,921*	*6,921*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	67.1	13.1	520	599	678			
R ALDER	60.0	10.1	139	154	170			
WHEMLOCK	105.7	22.5	188	243	297			
BL MAPLE	81.8	36.4	77	122	166			
TOTAL	*105.5*	*11.1*	*273*	*306*	*340*	*445*	*111*	*49*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	143.8	22.2	27	34	42			
R ALDER	128.3	19.8	42	53	63			
WHEMLOCK	156.4	24.1	43	57	71			
BL MAPLE	386.1	59.5	2	4	7			
TOTAL	*76.1*	*11.7*	*131*	*148*	*165*	*231*	*58*	*26*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	109.1	16.8	59	70	82			
R ALDER	122.1	18.8	49	60	71			
WHEMLOCK	144.1	22.2	41	53	65			
BL MAPLE	364.9	56.3	2	5	8			
TOTAL	*53.8*	*8.3*	*173*	*189*	*204*	*115*	*29*	*13*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	104.2	16.1	10,996	13,101	15,206			
R ALDER	124.2	19.1	5,190	6,419	7,648			
WHEMLOCK	148.9	22.9	4,512	5,856	7,200			
BL MAPLE	444.0	68.4	134	424	715			
TOTAL	*54.3*	*8.4*	*23,642*	*25,801*	*27,960*	*118*	*29*	*13*

STATISTICS

PROJECT CRONINT

DATE 12/11/2025

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	07W	32	U12	00CC	161.00	73	390	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	73	390	5.3		
CRUISE	29	157	5.4	19,266	.8
DBH COUNT					
REFOREST					
COUNT	44	229	5.2		
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	88	65.7	18.5	58	28.4	122.2	16,755	16,648	4,418	4,418
R ALDER	50	43.7	15.9	50	15.0	59.9	5,744	5,695	1,833	1,833
BL MAPLE	11	4.7	16.9	40	1.8	7.4	468	465	136	136
WHEMLOCK	4	2.6	20.6	63	1.3	6.0	934	923	238	238
SNAG	3	2.4	17.8	38	1.0	4.2				
CEDLEAV	1	.5	20.0	30	0.2	1.1	25	25	17	17
TOTAL	*157*	*119.7*	*17.5*	*54*	*47.9*	*200.7*	*23,925*	*23,757*	*6,642*	*6,642*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 % COEFF — **SAMPLE TREES - BF** — # OF TREES REQ. — INF. POP.

SD: 1.0

	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	95.3	10.1	413	459	506			
R ALDER	51.8	7.3	141	152	163			
BL MAPLE	80.6	25.5	91	123	154			
WHEMLOCK	139.2	79.5	141	688	1,234			
SNAG								
CEDLEAV								
TOTAL	*118.7*	*9.5*	*301*	*332*	*364*	*562*	*141*	*62*

CL: 68.1 % COEFF — **TREES/ACRE** — # OF PLOTS REQ. — INF. POP.

SD: 1.0

	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	90.2	10.5	59	66	73			
R ALDER	126.8	14.8	37	44	50			
BL MAPLE	290.2	33.9	3	5	6			
WHEMLOCK	323.6	37.8	2	3	4			
SNAG	298.4	34.9	2	2	3			
CEDLEAV	599.9	70.2	0	1	1			
TOTAL	*46.6*	*5.4*	*113*	*120*	*126*	*87*	*22*	*10*

CL: 68.1 % COEFF — **BASAL AREA/ACRE** — # OF PLOTS REQ. — INF. POP.

SD: 1.0

	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	81.5	9.5	111	122	134			
R ALDER	126.7	14.8	51	60	69			
BL MAPLE	276.8	32.4	5	7	10			
WHEMLOCK	325.7	38.1	4	6	8			
SNAG	287.9	33.7	3	4	6			
CEDLEAV	599.9	70.2	0	1	2			
TOTAL	*38.5*	*4.5*	*192*	*201*	*210*	*59*	*15*	*7*

CL: 68.1 % COEFF — **NET BF/ACRE** — # OF PLOTS REQ. — INF. POP.

SD: 1.0

	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	82.8	9.7	15,036	16,648	18,261			
R ALDER	130.8	15.3	4,824	5,695	6,566			
BL MAPLE	313.2	36.6	295	465	636			
WHEMLOCK	343.3	40.1	552	923	1,293			
SNAG								
CEDLEAV	599.9	70.2	7	25	43			

STATISTICS

PROJECT CRONINT

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	07W	32	U12	00CC	161.00	73	390	1	W

CL: 68.1 % COEFF
SD: 1.0 VAR.

	S.E.%	NET BF/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
TOTAL	*5.2*	*22,530*	*23,757*	*24,983*	*78*	*19*	*9*

TC TSTATS

STATISTICS

PROJECT CRONINT

DATE 12/11/2025

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	07W	31	U3	00CC	88.00	42	218	1	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	42	218	5.2		
CRUISE	17	92	5.4	13,299	.7
DBH COUNT					
REFOREST					
COUNT	22	114	5.2		
BLANKS	3				
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	27	34.1	19.5	78	16.0	70.5	13,126	13,101	3,176	3,176
R ALDER	35	52.7	14.5	48	15.8	60.0	6,488	6,419	1,931	1,931
WHEMLOCK	23	57.0	13.1	37	14.7	53.3	5,961	5,856	1,682	1,682
SNAG	1	3.1	20.0	46	1.5	6.7				
BL MAPLE	6	4.2	14.4	38	1.3	4.8	424	424	132	132
TOTAL	*92*	*151.1*	*15.4*	*50*	*49.8*	*195.3*	*26,000*	*25,801*	*6,921*	*6,921*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 % COEFF — **SAMPLE TREES - BF** — # OF TREES REQ. — INF. POP.

SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	67.1	13.1	520	599	678			
R ALDER	60.0	10.1	139	154	170			
WHEMLOCK	105.7	22.5	188	243	297			
SNAG								
BL MAPLE	81.8	36.4	77	122	166			
TOTAL	*106.6*	*11.1*	*269*	*303*	*337*	*454*	*113*	*50*

CL: 68.1 % COEFF — **TREES/ACRE** — # OF PLOTS REQ. — INF. POP.

SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	143.8	22.2	27	34	42			
R ALDER	128.3	19.8	42	53	63			
WHEMLOCK	156.4	24.1	43	57	71			
SNAG	262.3	40.4	2	3	4			
BL MAPLE	386.1	59.5	2	4	7			
TOTAL	*73.5*	*11.3*	*134*	*151*	*168*	*216*	*54*	*24*

CL: 68.1 % COEFF — **BASAL AREA/ACRE** — # OF PLOTS REQ. — INF. POP.

SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	109.1	16.8	59	70	82			
R ALDER	122.1	18.8	49	60	71			
WHEMLOCK	144.1	22.2	41	53	65			
SNAG	262.3	40.4	4	7	9			
BL MAPLE	364.9	56.3	2	5	8			
TOTAL	*51.0*	*7.9*	*180*	*195*	*211*	*104*	*26*	*12*

CL: 68.1 % COEFF — **NET BF/ACRE** — # OF PLOTS REQ. — INF. POP.

SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR	104.2	16.1	10,996	13,101	15,206			
R ALDER	124.2	19.1	5,190	6,419	7,648			
WHEMLOCK	148.9	22.9	4,512	5,856	7,200			
SNAG								
BL MAPLE	444.0	68.4	134	424	715			
TOTAL	*54.3*	*8.4*	*23,642*	*25,801*	*27,960*	*118*	*29*	*13*

TC PLOGSTVB

Log Stock Table - MBF

T04N R07W S31 Ty00CC 88.00
T04N R07W S32 Ty00CC 161.00

Project: CRONINT
Acres 249.00

Page 1
Date 11/3/2025
Time 2:23:38PM

Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
D		DO	2S	24	41		41	1.1							19	22				
D		DO	2S	26	19		19	.5						9	10					
D		DO	2S	28	20		20	.5									20			
D		DO	2S	30	10		10	.3						10						
D		DO	2S	32	26		26	.7								26				
D		DO	2S	34	5		5	.1							5					
D		DO	2S	36	12		12	.3						12						
D		DO	2S	40	2,454		2,446	63.8					20	393	580	989	388	39	36	
D		DO	3S	16	8		8	.2					8							
D		DO	3S	20	9		9	.2				9								
D		DO	3S	24	61		61	1.6			2	3	57							
D		DO	3S	26	7		7	.2				3	4							
D		DO	3S	28	18		18	.5				14	4							
D		DO	3S	30	49		49	1.3			4	18	15			13				
D		DO	3S	32	176	1.0	174	4.5			11	79	84							
D		DO	3S	34	31		31	.8			20	11								
D		DO	3S	36	85		85	2.2			22	63								
D		DO	3S	40	602		601	15.7			183	165	193		25		36			
D		DO	4S	12	11		11	.3			10	1								
D		DO	4S	14	1		1	.0				1								
D		DO	4S	16	42		42	1.1			31	9	2							
D		DO	4S	18	10		10	.3			10									
D		DO	4S	20	51		51	1.3			46	5								
D		DO	4S	24	48		48	1.3			45	3								
D		DO	4S	26	3		3	.1			3									
D		DO	4S	28	24	8.7	22	.6			22									
D		DO	4S	30	16	17.3	14	.4			14									
D		DO	4S	32	12	20.0	10	.3			10									
D		Totals			3,853		3,833	62.9			431	383	388	424	638	1050	443	39	36	
H		DO	2S	32	37		37	5.6						10			27			
H		DO	2S	40	275		273	41.1						49	23	105	54	43		
H		DO	3S	20	9	44.4	5	.7							5					
H		DO	3S	24	23		23	3.5				23								
H		DO	3S	28	5		5	.8			5									
H		DO	3S	30	23	7.7	21	3.1					21							
H		DO	3S	32	45	4.9	43	6.5			11	4	28							

TC PLOGSTVB

Log Stock Table - MBF

T04N R07W S31 Ty00CC 88.00
T04N R07W S32 Ty00CC 161.00

Project: CRONINT
Acres 249.00

Date 11/3/2025
Time 2:23:38PM

Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
H		DO	3S	34	21		21	3.2			15			6						
H		DO	3S	38	10	14.3	9	1.3			9									
H		DO	3S	40	136		136	20.5			32	14	65	24						
H		DO	4S	12	8		8	1.2			8									
H		DO	4S	16	14		14	2.1			14									
H		DO	4S	18	12		12	1.8			12									
H		DO	4S	20	30		30	4.4			27	3								
H		DO	4S	26	11		11	1.7			11									
H		DO	4S	28	4		4	.6			4									
H		DO	4S	30	12		12	1.9			12									
H		Totals			675	1.6	664	10.9			161	44	114	89	28	105	80	43		
M		DO	1S	12	2		2	2.1						2						
M		DO	1S	18	9		9	7.8							9					
M		DO	1S	26	9		9	8.4							9					
M		DO	1S	30	9		9	8.5								9				
M		DO	1S	32	5	6.2	5	4.6						5						
M		DO	1S	40	10		10	8.5						10						
M		DO	2S	18	7		7	6.3					7							
M		DO	2S	20	3		3	3.1					3							
M		DO	2S	32	11		11	9.4					11							
M		DO	2S	40	9		9	7.7					9							
M		DO	3S	12	1		1	1.0				1								
M		DO	3S	20	3		3	2.4				3								
M		DO	3S	24	4		4	3.5				4								
M		DO	3S	32	10		10	8.6				10								
M		DO	3S	34	4		4	4.0				4								
M		DO	3S	40	3		3	2.3				3								
M		DO	4S	16	3		3	2.4			3									
M		DO	4S	18	3		3	3.0			3									
M		DO	4S	26	3		3	2.9			3									
M		DO	4S	40	4		4	3.6			4									
M		Totals			113		112	1.8			13	25	30	17	18	9				
A		DO	1S	16	14		14	.9						14						
A		DO	1S	24	48		48	3.2						16	32					
A		DO	1S	26	17		17	1.1							17					

TC PLOGSTVB

Log Stock Table - MBF

T04N R07W S31 Ty00CC 88.00
T04N R07W S32 Ty00CC 161.00

Project: CRONINT
Acres 249.00

Date 11/3/2025
Time 2:23:38PM

Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
A		DO	1S	30	29	12.0	25	1.7						7	19					
A		DO	1S	32	55		55	3.7						35	20					
A		DO	1S	34	20		20	1.4								20				
A		DO	1S	40	206		206	13.9						134	72					
A		DO	2S	24	16	22.2	13	.9					13							
A		DO	2S	26	30		30	2.0					30							
A		DO	2S	36	19		19	1.3					19							
A		DO	2S	40	369		367	24.8					367							
A		DO	3S	16	10		10	.7				10								
A		DO	3S	26	15		15	1.0				15								
A		DO	3S	30	27		27	1.9				27								
A		DO	3S	32	19		19	1.3				19								
A		DO	3S	34	16		16	1.1				16								
A		DO	3S	36	39		39	2.6				39								
A		DO	3S	38	15		15	1.0				15								
A		DO	3S	40	129		128	8.6				128								
A		DO	4S	12	11		11	.8			8	3								
A		DO	4S	14	2		2	.1			2									
A		DO	4S	16	31	5.8	29	2.0			29									
A		DO	4S	18	35		35	2.4			35									
A		DO	4S	20	39		39	2.6			39									
A		DO	4S	24	22		22	1.5			22									
A		DO	4S	26	26		26	1.7			26									
A		DO	4S	28	18		18	1.2			18									
A		DO	4S	30	18	8.9	16	1.1			16									
A		DO	4S	32	51		51	3.4			51									
A		DO	4S	34	16		16	1.1			16									
A		DO	4S	36	30		30	2.0			30									
A		DO	4S	40	104		104	7.0			93	11								
A		Totals			1,496		1,482	24.3			384	283	429	206	159	20				
CL		DO	3S	28	4		4	100.0			4									
CL		Totals			4		4	.1			4									
Total		All Species			6,140		6,095	100.0			994	734	961	736	843	1185	524	82	36	

TC PSTNDSUM

Stand Table Summary

Page 1
Date: 11/3/2025

T04N R07W S31 Ty00CC 88.00
T04N R07W S32 Ty00CC 161.00

Project CRONINT
Acres 249.00

Time: 2:20:18PM
Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
D		9	1	83	17	2.032	.90	2.03	5.0	20.0		10	41		25	10
D		11	4	86	75	5.479	3.62	5.48	16.5	57.6		90	316		225	79
D		12	2	85	66	2.318	1.82	3.49	12.6	36.7		44	128		110	32
D		13	5	86	64	4.897	4.51	6.87	16.3	48.5		112	334		278	83
D		14	9	84	74	7.605	8.13	11.85	19.8	62.1		235	736		585	183
D		15	9	87	68	6.584	8.08	10.97	20.1	65.3		220	717		548	179
D		16	3	85	87	1.947	2.72	3.27	26.8	90.1		88	294		218	73
D		17	1	85	86	.570	.90	1.14	26.5	90.0		30	103		75	26
D		18	3	86	110	1.538	2.72	3.58	32.7	114.4		117	410		292	102
D		19	4	86	81	1.824	3.59	3.65	32.8	105.0		119	383		297	95
D		20	7	85	101	2.881	6.28	7.00	35.9	126.5		251	885		626	220
D		21	8	88	110	3.027	7.28	7.58	41.7	162.8		316	1,233		787	307
D		22	5	86	122	1.729	4.56	4.50	46.7	185.5		210	834		523	208
D		23	5	85	95	1.556	4.49	3.42	48.4	170.0		166	582		412	145
D		24	6	86	112	1.730	5.44	4.33	54.1	210.0		234	910		584	227
D		25	3	89	115	.797	2.72	1.86	64.4	265.6		120	493		298	123
D		26	7	85	108	1.718	6.33	3.93	66.3	256.5		260	1,008		648	251
D		27	7	88	117	1.605	6.38	3.91	72.8	308.1		284	1,204		708	300
D		28	10	87	120	2.105	9.00	5.69	73.2	314.1		416	1,786		1,037	445
D		29	3	86	123	.593	2.72	1.58	79.9	356.9		126	565		315	141
D		30	2	87	126	.366	1.80	.91	92.8	420.0		85	384		211	96
D		31	1	92	113	.171	.90	.51	79.7	403.3		41	207		102	52
D		32	6	85	109	.965	5.39	2.57	85.9	374.4		221	963		550	240
D		33	1	89	140	.155	.92	.47	106.0	526.7		49	245		123	61
D		34	1	85	125	.146	.92	.44	99.3	456.7		44	200		109	50
D		35	1	85	115	.134	.90	.40	95.7	453.3		39	183		96	46
D		43	1	86	151	.089	.90	.27	183.7	940.0		49	251		122	63
D		Totals	115	86	85	54.562	103.91	101.70	39.1	151.4		3,979	15,395		9,907	3,833
A		10	1	86	26	1.111	.61	1.11	8.0	30.0		9	33		22	8
A		11	6	86	59	5.764	3.80	7.60	12.8	39.7		97	301		242	75
A		12	6	87	68	5.271	4.14	7.24	16.5	52.6		120	381		298	95
A		13	5	86	66	4.016	3.70	5.70	18.9	63.1		108	360		268	90
A		14	6	87	66	4.030	4.31	6.61	19.6	60.6		130	401		323	100
A		15	13	86	65	7.515	9.22	10.89	25.1	73.9		273	805		681	200
A		16	12	86	71	6.051	8.45	10.12	26.8	84.5		271	856		675	213
A		17	8	86	80	3.502	5.52	6.51	31.2	103.4		203	674		506	168
A		18	10	86	73	3.905	6.90	7.81	30.6	102.2		239	798		596	199
A		19	4	87	74	1.572	3.10	3.14	33.9	107.5		107	338		265	84
A		20	6	87	63	2.052	4.48	3.83	34.7	113.9		133	436		331	109
A		21	3	87	72	.965	2.32	1.61	45.8	136.0		74	219		183	54
A		23	3	86	76	.630	1.82	1.05	58.6	224.0		62	235		153	59
A		24	1	86	56	.246	.77	.25	81.0	200.0		20	49		50	12
A		26	1	86	60	.210	.77	.42	54.0	155.0		23	65		56	16
A		Totals	85	86	67	46.841	59.91	73.89	25.3	80.5		1,868	5,951		4,650	1,482
H		8	2	90	26	4.695	1.64	4.70	4.5	15.0		21	70		53	18
H		9	1	89	19	1.855	.82	1.85	6.0	30.0		11	56		28	14
H		10	2	89	35	3.005	1.64	3.01	9.0	25.0		27	75		67	19
H		11	2	87	53	2.484	1.64	2.48	15.0	45.0		37	112		93	28
H		12	2	87	68	2.087	1.64	3.13	16.0	50.0		50	157		125	39
H		13	1	83	47	.889	.82	.89	21.0	50.0		19	44		46	11
H		14	1	88	73	.767	.82	1.53	18.0	70.0		28	107		69	27
H		16	3	84	69	1.872	2.61	3.16	25.7	75.6		81	239		202	59

TC PSTNDSUM

Stand Table Summary

Page 2
Date: 11/3/2025

T04N R07W S31 Ty00CC 88.00
T04N R07W S32 Ty00CC 161.00

Project CRONINT
Acres 249.00

Time: 2:20:18PM
Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
H		17	2	85	101	1.040	1.64	2.60	28.0	98.0		73	255		181	63
H		18	1	85	106	.464	.82	.93	40.0	135.0		37	125		92	31
H		20	1	85	65	.447	.97	.89	33.5	100.0		30	89		75	22
H		21	2	86	92	.746	1.79	1.49	48.2	156.4		72	233		179	58
H		23	1	86	107	.284	.82	.57	66.0	260.0		37	148		93	37
H		24	2	85	109	.522	1.64	1.30	58.0	230.0		76	300		188	75
H		27	1	77	89	.206	.82	.41	77.0	235.0		32	97		79	24
H		28	1	88	81	.192	.82	.38	72.0	330.0		28	126		69	31
H		31	1	88	91	.156	.82	.31	106.5	450.0		33	141		83	35
H		36	1	86	145	.138	.97	.41	138.0	706.7		57	292		142	73
H		Totals	27	87	53	21.847	22.75	30.05	24.9	88.7		749	2,666		1,864	664
M		11	1	82	44	.429	.28	.43	13.0	30.0		6	13		14	3
M		12	1	87	79	.551	.43	1.10	13.0	45.0		14	50		36	12
M		13	2	87	46	.940	.87	.47	14.0	60.0		7	28		16	7
M		14	1	87	41	.265	.28	.26	19.0	60.0		5	16		13	4
M		15	3	86	71	.814	1.00	1.40	23.0	74.9		32	105		80	26
M		17	2	84	45	.454	.72	.45	24.3	63.7		11	29		27	7
M		18	1	87	110	.160	.28	.32	35.5	150.0		11	48		28	12
M		19	1	87	45	.220	.43	.44	23.0	95.0		10	42		25	10
M		20	1	86	67	.198	.43	.40	33.0	130.0		13	52		33	13
M		22	1	87	39	.164	.43									
M		24	1	87	43	.138	.43	.14	61.0	150.0		8	21		21	5
M		25	1	86	55	.127	.43	.13	77.0	300.0		10	38		24	9
M		30	1	87	59	.088	.43	.09	79.0	120.0		7	11		17	3
M		Totals	17	86	57	4.547	6.46	5.63	23.9	80.1		134	451		335	112
Totals			244	86	72	127.797	193.03	211.28	31.9	115.8		6,729	24,463		16,756	6,091

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT
NO. TL-341-2026-W01152-01
CRONIN TOO
PORTIONS OF SECTIONS 29,
31, 32, & 33, T4N, R7W, W.M.,
CLATSOP COUNTY, OREGON

Logging Breakdown	Tractor	Cable	Acres
Unit 1 (CC)	0%	100%	= 88
Unit 2 (CC)	0%	100%	= 73
Unit 3 (CC)	7%	93%	= 88
Unit 4 (R/W)	100%	0%	= <1
Total	2%	98%	= 249

0 500 1,000 2,000 Feet

1 inch equals 1,000 feet
Contours = 40 ft

N

T4N, R8W
T4N, R7W

Spruce Run Road
Seven Ridge Road
Four
PRIVATE
STATE
30 29
31 32
Unit 1
North Fork Cronin Creek
Roundabout Quarry
Cronin Stockpile Site
Cronin Ridge Road

Legend

- Ownership Boundary
- Timber Sale Boundary
- Timber Sale Boundary - Non-Posted
- Paved Road
- Surfaced Road
- New Road Construction -Surfaced
- New Road Construction -Unsurfaced
- Landing to be Constructed
- Existing Landing
- Equipment Access
- Ground Based Logging
- Cable Based Yarding
- Type F Stream
- Type N Stream - Perennial
- Type N Stream - Seasonal
- Non-Posted Stream Buffer
- Posted Stream Buffer
- Reserve Tree Area
- Reforestation Area
- Controlled Felling Area
- Conifer Retention Area
- Waste Area
- Rock Quarry
- Stockpile Site
- Section Line
- Survey Monument

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT
NO. TL-341-2026-W01152-01
CRONIN TOO
PORTIONS OF SECTIONS 29,
31, 32, & 33, T4N, R7W, W.M.,
CLATSOP COUNTY, OREGON

Logging Breakdown	Tractor	Cable	Acres
Unit 1 (CC)	0%	100%	= 88
Unit 2 (CC)	0%	100%	= 73
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Unit 4 (R/W)	100%	0%	= <1
Total	2%	98%	= 249

0 500 1,000 2,000 Feet

1 inch equals 1,000 feet
Contours = 40 ft

N

Unit 2

Unit 3

North Fork Cronin Creek

108 Road

29 28
32 33
28
33

W

T

NF

Road

Cronin Creek

STATE
PRIVATE

32 33 T4N, R7W
5 4 T3N, R7W

CLATSOP COUNTY
TILLAMOOK COUNTY

Legend

- Ownership Boundary
- Timber Sale Boundary
- Timber Sale Boundary - Non-Posted
- Paved Road
- Surfaced Road
- New Road Construction -Surfaced
- New Road Construction -Unsurfaced
- Landing to be Constructed
- Existing Landing
- Equipment Access
- T Ground Based Logging
- Cable Based Yarding
- Type F Stream
- Type N Stream - Perennial
- Type N Stream - Seasonal
- Non-Posted Stream Buffer
- Posted Stream Buffer
- Reserve Tree Area
- Reforestation Area
- Controlled Felling Area
- W Waste Area
- S Stockpile Site
- Section Line
- Survey Monument