



TIMBER NOTICE OF SALE

SALE NAME: CLAUDE SUMMIT

AGREEMENT NO: 30-97259

AUCTION: January 29, 2020 starting at 10:00 a.m.,
Olympic Region Office, Forks, WA

COUNTY: Clallam

SALE LOCATION: Sale located approximately 19 miles northeast of Forks, WA

**PRODUCTS SOLD
AND SALE AREA:**

All timber, except trees marked with a band of blue paint or bounded out by leave tree area tags, bounded by timber sale boundary tags and the CB-1000 Road in Units 1 and 5; timber sale boundary tags in Units 2, 3, 4 and 6;

All timber bounded by right of way boundary tags; on part(s) of Sections 6 and 7 all in Township 30 North, Range 11 West, Sections 1 and 12 all in Township 30 North, Range 12 West, W.M., containing 195 acres, more or less.

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: PwC-SFIFM-513)

ESTIMATED SALE VOLUMES AND QUALITY:

Species	Avg DBH	Ring Count	Total MBF	Total \$/MBF	MBF by Grade								
					1P	2P	3P	SM	1S	2S	3S	4S	UT
Douglas fir	18	6	4,009	\$164.00						2,593	1,010	397	9
Hemlock	14.5	5	2,752	\$50.00						1,381	945	404	22
Red cedar	11.3		380	\$605.00							149	230	1
Red alder	11.3		336	\$25.00						6	72	239	19
Silver fir	19		27	\$50.00						19	8		
Sale Total			7,504										

MINIMUM BID: \$164/MBF (est. value \$1,034,000.00) **BID METHOD:** Sealed Bids

PERFORMANCE SECURITY: \$100,000.00 **SALE TYPE:** MBF Scale

EXPIRATION DATE: October 31, 2022 **ALLOCATION:** Export Restricted

BIDDABLE SPECIES: Douglas fir biddable

BID DEPOSIT: \$103,400.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: 86% - Cable/14% - Ground.

ROADS: 63.50 stations of required construction. 13.00 stations of required reconstruction. 28.20 stations of optional construction. 25.60 stations of optional reconstruction. 177.90 stations of required pre-haul maintenance. Road construction will not be permitted from November 1 to March 31 unless authorized in writing by the Contract Administrator.

ACREAGE DETERMINATION

CRUISE METHOD: Sale area was 100% GPS'd. Sale units were cruised using a variable plot sample.



TIMBER NOTICE OF SALE

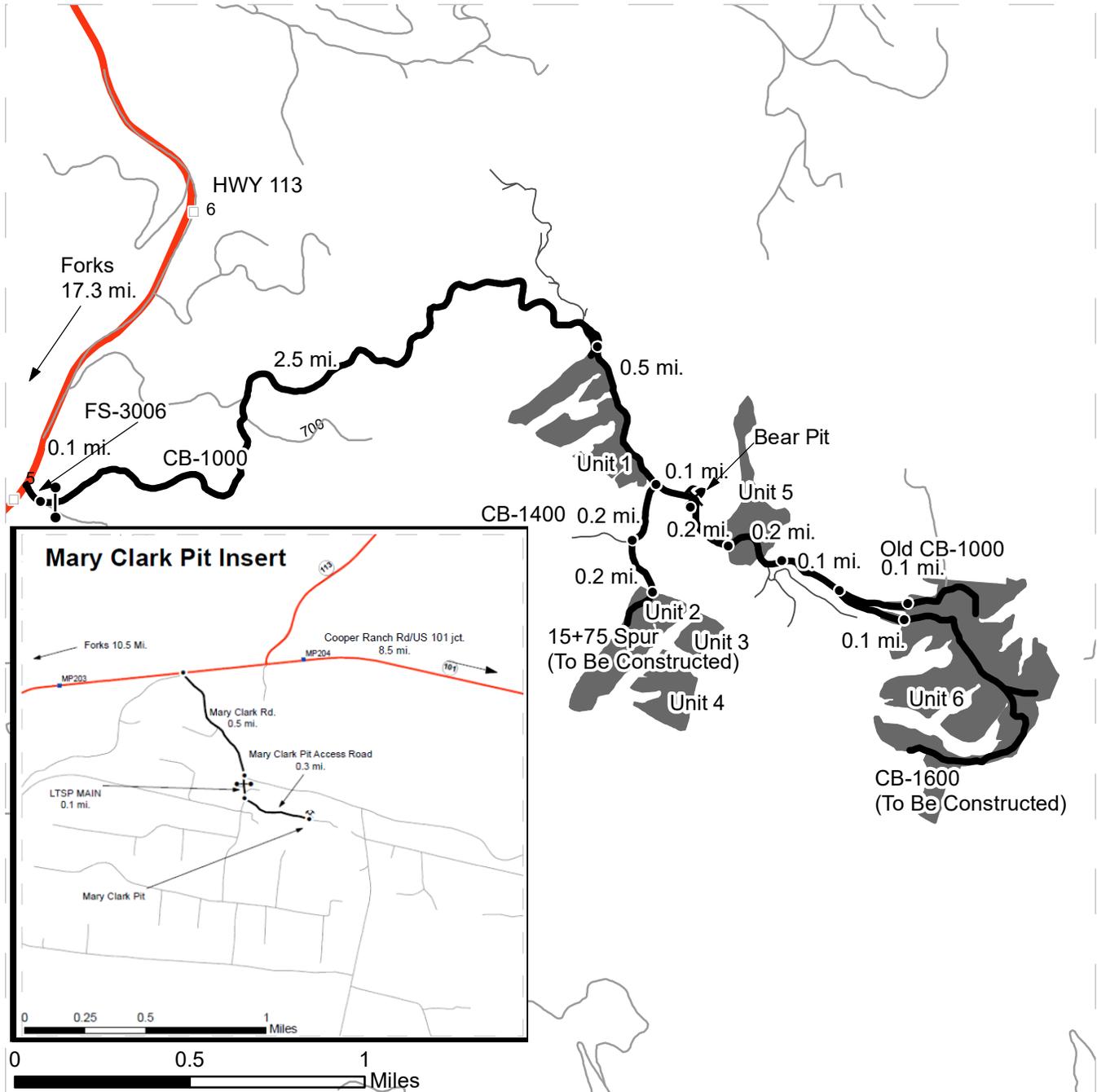
FEES: Within seven days of auction, Purchaser must provide the DNR with a check made payable to JLCG LLC, in the amount of \$1,163.73 for a road use permit. \$127,568.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: There are locked gates on the CB-1000 and Mary Clark Pit Access Roads - contact Olympic Region Dispatch Center at 360-374-2811.

DRIVING MAP

SALE NAME: CLAUDE SUMMIT
AGREEMENT#: 30-097259
TOWNSHIP(S): T30R11W, T30R12W
TRUST(S): Common School and Indemnity(3), Agricultural School(4), Capitol Grant(7)

REGION: Olympic Region
COUNTY(S): CLALLAM



- Timber Sale Unit
- Haul Route
- Other Road
- Milepost Markers
- Rock Pit
- Distance Indicator
- Gate (AA1 Lock)

DRIVING DIRECTIONS:

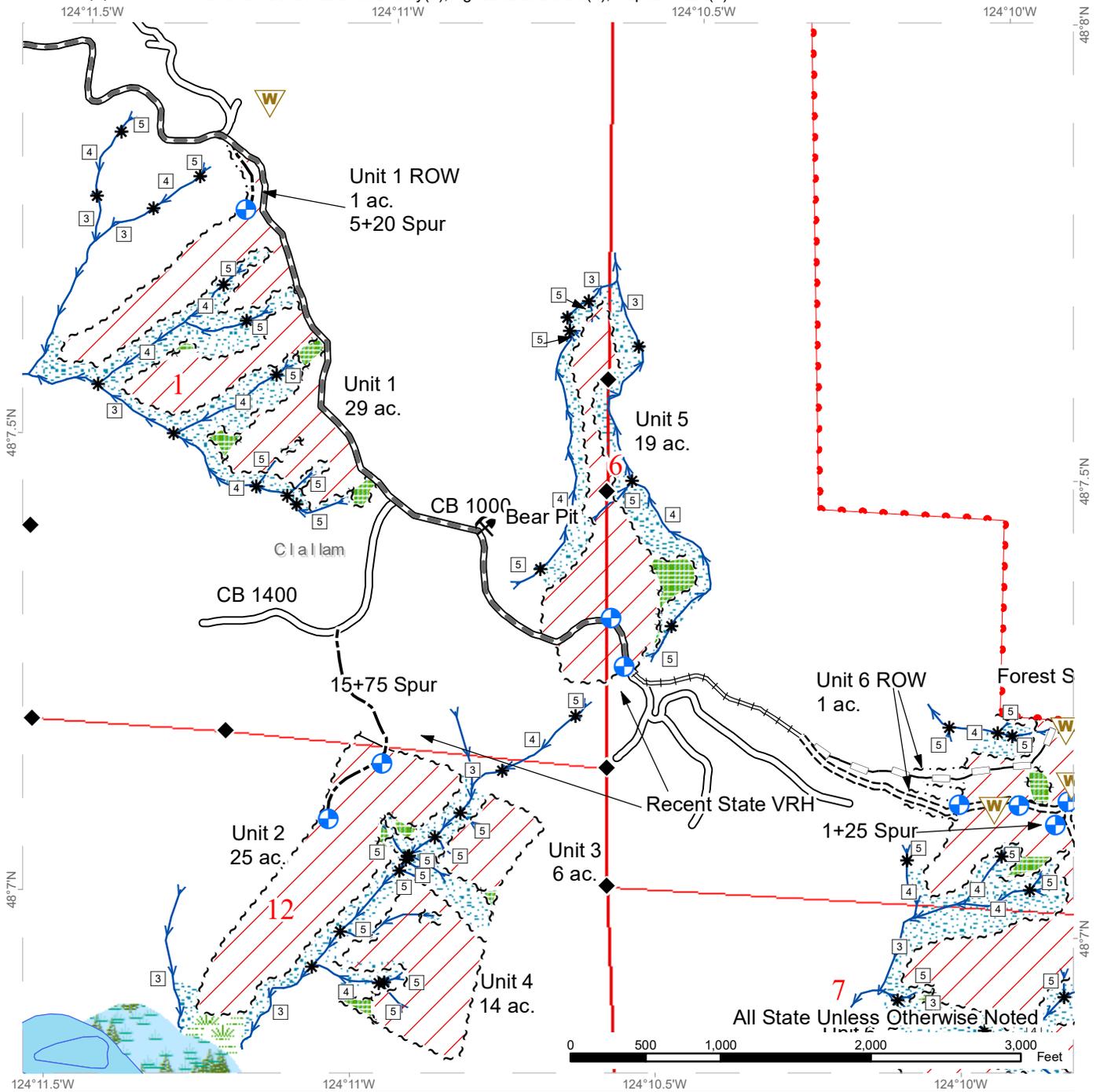
Unit 1: From Forks, drive 12.2 mi. north on HWY 101 and turn left on HWY 113. Continue 5.1 mi. and turn right on the FS-3006 Rd. Continue 0.1 mi. and turn left on the CB-1000 Rd. Continue 2.5 mi., through gate (AA1 lock), to Unit 1, on right.
Unit 2: Continue 0.5 mi. past the beginning of Unit 1 and turn right on the CB-1400. Continue 0.2 mi. to the junction of the 15+75 Spur (to be constructed) and walk the road 0.2 mi. to Unit 2.
Bear Pit: Continue 0.1 mi. past the CB-1400 on the CB-1000 to Bear Pit, on left.
Unit 5: Continue 0.2 mi. past the Bear Pit on the CB-1000 to Unit 5, on left
Unit 3, 4: There is no road access to these units. For foot access, park at the beginning of Unit 5 on the CB-1000 and walk 0.3 mi. south.
Unit 6: Continue 0.2 mi. past the beginning of Unit 5 until the CB-1000 Rd. is no longer drivable. Walk another 0.1 on the Old CB-1000 to the Old CB-1000 / CB-1600 Junction (both to be constructed). Continue another 0.1 mi. on either the Old CB-1000 or CB-1600 to Unit 6.
Mary Clark Pit: From the Mary Clark Rd./ US 101 jct., continue 0.5 mi. on Mary Clark Rd. and turn right on the LTSP Main Rd. Continue 0.1 mi. through gate (AA1 lock) and turn left on Mary Clark Pit Access Road and continue 0.3 mi. to pit.



TIMBER SALE MAP

SALE NAME: Claude Summit
AGREEMENT #: 30-097259
TOWNSHIP(S): T30R11W, T30R12W
TRUST(S): Common School and Indemnity(3), Agricultural School(4), Capitol Grant(7)

REGION: Olympic Region
COUNTY(S): CLALLAM
ELEVATION RGE: 880'-1930'

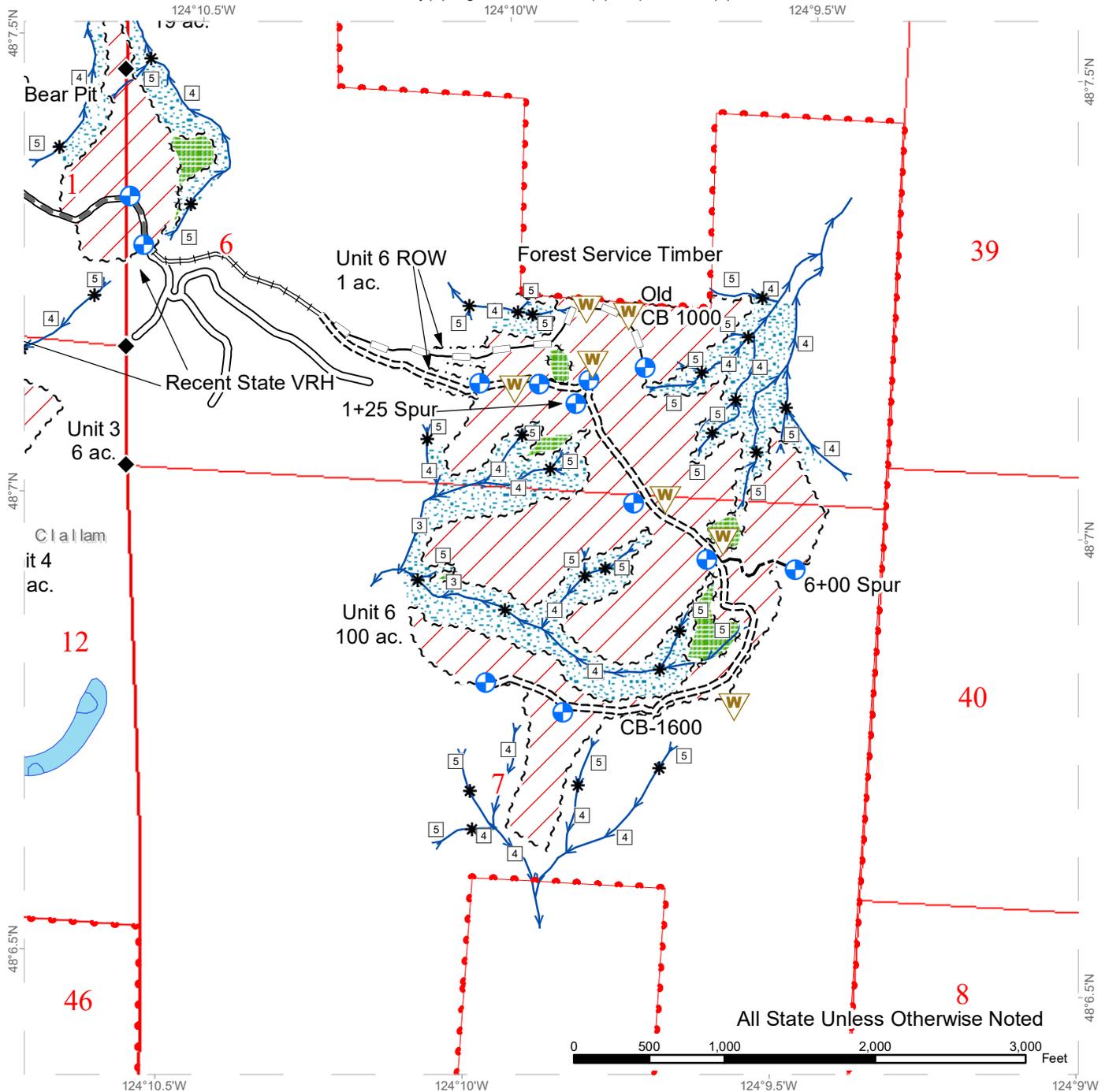


VRH	Existing Roads	Survey Monument
Sale Boundary Tags	Required Pre-Haul Maintenance	Streams
Leave Tree Tags	Required Construction	Stream Type
Right of Way Tags	Required Reconstruction	Stream Type Break
Property Line	Optional Construction	Rock Pit
Landing - Proposed	Optional Reconstruction	Public Land Survey Sections
Waste Area	Leave Tree Area	Public Land Survey Townships
	Riparian Mgt Zone	
	Forested Wetland	
	Wetland Mgt Zone	

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VRH	Existing Roads	Survey Monument
Sale Boundary Tags	Required Pre-Haul Maintenance	Streams
Leave Tree Tags	Required Construction	Stream Type
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Property Line	Optional Construction	Public Land Survey Sections
Landing - Proposed	Optional Reconstruction	Public Land Survey Townships
Waste Area	Leave Tree Area	
	Riparian Mgt Zone	

**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

**BILL OF SALE AND CONTRACT FOR
FOREST PRODUCTS**

Export Restricted MBF Scale AGREEMENT NO. 30-097259

SALE NAME: CLAUDE SUMMIT

**THE STATE OF WASHINGTON DEPARTMENT OF NATURAL
RESOURCES, HEREINAFTER ACTING SOLELY, IN ITS PROPRIETARY
CAPACITY, STATE, AND PURCHASER, AGREE AS FOLLOWS:**

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

Bill of Sale and Contract for Forest Products: Contract between the Purchaser and the State, which sets forth the procedures and obligations of the Purchaser in exchange for the right to remove forest products from the sale area. The Bill of Sale and Contract for Forest Products may include a Road Plan for any road construction or reconstruction, where applicable.

Contract Administrator: Region Manager's designee responsible for assuring that the contractual obligations of the Purchaser are met.

Forest Product: Any material derived from the forest for commercial use.

Purchaser: The company or individual that has entered into a Bill of Sale and Contract for Forest Products with the State for the right to harvest and remove forest products from the timber sale area.

Road Construction: Includes building new and maintaining existing forest roads and associated work that may be optional or required as described in the Road Plan.

State: The Washington State Department of Natural Resources, landowner and seller of Forest Products from the timber sale area. The State is represented by the Region Manager as designated on the contract signature page. Contractual obligations to the State are enforced by the Region Manager or the designated Contract Administrator.

Subcontractor: Individual or company employed by the Purchaser to perform a portion or all of the services required by The Bill of Sale and Contract for Forest Products. The Purchaser is responsible for independently negotiating, procuring and paying for all subcontracted services rendered.

G-010 Products Sold and Sale Area

Purchaser was the successful bidder on January 29, 2020 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase, cut, and remove the following forest products: All timber, except trees marked with a band of blue paint or bounded out by leave tree area tags, bounded by timber sale boundary tags and the CB-1000 Road in Units 1 and 5; timber sale boundary tags in Units 2, 3, 4 and 6;

All timber bounded by right of way boundary tags;, located on approximately 195 acres on part(s) of Sections 6, and 7 all in Township 30 North, Range 11 West, Sections 1, and 12 all in Township 30 North, Range 12 West W.M. in Clallam County(s) as shown on the attached timber sale map and as designated on the sale area.

All forest products described above from the bole of the tree that meet or exceed 2 inches diameter inside bark on the small end are eligible for removal. Above ground components of a tree that remain as by-products after the manufacture of logs, including but not limited to tree tops, branches, limbs, needles, leaves, stumps, are not eligible for removal under the terms of this contract.

Forest products purchased under a contract that is designated as export restricted shall not be exported until processed. Forest products purchased under a contract that is designated as exportable may be exported prior to processing.

G-020 Inspection By Purchaser

Purchaser hereby warrants to the State that they have had an opportunity to fully inspect the sale area and the forest products being sold. Purchaser further warrants to the State that they enter this contract based solely upon their own judgment of the value of the forest products, formed after their own examination and inspection of both the timber sale area and the forest products being sold. Purchaser also warrants to the State that they enter this contract without any reliance upon the volume estimates, acreage estimates, appraisals, pre-bid documentation, or any other representations by the State Department of Natural Resources.

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	SLASH PILING SPECS
B	GREEN TREE RETENTION PLAN
S	SAMPLE SCALING

G-030 Contract Term

Purchaser shall remove the forest products conveyed and complete all work required by this contract prior to October 31, 2022.

G-040 Contract Term Adjustment - No Payment

Purchaser may request an adjustment in the contract term. A claim must be submitted in writing and received by the State within 30 days after the start of interruption or delay. The claim must also indicate the actual or anticipated length of interruption or delay. The State may grant an adjustment without charge only if the cause for contract term adjustment is beyond Purchaser's control. The cause must be one of the following and the adjustment may be granted only if operations or planned operations under this contract are actually interrupted or delayed:

- a. Road and bridge failures which deny access.
- b. Access road closures imposed by road owner.
- c. Excessive suspensions as provided in clause G-220.
- d. Regulatory actions not arising from Purchaser's failure to comply with this contract which will prevent timber harvest for a period less than 6 months.

G-050 Contract Term Extension - Payment

Extensions of this contract term may be granted only if, in the judgment of the State, Purchaser is acting in good faith and is endeavoring to remove the forest products conveyed. The term of this contract may be extended for a reasonable time by the State if all of the following conditions are satisfied:

- a. A written request for extension of the contract term must be received prior to the expiration date of the contract.
- b. Completion of all required roads and compliance with all contract and regulatory requirements.
- c. For the first extension, not to exceed 1 year, payment of at least 25 percent of the contract value based on the contract payment rate and advertised volume.

For the second extension, not to exceed 1 year, payment of at least 90 percent of the contract value based on the contract payment rate base and advertised volume.

The payments shall not include the initial deposit which shall be held according to the provisions of RCW 79.15.100.

- d. Payment of an amount based on 12 percent interest per annum on the unpaid portion of the timber value of the contract.

To determine the unpaid portion of the contract, multiply the contract payment rate for each item by the remaining volume for each item based on the volumes from the Timber Notice of Sale. In addition, all cash deposits that can be used for timber payments, except the initial deposit, will be deducted from the unpaid portion of the contract.

- e. Payment of \$16.00 per acre per annum for the acres on which an operating release has not been issued.
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

G-053 Surveys - Sensitive, Threatened, Endangered Species

Whenever the State determines that a survey for sensitive, threatened, or endangered species is prudent, or when Purchaser determines a survey is prudent and the State agrees, Purchaser shall perform such surveys at Purchaser's expense and to the standards required by the State. The survey information shall be supplied to the State.

G-060 Exclusion of Warranties

The PARTIES AGREE that the IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE and ALL OTHER WARRANTIES EXPRESSED OR IMPLIED ARE EXCLUDED from this transaction and shall not apply to the goods sold. For example, THE FOLLOWING SPECIFIC MATTERS ARE NOT WARRANTED, and are EXCLUDED from this transaction:

- a. The MERCHANTABILITY of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.
- b. The CONDITION of the forest products. The forest products will be conveyed "AS IS."
- c. The ACREAGE contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.

- d. The VOLUME, QUALITY, OR GRADE of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.
- e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.
- f. THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any threatened or endangered species, or the presence of their habitat, within the sale area.
- g. THAT THE FORESTRY OPERATIONS to be performed under this contract WILL BE FREE FROM REGULATORY ACTIONS by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.
- h. Items contained in any other documents prepared for or by the State.

G-062 Habitat Conservation Plan

The State has entered into a Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services) to address state trust land management issues relating to compliance with the Federal Endangered Species Act. The activities to be carried out under this contract are located within the State's HCP area and are subject to the terms and conditions of the HCP, and the Services' Incidental Take Permit Nos. TE812521-1 and 1168 (collectively referred to as ITP), or as amended hereafter by the Services. The ITP authorizes the incidental take of certain federally listed threatened and endangered species, as specified in the ITP conditions. All HCP materials, including the ITP, are available for review at the State's Regional Offices and the administrative headquarters in Olympia, Washington.

By signing this contract, Purchaser agrees to comply with the terms and conditions of the ITP, and the HCP, which shall become terms of this contract. The State agrees to authorize the lawful activities of the Purchaser carried out pursuant to this contract, PROVIDED the Purchaser remains in compliance with the terms and conditions of both the HCP and ITP. The requirements set forth in this contract are intended to comply with the terms and conditions of the HCP and ITP. Accordingly, non-compliance with the terms and conditions of the HCP and ITP will render the authorization provided in this paragraph void, be deemed a breach of the contract and may subject Purchaser to liability for violation of the Endangered Species Act.

Any modifications to the contract shall be proposed in writing by Purchaser, shall continue to meet the terms and conditions of the HCP and ITP, and shall require the prior written approval of the Region Manager before taking effect.

G-063 Incidental Take Permit Notification Requirements

- a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.
- b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, Purchaser shall immediately notify the Contract Administrator. Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchaser may be required to take certain actions to help the Contract Administrator safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.
- c. Purchaser shall refer to a specific ITP number, ITP TE812521-1 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.
- d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP and this schedule must be presented and clearly explained by Purchaser to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

G-064 Permits

Purchaser is responsible for obtaining any permits not already obtained by the State that relate to Purchaser's operation. Forest Practice Application / Hydraulic Project Approval permits obtained by the State shall be transferred to Purchaser. Purchaser is responsible for all permits, amendments and renewals.

G-065 Regulatory Disclaimer

The State disclaims any responsibility for, or liability relating to, regulatory actions by any government agency, including actions pursuant to the Forest Practices Act, Ch. 76.09 RCW that may affect the operability of the timber sale.

G-066 Governmental Regulatory Actions

a. Risk

Purchaser shall be responsible for any increased operational costs arising from any applicable foreign or domestic governmental regulation or order that does not cause contract performance to become commercially impracticable or that does not substantially frustrate the purpose of the contract. If impracticability or frustration results from Purchaser's failure to comply with this contract, Purchaser shall remain responsible for payment of the total contract price notwithstanding the impracticability or frustration.

b. Sale Area

When portions of the sale area become subject to a foreign or domestic governmental regulation or order that will likely prevent timber harvest for a period that will exceed the expiration date of this contract, and Purchaser has complied with this contract, the following shall apply:

i. RCW 79.15.140 shall govern all adjustments to the contract area.

c. Adjustment of Price

The State shall adjust the total contract price by subtracting from the total contract price an amount determined in the following manner: The State shall cause the timber sale area subject to governmental regulation or order to be measured. The State shall calculate the percentage of the total sale area subject to the governmental regulation or order. The State shall reduce the total contract price by that calculated percentage. However, variations in species, value, costs, or other items pertaining to the affected sale area will be analyzed and included in the adjustment if deemed appropriate by the State. The State will further reduce the total contract price by the reasonable cost of unamortized roads Purchaser constructed but was unable to fully use for removing timber. A reduction in total contract price terminates all of the Purchaser's rights to purchase and remove the timber and all other interest in the affected sale area.

G-070 Limitation on Damage

In the event of a breach of any provision of this contract by the State, the exclusive remedy available to Purchaser will be limited to a return of the initial deposit, unapplied payments, and credit for unamortized improvements made by Purchaser.

The State shall not be liable for any damages, whether direct, incidental or consequential.

G-080 Scope of State Advice

No advice by any agent, employee, or representative of the State regarding the method or manner of performing shall constitute a representation or warranty that said method, manner or result thereof will conform to the contract or be suitable for Purchaser's purposes under the contract. Purchaser's reliance on any State advice regarding the method or manner of performance shall not relieve Purchaser of any risk or obligation under the contract. Purchaser retains the final responsibility for its operations under this contract and State shall not be liable for any injuries resulting from Purchaser's reliance on any State advice regarding the method or manner of performance.

G-090 Sale Area Adjustment

The Parties may agree to adjustments in the sale area boundary. The cumulative changes to the sale area during the term of the contract shall not exceed more than four percent of the original sale area. If the sale area is increased, added forest products become a part of this contract and shall be paid for at the same rate and manner as other forest products under this contract.

G-100 Forest Products Not Designated

Any forest products not designated for removal, which must be removed in the course of operations authorized by the State, shall be approved and designated by the Contract Administrator. Added forest products become a part of this contract and shall be paid for at the same rate and manner as other forest products under this contract.

G-105 Adding Naturally Damaged Forest Products

Any forest products not designated for removal that are seriously damaged by disease, insects or wind, or that may contribute seriously to the spread of insect or disease damage may be added to this sale by the Contract Administrator. Additions must be in unlogged areas of the sale and added volume shall not exceed an amount equal to 10 percent of the original advertised volume. Added forest products become a part of this contract and shall be paid for at the same rate and manner as other forest products under this contract.

G-110 Title and Risk of Loss

Title to the forest products conveyed passes at confirmation of the sale. Purchaser bears the risk of loss of or damage to and has an insurable interest in the forest products in this contract from the time of confirmation of the sale of forest products. In the event of loss of or damage to the forest products after passage of title, whether the cause is foreseeable or unforeseeable, the forest products shall be paid for by Purchaser. Breach of this contract shall have no effect on this provision. Title to the forest products not removed from the sale area within the period specified in this contract shall revert to the State as provided in RCW 79.15.100.

G-116 Sustainable Forestry Initiative® (SFI) Certification

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative program Standard under certificate number: BV-SFIS-US09000572.

Purchaser shall have at least one person regularly on-site during active operations that have completed training according to the requirements outlined within the SFI® program Standard. Purchaser shall designate in writing the name(s) of the individual(s) who will be on-site and provide proof of their successful completion of an approved training program prior to active operations.

G-120 Responsibility for Work

All work, equipment, and materials necessary to perform this contract shall be the responsibility of Purchaser. Any damage to improvements, except as provided in clause G-121 or unless the State issues an operating release pursuant to clause G-280, shall be repaired promptly to the satisfaction of the State and at Purchaser's expense.

G-121 Exceptions

Exceptions to Purchaser's responsibility in clause G-120 shall be limited exclusively to the following. These exceptions shall not apply where road damage occurs due to Purchaser's failure to take reasonable precautions or to exercise sound forest engineering and construction practices.

Road is defined as the road bed, including but not limited to its component parts, such as subgrade, ditches, culverts, bridges, and cattle guards.

For the purposes of this clause, damage will be identified by the State and is defined as:

1. Failure of (a) required improvements or roads designated in clause C-050, or (b) required or optional construction completed to the point that authorization to haul has been issued;
2. Caused by a single event from forces beyond the control of Purchaser, its employees, agents, or invitees, including independent contractors; and
3. Includes, but is not limited to natural disasters such as earthquakes, volcanic eruptions, landslides, and floods.

The repair work identified by the State shall be promptly completed by Purchaser at an agreed price. The State may elect to accomplish repairs by means of State-provided resources. The State will bear the cost to repair damages caused by a third party. In all other cases, the Purchaser shall bear responsibility for the costs as described below.

For each event, Purchaser shall be solely responsible for the initial \$5,000 in repairs. For repairs in excess of \$5,000, the parties shall share equally the portion of costs

between \$5,000 and \$15,000. The State shall be solely responsible for the portion of the cost of repairs that exceed \$15,000.

Nothing contained in clauses G-120 and G-121 shall be construed as relieving Purchaser of responsibility for, or damage resulting from, Purchaser's operations or negligence, nor shall Purchaser be relieved from full responsibility for making good any defective work or materials. Authorization to haul does not warrant that Purchaser built roads are free from material defect and the State may require additional work, at Purchasers expense regardless of cost, to remedy deficiencies at any time.

G-140 Indemnity

To the fullest extent permitted by law, Purchaser shall indemnify, defend and hold harmless State, agencies of State and all officials, agents and employees of State, from and against all claims arising out of or resulting from the performance of the contract. "Claim" as used in this contract means any financial loss, claim, suit, action, damage, or expense, including but not limited to attorneys' fees, attributable for bodily injury, sickness, disease or death, or injury to or destruction of tangible property including loss of use resulting therefrom. Purchasers' obligations to indemnify, defend, and hold harmless includes any claim by Purchasers' agents, employees, representatives, or any subcontractor or its employees. Purchaser expressly agrees to indemnify, defend, and hold harmless State for any claim arising out of or incident to Purchasers' or any subcontractors' performance or failure to perform the contract. Purchasers' obligation to indemnify, defend, and hold harmless State shall not be eliminated or reduced by any actual or alleged concurrent negligence of State or its agents, agencies, employees and officials. Purchaser waives its immunity under Title 51 RCW to the extent it is required to indemnify, defend and hold harmless State and its agencies, officials, agents or employees.

G-150 Insurance

Purchaser shall, at its cost and expense, buy and maintain insurance of the types and amounts listed below. Failure to buy and maintain the required insurance may result in a breach and/or termination of the contract at State's option. State may suspend Purchaser operations until required insurance has been secured.

All insurance and surety bonds should be issued by companies admitted to do business within the State of Washington and have a rating of A-, Class VII or better in the most recently published edition of Best's Reports. If an insurer is not admitted, all insurance policies and procedures for issuing the insurance policies must comply with Chapter 48.15 RCW and 284-15 WAC.

The State of Washington, Department of Natural Resources region office of sale origin shall be provided written notice before cancellation or non-renewal of any insurance referred to therein, in accord with the following specifications:

1. Insurers subject to Chapter 48.18 RCW (admitted and regulated by the Insurance Commissioner): The insurer shall give the State 45 days advance

notice of cancellation or non-renewal. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.

2. Insurers subject to Chapter 48.15 RCW (surplus lines): The State shall be given 20 days advance notice of cancellation. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.

Before starting work, Purchaser shall furnish State of Washington, Department of Natural Resources with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements specified in the contract. Insurance coverage shall be obtained by the Purchaser prior to operations commencing and continually maintained in full force until all contract obligations have been satisfied or an operating release has been signed by the State.

Purchaser shall include all subcontractors as insured under all required insurance policies, or shall furnish separate certificates of insurance and endorsements for each subcontractor. Subcontractor(s) must comply fully with all insurance requirements stated herein. Failure of subcontractor(s) to comply with insurance requirements does not limit Purchaser's liability or responsibility.

The State of Washington, Department of Natural Resources, its elected and appointed officials, agents and employees shall be named as an additional insured via endorsement on all general liability, excess, umbrella, and property insurance policies.

All insurance provided in compliance with this contract shall be primary as to any other insurance or self-insurance programs afforded to or maintained by State. Purchaser waives all rights against State for recovery of damages to the extent these damages are covered by general liability or umbrella insurance maintained pursuant to this contract.

By requiring insurance herein, State does not represent that coverage and limits will be adequate to protect Purchaser and such coverage and limits shall not limit Purchaser's liability under the indemnities and reimbursements granted to State in this contract.

The limits of insurance, which may be increased as deemed necessary by State of Washington, Department of Natural Resources, shall not be less than as follows:

Commercial General Liability (CGL) Insurance. Purchaser shall maintain general liability (CGL) insurance, and, if necessary, commercial umbrella insurance with a limit of not less than \$1,000,000.00 per each occurrence. If such CGL insurance contains aggregate limits, the General Aggregate limit shall be at least twice the "each occurrence" limit. CGL insurance shall have products-completed operations aggregate limit of at least two times the "each occurrence" limit. CGL coverage shall include a Logging and Lumbering Endorsement (i.e. Logger's Broad-Form) to cover the events that include, but are not limited to, fire suppression expenses, accidental timber

trespasses, and wildfire property damage with limits of not less than \$2,000,000.00 each occurrence.

CGL insurance shall be written on Insurance Services Office (ISO) occurrence form CG 00 01 (or a substitute form providing equivalent coverage). All insurance shall cover liability arising out of premises, operations, independent contractors, products completed operations, personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another party assumed in a business contract), and contain separation of insured (cross liability) condition.

Employer's Liability "Stop Gap" Insurance. Purchaser shall buy employers liability insurance, and, if necessary, commercial umbrella liability insurance with limits not less than \$1,000,000.00 each accident for bodily injury by accident or \$1,000,000.00 each employee for bodily injury by disease.

Workers' Compensation Coverage. Purchaser shall comply with all State of Washington workers' compensation statutes and regulations. Workers' compensation coverage shall be provided for all employees of Purchaser and employees of any subcontractor or sub-subcontractor. Coverage shall include bodily injury (including death) by accident or disease, which exists out of or in connection with the performance of this contract. Except as prohibited by law, Purchaser waives all rights of subrogation against State for recovery of damages to the extent they are covered by workers' compensation, employer's liability, commercial general liability, or commercial umbrella liability insurance.

If Purchaser, subcontractor or sub-subcontractor fails to comply with all State of Washington workers' compensation statutes and regulations and State incurs fines or is required by law to provide benefits to or obtain coverage for such employees, Purchaser shall indemnify State. Indemnity shall include all fines, payment of benefits to Purchaser or subcontractor employees, or their heirs or legal representatives, and the cost of effecting coverage on behalf of such employees.

Business Auto Policy (BAP). Purchaser shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit not less than \$1,000,000.00 per accident. Such insurance shall cover liability arising out of "Any Auto". Business auto coverage shall be written on ISO form CA 00 01, or substitute liability form providing equivalent coverage. If necessary the policy shall be endorsed to provide contractual liability coverage and cover a "covered pollution cost or expense" as provided in the 1990 or later editions of CA 00 01. Purchaser waives all rights against State for the recovery of damages to the extent they are covered by business auto liability or commercial umbrella liability insurance.

G-160 Agents

The State's rights and duties will be exercised by the Region Manager at Forks, Washington. The Region Manager will notify Purchaser in writing who is responsible for administering the contract. The Region Manager has sole authority to waive, modify, or amend the terms of this contract in the manner prescribed in clause G-180.

No agent, employee, or representative of the State has any authority to bind the State to any affirmation, representation, or warranty concerning the forest products conveyed beyond the terms of this contract.

Purchaser is required to have a person on site during all operations who is authorized to receive instructions and notices from the State. Purchaser shall inform the State in writing who is authorized to receive instructions and notices from the State, and any limits to this person's authority.

G-170 Assignment and Delegation

No rights or interest in this contract shall be assigned by Purchaser without prior written permission of the State. Any attempted assignment shall be void and ineffective for all purposes unless made in conformity with this paragraph. Purchaser may perform any duty through a delegate, but Purchaser is not thereby relieved of any duty to perform or any liability. Any assignee or delegate shall be bound by the terms of the contract in the same manner as Purchaser.

G-180 Modifications

Waivers, modifications, or amendments of the terms of this contract must be in writing signed by Purchaser and the State.

G-190 Contract Complete

This contract is the final expression of the Parties' agreement. There are no understandings, agreements, or representations, expressed or implied, which are not specified in this contract.

G-200 Notice

Notices required to be given under the following clauses shall be in writing and shall be delivered to Purchaser's authorized agent or sent by certified mail to Purchaser's address of record:

G-210 Violation of Contract

G-220 State Suspends Operations

All other notices required to be given under this contract shall be in writing and delivered to the authorized agent or mailed to the Party's post office address. Purchaser agrees to notify the State of any change of address.

G-210 Violation of Contract

- a. If Purchaser violates any provision of this contract, the Contract Administrator, by written notice, may suspend those operations in violation. If the violation is capable of being remedied, Purchaser has 30 days after receipt of a suspension notice to remedy the violation. If the violation cannot be remedied (such as a violation of WAC 240-15-015) or Purchaser fails to remedy the violation within 30 days after receipt of a suspension notice, the State may terminate the rights of Purchaser under this contract and collect damages.

- b. If the contract expires pursuant to clause G-030 or G-031 without Purchaser having performed all its duties under this contract, Purchaser's right to operate is terminated and Purchaser shall not have the right to remedy the breach. This provision shall not relieve Purchaser of any payment obligations.
- c. The State has the right to remedy the breach in the absence of any indicated attempt by Purchaser or if Purchaser is unable, as determined by the State, to remedy the breach. Any expense incurred by the State shall be charged to Purchaser and shall be paid within 30 days of receipt of billing.
- d. If Purchaser's violation is a result of a failure to make a payment when due, in addition to a. and b. above, interest shall accrue on the unpaid balance at 12 percent per annum, beginning the date payment was due.

G-220 State Suspends Operation

The Contract Administrator may suspend any operation of Purchaser under this contract when the State is suffering, or there is a reasonable expectation the State will suffer environmental, monetary, or other damage if the operation is allowed to continue.

Purchaser shall be in breach of this contract if the operation continues after the suspension notice or if the operation resumes without prior approval and notice from the Contract Administrator.

Purchaser may request a modification of a suspension within 30 days of the start of suspension through the dispute resolution process in clause G-240. If this process results in a finding that the suspension exceeded the time reasonably necessary to stop or prevent damage to the State, Purchaser is entitled to request a contract term adjustment under clause G-040.

If it reasonably appears that the damage that the State is suffering, or can reasonably be expected to suffer if the operation is allowed to continue, will prevent harvest for a period that will exceed 6 months, and Purchaser has complied with this contract, the provisions of clause G-066 shall govern just as if the harvest was prevented by an applicable foreign or domestic governmental regulation or order.

G-230 Unauthorized Activity

Any cutting, removal, or damage of forest products by Purchaser, its employees, agents, or invitees, including independent contractors, in a manner inconsistent with the terms of this contract or State law, is unauthorized. Such activity may subject Purchaser to liability for triple the value of said forest products under RCW 79.02.320 or RCW 79.02.300 and may result in prosecution under RCW 79.02.330 or other applicable statutes.

G-240 Dispute Resolution

The following procedures apply in the event of a dispute regarding interpretation or administration of this contract and the parties agree that these procedures must be followed before a lawsuit can be initiated.

- a. In the event of a dispute, Purchaser must make a written request to the Region Manager for resolution prior to seeking other relief.
- b. The Region Manager will issue a written decision on Purchaser's request within ten business days.
- c. Within ten business days of receipt of the Region Manager's decision, Purchaser may make a written request for resolution to the Deputy Supervisor - Uplands of the Department of Natural Resources.
- d. Unless otherwise agreed, a conference will be held by the Deputy Supervisor - Uplands within 30 calendar days of the receipt of Purchaser's request for review of the Region Manager's written decision. Purchaser and the Region Manager will have an opportunity to present their positions. The Deputy Supervisor - Uplands will issue a decision within a reasonable time of being presented with both Parties' positions.

G-250 Compliance with All Laws

Purchaser shall comply with all applicable statutes, regulations and laws, including, but not limited to; chapter 27.53 RCW, chapter 68.50 RCW, WAC 240-15 and WAC 296-54. Failure to comply may result in forfeiture of this contract.

G-260 Venue

This contract shall be governed by the laws of the State of Washington. In the event of a lawsuit involving this contract, venue shall be proper only in Thurston County Superior Court.

G-270 Equipment Left on State Land

All equipment owned or in the possession of Purchaser, its employees, agents, or invitees, including independent contractors, shall be removed from the sale area and other State land by the termination date of this contract. Equipment remaining unclaimed on State land 60 days after the expiration of the contract period is subject to disposition as provided by law. Purchaser shall pay to the State all costs of moving, storing, and disposing of such equipment. The State shall not be responsible for any damages to or loss of the equipment or damage caused by the moving, storing or disposal of the equipment.

G-280 Operating Release

An operating release is a written document, signed by the State and Purchaser, indicating that Purchaser has been relieved of certain rights or responsibilities with regard to the entire or a portion of the timber sales contract. Purchaser and State may agree to an operating release for this sale, or portion of this sale, prior to the contract

expiration, when all contract requirements pertaining to the release area have been satisfactorily completed. Upon issuance of a release, Purchaser's right to cut and remove forest products on the released area will terminate.

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; FS-3006 Rd., CB-1000, CB-1400, 15+75 Spur, Old CB-1000, CB-1600, 6+00 Spur, 1+25 Spur, 5+20 Spur. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

G-330 Pre-work Conference

Purchaser shall arrange with the Contract Administrator to review this contract and to examine the sale area before beginning any operations. A plan of operations shall be developed and agreed upon by the Contract Administrator and Purchaser before beginning any operations. To the extent that the plan of operations is inconsistent with the contract, the terms of the contract shall prevail. State's acceptance and approval of Purchaser's plan of operations shall not be construed as any statement or warranty that the plan of operations is adequate for Purchaser's purposes or complies with applicable laws.

G-340 Preservation of Markers

Any legal land subdivision survey corners and witness objects are to be preserved. If such are destroyed or disturbed, the Purchaser shall, at the Purchaser's own expense, re-establish them through a licensed land surveyor in accordance with U.S. General Land Office standards. Corners and/or witness objects that must be disturbed or destroyed in the process of road construction or logging shall be adequately referenced and/or replaced in accordance with RCW 58.24.040(8). Such references must be approved by the Contract Administrator prior to removal of said corners and/or witness objects.

G-360 Road Use Reservation

The State shall have the right to use, without charge, all existing roads and any road constructed or reconstructed on State lands by Purchaser under this contract. The State may extend such rights to others. If the State grants such rights to others, the State shall require performance or payment, as directed by the State, for their proportionate share of maintenance based on their use.

G-370 Blocking Roads

Purchaser shall not block the CB-1000 Road, unless authority is granted in writing by the Contract Administrator.

G-380 Road Easement and Road Use Permit Requirements

Purchaser agrees to comply with the terms and conditions of the attached:

Road Use Permit #55-097827 with JLCG LLC

G-430 Open Fires

Purchaser shall not set, or allow to be set by Purchaser's employees, agents, invitees and independent contractors, any open fire at any time of the year without first obtaining permission, in writing, from the Contract Administrator.

G-450 Encumbrances

This contract and Purchaser's activities are subject to the following:

Easement, including the terms and provisions thereof,
For: Road
In Favor of: United States of America – Forest Service
Disclosed by Application No.: 50-CR1884
Granted: 12/20/1948
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Road
In Favor of: United States of America – Forest Service
Disclosed by Application No.: 50-CR1888
Granted: 11/20/1948
Expires: Indefinite

Section P: Payments and Securities

P-010 Initial Deposit

Purchaser paid DATA MISSING initial deposit, which will be maintained pursuant to RCW 79.15.100(3). If the operating authority on this contract expires without Purchaser's payment of the full amount specified in the 'Payment for Forest Products' clause, the initial deposit will be immediately forfeited to the State, and will be offset against Purchaser's remaining balance due. Any excess initial deposit funds not needed to ensure full payment of the contract price, or not needed to complete any remaining obligations of the Purchaser existing after contract expiration, will be refunded to the Purchaser.

P-021 Payment for Forest Products

Purchaser agrees to pay the following rates per MBF Scribner net log scale for forest products conveyed and cut or removed from the sale area plus \$127,568.00 on day of sale and \$9.00 per MBF upon removal in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause.

DATA MISSING

Species that are conveyed but are not listed in the table above shall be paid for at a rate to be determined by the State.

Utility logs, special cull and peelable cull logs of all species, included on loads of logs that are required to be removed and scaled per clause H-150 will be paid for on an adjusted gross scale basis at the rate of \$20.00 per MBF plus fees.

P-027 Payment for Removal of Optional Forest Products

Purchaser agrees to weigh all loads and pay the rate of \$2.00 per ton for forest products approved for removal from the sale area under clause H-157.

P-040 Weighing and Scaling Costs

Purchaser agrees to pay for all scaling and weighing costs for logs and other products sold under this contract. Purchaser also agrees to pay for all costs associated with the transmission and reporting of scale or weight data.

P-045 Guarantee of Payment

Purchaser will pay for forest products prior to cutting or will guarantee payment by posting an approved payment security. The amount of cash or payment security shall be determined by the State and shall equal or exceed the value of the cutting proposed by Purchaser.

P-050 Billing Procedure

The State will compute and forward to Purchaser statements of charges provided for in the contract. Purchaser shall deliver payment to the State on or before the date shown on the billing statement.

P-070 Payment for Products: Damage, Theft, Loss, or Mismatch

Forest products included in this agreement which are destroyed, damaged, stolen, lost, or mismatched shall be paid for by Purchaser on demand of the State. The rates contained in clause P-021 shall apply.

P-080 Payment Account Refund

Advance payments made under P-045 or P-045.2 remaining on account above the value for the charges shall be returned to Purchaser within 30 days following the final report of charges. Refunds not made within the 30 day period will accrue interest at the interest rate, as established by WAC 332-100-030, computed on a daily basis until paid.

P-090 Performance Security

Purchaser agrees to furnish, within 30 days of the confirmation date, security acceptable to the State in the amount of \$100,000.00. The Security provided shall guarantee performance of all provisions of this contract and payment of any damages caused by operations under this contract or resulting from Purchaser's noncompliance with any rule or law. Acceptable performance security may be in the form of a performance bond, irrevocable letter of credit, cash, savings or certificate of deposit account assignments, and must name the State as the obligee or beneficiary. A letter of credit must comply with Title 62A RCW, Article 5. Performance security must remain in full force over the duration of the contract length. Surety bonds issued shall conform to the issuance and rating requirements in clause G-150. The State shall retain the performance security pursuant to RCW 79.15.100. Purchaser shall not operate unless

the performance security has been accepted by the State. If at any time the State decides that the security document or amount has become unsatisfactory, Purchaser agrees to suspend operations and, within 30 days of notification, to replace the security with one acceptable to the State or to supplement the amount of the existing security.

P-100 Performance Security Reduction

The State may reduce the performance security after an operating release has been issued if the State determines that adequate security exists for any remaining obligations of Purchaser.

Section L: Log Definitions and Accountability

L-010 Forest Products Conveyed

Forest products conveyed are all logs or parts of logs described by the 'Products Sold and Sale Area' (G-010) clause meeting the removal requirements listed in the 'Required Removal of Forest Products' (H-150) clause.

L-020 Short Logs - Peeler Blocks

Logs or parts of logs which are removed from the sale area that fail to meet the minimum gross length requirements shall be scaled and graded as short logs or peeler blocks. Such material shall be paid for at the forest products rates specified in this contract.

L-060 Load Tickets

Purchaser shall complete and use load tickets as directed by the Contract Administrator and, if required, use other identification as directed by the State to ensure accounting of forest products removed from the sale area. A load ticket must be fixed, as designated by the Contract Administrator, to each truck and trailer load prior to leaving the landing.

Purchaser shall account for all load tickets issued by the Contract Administrator and return unused tickets at termination of the contract, or as otherwise required by the Contract Administrator. Unused tickets not returned shall be subject to liquidated damages per clause D-030.

The State may also treat load tickets either not accounted for or not returned as lost forest products per clause P-070. All costs associated with computing the billings for lost forest products shall be borne by Purchaser

L-071 Log and Load Reporting Service

This contract requires the use of a State approved third party Log and Load Reporting Service (LLRS). Purchaser shall ensure log volume measurement data and/or load and weight data is received by the LLRS within one business of logs being measured or weighed. Purchaser agrees to pay the LLRS for log and load data supplied to the State.

If during the term of this contract, the State discontinues use of the LLRS, the State will notify the Purchaser in writing and the Purchaser will then be responsible to send log scale and/or weight information to the State.

L-080 Scaling Rules

Determination of volume and grade of any forest products shall be conducted by a state approved third party scaling organization and in accordance with the Westside log scaling and grading rules and Scribner Volume Table, revised July 1, 1972, contained in the Northwest Log Rules Eastside and Westside Log Scaling Handbook (developed and produced by the Northwest Log Rules Advisory Group) and in effect on the date of confirmation of this contract.

Special scaling specifications shall be noted on the State's Brand Designation form which is hereby incorporated to this contract by reference.

L-110 State Approval of Log Scaling and Weighing Locations

Forest Product measurement and weighing facilities required by this contract must be approved by the State. Forest products sold under the contract which require log scaling shall be scaled, measured, or counted by a State approved third party log scaling organization. Forest products sold under the contract which require weighing shall be weighed at a location that meets Washington State Department of Agriculture approval.

Prior to forest products being hauled, the Contract Administrator must authorize in writing the use of State approved measurement and/or weighing facilities that are at or en-route to final destinations. Forest products from this sale shall be measured or weighed at facilities, which are currently approved for use by the State and are currently authorized for this sale. The State reserves the right to verify load volume and weights with State employees or contractors at the State's own expense. The State reserves the right to revoke the authorization of previously approved measurement locations.

L-120 Long Log Taper Distribution

Forest products over 40 feet long plus trim shall be segment scaled and the lower segment diameters shall be determined using actual taper. In order to utilize taper rules for determining segment diameters for poles and pilings greater than 40 feet in length plus trim, Purchaser must request use of a Pole and Piling Scaling Specification Agreement on file in the region office. Approval for usage of a special Pole and Piling Scaling Specification Agreement may be granted at the sole discretion of the State.

Following State approval for usage of the Pole and Piling Scaling Specification Agreement, the Brand Designation form shall be amended to incorporate the long log taper rules. The volume reported by the scaling organization for forest products over 40 feet plus trim will be expanded by 5 percent and the additional 5 percent volume shall be billed to the purchaser at the contract rate.

L-130 Conversion Factors

Forest products removed from the sale area that are not measured in units specified in the 'Payment for Forest Products' clause of this contract shall be converted to board feet using Department of Natural Resources' standard conversion factors.

Section H: Harvesting Operations

H-001 Operations Outside the Sale Boundaries

No operations shall occur outside the sale boundaries, as described within the contract, unless approved in writing by the State.

H-013 Reserve Tree Damage Definition

Reserve trees are trees required and designated for retention within the sale boundary. Purchaser shall protect reserve trees from being cut, damaged, or removed during operations.

Reserve tree damage exists when one or more of the following criteria occur as a result of Purchaser's operation, as determined by the Contract Administrator:

- a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 100 square inches.
- b. A reserve tree top is broken or the live crown ratio is reduced below 30 percent.
- c. A reserve tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.

If the Contract Administrator determines that a reserve tree has been cut or damaged, the Purchaser shall provide a replacement reserve tree of like condition, size, and species within the sale unit containing the damaged leave tree, as approved by the Contract Administrator. Purchaser may be required to pay liquidated damages for Excessive Reserve Tree Damage as detailed in clause D-041.

Removal of designated reserve trees from the sale area is unauthorized, and may invoke the use of the G-230 'Trespass and Unauthorized Activity' clause. Purchaser is required to leave all cut or damaged reserve trees on site.

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 12 inches as measured from the natural ground line. To reduce soil damage, the Contract Administrator may require water bars to be constructed, grass seed to be placed on exposed soils, or other mitigation measures. Suspended operations shall not resume unless approval to do so has been given, in writing, by the Contract Administrator.

H-030 Timber Falling

Trees shall be felled and logs shall be bucked to obtain the greatest practicable utilization of forest products and other valuable materials conveyed.

H-052 Branding and Painting

Forest products shall be branded with a brand furnished by the State prior to removal from the landing. All purchased timber shall be branded in a manner that meets the

requirements of WAC 240-15-030(2)(a)(i). All timber purchased under a contract designated as export restricted shall also be painted in a manner that meets the requirements of WAC 240-15-030(2)(a)(ii).

For pulp loads purchased under a contract designated as export restricted, Purchaser shall brand at least 3 logs with legible brands at one end. Also, 10 logs shall be painted at one end with durable red paint.

H-110 Stump Height

Trees shall be cut as close to the ground as practicable. Stump height shall not exceed 12 inches in height measured on the uphill side, or 2 inches above the root collar, whichever is higher.

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using cable and ground methods. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

1. Purchaser shall immediately repair all gate damage resulting from operations to an equal or better condition than existed at the time of sale.
2. While felling timber, one warning sign must be posted on the CB-1000 Road.
3. Yarding equipment shall not cross live streams without an FPHP.
4. Purchaser shall fully suspend all logs while yarding over riparian management zones during logging operations in Units 3, 4 and 6.
5. The Purchaser shall notify all employees and contractors working on this sale that any danger tree, marked or unmarked, may be felled. Any felled marked danger tree shall be replaced with a suitable tree of similar size and species as approved by the contract administrator.
6. All yarding corridors through riparian management zones shall be marked by Purchaser and approved by Contract Administrator prior to yarding over riparian management zones.

Permission to do otherwise must be granted in writing by the Contract Administrator.

H-150 Required Removal of Forest Products

Purchaser shall remove from the sale area and present for scaling or weighing all forest products conveyed in the G-010 clause that meet the following minimum dimensions:

Species	Net bd ft	Log length (ft)	Log dib
All	10	16	5

The State may treat failure to remove forest products left on the sale area that meet the above specifications as a breach of this contract. At the State's option, forest products that meet the above specifications and are left on the sale area may be scaled for volume or measured and converted to weight by the State or a third party scaling organization and billed to Purchaser at the contract payment rate. All costs associated with scaling, measuring and computing the billing will be borne by the Purchaser.

H-151 Required Harvesting Area

Unless otherwise authorized by the State, Purchaser is required to fall, yard and remove all forest products and other valuable materials conveyed and required to be removed under this contract within the percent slope and yarding distances listed below. The yarding distances are measured from all existing roads and those required roads constructed under this contract. Purchaser may yard beyond the required removal distances up to the designated sale boundaries. If Purchaser decides to yard beyond the required yarding distance, Purchaser must follow all requirements specified in this contract.

Yarding Method	Max Slope %	Slope Dist	Max Slope %	Slope Dist
	Downhill	Downhill	Uphill	Uphill
Ground	40	500'	40	500'
Cable	N/A	200'	N/A	200'

Cable or aerial/helicopter equipment is permitted on all slopes. Cable or aerial/helicopter equipment may be used on any required harvest area of this sale where ground based equipment is not permitted or on designated ground based harvest areas where Purchaser does not choose to use ground based equipment.

H-157 Optional Removal of Forest Products Not Designated

If in the course of operations, Purchaser decides to remove forest products that are below the minimum designated removal specifications per the 'Required Removal of Forest Products' (H-150), the payment rates in clause P-027 shall apply.

Forest products designated as optional shall be decked separately from forest products designated as required for removal. Prior to removal from the sale area, optional forest products as described in this clause must be inspected and approved by the Contract Administrator. Optional forest products may not be mixed with forest products that are required for removal by this contract and shall be removed from the sale area in separate truck loads using load tickets specified by the Contract Administrator.

All material removed under this clause is subject to the same log and load accountability rules as defined in the Log Definitions and Accountability section of this contract. Purchaser shall follow the payment procedures as required in the P-052 clause and will submit a separate summary report for all forest products removed from the sale area under the authority of this clause.

H-160 Mismatch

Mismatch is defined as forest products remaining on the sale area that would have met the specifications in clause H-150 if bucking lengths had been varied to include such products.

The State may treat mismatch as a breach of this contract. At the State's option, forest products that are left on the sale area may be scaled for volume by the State or a third party scaling organization and billed to Purchaser at the contract payment rate. All costs associated with scaling and computing the billing will be borne by Purchaser.

H-180 Removal of Specialized Forest Products or Firewood

Prior to the removal of conveyed specialized forest products or firewood from the sale area, Purchaser and the State shall agree in writing to the method of accounting for/and removal of such products.

H-190 Completion of Settings

Operations begun on any setting of the sale area shall be completed before any operation begins on subsequent settings unless authorized in writing by the Contract Administrator.

H-220 Protection of Residual or Adjacent Trees

Unless otherwise specified by this contract, the Contract Administrator shall identify damaged adjacent or leave trees that shall be paid for according to clause G-230.

H-230 Tops and Limbs Outside the Sale Boundary

Tops and limbs outside the sale boundary as a result of Purchaser's operation shall be removed concurrently with the yarding operation unless otherwise directed by the Contract Administrator.

Section C: Construction and Maintenance**C-040 Road Plan**

Road construction and associated work provisions of the Road Plan for this sale, dated 9/12/2018 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on CB-1400, CB-1600, Old CB-1000, 15+75 Spur, 6+00 Spur, 5+20 Spur, 1+25 Spur. All work shall be completed to the specifications detailed in the Road Plan.

C-060 Designated Road Maintainer

If required by the State, Purchaser shall perform maintenance and replacement work as directed by the Contract Administrator on the CB-1400, CB-1600, Old CB-1000, 15+75 Spur, 6+00 Spur, 5+20 Spur, 1+25 Spur.. Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the equipment rate schedule on file at the Region office or Engineering Division in Olympia. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

C-140 Water Bars

Purchaser shall, as directed by the Contract Administrator, construct water bars across haul roads, skid trails and fire trails as necessary to control soil erosion and water pollution.

Section S: Site Preparation and Protection**S-001 Emergency Response Plan**

An Emergency Response Plan (ERP) shall be provided to the Contract Administrator containing but not limited to, valid contact numbers and procedures for medical emergencies, fire, hazardous spills, forest practice violations and any unauthorized or unlawful activity on or in the vicinity of the sale area. The Contract Administrator and the State shall be promptly notified whenever an incident occurs requiring an emergency response.

The ERP must be presented for inspection at the prework meeting and kept readily available to all personnel, including subcontractors, on site during active operations.

S-010 Fire Hazardous Conditions

Purchaser acknowledges that operations under this Contract may increase the risk of fire. Purchaser shall conduct all operations under this agreement following the requirements of WAC 332-24-005 and WAC 332-24-405 and further agrees to use the highest degree of care to prevent uncontrolled fires from starting.

In the event of an uncontrolled fire, Purchaser agrees to provide equipment and personnel working at the site to safely and effectively engage in first response fire suppression activity.

Purchaser's failure to effectively engage in fire-safe operations is considered a breach and may result in suspension of operations.

S-030 Landing Debris Clean Up

Landing debris shall be disposed of in a manner approved in writing by the Contract Administrator.

S-035 Logging Debris Clean Up

Slash and debris created from harvest activities shall be treated in a manner approved in writing by the Contract Administrator.

S-050 Cessation of Operations for Low Humidity

When the humidity is 30 percent or lower on the sale area, all operations must cease unless authority to continue is granted by the State in writing.

S-060 Pump Truck or Pump Trailer

Purchaser shall provide a fully functional pump truck or pump trailer equipped to meet the specifications of WAC 332-24-005 and WAC 332-24-405 during the "closed season" or as extended by the State and shall provide trained personnel to operate this equipment on the sale area during all operating periods.

S-100 Stream Cleanout

Slash or debris which enters any typed water as a result of operations under this contract and which is identified by the Contract Administrator shall be removed and deposited in a stable position. Removal of slash or debris shall be accomplished in a manner that avoids damage to the natural stream bed and bank vegetation.

S-120 Stream Protection

No timber shall be felled into, across, or yarded through any streams.

S-130 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

Purchaser is responsible for understanding and complying with all applicable local, state, and federal hazardous material/waste laws and regulations for operations conducted under this contract. Such regulations pertain to, but may not be limited to, hazardous material storage, handling and transport, personnel protection, release notification and emergency response, cleanup and waste disposal. Purchaser shall be responsible for restoring the site in the event of a spill.

b. Hazardous Materials Spill Prevention

All operations shall be conducted in a manner that avoids the release of hazardous materials, including petroleum products, into the environment (water, air or land).

c. Hazardous Materials Spill Containment, Control and Cleanup

If safe to do so, Purchaser shall take immediate action to contain and control all hazardous material spills. Purchaser shall ensure that enough quick response spill kits capable of absorbing 10 gallons of oil, coolant, solvent or contaminated water are available on site to quickly address potential spills from any piece of equipment at all times throughout active operations. If large quantities of bulk fuel/other hazardous materials are stored on site, Purchaser must be able to effectively control a container leak and contain & recover a hazmat spill equal to the largest single on site storage container volume. (HAZWOPER reg. 29CFR 1910.120 (j) (1) (vii)).

d. Hazardous Material Release Reporting

Releases of oil or hazardous materials to the environment must be reported according to the State Department of Ecology (ECY). It is the responsibility of the Purchaser to have all emergency contact information readily available and a means of remote communication for purposes of quick notification. In the event of a spill, the Purchaser is responsible for notifying the following:

Appropriate Department of Ecology regional office (contact information below).

DNR Contract Administrator

ECY - Northwest Region:

1-425-649-7000

(Island, King, Kitsap, San Juan, Skagit, Snohomish, and Whatcom counties)

ECY - Southwest Region:

1-360-407-6300

(Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, and Wahkiakum counties)

ECY - Central Region:

1-509-575-2490

(Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, and Yakima counties)

ECY - Eastern Region:

1-509-329-3400

(Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman counties)

S-131 Refuse Disposal

As required by RCW 70.93, All Purchaser generated refuse shall be removed from state lands for proper disposal prior to termination of this contract. No refuse shall be burned, buried or abandoned on state forest lands. All refuse shall be transported in a

manner such that it is in compliance with RCW 70.93 and all loads or loose materials shall be covered/secured such that these waste materials are properly contained during transport.

Section D: Damages

D-010 Liquidated Damages

The clauses in the DAMAGES section of this contract provide for payments by Purchaser to the State for certain breaches of the terms of this contract. These payments are agreed to as liquidated damages and not as penalties. They are reasonable estimates of anticipated harm to the State caused by Purchaser's breach. These liquidated damages provisions are agreed to by the State and Purchaser with the understanding of the difficulty of proving loss and the inconvenience or infeasibility of obtaining an adequate remedy. These liquidated damages provisions provide greater certainty for the Purchaser by allowing the Purchaser to better assess its responsibilities under the contract.

D-020 Failure to Remove Forest Products

Purchaser's failure to remove all or part of the forest products sold in this agreement prior to the expiration of the contract term results in substantial injury to the State. The value of the forest products sold at the time of breach is not readily ascertainable. Purchaser's failure to perform disrupts the State's management plans, the actual cost of which is difficult to assess. A resale involves additional time and expense and is not an adequate remedy. Therefore, Purchaser agrees to pay the State as liquidated damages a sum calculated using the following formula:

$$LD = .35V-ID-P+C+A$$

Where:

LD = Liquidated Damage value.

V = The unremoved value at the date of breach of contract. The value is determined by subtracting the removal volume to date from the State's cruise volume multiplied by the contract bid rates.

ID = Initial Deposit paid at date of contract that has not been applied to timber payments.

P = Advance payments received but not yet applied to specific contract requirements.

C = Charges assessed for contract requirements completed prior to breach of contract but not paid for.

A = Administrative Fee = \$2,500.00.

The above formula reflects the Purchaser's forfeiture of the initial deposit in accordance with clause P-010 by deducting the initial deposit from the amount owed. In no event

shall the liquidated damages be less than zero. Interest on the liquidated damage is owed from the date of breach until final payment, calculated using the following formula: $\text{Interest} = r \times \text{LD} \times N$.

Where:

r = daily equivalent of an annual interest at current interest rate as established by WAC 332-100-030.

LD = Liquidated damage value.

N = Number of days from date of breach to date payment is received.

D-030 Inadequate Log Accountability

Removal of forest products from the sale area without adequate branding and/or valid load tickets attached to the load and scaling forest products in a location other than the facility approved by the State can result in substantial injury to the State. Failure to properly account for loads and scaling and/or weighing information can result in loss to the State. The potential loss from not having proper branding, ticketing, scaling and/or weighing location and accountability is not readily ascertainable. Purchaser's failure to perform results in a loss of log weight and scale accountability, increases the potential for unauthorized removal of forest products, and increases the State's administration costs, the actual costs of which are difficult to assess.

Enforcement actions for unauthorized removal of forest products for each improperly branded load, improperly ticketed load, lost or unaccounted for tickets, or use of a facility not authorized for this sale or improper submission of scaling data are impractical, expensive, time consuming and are not an adequate remedy. Therefore, Purchaser agrees to pay the State, as liquidated damages, a sum of \$100 each time a load of logs does not have branding as required in the contract, \$250 each time a load of logs does not have a load ticket as required by the contract, \$250 each time a load ticket has not been filled out as required by the plan of operations, \$250 each time a load is weighed or scaled at a location not approved as required under this contract, \$250 each time a log ticket summary report is not submitted properly, and if a third party Log and Load Reporting Service is required, \$250 each time scaling or weight data is not properly submitted to the Log and Load Reporting Service per clause L-071, and \$250 each unused ticket that is not returned to the State, for any reason.

D-041 Reserve Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-013, Reserve Tree Damage Definition, and when the Contract Administrator determines that a suitable replacement for a damaged reserve tree is not possible, the damaged trees result in substantial injury to the State. The value of the damaged reserve trees at the time of the breach is not readily ascertainable. Therefore, the Purchaser agrees to pay the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged reserve trees that are not replaced in All Units.

IN WITNESS WHEREOF, the Parties hereto have entered into this contract.

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Mona Griswold
Olympic Region Manager

Print Name

Date: _____

Date: _____

Address:

CORPORATE ACKNOWLEDGEMENT
(Required for both LLC and Inc. Entities)

STATE OF _____)

COUNTY OF _____)

On this _____ day of _____, 20____, before me personally appeared _____

_____ to me known to be the _____ of the corporation that executed the within and foregoing instrument and acknowledged said instrument to be the free and voluntary act and deed of the corporation, for the uses and purposes therein mentioned, and on oath stated that (he/she was) (they were) authorized to execute said instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

Notary Public in and for the State of

My appointment expires _____

Schedule A
SLASH PILING SPECS

The area shall be piled by creating circular piles of slash and brush conforming to the following specifications:

1. Piles shall be a minimum of 12 feet tall by 8 feet wide to a maximum of 30 feet tall and 16 feet wide. Piles shall be cone shaped and stable.
2. Piles shall be free of topsoil, large rotten logs and large stumps. No material larger than 8 inches in diameter shall be piled. Any burnable material shall be well scattered.
3. Piles shall not be placed on large stumps or logs.
4. Piles shall be stacked a minimum of 50 feet from all unit boundaries, Riparian Management Zones, leave tree areas and any standing timber; a minimum of 100 feet from any public roads and highways; and a minimum of 200 feet from any structures.
5. Piling shall be completed using an approved hydraulic shovel and grapples.
6. Slash and displaced soil shall be removed from swales and natural drainage channels concurrent with yarding.
7. Slash generated during cable yarding shall be stacked in dirt free piles and shall not block roads or interfere with functioning of drainage structures, ditches or stream channels.

Schedule B
GREEN TREE RETENTION PLAN

Leave the following as directed by the Contract Administrator:

1. All trees marked with a blue band of paint and all leave tree area clumps shall remain standing. The perimeter of the leave tree clumps are designated by Leave Tree Area tags. The tags face outward from the leave tree clumps.

Unit #	# of Individually Marked Trees	# of Clumps	# of Trees Clumped	Total # of Leave Trees
1	11	4	228	239
2	34	2	166	199
3	4	1	44	46
4	14	1	102	116
5	10	2	142	152
6	42	5	758	800

Schedule S
SAMPLE SCALING

For this contract, weight conversion sample scaling will be allowed for the following species. Douglas fir and western Hemlock.

The Purchaser must make a written request for sample scaling and the State shall authorize in writing the use of sample scaling and amend the brand designation form accordingly. Upon facility inspection and approval for weight sample scaling, DNR will set the sample scaling intensity for this contract.

Facilities accepting deliveries under the weight conversion sample scale approval will be required to have a minimum of 1 load available for check scaling. The default frequency shall be 1:2. However, any facility that can provide at least one load per day for check scaling may use a frequency of 1:3. The load must be the most recently scaled load.

All loads arriving at a facility approved for weight conversion sample scale shall be weighed. DNR may force scaling at any time. Scale data from the forced scale loads will be included in the sample pool. The State may revoke the approval of the facility for weight conversion sample scaling at any time. Any load presented for weight conversion sample scale that is mis-sorted by species or diameter in excess of one log shall be scaled and excluded from the sample pool.



WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES
FOREST EXCISE TAX ROAD SUMMARY SHEET

Region:

Timber Sale Name:

Application Number:

EXCISE TAX APPLICABLE ACTIVITIES

Construction: linear feet
Road to be constructed (optional and required) but not abandoned

Reconstruction: linear feet
Road to be reconstructed (optional and required) but not abandoned

Abandonment: linear feet
Abandonment of existing roads not reconstructed under the contract

Decommission: linear feet
Road to be made undriveable but not officially abandoned.

Pre-Haul Maintenance: linear feet
Existing road to receive maintenance work (specifically required by the contract) prior to haul

EXCISE TAX EXEMPT ACTIVITIES

Temporary Optional Construction: linear feet
Optional roads to be constructed and then abandoned

Temporary Optional Reconstruction: linear feet
Optional roads to be reconstructed and then abandoned

New Abandonment: linear feet
Abandonment of roads constructed or reconstructed under the contract

All parties must make their own assessment of the taxable or non-taxable status of any work performed under the timber sale contract. The Department of Revenue bears responsibility for determining forest road excise taxes. The Department of Natural Resources developed this form to help estimate the impact of forest excise taxes. However, the information provided may not precisely calculate the actual amount of taxes due. The Department of Revenue is available for consultation by calling 1.800.548.8829.

(Revised 1/17)

Cruise Narrative

Sale Name: Claude Summit	Region: Olympic
Agreement #: 30-	District: Coast
Lead Cruiser: Kevin Peterson	Completion Date: 5/12/2018
Other Cruisers:	

Unit acreage specifications:

Unit #	Cruised Acres	Cruised acres agree with sale acres? Y/N	If acres do not agree explain why.
1	30.7	Y	
2	24.8	Y	
3	5.7	Y	
4	14.5	Y	
5	19	Y	
6	100.7	Y	
Total	195.4	Y	

Unit cruise specifications:

Unit #	Sample Type (VP,FP,ITS,100%)	Expansion Factor (baf,full/half)	Sighting Height (4.5', 16')	Grid Size (plot spacing)	Plot Ratio (cruise/count)	Number of plots
1	VP	62.50/40	4.5'	290X290	1:1	17
2	VP	62.50/40	4.5'	290X290	1:1	13
3	VP	62.50/40	4.5'	290X290	ALL CRUISE	4
4	VP	62.50/40	4.5'	290X290	5:3	8
5	VP	62.50/40	4.5'	290X290	1:1	10
6	VP	62.50/40	4.5'	290X290	1:1	51

Sale/Cruise Description:

Minor species cruise intensity	Minor species sampled using same cruise plots. Red Cedar and Red Alder were cruised at a 40 BAF					
Minimum cruise spec:	40% of Form Factor at 16 ft. D.O.B or 5 inch top.					
Average ring count:	DF =	6	WH =	5		
Leave/take tree description:	Leave tree clumps are bounded out with yellow tags, pink flashers and blue paint. Individual leave trees are marked with blue bands and two blue butt marks.					
Other conditions:	Exterior boundaries are marked with white tags and pink flashers					

<p>Sort Description:</p>	<p>HA– Logs meeting the following criteria: Surface characteristics for a high quality A sort will have sound tight knots not to exceed 1 ½” in diameter, numbering not more than an average of one per foot of log length. May include logs with not more than two larger knots. Knots and knot indicators ½” in diameter and smaller shall not be a determining factor. Logs will have a growth ring count of 6 or more rings per inch in the outer third top end of the log. (minimum diameter 8”.)</p> <p>R – Logs meeting the following criteria: Gross diameter of 12 inches or greater, excessive knots greater than 2 ½ inches with recovery less than 65% of the net scale.</p>
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Field Observations:

This sale is located off of US 113 on the CB-1000 road system. The sale has 6 units that consists of 195.4 harvest acres. The sale is 86% uphill cable harvest and 14% ground based.

The total sale volume is 7,505 MBF and is comprised of 53% Douglas-fir, 37% Western Hemlock, 4% Western Red Cedar and 4% Red Alder; with traces of Silver-fir. The average DF has a DBH of 18” and a bole height of 73’, main defects are sweep and spike knots. The average WH has a DBH of 14.5” and a bole height of 67’, main defects are sweep and forks.

Access to the sale is pretty good, some of the eastern units require some walking on a ridge to get access.

Grants: 03, 04 and 07

Prepared By: Kevin Peterson – Olympic Region Cruiser

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T000 R000 S00 TyU1 THRU T000 R000 S00 TyU6				Project: SUMMIT										Page 1							
				Acres 195.40										Date 5/10/2018			Time 1:18:20PM				
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99					
RC	CU	CU			100.0	3											1	5		0.00	6.2
RC	D	3S		39	16.7	915	763	149	4	52	31	13	1	2		98	38	10	132	1.67	5.8
RC	D	4S		60		1,177	1,177	230	100				3	77	10	11	26	5	26	0.34	44.4
RC	D	UT		1		6	6	1	100				100				13	5	10	0.24	.6
RC Totals				5	7.4	2,101	1,946	380	62	20	12	5	2	47	6	45	24	6	34	0.55	57.0
WH	CU	CU															0	6		0.00	40.1
WH	D	2S		50	7.1	7,607	7,069	1,381			68	32				100	40	14	272	1.76	26.0
WH	D	3S		34	1.3	4,902	4,836	945	31	69					5	95	39	8	93	0.71	51.9
WH	D	4S		15	3.3	2,136	2,066	404	93	7			3	54	6	37	30	5	32	0.30	64.7
WH	D	UT		1	16.3	137	115	22	100						61	39	18	5	6	0.14	18.6
WH Totals				37	4.7	14,782	14,086	2,752	25	25	34	16	0	8	3	89	27	7	70	0.73	201.2
DF	CU	CU			100.0	67											2	6		0.00	38.6
DF	HQ	2S		1		398	398	78			54	46				100	40	13	270	1.68	1.5
DF	D	2S		63	5.3	13,605	12,879	2,517			48	52				100	40	15	323	2.15	39.9
DF	D	3S		25	3.1	5,333	5,167	1,010	19	81				1	3	96	39	8	101	0.76	51.2
DF	D	4S		10	6.1	2,162	2,030	397	92	8			13	28	16	44	29	6	32	0.37	63.5
DF	D	UT		1		45	45	9	100				100				11	6	3	0.06	13.9
DF Totals				53	5.0	21,611	20,519	4,009	14	21	31	33	2	3	2	93	27	8	98	1.00	208.6
RA	CU	CU			100.0	69											6	5		0.00	11.8
RA	D	2S		1		33	33	6			100		100				20	14	140	1.23	.2
RA	D	3S		22	6.1	391	367	72	11	89			31	39	30		28	9	79	0.87	4.7
RA	D	4S		71	8.4	1,336	1,224	239	96	4			19		81		30	6	36	0.40	33.9
RA	D	UT		6		96	96	19	100				100				12	5	7	0.12	14.5
RA Totals				4	10.6	1,925	1,720	336	76	22	2		28	8	64		22	6	26	0.39	65.2
SF	CU	CU															7			0.00	.5
SF	D	2S		73	5.0	105	100	19			100					100	40	12	190	1.48	.5
SF	D	3S		27		37	37	7	100							100	40	7	70	0.53	.5
SF Totals				0	3.7	142	136	27	27		73					100	27	9	87	1.00	1.6
Totals					5.3	40,560	38,407	7,505	23	22	30	24	2	7	3	88	26	7	72	0.79	533.6

TC PSTATS											PROJECT STATISTICS					PAGE	1
											PROJECT		SUMMIT			DATE	5/10/2018
TWP	RGE	SC	TRACT	TYPE		ACRES		PLOTS	TREES	CuFt	BdFt						
000	000	00	CLAUDE	U1	THR	195.40		103	603	S	W						
000	000	00	CLAUDE	U6													
					TREES		ESTIMATED	PERCENT									
					PER PLOT		TOTAL	SAMPLE									
			PLOTS	TREES			TREES	TREES									
TOTAL			103	603	5.9												
CRUISE			55	296	5.4		52,724	.6									
DBH COUNT																	
REFOREST																	
COUNT			48	300	6.3												
BLANKS																	
100 %																	
STAND SUMMARY																	
SAMPLE		TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET							
TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC								
DOUG FIR	125	91.3	18.0	73	37.9	160.7	21,611	20,519	5,742	5,727							
WHEMLOCK	108	99.3	14.5	67	29.9	113.9	14,782	14,086	3,919	3,919							
WR CEDAR	24	46.2	11.3	53	9.6	32.4	2,101	1,946	765	765							
R ALDER	37	32.5	11.3	55	6.8	22.8	1,925	1,720	561	543							
PS FIR	2	.5	19.0	89	0.2	1.0	142	136	42	42							
TOTAL	296	269.8	15.0	65	85.4	330.8	40,560	38,407	11,030	10,996							
CONFIDENCE LIMITS OF THE SAMPLE																	
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR																	
CL	68.1	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.								
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10								
DOUG FIR		93.4	9.2	83	91	100											
WHEMLOCK		115.1	11.3	88	99	111											
WR CEDAR		213.8	21.1	36	46	56											
R ALDER		210.1	20.7	26	32	39											
PS FIR		719.2	70.9	0	1	1											
TOTAL		53.8	5.3	256	270	284	116	59	29								
CL	68.1	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.								
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10								
DOUG FIR		78.5	7.7	148	161	173											
WHEMLOCK		97.3	9.6	103	114	125											
WR CEDAR		177.9	17.5	27	32	38											
R ALDER		202.0	19.9	18	23	27											
PS FIR		719.2	70.9	0	1	2											
TOTAL		31.7	3.1	321	331	341	40	21	10								
CL	68.1	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.								
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10								
DOUG FIR		82.9	8.2	18,843	20,519	22,196											
WHEMLOCK		100.5	9.9	12,690	14,086	15,481											
WR CEDAR		177.4	17.5	1,605	1,946	2,286											
R ALDER		200.4	19.7	1,380	1,720	2,060											
PS FIR		719.2	70.9	40	136	233											
TOTAL		39.5	3.9	36,913	38,407	39,901	62	32	16								
CL	68.1	COEFF	V_BAR/ACRE				# OF PLOTS REQ.		INF. POP.								
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10								
DOUG FIR				117	128	138											
WHEMLOCK		27.5	2.7	111	124	136											
WR CEDAR				50	60	70											
R ALDER		154.3	15.2	61	76	90											
PS FIR		719.2	70.9	38	132	226											
TOTAL		37.2	3.7	112	116	121	55	28	14								

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1										
Project: SUMMIT												Date 5/10/2018										
												Time 1:18:20PM										
T000 R000 S00 TU1										T000 R000 S00 TU1												
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt													
000	000	00	CLAUDE	U1	30.70	17	50	S	W													
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf		
								5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft				
DF	CU	CU			100.0	326										2	6		0.00		60.6	
DF	HQ	2S		8		1,891	1,891				39	61			100	40	14	307	1.79		6.2	
DF	D	2S		39	3.5	8,930	8,622				69	31			100	40	14	275	1.87		31.4	
DF	D	3S		27	3.0	6,250	6,062		23	77					100	40	9	111	0.80		54.8	
DF	D	4S		25	2.8	5,655	5,494		93	7			7	29	13	52	31	5	36	0.34	154.0	
DF	D	UT		1		114	114		100						100	12	5	6	0.10		18.3	
DF	Totals			62	4.2	23,166	22,183		30	23	30	17	2	7	3	88	27	7	68	0.70	325.2	
WH	CU	CU															5		0.00		27.0	
WH	D	2S		40	12.0	4,971	4,374				40	60			100	40	14	286	1.93		15.3	
WH	D	3S		23		2,444	2,444		7	93					100	40	8	108	0.72		22.5	
WH	D	4S		37	6.9	4,179	3,892		83	17			6	44	22	28	29	5	31	0.31	124.5	
WH	D	UT														11	7		0.00		2.5	
WH	Totals			30	7.6	11,594	10,709		32	27	16	25	2	16	8	74	27	7	56	0.57	191.8	
RA	CU	CU															6	5	0.00		12.9	
RA	D	2S		14		209	209					100	100			20	14	140	1.23		1.5	
RA	D	4S		82	5.8	1,257	1,184		36	85	15		11		89	34	6	51	0.53		23.2	
RA	D	UT		4		44	44		1	100			100			11	5	4	0.07		10.3	
RA	Totals			4	4.8	1,510	1,437		44	73	12	15	27		73	21	6	30	0.46		47.9	
RC	CU	CU															3	5	0.00		7.4	
RC	D	3S		69	3.4	580	560		17	31	69				100	40	7	76	0.98		7.4	
RC	D	4S		27		220	220		7	100			18		82	31	5	34	0.49		6.5	
RC	D	UT		4		25	25		1	100			100			13	5	10	0.24		2.5	
RC	Totals			2	2.4	825	805		25	52	48		8		92	23	6	34	0.72		23.8	
SF	CU	CU															7		0.00		1.9	
SF	D	2S		73	5.0	373	355		11			100			100	40	12	190	1.48		1.9	
SF	D	3S		27		131	131		4	100					100	40	7	70	0.53		1.9	
SF	Totals			1	3.7	504	485		15	27	73				100	27	9	87	1.00		5.6	
Type Totals					5.3	37,600	35,620		1,094	33	24	25	18	3	9	4	83	27	7	60	0.64	594.3

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	SUMMIT		DATE	5/10/2018		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
000	000	00	CLAUDE	U1	30.70	17	94	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		17	94	5.5						
CRUISE		9	50	5.6	9,398	.5				
DBH COUNT REFOREST COUNT		8	44	5.5						
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	25	168.1	14.7	66	51.8	198.5	23,166	22,183	6,294	6,218
WHEMLOCK	12	101.1	12.7	68	24.8	88.2	11,594	10,709	2,954	2,953
R ALDER	8	23.2	12.2	59	5.4	18.8	1,510	1,437	469	469
WR CEDAR	4	11.9	14.8	58	3.7	14.1	825	805	396	396
PS FIR	1	1.9	19.0	89	0.8	3.7	504	485	150	150
TOTAL	<i>50</i>	<i>306.1</i>	<i>13.9</i>	<i>66</i>	<i>86.7</i>	<i>323.4</i>	<i>37,600</i>	<i>35,620</i>	<i>10,263</i>	<i>10,186</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	65.7	16.4		140	168	196				
WHEMLOCK	119.0	29.7		71	101	131				
R ALDER	248.6	62.2		9	23	38				
WR CEDAR	194.9	48.7		6	12	18				
PS FIR	412.3	103.1			2	4				
TOTAL	<i>55.6</i>	<i>13.9</i>		<i>264</i>	<i>306</i>	<i>349</i>	<i>132</i>	<i>67</i>	<i>33</i>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	62.2	15.6		168	199	229				
WHEMLOCK	109.3	27.3		64	88	112				
R ALDER	272.1	68.0		6	19	32				
WR CEDAR	198.9	49.7		7	14	21				
PS FIR	412.3	103.1			4	7				
TOTAL	<i>34.3</i>	<i>8.6</i>		<i>296</i>	<i>323</i>	<i>351</i>	<i>50</i>	<i>25</i>	<i>12</i>	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	65.4	16.3		18,556	22,183	25,809				
WHEMLOCK	115.0	28.7		7,631	10,709	13,787				
R ALDER	272.9	68.2		457	1,437	2,418				
WR CEDAR	196.3	49.1		410	805	1,200				
PS FIR	412.3	103.1			485	986				
TOTAL	<i>36.5</i>	<i>9.1</i>		<i>32,373</i>	<i>35,620</i>	<i>38,866</i>	<i>56</i>	<i>29</i>	<i>14</i>	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR				93	112	130				
WHEMLOCK	36.0	9.0		86	121	156				
R ALDER	272.9	68.2		24	76	128				
WR CEDAR	135.9	34.0		29	57	85				
PS FIR	412.3	103.1			132	268				
TOTAL	<i>183.1</i>	<i>45.8</i>		<i>100</i>	<i>110</i>	<i>120</i>	<i>1,425</i>	<i>727</i>	<i>356</i>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	SUMMIT		DATE	5/10/2018		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
000	000	00	CLAUDE	U2	24.80	13	87	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		13	87	6.7						
CRUISE		7	39	5.6	8,184	.5				
DBH COUNT										
REFOREST										
COUNT		6	48	8.0						
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
WHEMLOCK	18	122.7	14.7	65	37.8	145.2	17,812	17,227	4,864	4,864
DOUG FIR	12	59.9	19.2	81	27.4	120.2	17,087	16,296	4,561	4,561
WR CEDAR	3	93.1	10.4	52	17.1	55.4	3,353	2,905	1,205	1,205
R ALDER	6	54.3	11.2	56	11.0	36.9	3,076	2,655	896	845
TOTAL	39	330.0	14.1	63	95.3	357.7	41,328	39,082	11,526	11,475
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	104.8	30.2		86	123	160				
DOUG FIR	107.7	31.1		41	60	79				
WR CEDAR	147.7	42.6		53	93	133				
R ALDER	162.4	46.9		29	54	80				
TOTAL	47.5	13.7		285	330	375	98	50	24	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	76.1	21.9		113	145	177				
DOUG FIR	91.2	26.3		89	120	152				
WR CEDAR	146.1	42.1		32	55	79				
R ALDER	156.1	45.0		20	37	54				
TOTAL	32.0	9.2		325	358	391	44	23	11	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	76.7	22.1		13,415	17,227	21,038				
DOUG FIR	93.4	26.9		11,905	16,296	20,687				
WR CEDAR	146.1	42.2		1,681	2,905	4,130				
R ALDER	157.8	45.5		1,446	2,655	3,863				
TOTAL	38.0	11.0		34,795	39,082	43,370	63	32	16	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK				92	119	145				
DOUG FIR				99	136	172				
WR CEDAR				30	52	75				
R ALDER	85.4	24.6		39	72	105				
TOTAL	207.5	59.9		97	109	121	1,863	951	466	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	SUMMIT		DATE	5/10/2018		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
000	000	00	CLAUDE	U3	5.70	4	22	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		4	22	5.5						
CRUISE		4	22	5.5	1,866		1.2			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	11	150.1	14.5	57	45.2	171.9	15,250	14,610	4,769	4,769
WHEMLOCK	7	141.3	11.9	67	31.7	109.4	11,992	10,847	3,356	3,355
WR CEDAR	3	28.0	14.0	64	8.0	30.0	2,040	1,796	850	850
PS FIR	1	7.9	19.0	89	3.6	15.6	2,143	2,063	638	638
TOTAL	22	327.4	13.5	63	88.9	326.9	31,425	29,317	9,613	9,612
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	75.1	43.0		86	150	215				
WHEMLOCK	108.7	62.2		53	141	229				
WR CEDAR	116.4	66.6		9	28	47				
PS FIR	200.0	114.4			8	17				
TOTAL	49.0	28.1		236	327	419	126	64	31	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	68.8	39.4		104	172	240				
WHEMLOCK	97.6	55.8		48	109	170				
WR CEDAR	127.7	73.0		8	30	52				
PS FIR	200.0	114.4			16	33				
TOTAL	19.1	10.9		291	327	363	19	10	5	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	70.2	40.2		8,744	14,610	20,476				
WHEMLOCK	111.5	63.8		3,929	10,847	17,765				
WR CEDAR	135.4	77.4		405	1,796	3,186				
PS FIR	200.0	114.4			2,063	4,423				
TOTAL	22.0	12.6		25,625	29,317	33,008	25	13	6	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	70.2	40.2		51	85	119				
WHEMLOCK	111.5	63.8		36	99	162				
WR CEDAR	135.4	77.4		14	60	106				
PS FIR	200.0	114.4			132	283				
TOTAL	17.4	10.0		78	90	101	16	8	4	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	SUMMIT		DATE	5/10/2018		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
000	000	00	CLAUDE	U4	14.50	8	46	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		8	46	5.8						
CRUISE		5	28	5.6	4,017		.7			
DBH COUNT										
REFOREST										
COUNT		3	18	6.0						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	20	206.0	16.3	66	73.6	296.9	33,375	31,519	9,599	9,560
WHEMLOCK	3	31.6	11.7	54	6.9	23.4	2,182	1,915	679	679
R ALDER	3	29.5	9.7	57	4.8	15.0	1,415	1,263	386	385
WR CEDAR	2	9.9	13.6	61	2.7	10.0	613	577	277	266
TOTAL	28	277.1	15.1	63	88.8	345.3	37,584	35,274	10,942	10,890
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	35.9	13.5		178	206	234				
WHEMLOCK	253.9	95.8		1	32	62				
R ALDER	282.8	106.7			29	61				
WR CEDAR	194.6	73.4		3	10	17				
TOTAL	42.4	16.0		233	277	321	82	42	20	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	33.3	12.6		260	297	334				
WHEMLOCK	198.4	74.9		6	23	41				
R ALDER	282.8	106.7			15	31				
WR CEDAR	185.2	69.9		3	10	17				
TOTAL	24.6	9.3		313	345	377	28	14	7	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	43.1	16.3		26,394	31,519	36,643				
WHEMLOCK	189.9	71.7		543	1,915	3,288				
R ALDER	282.8	106.7			1,263	2,611				
WR CEDAR	186.9	70.5		170	577	984				
TOTAL	35.4	13.4		30,556	35,274	39,992	57	29	14	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR				89	106	123				
WHEMLOCK	189.9	71.7		23	82	140				
R ALDER	282.8	106.7			84	174				
WR CEDAR	186.9	70.5		17	58	98				
TOTAL	159.0	60.0		88	102	116	1,152	588	288	

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1										
Project: SUMMIT												Date 5/10/2018										
												Time 1:18:20PM										
T000 R000 S00 TU5										T000 R000 S00 TU5												
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt													
000	000	00	CLAUDE	U5	19.00	10	32	S	W													
S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre		
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf			
								5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft				
WH	CU	CU																				57.7
WH	D	2S	49	5.1	9,583	9,099	173			84	16				100	40	13	255	1.66			35.7
WH	D	3S	39	.9	7,273	7,210	137	51	49					10	90	39	7	79	0.65			90.8
WH	D	4S	12		2,185	2,185	42	100					76		24	28	5	31	0.23			71.5
WH	D	UT														10	5		0.00			29.1
WH	Totals		51	2.9	19,040	18,493	351	32	19	42	8		9	4	87	26	7	65	0.71			284.8
DF	CU	CU														3	6		0.00			35.2
DF	D	2S	68	6.8	8,585	8,000	152			54	46				100	40	14	278	1.98			28.8
DF	D	3S	23	2.0	2,738	2,684	51	45	55						100	40	7	80	0.60			33.5
DF	D	4S	9	13.4	1,116	967	18	79	21			17	21	62		25	6	33	0.47			29.1
DF	D	UT														11	6		0.00			4.1
DF	Totals		32	6.3	12,439	11,651	221	17	14	37	32		1	2	5	92	26	8	89	1.01		130.6
RC	D	4S	100		3,818	3,818	73	100							100	24	5	24	0.29			159.7
RC	Totals		10		3,818	3,818	73	100							100	24	5	24	0.29			159.7
RA	CU	CU		100.0	195											12	5		0.00			14.1
RA	D	3S	28	4.4	767	733	14		100			44	56			23	10	74	0.92			9.9
RA	D	4S	65	9.7	1,865	1,683	32	100				28			72	28	6	30	0.38			55.5
RA	D	UT	7		172	172	3	100				100				12	5	7	0.11			26.3
RA	Totals		7	13.7	2,999	2,588	49	72	28			37	16		47	21	6	24	0.37			105.8
Type Totals				4.6	38,296	36,550	694	37	16	33	14		3	17	4	77	25	7	54	0.63		681.0

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	SUMMIT		DATE	5/10/2018		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
000	000	00	CLAUDE	U5	19.00	10	68	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		10	68	6.8						
CRUISE		5	32	6.4	7,817		.4			
DBH COUNT										
REFOREST										
COUNT		5	36	7.2						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	16	145.3	14.1	65	41.9	157.5	19,040	18,493	5,137	5,137
DOUG FIR	8	53.5	17.9	77	22.1	93.8	12,439	11,651	3,428	3,428
WR CEDAR	2	159.7	8.8	51	22.9	68.0	3,818	3,818	1,094	1,094
R ALDER	6	52.9	11.2	56	10.8	36.0	2,999	2,588	874	824
TOTAL	32	411.4	12.6	60	100.2	355.3	38,296	36,550	10,533	10,483
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	100.5	33.5		97	145	194				
DOUG FIR	120.8	40.2		32	53	75				
WR CEDAR	130.4	43.4		90	160	229				
R ALDER	169.5	56.5		23	53	83				
TOTAL	36.8	12.3		361	411	462	60	31	15	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	78.4	26.1		116	158	199				
DOUG FIR	105.4	35.1		61	94	127				
WR CEDAR	130.2	43.4		39	68	97				
R ALDER	161.0	53.6		17	36	55				
TOTAL	25.5	8.5		325	355	385	29	15	7	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	79.6	26.5		13,587	18,493	23,399				
DOUG FIR	110.4	36.8		7,368	11,651	15,934				
WR CEDAR	130.2	43.4		2,162	3,818	5,474				
R ALDER	163.2	54.4		1,181	2,588	3,995				
TOTAL	36.6	12.2		32,093	36,550	41,007	59	30	15	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK				86	117	149				
DOUG FIR	75.9	25.3		79	124	170				
WR CEDAR				32	56	81				
R ALDER	119.6	39.8		33	72	111				
TOTAL	192.0	63.9		90	103	115	1,635	834	409	

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1											
Project: SUMMIT												Date 5/10/2018											
												Time 1:18:20PM											
T000 R000 S00 TU6										T000 R000 S00 TU6													
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt														
000	000	00	CLAUDE	U6	100.70	51	125	S	W														
Spp	S	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre		
					Net	Def%	Gross		Net	Log Scale Dia.				Log Length				Ln	Dia	Bd		CF/Lf	
	T	rt	ad	BdFt				Net MBF	5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft				
DF	CU	CU															2	6				0.00	24.0
DF	D	2S		71	5.4	16,322	15,433	1,554			39	61				100	40	15	357	2.32			43.2
DF	D	3S		24	3.5	5,266	5,080	512	13	87				2	5	93	39	8	102	0.77			49.6
DF	D	4S		4	9.4	1,020	924	93	90	10			25	26	17	31	26	6	30	0.38			30.4
DF	D	UT		1		39	39	4	100				100				11	6	2	0.06			16.6
DF	Totals			53	5.2	22,647	21,476	2,163	7	21	28	44	1	2	2	95	28	9	131	1.25			163.8
WH	CU	CU															1	6				0.00	38.5
WH	D	2S		52	6.6	8,716	8,139	820			65	35				100	40	14	277	1.76			29.4
WH	D	3S		37	1.7	5,710	5,614	565	24	76					3	97	40	8	101	0.75			55.7
WH	D	4S		9	1.0	1,484	1,469	148	99	1			1	53		45	31	5	33	0.31			44.6
WH	D	UT		2	16.3	266	223	22	100						61	39	22	5	9	0.18			24.0
WH	Totals			38	4.5	16,176	15,446	1,555	20	28	34	18	0	5	2	93	28	7	80	0.80			192.1
RC	CU	CU															5					0.00	7.5
RC	D	3S		53	14.0	1,186	1,021	103		36	45	19			2	98	39	12	186	2.06			5.5
RC	D	4S		47		889	889	90	100				2	59	25	14	28	5	30	0.40			29.5
RC	Totals			5	8.0	2,075	1,909	192	47	19	24	10	1	29	12	59	25	6	45	0.74			42.6
RA	CU	CU			100.0	47											3	5				0.00	12.8
RA	D	3S		24	7.4	420	389	39	21	79			20	25		54	32	9	83	0.83			4.7
RA	D	4S		71	7.8	1,203	1,110	112	96	4			14			86	32	6	38	0.38			28.9
RA	D	UT		5	.0	77	77	8	100				100				13	5	7	0.14			10.3
RA	Totals			4	9.8	1,748	1,575	159	77	23			20	6		74	22	6	28	0.40			56.8
Type Totals					5.3	42,646	40,407	4,069	16	24	29	31	2	4	2	92	27	8	89	0.92			455.3

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	SUMMIT		DATE	5/10/2018		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
000	000	00	CLAUDE	U6	100.70	51	286	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		51	286	5.6						
CRUISE		25	125	5.0	21,441		.6			
DBH COUNT										
REFOREST										
COUNT		26	154	5.9						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	49	62.8	21.0	81	33.0	151.5	22,647	21,476	5,801	5,801
WHEMLOCK	52	91.7	15.4	69	30.3	119.1	16,176	15,446	4,250	4,250
WR CEDAR	10	30.0	13.3	53	7.9	29.0	2,075	1,909	773	773
R ALDER	14	28.4	11.5	54	6.0	20.4	1,748	1,575	504	492
TOTAL	125	212.9	16.6	68	78.5	320.0	42,646	40,407	11,328	11,316
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	93.7	13.1		55	63	71				
WHEMLOCK	112.9	15.8		77	92	106				
WR CEDAR	180.5	25.3		22	30	38				
R ALDER	213.5	29.9		20	28	37				
TOTAL	53.8	7.5		197	213	229	116	59	29	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	84.1	11.8		134	152	169				
WHEMLOCK	93.7	13.1		103	119	135				
WR CEDAR	176.7	24.7		22	29	36				
R ALDER	197.6	27.7		15	20	26				
TOTAL	33.0	4.6		305	320	335	44	22	11	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	86.1	12.1		18,886	21,476	24,067				
WHEMLOCK	95.2	13.3		13,387	15,446	17,505				
WR CEDAR	178.9	25.0		1,431	1,909	2,388				
R ALDER	192.5	27.0		1,151	1,575	2,000				
TOTAL	38.8	5.4		38,212	40,407	42,602	60	31	15	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR				125	142	159				
WHEMLOCK				112	130	147				
WR CEDAR				49	66	82				
R ALDER	130.5	18.3		56	77	98				
TOTAL	221.3	31.0		119	126	133	1,959	1,000	490	

Species Summary - Trees, Logs, Tons, CCF, MBF

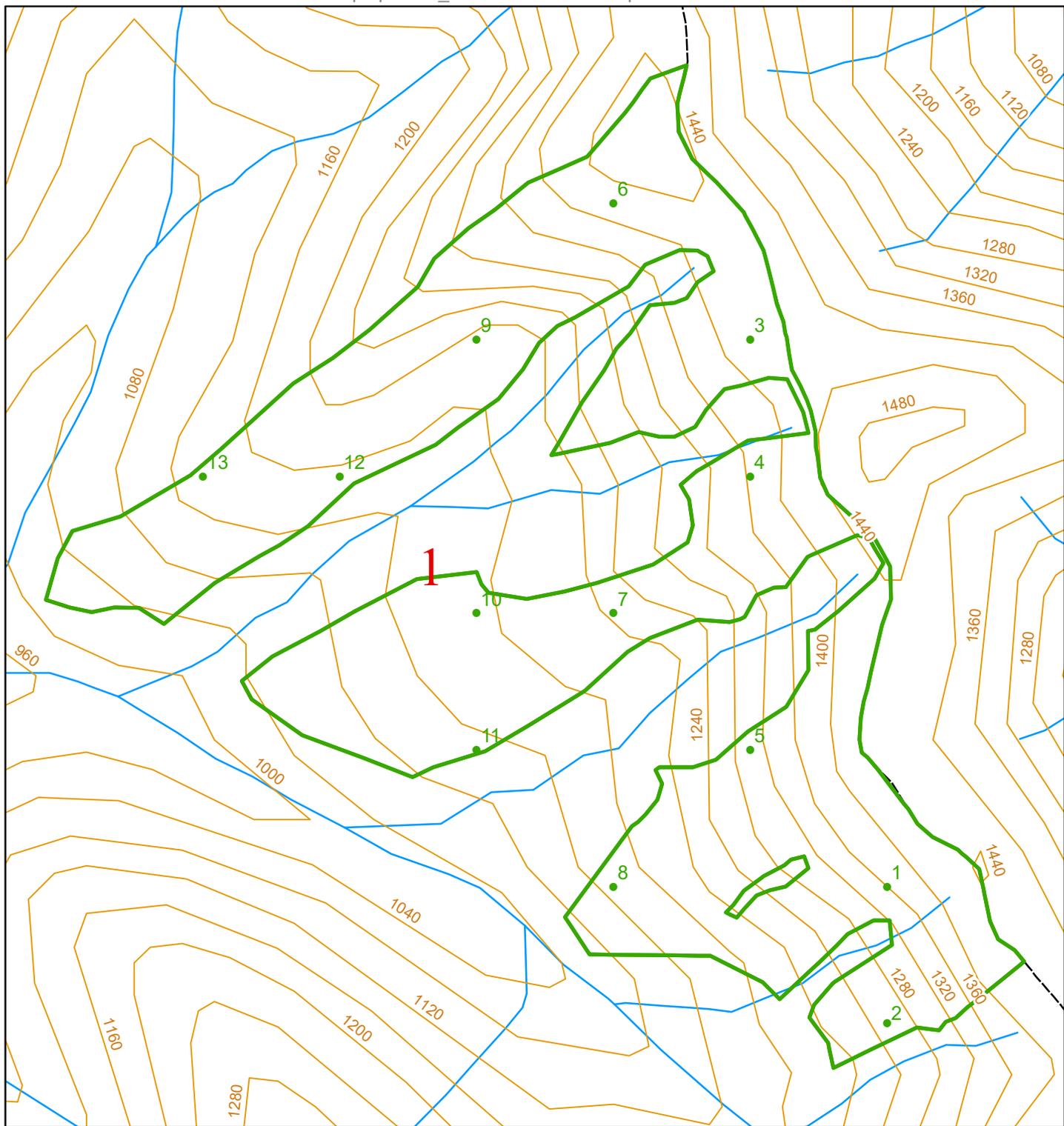
T000 R000 S00 TyU1	30.7
T000 R000 S00 TyU2	24.8
T000 R000 S00 TyU6	100.7

Project SUMMIT
Acres 195.40

Page No 1
Date: 5/10/2018
Time 1:18:21PM

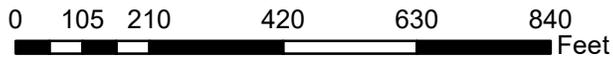
Species	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
DOUG FIR	17,834	33,223	31,976	62.75	33.68	1.03	11,220	11,191	4,223	4,009
WHEMLOCK	19,407	31,489	24,507	39.46	24.32	0.74	7,658	7,658	2,888	2,752
WR CEDAR	9,031	9,927	3,514	16.54	15.05	0.55	1,495	1,494	410	380
R ALDER	6,350	10,430	3,015	16.71	10.18	0.40	1,096	1,061	376	336
PS FIR	103	205	236	80.39	40.20	1.00	82	82	28	27
Totals	52,724	85,275	63,249	40.75	25.20	0.81	21,552	21,487	7,925	7,505

Wood Type Species	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
C	46,374	74,845	60,234	44.04	27.29	0.85	20,456	20,425	7,549	7,169
H	6,350	10,430	3,015	16.71	10.18	0.40	1,096	1,061	376	336
Totals	52,724	85,275	63,249	40.75	25.20	0.81	21,552	21,487	7,925	7,505



Cruiser Sample Point Locations

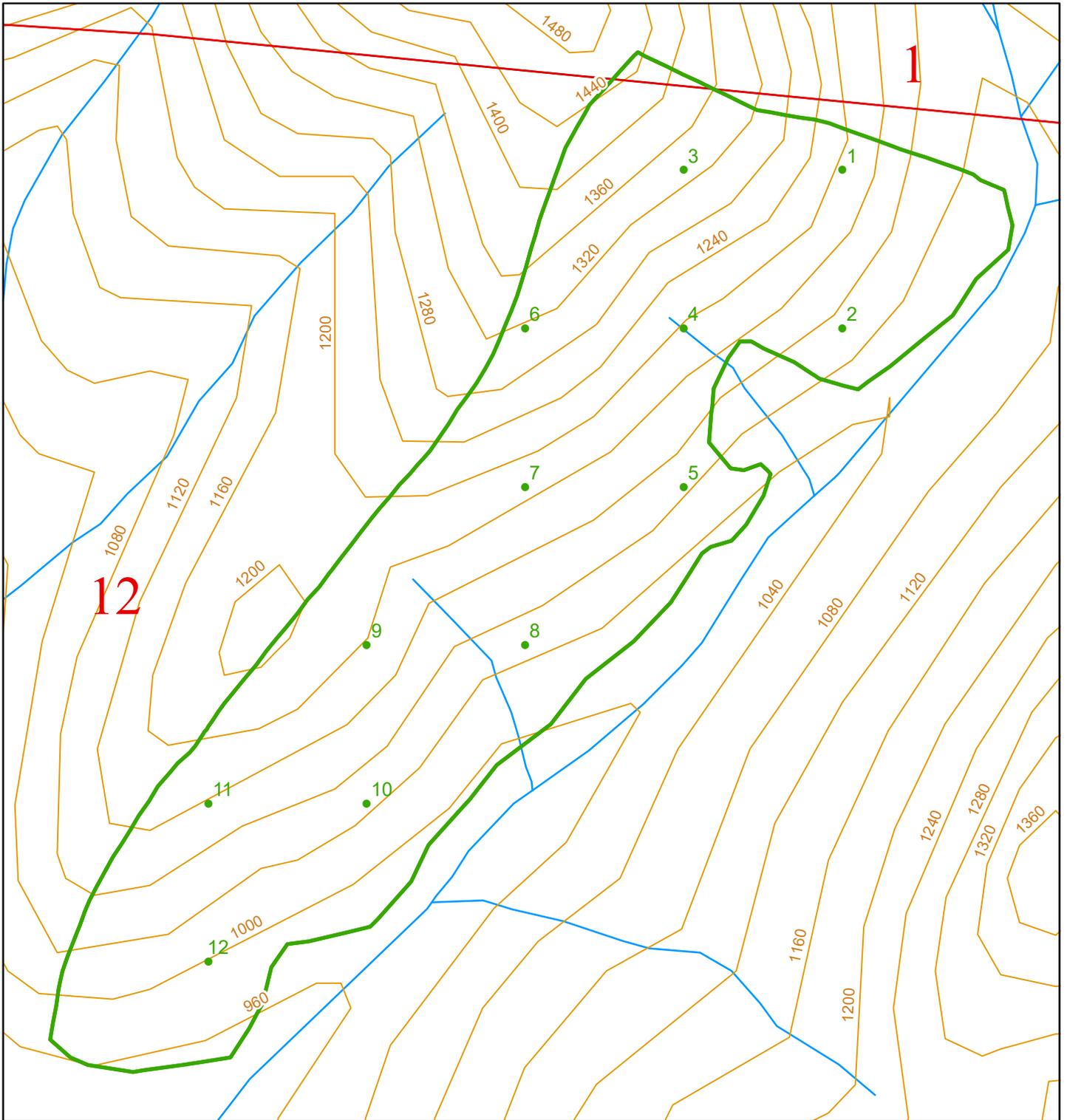
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POLY ID:	1	Total Sample Points:	13
Acres:	30	Spacing Between Points:	Width: 290 Height: 290
		Point Rotation Degrees:	0



Scale 1:3,600

Legend

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot



Cruiser Sample Point Locations

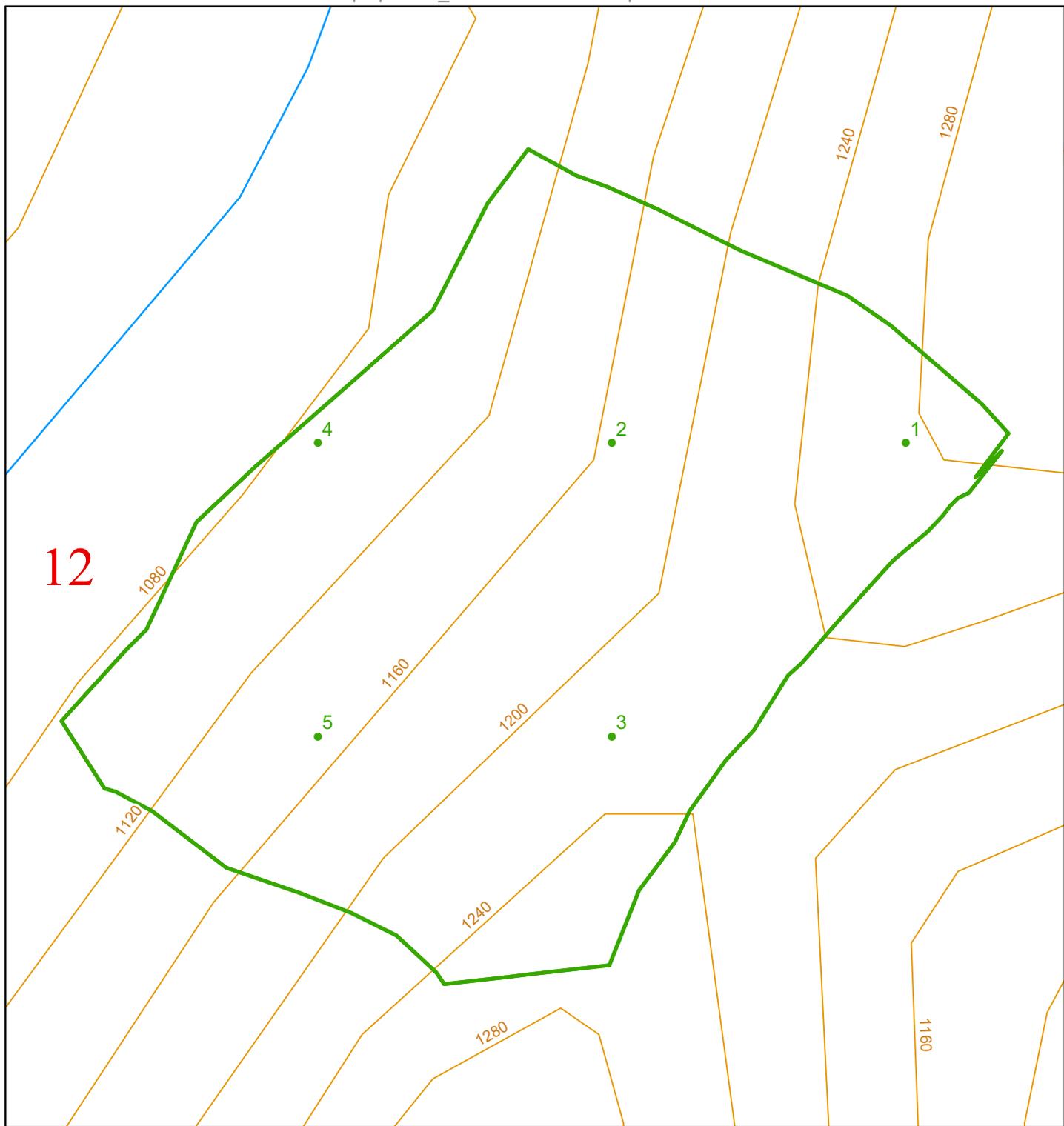
LAYER NAME:	export_output	Township:	T30R12W
POLY ID:	1	Total Sample Points:	12
Acres:	25	Spacing Between Points:	Width: 290 Height: 290
		Point Rotation Degrees:	0



Scale 1:3,100

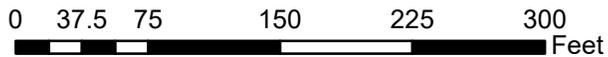
Legend

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot



Cruiser Sample Point Locations

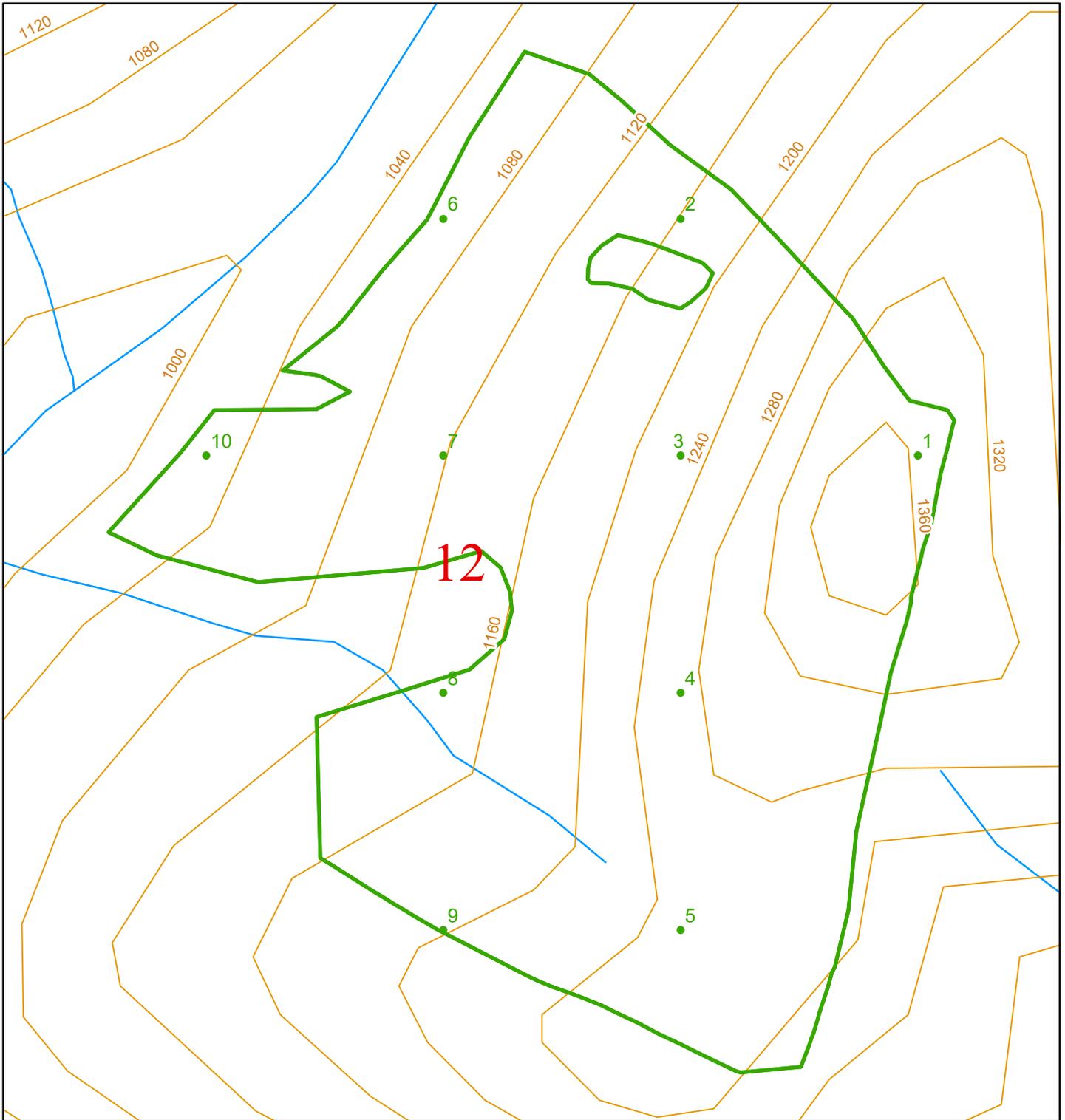
LAYER NAME:	export_output	Township:	T30R12W
POLY ID:	1	Total Sample Points:	5
Acres:	6	Spacing Between Points:	225
		Point Rotation Degrees:	0



Scale 1:1,300

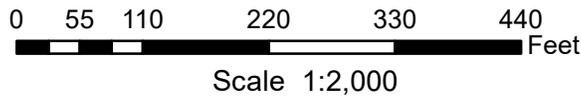
Legend

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot



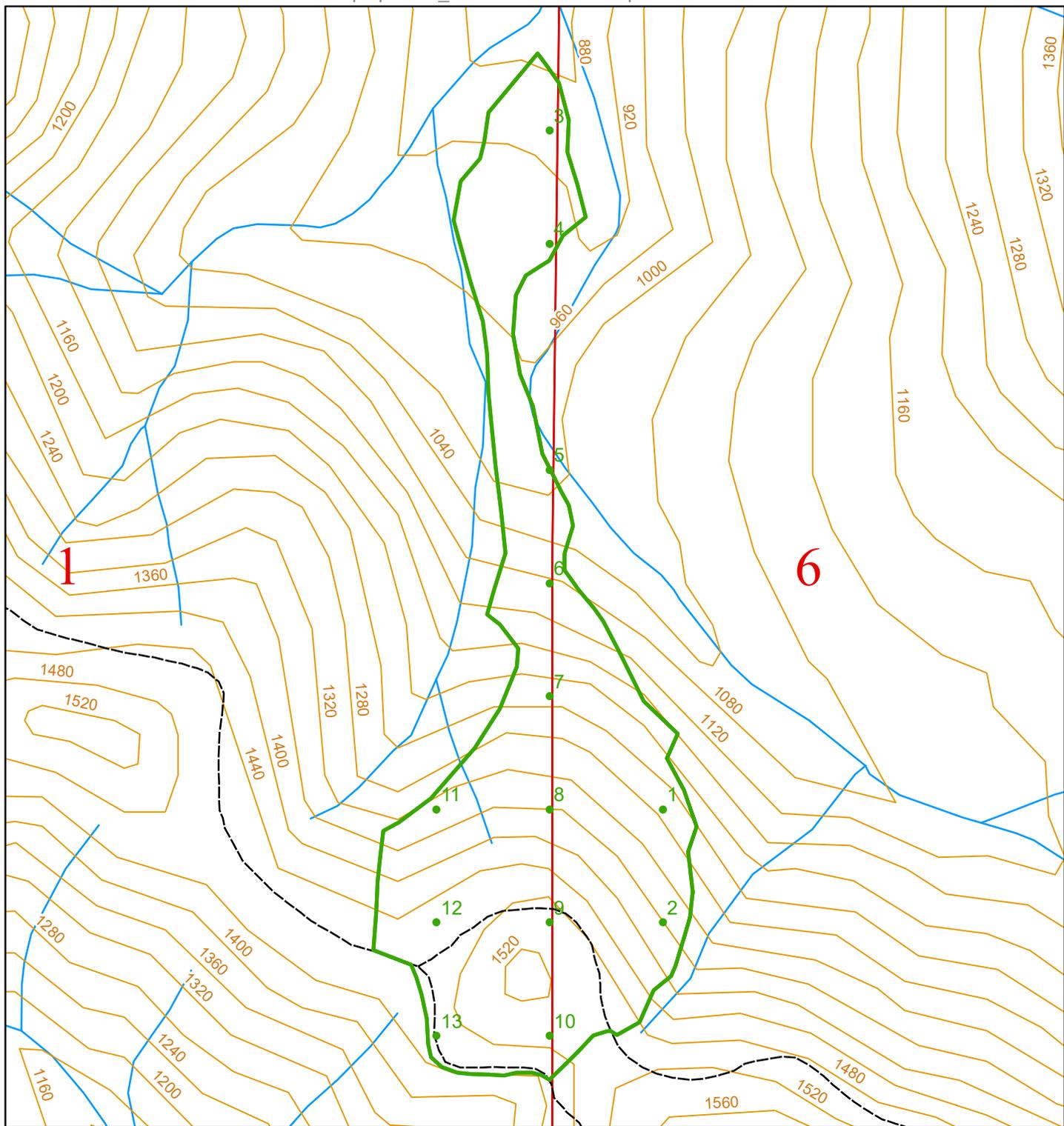
Cruiser Sample Point Locations

LAYER NAME:	export_output	Township:	T30R12W
POLY ID:	1	Total Sample Points:	10
Acres:	14	Spacing Between Points:	Width: 280 Height: 280
		Point Rotation Degrees:	0



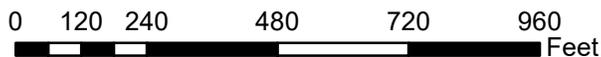
Legend

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot



Cruiser Sample Point Locations

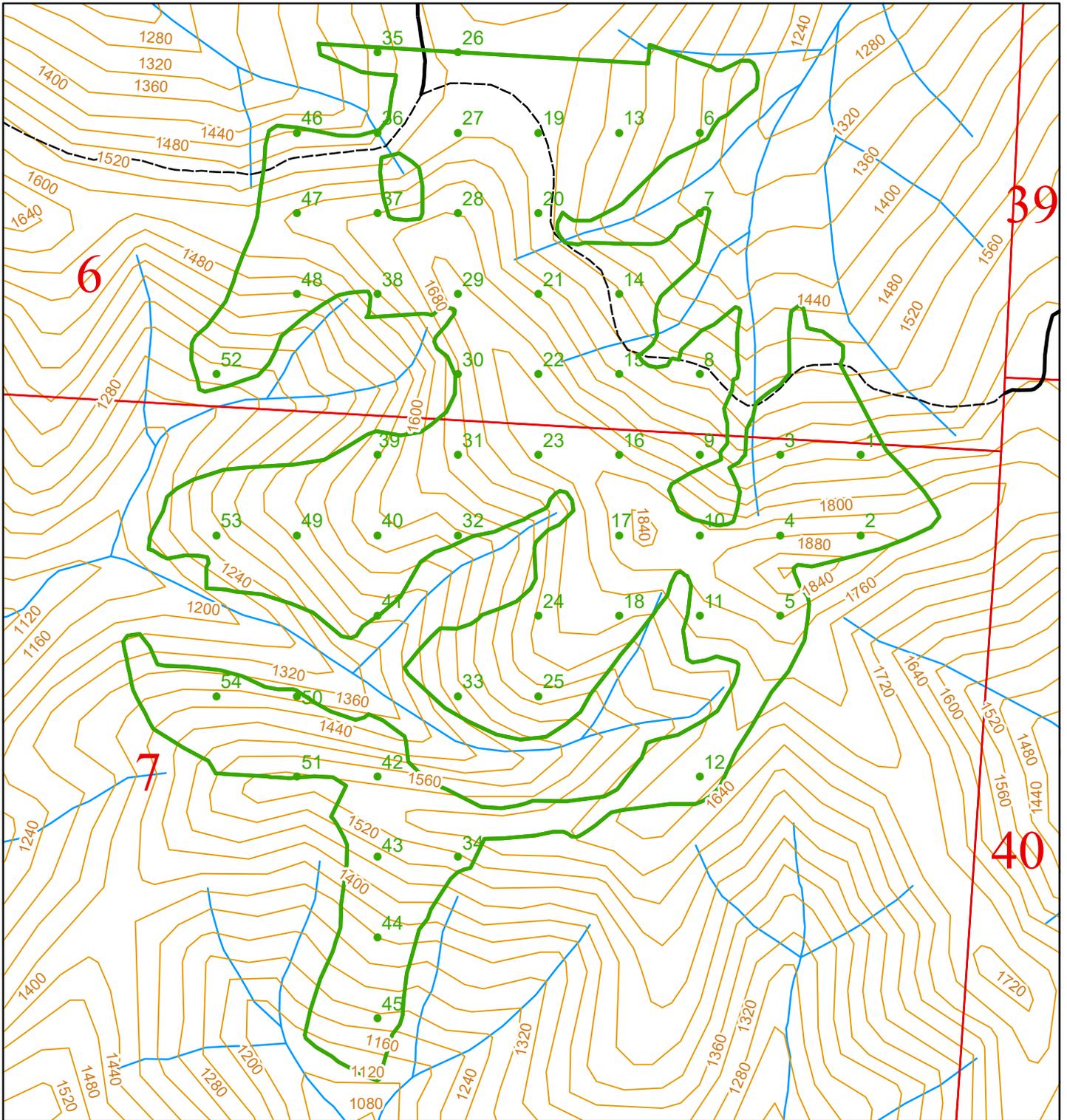
LAYER NAME:	export_output	Township: T30R12W, T30R11W
POLY ID:	1	Total Sample Points: 13
Acres:	19	Spacing Between Points: Width: 280 Height: 280
		Point Rotation Degrees: 0



Scale 1:4,200

Legend

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot

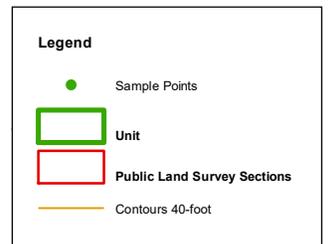


Cruiser Sample Point Locations

LAYER NAME:	claudesummit_plan	Township:	T30R11W
POLY ID:	1	Total Sample Points:	54
Acres:	101	Spacing Between Points:	Width: 290 Height: 290
		Point Rotation Degrees:	0



Scale 1:6,100





Forest Practices Application/Notification
Notice of Decision

FPA/N No: 2615560
Effective Date: 8/15/2018
Expiration Date: 8/15/2021
Shut Down Zone: 652NW
EARR Tax Credit: Eligible Non-eligible
Reference: Dept. of Natural Resources
Claude Summit

Decision

- Notification Operations shall not begin before the effective date.
- Approved This Forest Practices Application is subject to the conditions listed below.
- Disapproved This Forest Practices Application is disapproved for the reasons listed below.
- Closed Applicant has withdrawn FPA/N.

FPA/N Classification

Class II Class III Class IVG Class IVS

Number of Years Granted on Multi-Year Request

4 years 5 years

Conditions on Approval / Reasons for Disapproval

Issued By: Erik Dukes Region: Olympic

Title: Forest Practice Forester Date: 8/15/2018

Copies to: Landowner, Timber Owner and Operator.

Issued in person: Landowner Timber Owner Operator By: *J. Mikhaud*

Appeal Information

You have thirty (30) days to appeal this Decision and any related State Environmental Policy Act determinations to the Pollution Control Hearings Board in writing at the following addresses:

Physical address: 1111 Israel Rd. SW, Ste 301, Tumwater, WA 98501

Mailing address: P.O. BOX 40903, OLYMPIA, WA 98504-0903

Information regarding the Pollution Control Hearings Board can be found at: <http://www.eluho.wa.gov/>

At the same time you file an appeal with the Pollution Control Hearings Board, also send a copy of the appeal to the Department of Natural Resources' region office and the Office of the Attorney General at the following addresses:

Office of the Attorney General
Natural Resources Division
1125 Washington Street SE
PO Box 40100
Olympia, WA 98504-0100

And

Department Of Natural Resources
Olympic Region
411 Tillicum Lane
Forks, WA 98331

Other Applicable Laws

Operating as described in this application/notification does not ensure compliance with the Endangered Species Act, or other federal, state, or local laws.

Transfer of Forest Practices Application/Notification (WAC 222-20-010)

Use the "Notice of Transfer of Approved Forest Practices Application/Notification" form. This form is available at region offices and on the Forest Practices website: <http://www.dnr.wa.gov/businesspermits/forestpractices>. Notify DNR of new Operators within 48 hours.

Continuing Forest Land Obligations (RCW 76.09.060, RCW 76.09.070, RCW 76.09.390, and WAC 222-20-055)

Obligations include reforestation, road maintenance and abandonment plans, conversions of forest land to non-forestry use and/or harvest strategies on perennial non-fish habitat (Type Np) waters in Eastern Washington.

Before the sale or transfer of land or perpetual timber rights subject to continuing forest land obligations, the seller must notify the buyer of such an obligation on a form titled "Notice of Continuing Forest Land Obligation". The seller and buyer must both sign the "Notice of Continuing Forest Land Obligation" form and send it to the DNR Region Office for retention. This form is available at DNR region offices.

If the seller fails to notify the buyer about the continuing forest land obligation, the seller must pay the buyer's costs related to continuing forest land obligations, including all legal costs and reasonable attorneys' fees incurred by the buyer in enforcing the continuing forest land obligation against the seller.

Failure by the seller to send the required notice to the DNR at the time of sale will be prima facie evidence in an action by the buyer against the seller for costs related to the continuing forest land obligation prior to sale.

DNR affidavit of mailing:

On this day _____, I placed in the United States mail at _____, WA,	
(date)	(post office location)
postage paid, a true and accurate copy of this document. Notice of Decision FPA # <u>2615560</u>	
_____	_____
(Printed name)	(Signature)

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

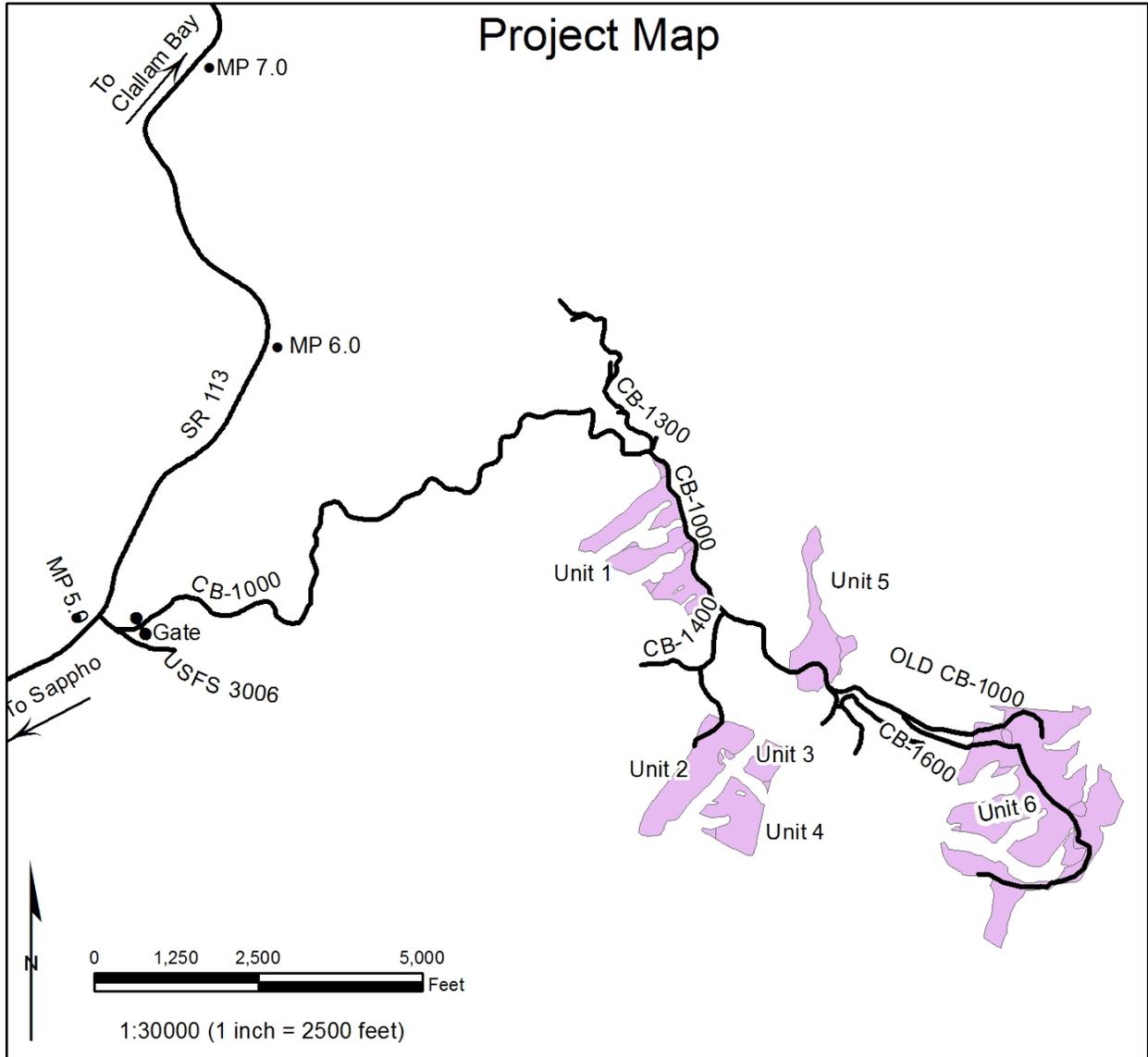
CLAUDE SUMMIT TIMBER SALE ROAD PLAN
CLALLAM COUNTY
COAST DISTRICT

AGREEMENT NO.: 30-097259

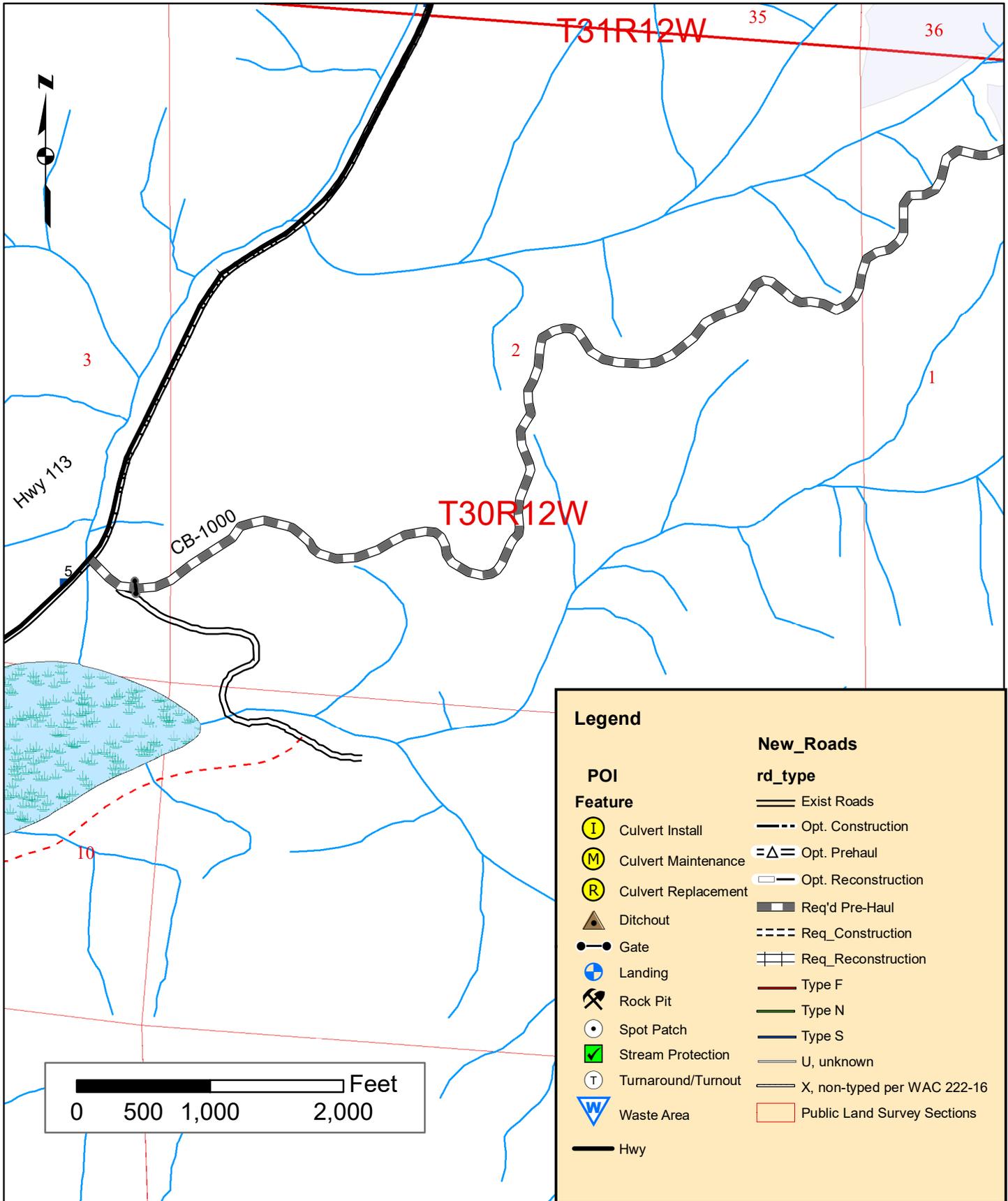
STAFF ENGINEER: BILL MEHL

DATE: 09/12/2018

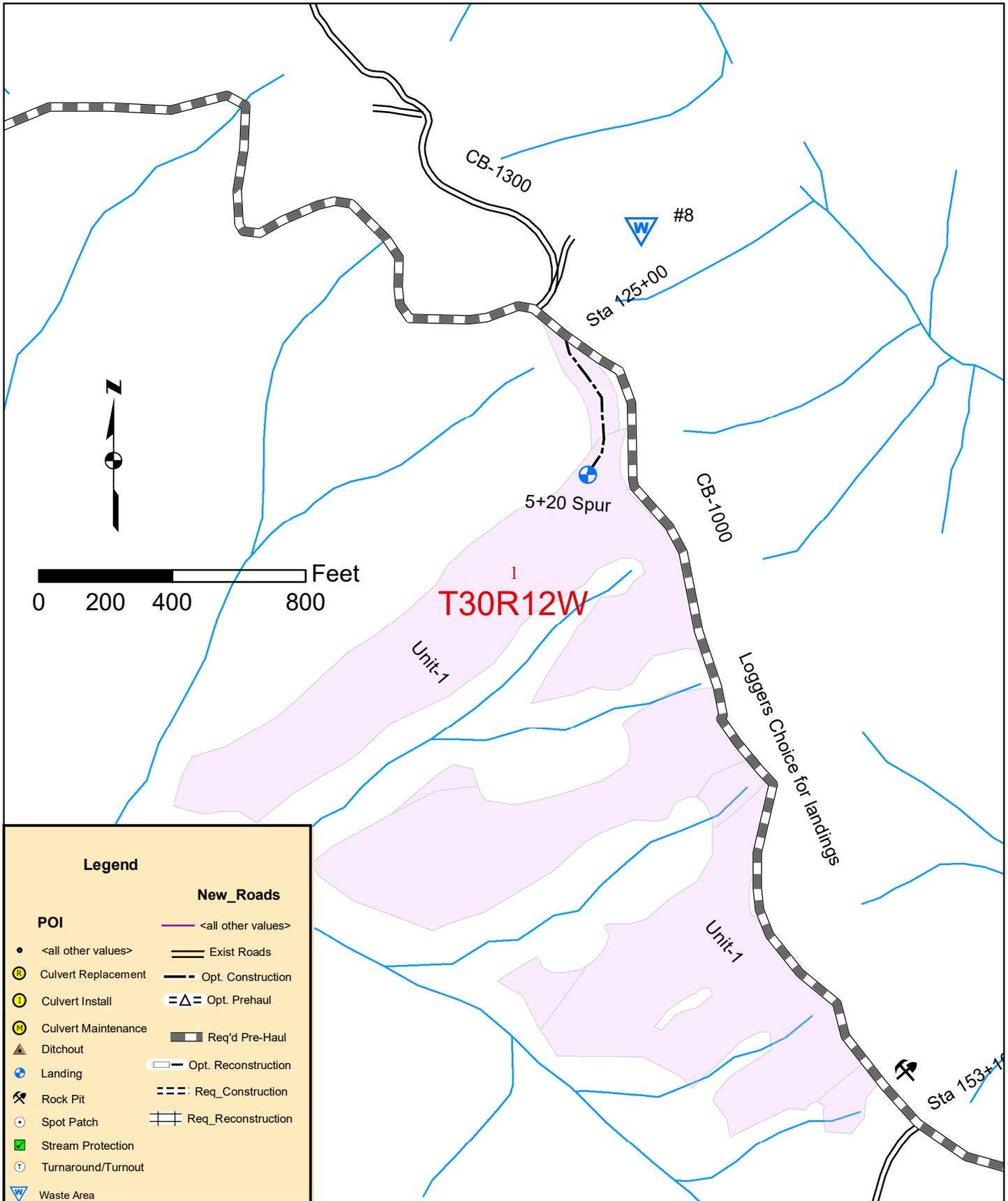
DRAWN & COMPILED BY: BILL MEHL



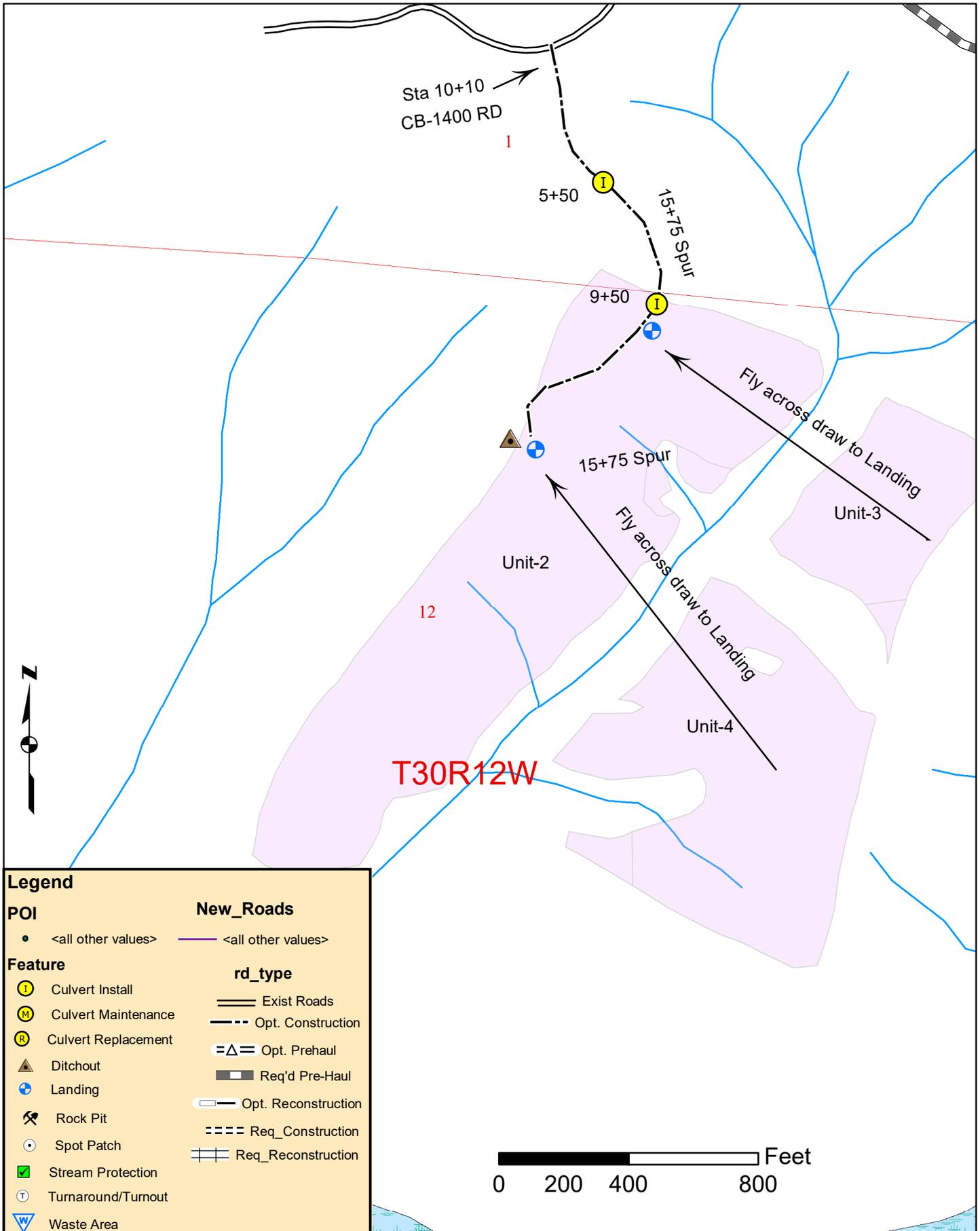
CB-1000 Pre-haul Maintenance



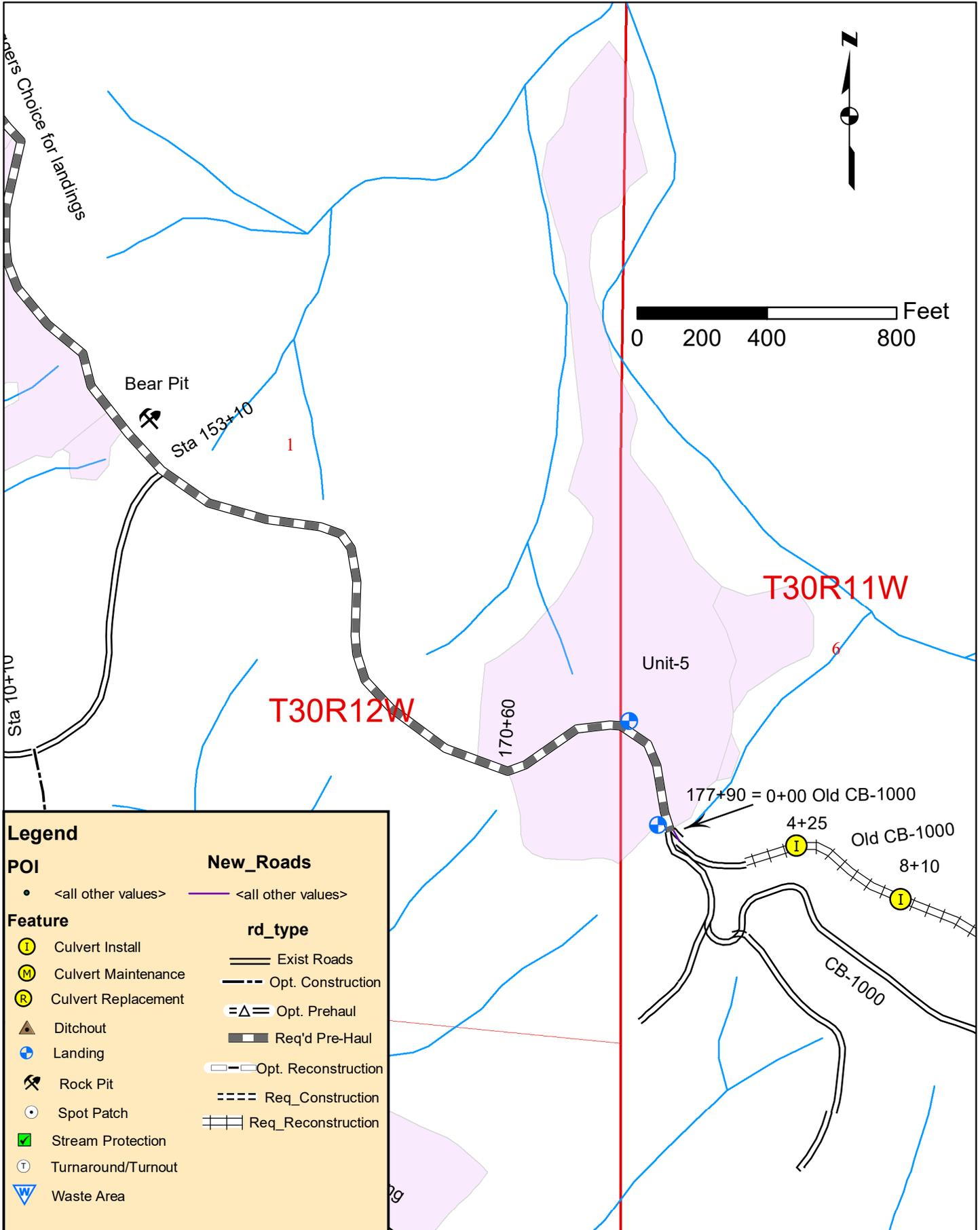
Claude Summit Unit 1



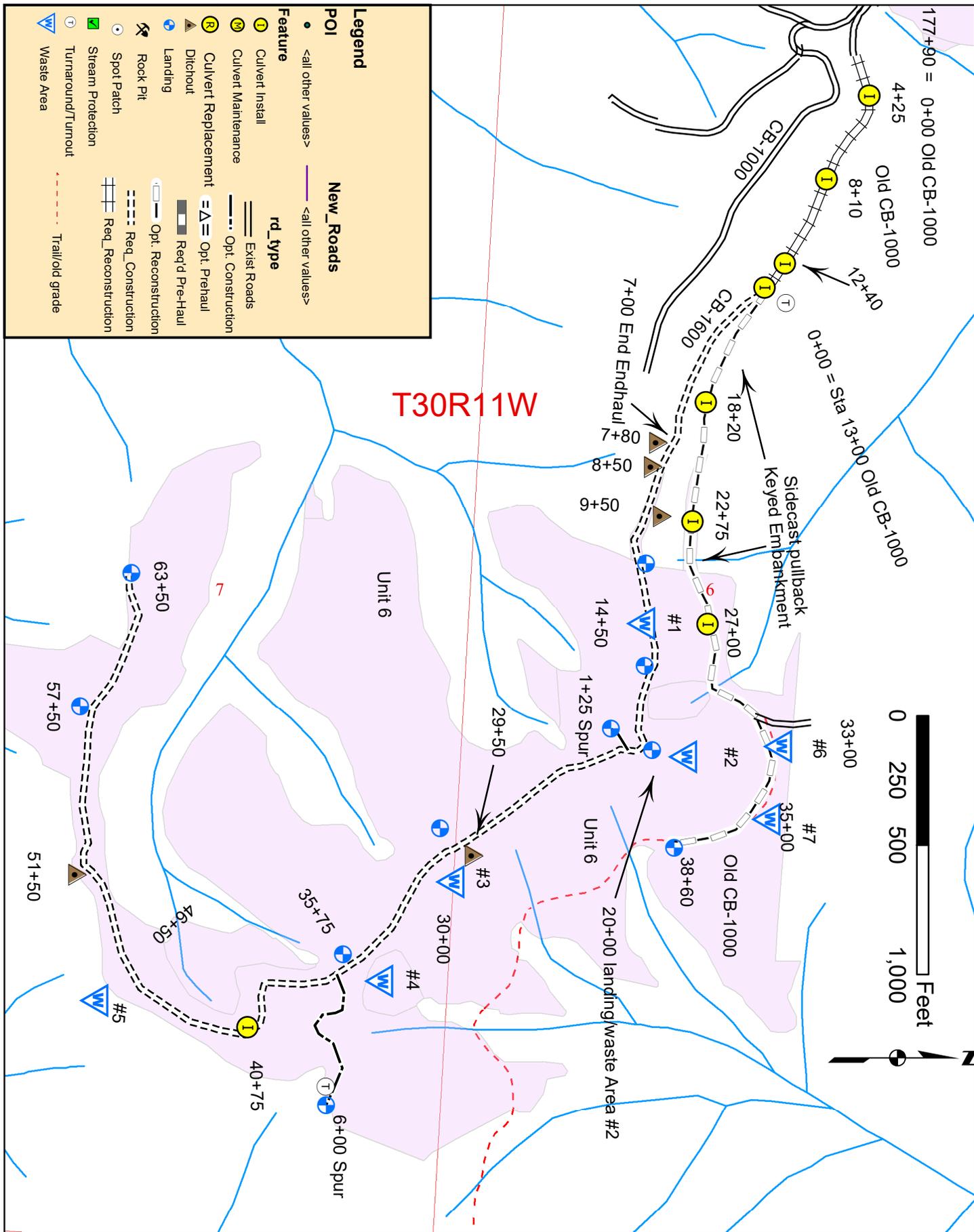
Claude Summit Units 2 - 4



Claude Summit Unit 5



Claude Summit Unit 6



SECTION 0 – SCOPE OF PROJECT

0-1 ROAD PLAN SCOPE

Clauses in this road plan apply to all road related work, including landings and rock source development, unless otherwise noted.

0-2 REQUIRED ROADS

The specified work on the following roads is required.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
CB-1000	177.90	Pre-haul Maintenance
CB-1600	63.50	Construction
Old CB-1000	13.00	Reconstruction

0-3 OPTIONAL ROADS

The specified work on the following roads is not required. Any optional roads built by the Purchaser must meet all the specifications in the road plan.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
5+20 Spur	5.20	Construction
15+75 Spur	15.75	Construction
Old CB-1000	25.60	Reconstruction
1+25 Spur	1.25	Construction
6+00 Spur	6.00	Construction

0-4 CONSTRUCTION

This project includes, but is not limited to the following construction requirements:

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
5+20 Spur	0+00 – 5+20	Construction
15+75 Spur	0+00 – 15+75	Construction
CB-1600	0+00 – 63+50	Construction
1+25 Spur	0+00 – 1+25	Construction
6+00 Spur	0+00 – 6+00	Construction
Total:	91.70 Sta	

Construction includes, but is not limited to:

Clearing, grubbing, right-of-way debris disposal, excavation and/or embankment to subgrade, end hauling material for construction, compacting road surfaces, constructing ditchlines, constructing ditchouts, constructing turnouts and turnarounds, curve widening, acquisition and installation of drainage structures, application of rock, spreading grass seed and hay.

0-5 RECONSTRUCTION

This project includes, but is not limited to the following reconstruction requirements:

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
Old CB-1000	0+00 – 38+60	Reconstruction
Total:	38.60 Sta	

Reconstruction includes, but is not limited to:
 Installing additional culvert, realigning road segments, application of rock, removing culvert.

0-6 PRE-HAUL MAINTENANCE

This project includes, but is not limited to the following prehaul maintenance requirements:

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
CB-1000	0+00-177+90	Grade, shape and compact road in accordance with Typical Section Sheet and compact in accordance with Compaction List.

Maintenance includes, but is not limited to:
 Brushing right-of-way, right-of-way debris disposal, cleaning ditches, constructing ditches, installing additional culverts, widening road segments, constructing headwalls, cleaning culvert inlets and outlets, cross drain culvert replacement, installing erosion control materials and sediment removal structures, spot rocking, grading and shaping existing road surface and turnouts, constructing additional turnouts, compaction of road surface, application of rock, acquisition and application of grass seed and hay.

0-7 POST-HAUL MAINTENANCE

This project includes post-haul road maintenance listed in Clause 9-5.

0-12 DEVELOP ROCK SOURCE

Development will involve stripping approximately 1 acre in Mary Clark Pit to useable rock as determined by the Contract Administrator and as shown on the Mary Clark pit plan.

0-13 STRUCTURES

The Purchaser shall acquire and install all structures. Requirements for these structures are listed in Section 7 Structures.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

If the Purchaser desires a change from this Road Plan including, but not limited to relocation, extension, change in design, or adding roads; a revised road plan shall be submitted, in writing, to the Contract Administrator for consideration. The State must approve the submitted plans before road work begins.

1-2 UNFORESEEN CONDITIONS

Quantities established in this road plan are minimum acceptable values. Additional quantities required by the state due to unforeseen conditions, or Purchaser's choice of construction season or techniques will be at the Purchaser's expense. Unforeseen conditions include, but are not limited to, solid subsurface rock, subsurface springs, saturated ground, and unstable soils.

1-3 ROAD DIMENSIONS

Unless controlled by construction stakes or design data (plan, profile, and cross-sections), road work shall be performed in accordance with the dimensions shown on the Typical Section Sheet and the specifications within this Road Plan.

1-5 DESIGN DATA

Road design data is available upon request at the Department of Natural Resources Olympic Region Office in Forks, WA.

1-6 ORDER OF PRECEDENCE

Any conflict or inconsistency in this Road Plan shall be resolved by giving the documents precedence in the following order:

1. Addenda.
2. Designs or Plans. On designs and plans, figured dimensions shall take precedence over scaled dimensions.
3. Road Plan Clauses.
4. Typical Section Sheet.
5. Standard Lists.
6. Standard Details.

In case of any ambiguity or dispute over interpreting the Road Plan, the Contract Administrator's or designee's decision will be final.

1-7 TEMPORARY ROAD CLOSURE

The Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before the closure of any road. Road work shall not close any road for more than 3 consecutive days.

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

The Purchaser is responsible for the repair or replacement of all materials, roadway infrastructure, and road components damaged during roadwork or operation activities. Repairs and replacements shall be directed by the Contract Administrator. Repairs to structural materials will be made according to the manufacturer's recommendation, and shall not begin without written approval from the Contract Administrator.

1-9 DAMAGED METALLIC COATING

Any damaged galvanized or aluminized coating on existing or new bridge components, culverts, downspouts, and flumes must be cleaned and treated with a minimum of two coats of zinc rich paint.

1-10 WSDOT STANDARD SPECIFICATION REFERENCE

References in this road plan to "WSDOT Standard Specifications" mean the Washington State Department of Transportation's Standard Specifications for Road, Bridge, and Municipal Construction 2012 (M41-10).

1-12 SURVEY MONUMENTS

At no time during construction, reconstruction, or maintenance shall survey monuments, witness trees, or bearing trees be disturbed or damaged. If damaged or disturbed, Purchaser shall hire a licensed land surveyor to repair, replace, and/or reset them.

SUBSECTION ROAD MARKING

1-15 ROAD MARKING

Road work must be in accordance with the State's marked location. All road work is marked as follows:

- Orange ribbon and paint for construction centerlines.
- Construction stakes for everything else.

1-16 CONSTRUCTION STAKES SET BY STATE

Purchaser shall perform work on the following road(s) in accordance with the construction stakes set in the field for grade and alignment. Purchaser's contractor shall notify DNR 3 days before starting work on the Old CB-1000 or CB-1600.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
CB-1600	0+00 -7+00	Centerline & Slope Stakes

1-18 REFERENCE POINT DAMAGE

Purchaser shall reset reference points (RPs) that were moved or damaged at any time during construction to their original locations. Excavation and embankment may not proceed on road segments controlled by said RPs until Purchaser resets all moved or damaged RPs.

SUBSECTION TIMING

1-20 COMPLETE BY DATE

Purchaser shall complete pre-haul road work before the start of timber haul.

1-21 HAUL APPROVAL

The Purchaser shall not use roads under this Road Plan without written approval from the Contract Administrator.

1-22 WORK NOTIFICATIONS

On all roads, the Purchaser shall notify the Contract Administrator a minimum of 3 calendar days before work begins.

1-23 ROAD WORK PHASE APPROVAL

Written approval by Contract Administrator needs to be given at these phases of road work:

- Subgrade approval
- Drainage installation
- Subgrade compaction
- Rock application
- Rock compaction

SUBSECTION RESTRICTIONS

1-25 ACTIVITY TIMING RESTRICTION

On the following road(s), the specified activities are not permitted during the listed closure period(s) unless authorized in writing by the Contract Administrator.

<u>Road</u>	<u>Stations</u>	<u>Activity</u>	<u>Closure Period</u>
All	All	Construction	October 31 th – April 1st

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 Activity Timing Restriction, the Purchaser shall provide a maintenance plan to include further protection of State resources. The Contract Administrator must approve the maintenance plan in writing, and preventative measures shall be put in place, before operation in the closure period. The Purchaser shall be required to maintain all haul roads at their own expense including those listed in Contract Clause C-060 Designated Road Maintainer. If other operators are using, or desire to use these designated maintainer roads, a joint operating plan shall be developed. All parties shall follow this plan.

1-29 SEDIMENT RESTRICTION

Purchaser shall not allow silt-bearing runoff to enter any streams.

1-30 CLOSURE TO PREVENT DAMAGE

In accordance with Contract Clause G-220 State Suspends Operation, the Contract Administrator shall suspend road work or hauling of right-of-way timber, forest products, or rock under the following conditions:

- In the opinion of the Contract Administrator excessive road damage or rutting may occur.

Operations must stop unless authority to continue working or hauling is granted, in writing, by the Contract Administrator. In the event that surface or base stability problems persist, the Purchaser will be required to cease operations, or perform corrective maintenance or repairs, subject to specifications within this Road Plan. Before and during any suspension, the Purchaser shall protect the work from damage or deterioration.

1-32 ASPHALT SURFACE RESTRICTION

The use of metal tracked equipment is not allowed on asphalt surfaces at any time. If Purchaser must run equipment on asphalt surfaces, then rubber tired equipment or other methods, as approved in writing by Contract Administrator, shall be used.

1-33 SNOW PLOWING RESTRICTION

On all roads, snow plowing shall be permitted only after the execution of a Snow Plowing Agreement, which is available from the Contract Administrator upon request. Purchaser shall request a Snow Plowing Agreement each time plowing occurs. If damage occurs while plowing, further permission to plow may be revoked by the Contract Administrator.

SUBSECTION OTHER INFRASTRUCTURE

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

At existing road approaches to county roads and state highways, any mud, dirt, rock or other material tracked or spilled on the asphalt surface shall be removed immediately by the Purchaser.

If additional damage to the surface, signs, guardrails, etc. occurs then the damage shall be repaired, at the Purchaser's expense, as directed by the Contract Administrator when authorized by the county or WSDOT.

The following county roads and state highways are affected by this sale:

<u>Road Name</u>
Hwy 113
Mary Clark Road

1-41 REQUIREMENTS FOR PAVED ROAD APPROACHES

Requirements for the USFS 3006/HWY 113 road approaches:
Approaches shall be built up to allow a smooth grade transition between the USFS 3006 and HWY 113 roads. The top of the USFS 3006 road surfacing shall be kept level with the asphalt surface of the HWY 113 road at all times. On sloped approaches, the surface of the USFS 3006 approach shall slope from the edge of the HWY 113 road at the rate of no more than 2%, unless otherwise directed by the Contract Administrator.

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

Purchaser shall maintain all roads used under this contract in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS for the entire term of this contract. Maintenance is required even during periods of inactivity.

2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE

Purchaser shall perform maintenance on roads listed in Contract Clause C-050 PURCHASER ROAD MAINTENANCE AND REPAIR in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

Purchaser may be required to perform maintenance on roads listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER as directed by the Contract Administrator. Purchaser shall maintain roads in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

2-5 MAINTENANCE GRADING – EXISTING ROAD

On the following road(s), a grader shall be used to shape the existing surface.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
CB-1000	0+00 - 177+90	Grade, Shape, and compact existing road surface

2-8 MAINTAINING EROSION CONTROL STRUCTURES

On the following road(s), Purchaser shall clean and maintain all erosion control devices. Work shall be completed before the start of timber haul and shall be done in accordance with all pertaining clauses contained in this Road Plan. Excavated material shall be disposed of in accordance with Clause 4-35 through Clause 4-38.

<u>Road</u>	<u>Stations</u>	<u>Work Needed</u>
CB-1000	0+00 – 177+90	Maintain silt fences as directed by C/A

2-9 REMOVING VEGETATIVE MATERIAL

On the following road(s), Purchaser shall remove all vegetative material, dirt, mud, and other debris on the existing road surface with a minimum loss of rock. Material removed shall be disposed of in accordance with Clause 3-21 through Clause 3-25 and Clause 4-36 through Clause 4-38.

<u>Road</u>	<u>Stations</u>
Old CB-1000	0+00 – 38+60

**SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL
SUBSECTION BRUSHING**

3-2 BRUSHING RESTRICTION

Pulling, digging, pushing over, and other non-cutting methods used for vegetation removal shall not be used for brushing. Excavator buckets, log loaders and similar equipment shall not be used for brushing.

3-3 BRUSH REMOVAL

Remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets. Brush should be disposed of so that it will not fall back onto the road prism.

SUBSECTION CLEARING

3-5 CLEARING

Purchaser shall fall all vegetative material larger than 5 inches DBH or over 15 feet high between the marked right-of-way boundaries or if not marked in the field, between the clearing limits specified on the TYPICAL SECTION SHEET. Clearing must be completed before starting excavation and embankment.

Deck all merchantable right-of-way timber. Decks shall be parallel to the road centerline and placed within the cleared right-of-way. Decks shall be free of dirt, limbs and other right-of-way debris, and removable by standard log loading equipment.

3-8 PROHIBITED DECKING AREAS

Right-of-way timber shall not be decked in the following areas:

- Within the grubbing limits.
- Within 50 feet of any stream.

- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- On slopes greater than 40%.
- Against standing trees unless approved by the Contract Administrator.

SUBSECTION GRUBBING

3-10 GRUBBING

Remove all stumps between the grubbing limits specified on the Typical Section Sheet. Those stumps outside the grubbing limits but with undercut roots shall also be removed. Stump removal shall be accomplished using a hydraulic mounted excavator unless authorized, in writing, by the Contract Administrator. Grubbing shall be completed before starting excavation and embankment.

3-12 STUMP PLACEMENT

Grubbed stumps shall be placed outside of the clearing limits, as directed by the Contract Administrator and in compliance with all other clauses in this road plan. Stumps shall be positioned upright with root wads in contact with the forest floor and on stable locations.

3-14 STUMPS WITHIN DESIGNATED WASTE AREAS

In the following waste area(s), the removal of stumps is not required within waste areas if they are cut flush with the ground.

<u>Road</u>	<u>Waste Area</u>	<u>Stations</u>
Old CB-1000	#6 & #7	All

SUBSECTION ORGANIC DEBRIS

3-20 ORGANIC DEBRIS DEFINITION

Organic debris is defined as all vegetative material not eligible for removal by Contract Clauses G-010 Products Sold And Sale Area or G-011 Right To Remove Forest Products And Contract Area, that is larger than one cubic foot in volume within the grubbing Typical Section Sheet.

3-21 DISPOSAL COMPLETION

All disposal of organic debris, shall be completed before the application of rock.

3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS

Waste areas for organic debris at the following locations shall be located as listed below.

<u>Road</u>	<u>Stations</u>	<u>Waste Area Location</u>
Old CB-1000	0+00 – 33+00	#7
CB-1600	0+00 – 7+00	#7
CB-1600	17+60 – 19+00	#2
CB-1600	30+80 – 35+00	#2
CB-1600	47+00 – 50+50	#5
5+20 Spur	0+00 – 5+20	#8

3-23 PROHIBITED DISPOSAL AREAS

Organic debris shall not be deposited in the following areas:

- Within 5 feet of a cross drain culvert.
- Within 50 feet of a live stream, or wetland.
- On road subgrades road prism excavation and embankment slopes.
- On slopes greater than 45%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush will fall into the ditch or onto the road surface.
- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

Organic debris shall not be buried unless otherwise stated in this Road Plan.

3-25 SCATTERING ORGANIC DEBRIS

Organic debris shall be scattered outside of the grubbing limits in accordance with Clause 3-23 unless otherwise detailed in this Road Plan and as directed by the Contract Administrator.

SUBSECTION FILE

3-32 END HAULING ORGANIC DEBRIS

On the following road(s), organic debris shall be end hauled or pushed to the designated waste areas specified in Clause 3-22 Designated Waste Area For Organic Debris, or to a waste area located by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
Old CB-1000	0+00 – 33+00
CB-1600	0+00 – 7+00
CB-1600	17+60 – 19+00
CB-1600	30+80 – 35+00
CB-1600	47+00 – 50+50
5+20 Spur	4+20 – 5+20
6+00 Spur	0+00 – 6+00

SECTION 4 – EXCAVATION

4-1 EXCAVATOR CONSTRUCTION

All roads shall be constructed, reconstructed, and maintained using a track mounted hydraulic excavator unless stated otherwise within this Road Plan, or permission to do otherwise is granted in writing by the Contract Administrator.

4-2 PIONEERING

Pioneering shall not extend past construction that will be completed during the current construction season. Pioneering shall not extend more than 1000 feet beyond completed construction unless approved in writing by the Contract Administrator. In addition, the following actions shall be taken as pioneering progresses:

- Drainage shall be provided on all uncompleted construction.
- Road pioneering operations shall not undercut the final cut slope or restrict drainage.

- Culverts at live stream crossings shall be installed during pioneering operations prior to embankment.

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

The following road grade and alignment standards shall be followed:

- Grade and alignment shall have smooth continuity, without abrupt changes in direction.
- Maximum grade shall not exceed 18 percent favorable and 16 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Sag vertical curves shall not have a grade change greater than 5% in 100 feet.
- Crest vertical curves shall not have a grade change greater than 4% in 100 feet.

4-4 SWITCHBACK STANDARDS

A switchback is defined as a curved segment of road between a beginning and end of the same curve, where the change of traffic travel direction is greater than 90 degrees.

The following standards for switchbacks shall be followed:

- Adverse grades on switchbacks shall not exceed 10%.
- Favorable grades through switchbacks shall not exceed 12%.
- Transition grades entering and leaving switchbacks shall not exceed a 5% grade change.
- Transition grades required to meet switchback grade limitations shall be constructed on the tangents preceding and departing from the switchbacks.

4-5 CUT SLOPE RATIO

Unless construction staked or designed excavation slopes shall be constructed no steeper than shown on the following table:

<u>Material Type</u>	<u>Excavation Slope Ratio</u>	<u>Excavation Slope Percent</u>
Common Earth (on side slopes up to 55%)	1:1	100
Common Earth (56% to 70% side slopes)	¾:1	133
Common Earth (on slopes over 70%)	½:1	200
Fractured or loose rock	½:1	200
Hardpan or solid rock	¼:1	400

4-6 EMBANKMENT SLOPE RATIO

Unless construction staked or designed embankment slopes shall be constructed no steeper than shown on the following table:

<u>Material Type</u>	<u>Embankment Slope Ratio</u>	<u>Embankment Slope Percent</u>
Sandy Soils	2:1	50
Common Earth and Rounded Gravel	1½:1	67
Angular Rock	1¼:1	80

4-7 SHAPING CUT AND FILL SLOPE

Excavation and embankment slopes shall be constructed to a uniform line and left rough for easier revegetation.

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

- 6 feet for curves of 50 to 79 feet radius.
- 4 feet for curves of 80 to 100 feet radius.

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

- 2 feet for embankment heights at centerline of 2 to 6 feet.
- 4 feet for embankment heights at centerline of greater than 6 feet.

Embankment widening shall be applied equally to both sides of the road to achieve the required width.

4-11 KEYED EMBANKMENT

On the following road(s), embankments shall be keyed into the native slope in accordance with the Typical Embankment Key Detail Sheet.

<u>Road</u>	<u>Stations</u>
Old CB-1000	15+00 – 16+00
Old CB-1000	24+50 – 25+00

4-12 FULL BENCH CONSTRUCTION

Where side slopes exceed 45%, Purchaser shall use full bench construction for the entire subgrade width. Purchaser shall end haul waste material to the location specified in Clause 4-37.

<u>Road</u>	<u>Full Bench Location</u>	<u>Comments</u>
Old CB-1000	0+00 – 33+00	Get road width back
CB-1600	0+00 – 7+00	New Construction
CB-1600	17+60 – 19+00	New Construction
CB-1600	30+80 – 35+00	New Construction
CB-1600	47+00 – 50+50	New Construction
6+00 Spur	1+00 – 6+00	New Construction
15+75 Spur	0+00 – 15+00	New Construction

SUBSECTION INTERSECTIONS, TURNOUTS AND TURNAROUNDS

4-21 TURNOUTS

Turnouts shall be intervisible with maximum of 1,000 feet between turnouts unless shown otherwise on drawings. Locations shall be adjusted to fit the final subgrade alignment and sight distances. Turnout locations shall be subject to written approval by the Contract Administrator.

4-22 TURNAROUNDS

Turnarounds shall be no larger than 50 feet long and 30 feet wide. Locations shall be subject to written approval by the Contract Administrator.

SUBSECTION DITCH CONSTRUCTION

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

The Purchaser shall construct ditches into the subgrade as specified on the Typical Section Sheet. Excavated slopes shall be consistent with Clause 4-5 Cut Slope Ratio. Ditches shall be constructed concurrently with construction of the subgrade.

4-27 DITCH WORK – MATERIAL USE PROHIBITED

On all roads, pulling ditch material across the road or mixing in with the road surface will not be allowed. Excavated material shall be disposed of as specified in Clause 4-36 through Clause 4-38.

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

Ditchouts shall be constructed at locations shown on the list below, and as needed to fit as built conditions. Ditchouts shall be constructed in a manner that diverts ditch water onto the forest floor and shall have excavation backslopes no steeper than a 1:1 ratio. L or R denotes ditchout left or ditchout right heading in.

<u>Road</u>	<u>Station</u>	<u>L or R</u>
15+75 Spur	15+75	R
CB-1600	7+80	R
CB-1600	8+50	R
CB-1600	9+50	L
CB-1600	29+50	L
CB-1600	51+50	L

SUBSECTION WASTE MATERIAL (DIRT)

4-35 WASTE MATERIAL DEFINITION

Waste material is defined as all dirt, rock, mud, or related material that is extraneous or unsuitable for construction material. Waste material, as used in Section 4 EXCAVATION, is not organic debris.

4-36 DISPOSAL OF WASTE MATERIAL

Purchaser may sidecast waste material on side slopes up to 45% if the waste material is compacted and free of organic debris. On side slopes greater than 45%, all waste material must be end hauled or pushed to the designated embankment sites and waste areas identified in Clause 4-37

4-37 WASTE AREA LOCATION AND COMPACTION

There are eight waste areas located within the Timber sale. Waste areas designated as non-fill can be used for all waste material, including organic waste such as stumps, logs, and woody debris. Waste areas designated as fill, are only to be used for non-organic waste such as dirt, rock, or mud. Waste areas designated as “fill” will be compacted in 6 inch lifts the same as road construction where feasible.

The “non-fill” waste area’s minimum acceptable compaction is to be achieved by placing embankments in 2 foot or shallower lifts and routing excavation equipment over the

entire width of the lifts, The exceptions being for side hill embankments too narrow to accommodate excavation equipment may be placed by end-dumping or side casting until sufficiently wide to support the equipment. Compaction is not required for waste area W5. All “non-fill” waste areas will be grass seeded and hay spread over the surface before the start of the rainy season.

<u>Waste Area Identifier</u>	<u>Waste Area Location</u>	<u>Fill Type</u>	<u>Allowable Volume</u>
W1	CB-1600 sta 14+50	Non-fill	500 cy
W2	CB-1600 sta 20+00	Non-fill	7,000 cy
W3	CB-1600 sta 30+00	Non-fill	2,000 cy
W4	CB-1600 sta 35+00	Non-fill	2,000 cy
W5	CB-1600 sta 46+50	Non-fill	500 cy
W6	Old CB-1000 sta 33+00	Fill Only	6,000 cy
W7	Old CB-1000 sta 35+00	Non-fill	10,000 cy
W8	CB-1300 sta 3+50	Non-fill	10,000*

*Note: If first waste area on CB-1300 is full, or contractor wants, 2nd waste area at 8+85 can be used with C/A permission.

ESTIMATED WASTE BY ROAD

<u>Waste Area Location</u>	<u>Waste Generated From Road</u>	<u>Waste Generated at Stations</u>	<u>Estimated Volume</u>
#6 & #7	Old CB-1000	0+00 – 33+00	8,000
#6 & #7	CB-1600	0+00 – 7+00	3,500
#2	CB-1600	17+60 – 19+00	1,200
#2	CB-1600	30+80 – 35+00	4,000
#5	CB-1600	47+00 – 50+50	3,500
#2, #3 & #4	6+00 Spur	0+00 – 6+00	6,000
#8	15+75 Spur	0+00 – 8+00	8,000
#8	5+20 Spur	4+20 – 5+20	1,000
		Total Est. Waste:	35,200 CY

4-38 PROHIBITED WASTE DISPOSAL AREAS

Waste material shall not be deposited in the following areas:

- Within 5 feet of a cross drain culvert.
- Within 50 feet of a live stream or wetland.
- Within a riparian management zone.
- On side slopes steeper than 45%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Within the operational area for cable landings.
- Against standing timber.

4-39 WASTE AREA COMPACTION

Excavated material may be deposited adjacent to the road prism on side slopes up to 45% if the waste material is compacted and free of debris. On side slopes of 45% or more, all excavation shall be end hauled or pushed to designated waste areas. All waste

material shall be compacted. The minimum acceptable compaction is achieved by placing embankments in 2 foot or shallower lifts and routing excavation equipment over the entire width of the lifts, with the exception of side hill embankments too narrow to accommodate excavation equipment which may be placed by end-dumping or sidecasting until sufficiently wide to support the equipment.

SUBSECTION BORROW

4-45 SELECT BORROW

Select borrow shall consist of granular material, either naturally occurring or processed, and shall contain no more than 5% clay, organic debris, or trash by volume.

4-46 COMMON BORROW

Common borrow shall consist of soil, and/or aggregate that is non-plastic and shall contain no more than 5% clay, organic debris, or trash by volume. The material is considered non-plastic if the fines (passes the U.S. #40 sieve) in the sample cannot be rolled between the hand and a smooth surface into a thread at any moisture content.

4-47 NATIVE MATERIAL

Native material shall be excavated material free of organic debris, trash, and rocks greater than 12" in any dimension.

4-48 BORROW MATERIAL

Borrow material shall contain no more than 5% clay, organic debris, or trash by volume.

SUBSECTION SHAPING

4-55 ROAD SHAPING

The road subgrade and surface shall be shaped as shown on the Typical Section Sheet. The subgrade and surface shape shall ensure runoff in an even, un-concentrated manner, and shall be uniform, firm, and rut-free.

4-56 DRY WEATHER SHAPING

At any time of year, the Contract Administrator may require the application of water to facilitate shaping activities. The method of water application is subject to written approval by the Contract Administrator.

SUBSECTION COMPACTION

4-60 FILL COMPACTION

Purchaser shall compact all embankment and waste material in accordance with the Compaction List by routing equipment over the entire width of each lift. A plate compactor must be used for areas specifically requiring keyed embankment construction, and embankment segments too narrow to accommodate equipment.

4-61 SUBGRADE COMPACTION

Purchaser shall compact constructed and reconstructed subgrades in accordance with the Compaction List by routing equipment over the entire width, except ditch. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before placement of rock.

4-62 DRY WEATHER COMPACTION

At any time of the year, the Contract Administrator may require the application of water to facilitate compaction activities. The method of water application is subject to written approval by the Contract Administrator.

4-63 EXISTING SURFACE COMPACTION

Purchaser shall compact maintained road surfaces in accordance with the Compaction List by routing equipment over the entire width.

4-64 WASTE MATERIAL COMPACTION

All waste material shall be compacted by running equipment over it or bucket tamping.

4-65 CULVERT BACKFILL COMPACTION

Culvert backfills shall be accomplished by using a jumping jack compactor, performing at least 2 passes per lift, in lifts not to exceed 8 inches.

4-66 COMPACTION BY METHOD

Compaction shall consist of three complete passes over the entire width of each lift with a vibratory drum roller weighing a minimum of 6,000 pounds at a maximum operating speed of 3 mph. For embankment segments too narrow to accommodate a drum roller, a plate compactor shall be used.

SUBSECTION SUBGRADE REINFORCEMENT

SECTION 5 – DRAINAGE

5-4 PUNCHEON RESTRICTED

At no time shall puncheon be used in the subgrade, unless approved by the Contract Administrator.

SUBSECTION CULVERTS

5-5 CULVERTS

Culverts shall be installed as part of this contract. Culverts shall be installed concurrently with subgrade work and shall be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the Culvert List. Culvert, downspout, and flume lengths shall be adjusted to fit as-built conditions and shall not terminate directly on unprotected soil. Culverts shall be new and meet the material specifications in Clauses 10-15 through 10-23.

5-11 UNUSED MATERIALS STATE PROPERTY

On required roads, any materials listed on the Culvert List and Rock List that are not installed shall become the property of the State. Purchaser shall stockpile materials as directed by the Contract Administrator.

5-12 CONTINGENCY CULVERTS

The following culverts will be supplied by the Purchaser and will be available for installation on Any road listed in the TYPICAL SECTION SHEET as directed by the Contract Administrator.

<u>Road</u>	<u>Size</u>
As Directed	(1) 18" x 30'
By C/A	

SUBSECTION CULVERT INSTALLATION

5-15 CULVERT INSTALLATION

Installation shall be in accordance with the Typical Cross Drain Culvert Installation Detail, Typical Type Ns Np Culvert Installation Detail, the National Corrugated Metal Pipe Association's "Installation Manual for Corrugated Steel Drainage Structures", and the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings". Corrugated Polyethylene pipe shall be installed in a manner consistent with the manufacturer's recommendations.

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

Installation of culverts 30 inches in diameter and over shall be subject to written approval by the District Engineer or their designee before backfilling.

5-17 CROSS DRAIN SKEW AND SLOPE

Cross drains on road grades in excess of 3% shall be skewed at least 30 degrees from perpendicular to the road centerline, except where the cross drain is at the low point in the road. Where the cross drain is at the low point in the road, culverts shall not be skewed. Cross drain culverts shall be installed at a slope steeper than the incoming ditch grade, but not less than 3% or more than 10%.

5-18 CULVERT DEPTH OF COVER

Cross drain culverts shall be installed with a depth of cover of not less than 18 inches of compacted depth over the top of the culvert at the shallowest point. Stream crossing culverts shall be installed with a depth of cover specified in the Engineer's design, Type Ns Np Typical Detail Sheet, or to the minimum depth recommended by the culvert manufacturer for the type of cover material over the pipe, whichever is greater.

SUBSECTION ENERGY DISSIPATERS

5-20 ENERGY DISSIPATERS

Energy dissipaters shall be installed to prevent erosion and are subject to approval by the Contract Administrator. Rock shall weigh at least 10 pounds and be placed by zero-drop-height method. Energy dissipater shall extend a minimum of ¾ foot to each side of the culvert at the outlet and a minimum of 2 feet beyond the outlet.

5-21 DOWNSPOUTS AND FLUMES

Downspouts and flumes longer than 10 feet shall be staked on both sides at maximum intervals of 10 feet with 6-foot heavy-duty steel posts or 1 ½" X 3/16" angle iron, and fastened securely to the posts with No. 10 galvanized smooth wire, or bolted using minimum 5/16" bolts and 2 washers per bolt, in accordance with the Culvert Installation Typical Details Page.

SUBSECTION CATCH BASINS, HEADWALLS, AND ARMORING

5-25 CATCH BASINS

Catch basins shall be constructed to resist erosion. Approximate dimensions are 1-2 feet deep, 1-2 feet wide, and 2-4 feet long.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Headwalls shall be constructed in accordance with the Typical Cross Drain Culvert Installation Detail at all cross drain culverts that specify the placement of rock. Rock used for headwalls shall consist of oversize or quarry spall material. Rock shall be placed on shoulders, slopes, and around culvert inlets and outlets. Rock shall not restrict the flow of water into culvert inlets or catch basins. No end dumping of rock is allowed.

SECTION 6 – ROCK AND SURFACING

SUBSECTION ROCK SOURCE

6-2 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the Rock List may be obtained from the following source(s) on state land at no charge to the Purchaser. Use of material from any other source must have prior written approval from the Contract Administrator. If other operators are using, or desire to use, the rock source(s), a joint operating plan shall be developed. All parties shall follow this plan. The Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Mary Clark Pit	T30N R12W Sec32	1¼" Minus crushed stockpile, Pitrun, Oversized
Bear Pit	T30N R12W Sec1	Ballast

6-3 ROCK SOURCE STATE LAND, EXISTING STOCKPILE

Rock used in accordance with the quantities on the Rock List may be obtained from the following existing stockpile(s) on state land at no charge to the Purchaser. Purchaser shall remove no more than 800 cubic yards of 1¼" minus crushed rock. If the "old" stockpile is exhausted before all of the rock called for has been removed, then the remaining rock shall come from the "new" stockpile, but not before.

<u>Source</u>	<u>Location</u>	<u>Quantity (yd³)</u>
Mary Clark Pit	1¼" Minus crushed stockpile	740 yd ³

6-5 ROCK FROM COMMERCIAL SOURCE

Rock used in accordance with the quantities on the Rock List may be obtained from any commercial source at the Purchaser's expense. Rock sources will be subject to written approval by the Contract Administrator before their use.

SUBSECTION ROCK SOURCE DEVELOPMENT

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

All rock source development and use shall be in accordance with a written Rock Source Development and Reclamation Plan prepared by the State and included in this Road Plan. Rock source operations shall be conducted as directed by the Contract Administrator and in accordance with the plan. Upon completion of operations, the rock source shall be left in the condition specified in the Rock Source Development and Reclamation Plan, and approved in writing by the Contract Administrator. The Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before starting any operations in the rock source.

6-12 ROCK SOURCE SPECIFICATIONS

Rock sources shall be in accordance with the following unless otherwise specified in Rock Source Development and reclamation plan:

- Pit walls shall not be undermined or over-steepened. The maximum slope of the walls shall be consistent with recognized engineering standards for the type of material being excavated in accordance with the following table:

Material	Maximum Slope Ratio (Horiz.:Vert.)	Maximum Slope Percent
Sand	2:1	50
Gravel	1.5:1	67
Common Earth	1:1	100
Fractured Rock	0.5:1	200
Solid Rock	0:1	vertical

- Pit walls shall be maintained in a condition to minimize the possibility of the walls sliding or failing.
- The width of pit benches shall be a minimum of 1.5 times the maximum length of the largest machine used.
- The surface of pit floors and benches shall be uniform and free-draining at a minimum 2% outslope gradient.
- All operations shall be carried out in compliance with all regulations of the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- Block all vehicle access to the top of the pit faces.

6-15 REQUIRED ROCK SOURCE WORK

The following rock source work is required. Work is to be done according to the approved Rock Source Development And Reclamation Plan and as directed by the Contract Administrator.

<u>Site</u>	<u>Requirements</u>
Mary Clark	Strip One Acre to Useable Rock as marked in the field and shown on Pit Development Map.

SUBSECTION ROCK GRADATIONS

6-28 1 1/4-INCH MINUS CRUSHED ROCK

% Passing 1 1/4" square sieve	100%
% Passing 5/8" square sieve	50 - 80%
% Passing U.S. #4 sieve	30 - 50%
% Passing U.S. #40 sieve	3 - 18%
% Passing U.S. #200 sieve	5%

The portion of aggregate retained on the No. 4 sieve shall not contain more than 0.2% organic debris and trash. All percentages are by weight.

SUBSECTION ROCK MEASUREMENT

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

Measurement of specified rock depths are defined as the compacted depth(s) using the compaction methods required in this Road Plan. Estimated quantities specified in the Rock List are estimated truck yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements and are not subject to reduction.

SUBSECTION ROCK APPLICATION

6-70 APPROVAL BEFORE ROCK APPLICATION

Subgrade drainage installation including grading and compaction, shall be completed and approved in writing by the Contract Administrator, before rock application.

6-71 ROCK APPLICATION

Rock shall be applied in accordance with the specifications and quantities shown on the Rock List. Rock shall be spread, shaped, and compacted full-width concurrent with rock hauling operations. Rock shall be compacted in accordance with Compaction List, in lifts not to exceed 6 inches.

6-72 ROCK APPLICATION AFTER HAULING

On the following road(s), upon completion of all hauling operations, Purchaser shall apply 1 1/4" minus crushed rock in accordance with the quantities shown on the Rock List.

<u>Road</u>	<u>Stations</u>	<u>Amount</u>
CB-1000	As Directed	200 yd ³

6-73 ROCK FOR WIDENED PORTIONS

Turnarounds, turnouts, and areas with curve widening shall have rock applied to the same depth and specifications as the traveled way.

6-78 ROCK FOR SPOT PATCHING

Rock for spot patching shall be applied before any grading is done and before any rock lifts are applied. Once applied, spot patches shall be graded into the existing running surface.

SECTION 7 – STRUCTURES

SUBSECTION STREAM CROSSING STRUCTURES GENERAL

7-5 STRUCTURE DEBRIS

The Purchaser shall ensure that debris from the installation or removal of structures does not enter any stream. Components removed from the existing structures(s) shall be placed at designated site(s), as directed in writing by the Contract Administrator. The Purchaser is responsible for maintaining a clean jobsite, with all materials stored away from any high water mark or other area presenting a risk of the materials entering a stream. Debris entering any stream shall be removed immediately and placed in the site(s) designated for stockpiling or disposal. The Purchaser is responsible for retrieving all material carried downstream from the jobsite by the stream current.

7-6 STREAM CROSSING INSTALLATION

Installation of stream crossing structures shall be in accordance with the manufacturer's requirements, and as directed by the District Engineer or their designee.

7-7 BANK PROTECTION FOR STREAM CROSSING STRUCTURES

Bank protection shall be designed and constructed to prevent the undermining of the structure.

SUBSECTION GATE CLOSURE

7-70 GATE CLOSURE

On the following road(s), Purchaser shall keep gates closed and locked except during periods of haul. All gates that remain open during haul shall be locked or securely fastened in the open position. All gates shall be closed at termination of use.

<u>Road</u>	<u>Station</u>
CB-1000	2+50
LTSP Mainline (Mary Clark Pit Access)	0+20

SECTION 8 – EROSION CONTROL

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall furnish and evenly spread a 3-inch layer of straw to all exposed soils at stream culvert installations. Soils shall not be allowed to sit exposed during any rain event.

SUBSECTION REVEGETATION

8-15 REVEGETATION

Purchaser shall grass seed and hay mulch all exposed soils including, but not limited to, stream culverts, waste areas, sidecast pull back areas, stream crossing removals, bridge installations, and other areas directed by the Contract Administrator. Revegetation of exposed soils shall be accomplished by manual dispersal of grass seed unless otherwise detailed in this Road Plan. Other methods of revegetation must be approved in writing by the Contract Administrator.

8-16 REVEGETATION SUPPLY

All seed, mulch, hay, matting, etc. will be provided by the Purchaser.

8-17 REVEGETATION TIMING

Purchaser shall perform revegetation during the first available opportunity. Soils shall not be allowed to sit exposed for longer than one month without receiving revegetation treatment unless otherwise approved in writing by the Contract Administrator. Soils shall not be allowed to sit exposed during any rain event.

8-18 PROTECTION FOR SEED

Purchaser shall provide a protective cover over the revegetated area. The protective cover may consist of, but not be limited to, such items as dispersed hay mulch 3” thick or jute matting.

8-19 ASSURANCE FOR SEEDED AREA

The Purchaser shall be responsible to ensure a uniform and dense crop of grass. The Purchaser shall reapply the seed and/or mulch in areas that have been damaged through any cause, before approval from the Contract Administrator. The Purchaser shall restore eroded or disturbed areas, clean up and properly dispose of eroded materials, and reapply the seed and/or mulch at no additional cost to the state.

SUBSECTION SEED, FERTILIZER, AND MULCH

8-25 GRASS SEED

Purchaser shall evenly spread the seed mixture listed below on all exposed soils at a rate of 60 pounds per acre of exposed soil.

<u>Seed Species</u>	<u>% by Weight</u>
• Perennial Ryegrass	40.00
• Creeping Red Fescue	40.00
• White Dutch Clover	10.00
• Colonial Bentgrass	10.00

Grass seed shall meet the following specifications:

1. Weed seed may not exceed 0.5% by weight.
2. All seed species must have a minimum 90% germination rate, unless otherwise specified.
3. Seed must be certified.
4. Seed must be furnished in standard containers showing the following information:
 - a. Common name of seed
 - b. Net weight
 - c. Percent of purity
 - d. Percentage of germination
 - e. Percentage of weed seed and inert material

SUBSECTION POST-HAUL MAINTENANCE

9-5 POST-HAUL MAINTENANCE

Post-haul maintenance shall be performed in accordance with the Forest Access Road Maintenance Specifications and as specified below.

<u>Roads</u>	<u>Stations</u>	<u>Additional Requirements</u>
All (includes CB-1400)	All	Clean culverts, clean ditches, grade road shape and compact as directed by the Contract Administrator
CB-1000		Apply post haul rock as per Clause 6-72.

SUBSECTION POST-HAUL LANDING MAINTENANCE

9-10 LANDING DRAINAGE

On all roads, Purchaser shall provide for drainage of the landing surface as approved in writing by the Contract Administrator.

9-11 LANDING EMBANKMENT

On all roads, landing embankments shall be sloped to original construction specifications.

SECTION 10 MATERIALS

SUBSECTION GEOTEXTILES

10-2 GEOTEXTILE FOR SEPARATION

Geotextiles shall meet the following minimum requirements for strength and property qualities, and shall be designed by the manufacturer to be used for separation. Material shall be free of defects, cuts, and tears.

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Non-woven
Apparent opening size	D 4751	No. 30 max
Water permittivity	D 4491	0.02 sec ⁻¹
Grab tensile strength	D 4632	160 lb
Grab tensile elongation	D 4632	= 50%
Puncture strength	D 6241	310 lb
Tear strength	D 4533	50 lb
Ultraviolet stability	D 4355	50% retained after 500 hours of exposure

10-6 GEOTEXTILE FOR TEMPORARY SILT FENCE

Geotextiles shall meet the following minimum requirements for strength and property qualities, and shall be designed by the manufacturer to be used for filtration. Woven slit-film geotextiles will not be allowed. Material shall be free of defects, cuts, and tears.

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Unsupported between posts
Apparent opening size	D 4751	No. 30 max., No. 100 min.
Water permittivity	D 4491	0.02 sec ⁻¹
Grab tensile strength	D 4632	180 lb in machine direction, 100lb in cross-machine direction
Grab tensile elongation	D 4632	30% max. at 180 lb or more
Ultraviolet stability	D 4355	70% retained after 500 hours of exposure

SUBSECTION CULVERTS

10-15 CORRUGATED STEEL CULVERT

Metallic coated steel culverts shall meet AASHTO M-36 (ASTM A-760) specifications. Culverts shall be aluminized (aluminum type 2 coated meeting AASHTO M-274).

10-16 CORRUGATED ALUMINUM CULVERT

Aluminum culverts shall meet AASHTO M-196 (ASTM A-745) specifications.

10-17 CORRUGATED PLASTIC CULVERT

Polyethylene culverts shall meet AASHTO M-294 specifications. Culverts shall be Type S – double walled with a corrugated exterior and smooth interior.

10-18 CORRUGATED STEEL STRUCTURAL PLATE

Structural plate culverts shall be galvanized steel meeting AASHTO M-167 (ASTM A-761) specifications.

10-19 CORRUGATED ALUMINUM STRUCTURAL PLATE

Structural plate culverts shall be aluminum alloy meeting AASHTO M-219 (ASTM A-746) specifications.

10-20 FLUME AND DOWNSPOUT

Downspouts and flumes shall meet the AASHTO specification designated for the culvert. Plastic downspouts and flumes shall be Type S – double walled with a corrugated exterior and smooth interior.

10-21 METAL BAND

Metal coupling and end bands shall meet the AASHTO specification designated for the culvert and shall have matching corrugations. On culverts 24 inches and smaller, bands shall have a minimum width of 12 inches. On culverts over 24 inches, bands shall have a minimum width of 24 inches.

10-22 PLASTIC BAND

Plastic coupling and end bands shall meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer shall be used. Couplings shall be split coupling band. Split coupling bands shall have a minimum of four corrugations, two on each side of the pipe joint.

10-23 RUBBER CULVERT GASKETS

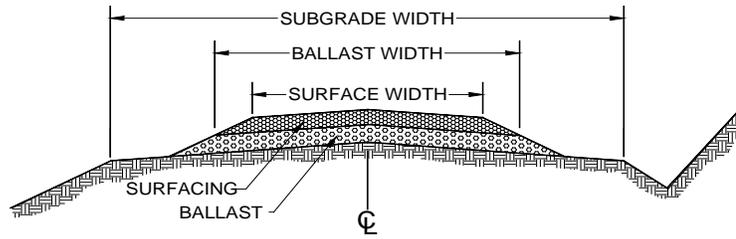
Rubber gaskets must be continuous closed cell, synthetic expanded rubber gaskets conforming to the requirements of ASTM D 1056. Rubber gaskets must be used with all corrugated metal pipe coupling bands.

10-24 GAGE AND CORRUGATION

Metal culverts shall conform to the following specifications for gage and corrugation as a function of diameter.

<u>Diameter</u>	<u>Gage</u>	<u>Corrugation</u>
18"	16 (0.064")	2 ² / ₃ " X 1/2"
24" to 42"	14 (0.079")	2 ² / ₃ " X 1/2"
48" to 54"	12	3" X 1"
60" +	10	5" X 1"

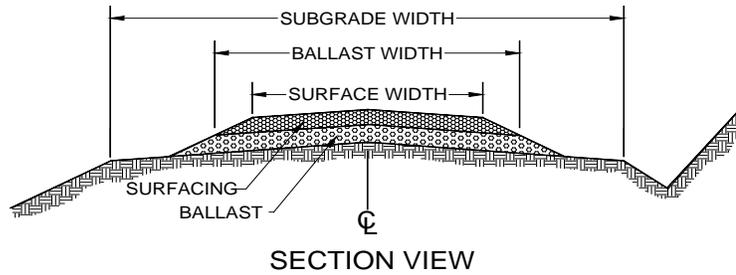
ROCK LIST SHEET



1. Rock quantities, subtotals and totals are "truck measure" estimates. Rock shall be applied to at least the depths listed.
2. All depths are compacted depths.
3. Rock slopes shall be 1½ (H) : 1 (V).
4. All rock sources are subject to approval by the Contract Administrator.
5. Pitrun is defined as pitrun or ballast per Line 6. Crushed is defined as any crushed rock from ¼" minus to 4" minus per Line 6. Oversize is defined as oversize, quarry spalls, light loose rip rap, or heavy loose rip rap per Line 6.
6. Rock sources= 1: Bear Pit Ballast, 2: Mary Clark ¼" minus, 3: Mary Clark Pit Run, 4: Mary Clark Rip Rap

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd³/sta)	Pitrun SUBTOTAL(yd³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd³/sta)	Crushed Subtotal(yd³)	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd³)
CB-1000															
Post Haul									2				200		
5+20 Spur	0+00	4+65	18	1	12	12	70	330							
Lift	0+00	4+65		3	12	12	35	160							
landing	4+65			3				50							
15+75 Spur	0+00	15+75	18	1	12	12	70	1100							
Lift	0+00	15+75		3	12	12	35	550							
Landing	10+00			3				50							
Landing	15+75			3				50							
Old CB-1000	0+00	38+60	18	3	14	14	80	3090							
Culvert	4+25			3				20							
Culvert	8+10			3				20							
Culvert	12+40			3				20							
Culvert	18+20			3				20							
Culvert	22+75			3				20							
Culvert	27+00			3				20							
Totals:								5480					200		

ROCK LIST SHEET CONTINUED



1. Rock quantities, subtotals and totals are "truck measure" estimates. Rock shall be applied to at least the depths listed.
2. All depths are compacted depths.
3. Rock slopes shall be 1½ (H) : 1 (V).
4. All rock sources are subject to approval by the Contract Administrator.
5. Pitrun is defined as pitrun or ballast per Line 6. Crushed is defined as any crushed rock from ¼" minus to 4" minus per Line 6. Oversize is defined as oversize, quarry spalls, light loose rip rap, or heavy loose rip rap per Line 6.
6. Rock sources= 1: Bear Pit Ballast, 2: Mary Clark 1 ¼" minus, 3: Mary Clark Pit Run, 4: Mary Clark Rip Rap

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd ³ /sta)	Pitrun SUBTOTAL(yd ³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd ³ /sta)	Crushed Subtotal(yd ³)	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd ³)
Old CB-1000															
Keyed Embank	15+00	16+00	18	4										4	100
Keyed Embank	24+50	25+00	18	4										4	50
Landing	38+60			3				50							
Turnaround	13+00			3				50							
CB-1600	0+00	63+50	18	1	12	12	70	4450							
Lift	0+00	36+00		3	12	6	35	1260							
Lift	36+00	51+50							2	1	6	35	540		
Lift	51+50	63+50		3	12	6	35	420							
Culvert	0+10			3				20							
Culvert	40+75			3				20							
Landings				3				350							
1+25 Spur	0+00	1+25	18	1	12	12	70	90							
Lift	0+00	1+25		3	12	6	35	40							
Landing	1+25			3				50							
6+00 Spur	0+00	6+00	18	1	12	12	70	420							
Lift	0+00	6+00		3	12	6	35	210							
Landing				3				50							
Totals:								7480					540		150
Grand Totals:								12,960					740		150

COMPACTION LIST

Road	Stations	Type	Max Depth per Lift (In)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
Construction	All	Subgrade, Embankment	6	Vibratory Smooth Drum Roller	6,000	3	3
Construction	All	Rock Placement	6				
Pre-haul Maintenance	All	Existing Pre-haul Surface	6				
Pre-haul Maintenance, Post-haul Maintenance	All	Rock Lifts	6				
Pre-haul Maintenance	All	Culvert Backfills	6	Jumping Jack	N/A	3	N/A
Waste Areas	See Clause 4-37	Waste Material	24	Excavation Equipment	See Clause 4-39		

Typical Type Ns, Np Culvert Installation Detail Sheet.

-Water shall be diverted away from the work site before any "in stream" work begins, and shall continue until culvert installation is complete.

-Culvert lay shall match stream gradient up to 5%.

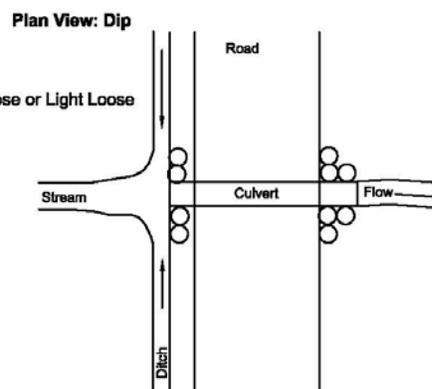
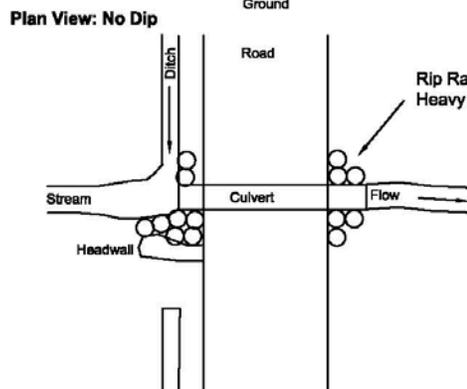
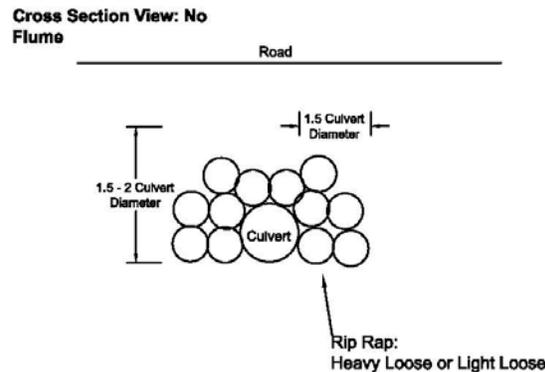
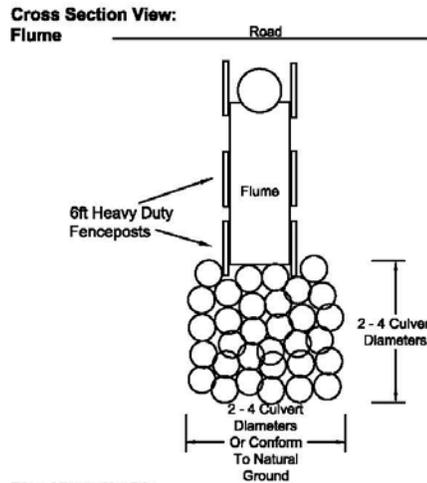
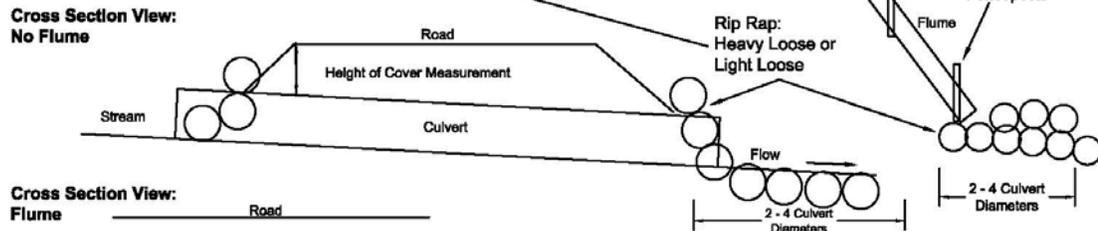
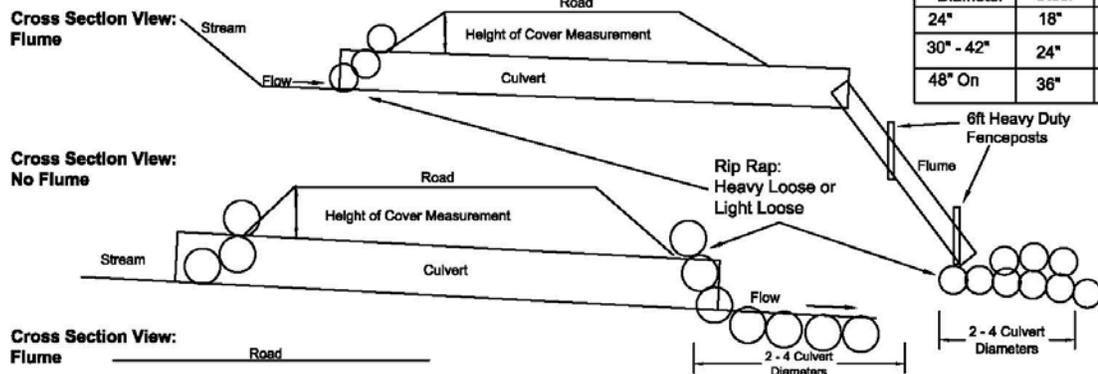
-Flumes longer than 10ft shall be staked on both sides at maximum intervals of 10ft with 6ft heavy duty steel fence posts, and fastened securely to the posts with No. 10 galvanized smooth wire or bolted to the fence posts.

-Rip rap shall be placed using a "zero height drop method", and shall be set in conjunction with the culvert installation.

-Rip rap shall be placed at headwalls, along the fill at the inlet, and at the end off flumes in accordance with this Detail. On culverts with no flume rip rap shall be placed along the fill at the outlet, unless there is stream drop or it is called for in the Road Plan, at which point it will be installed as an energy dissipater at the end of the culvert as specified in this Detail. All rip rap distance to be determined by the Contract Administrator or the District Engineer.

-Backfill compaction shall be achieved using a jumping jack, walk behind vibratory roller, or plate compactor on lifts not to exceed 8in. 3 complete passes per lift is required for compaction. Backfill shall be placed and compacted evenly on both sides of the culvert. Care shall be taken to ensure adequate compaction of backfill material under the haunches of the pipe. Excavation trench width shall be at least culvert diameter plus 3 times the width of the compactor footprint used.

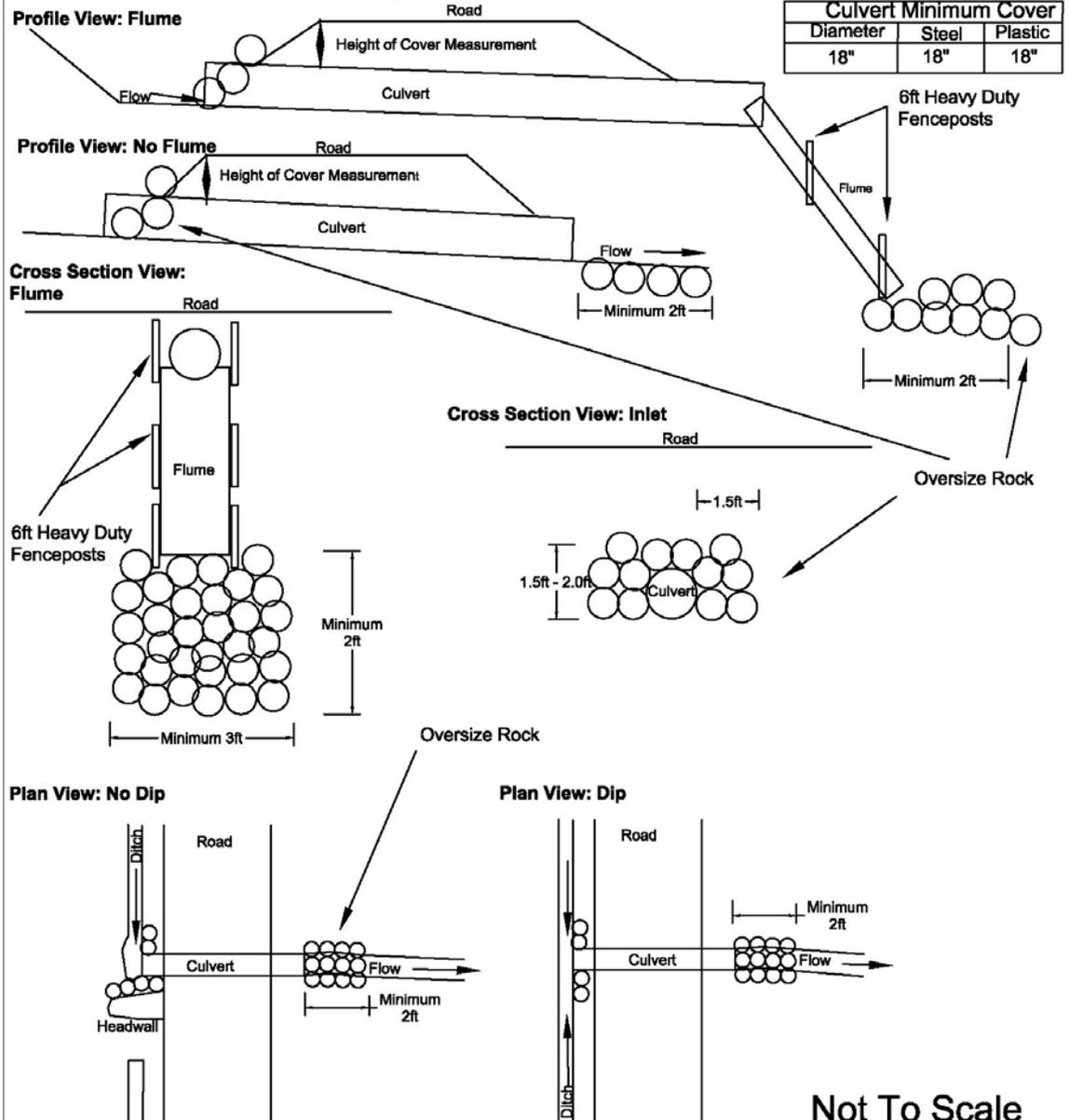
Culvert Minimum Cover		
Diameter	Steel	Plastic
24"	18"	24"
30" - 42"	24"	24"
48" On	36"	36"



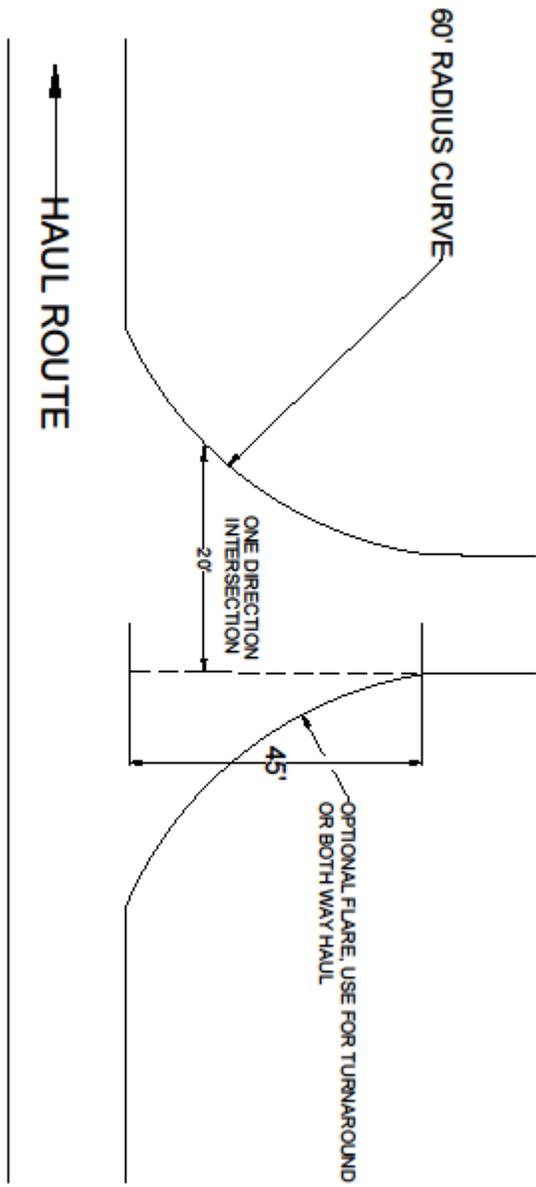
Not To Scale

Typical Cross Drain Culvert Installation Detail Sheet

- Culvert lay shall not exceed 10%.
- Flumes longer than 10ft shall be staked on both sides at maximum intervals of 10ft with 6ft heavy duty steel fence posts, and fastened securely to the posts with No. 10 galvanized smooth wire or bolted to the fence posts.
- Oversize shall be placed using a "zero height drop method", and shall be set in conjunction with the culvert installation.
- Oversize shall be placed at headwalls, along the fill at the inlet, and at the end off flumes in accordance with this Detail. On culverts with no flume oversize shall be placed at the outlet as an energy dissipater as specified in this Detail. All oversize distance to be determined by the Contract Administrator.
- Backfill compaction for installations on existing roads shall be achieved using a jumping jack, or plate compactor on lifts not to exceed 8in. 3 complete passes per lift is required for compaction. Backfill shall be placed and compacted evenly on both sides of the culvert. Care shall be taken to ensure adequate compaction of backfill material under the haunches of the pipe. Excavation trench width shall be at least culvert diameter plus at least the width of the compactor footprint used..



TYPICAL INTERSECTION



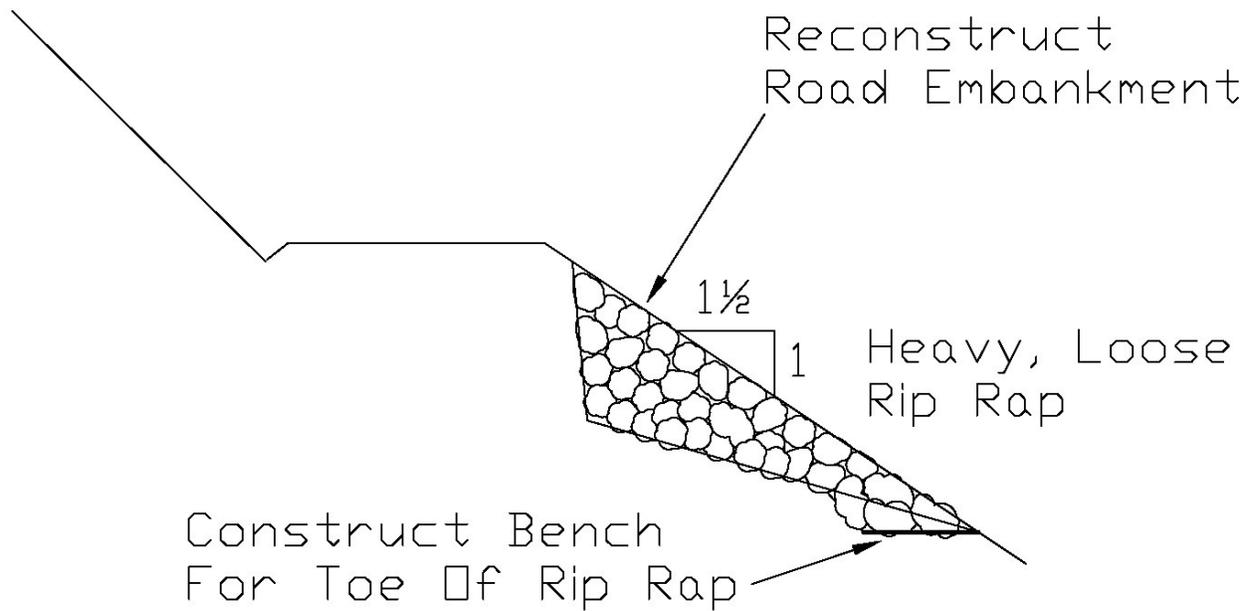
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SUMMARY - Road Development Costs									
SALE NAME:	Claude Summit	CONTRACT#:	30-097259	REGION:	Olympic	DISTRICT:	Coast		
LEGAL DESCRIPTION:	Sec. 7 T. 30 R11W								
ROAD NAME:	5+20 Spur	15+75 Spur	CB-1600	1+25 Spur	6+00 Spur	Old CB-1000	CB-1000	CB-1000	TOTAL:
ROAD TYPE:	Construction	Construction	Construction	Construction	Construction	Recon.	Prehaul	Posthaul	
NUMBER OF STATIONS:	5	16	64	1	6	39	178	280	588.20
SIDE SLOPE:	20%	70%	35%	10%	70%	70%	0%	0%	
CLEARING AND GRUBBING:	\$723	\$4,570	\$16,288	\$143	\$2,199	\$12,475	\$0	\$0	\$36,397
ROAD BRUSHING:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EXCAVATION AND FILL:	\$4,366	\$54,381	\$55,629	\$212	\$33,561	\$46,290	\$0	\$0	\$194,439
ROAD GRADING:	\$0	\$0	\$0	\$0	\$0	\$0	\$1,156	\$1,820	\$2,976
DITCH CLEANING/CONSTRUCTION:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ROCK TOTALS (Cl. Yds.)/ROCK COSTS:	0	0	0	0	0	0	0	0	
Ballast:	6419	6,390	360	1,100	4,450	90	420	0	6,419
	\$2,772	\$8,466	\$34,265	\$689	\$3,234	\$0	\$0	\$0	
Surface:	7350	7,310	230	650	2,610	90	260	3,310	7,350
Pitrun and crushed	\$2,799	\$8,713	\$41,778	\$1,203	\$3,567	\$45,413	\$0	\$2,630	
Overseer:	150	150	0	0	0	150	0	0	150
	\$0	\$0	\$0	\$0	\$0	\$2,322	\$0	\$0	\$2,322
CULVERTS AND FLUMES:	\$0	\$1,320	\$1,760	\$0	\$0	\$3,856	\$660	\$0	\$7,596
STRUCTURES:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MISC. EXPENSES:	\$30	\$92	\$371	\$7	\$35	\$12,000	\$1,041	\$1,638	\$15,215
OVERHEAD:	\$855	\$6,203	\$12,007	\$180	\$3,408	\$9,789	\$343	\$670	\$33,455
TOTAL COSTS:	\$11,546	\$83,746	\$162,099	\$2,434	\$46,004	\$132,145	\$3,200	\$6,758	\$447,931
COST PER STATION:	\$2,220	\$5,317	\$2,553	\$1,947	\$7,667	\$3,423	\$18	\$24	\$762
MOBILIZATION:			\$7,700						
ROAD DEACTIVATION AND ABANDONMENT COSTS:			\$0						
Pit Work		\$12,000							
NOTE: This appraisal has no allowance for profit and risk.									
Sheet 1 of 1									
Plans to be furnished by:									

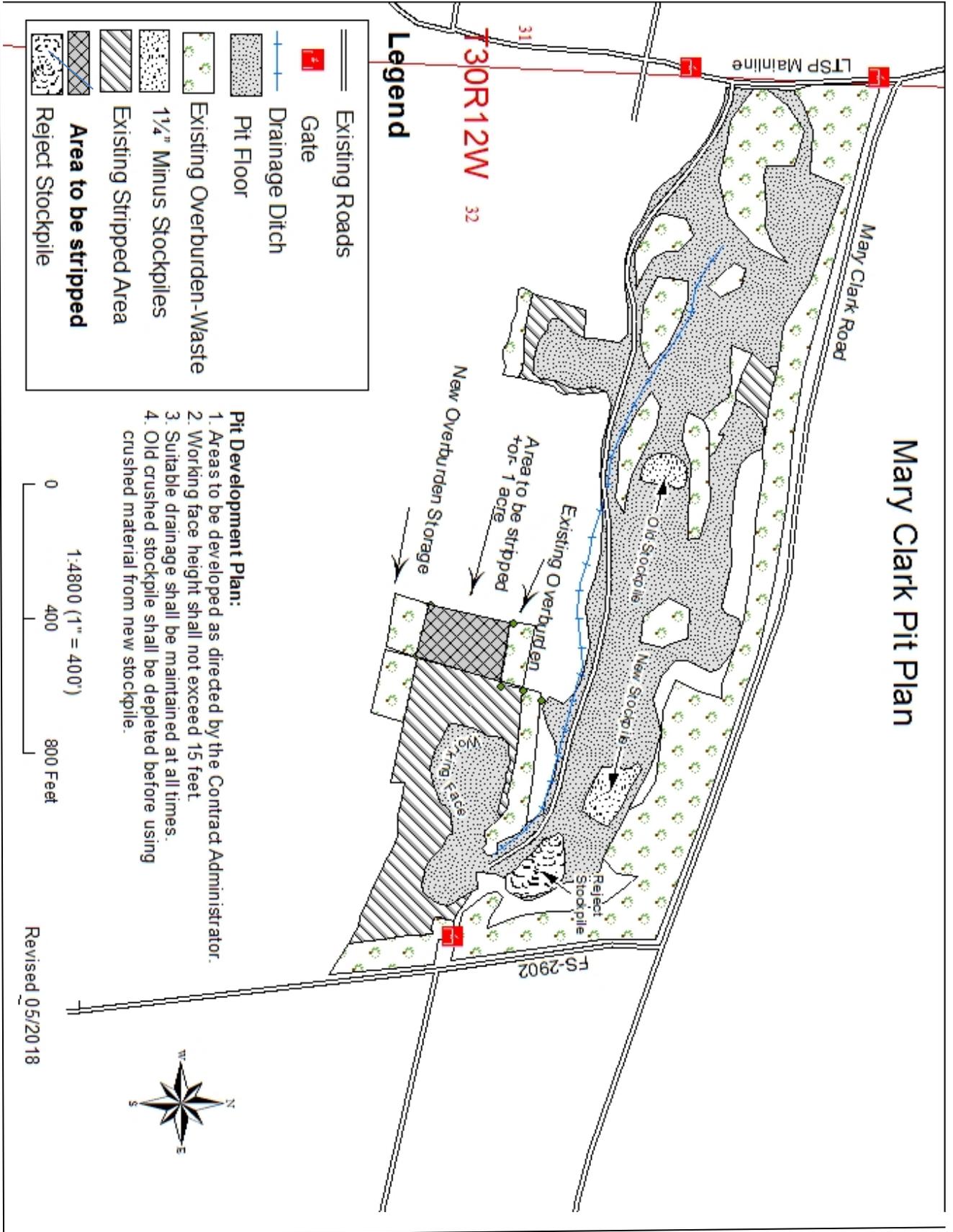
	Road Standard	Const.	Reconst.	Prehaul	Posthaul	TOTAL (All Roads) =
Total Costs =	\$320,714	\$134,070	\$5,125	\$8,683	SALE VOLUME MBF =	7,505
Total Sta. =	92	39	178	280	TOTAL COST PER MBF =	\$62.44
Cost per Sta. =	\$3,497	\$3,473	\$29	\$31	TOTAL COST PER STATION =	\$796.65
Compiled by:	Bill Mehl				Date:	5/21/18

Typical Embankment Key Detail

Except where designed otherwise,
road reconstruction with rip rap
keyed toe and embankment.

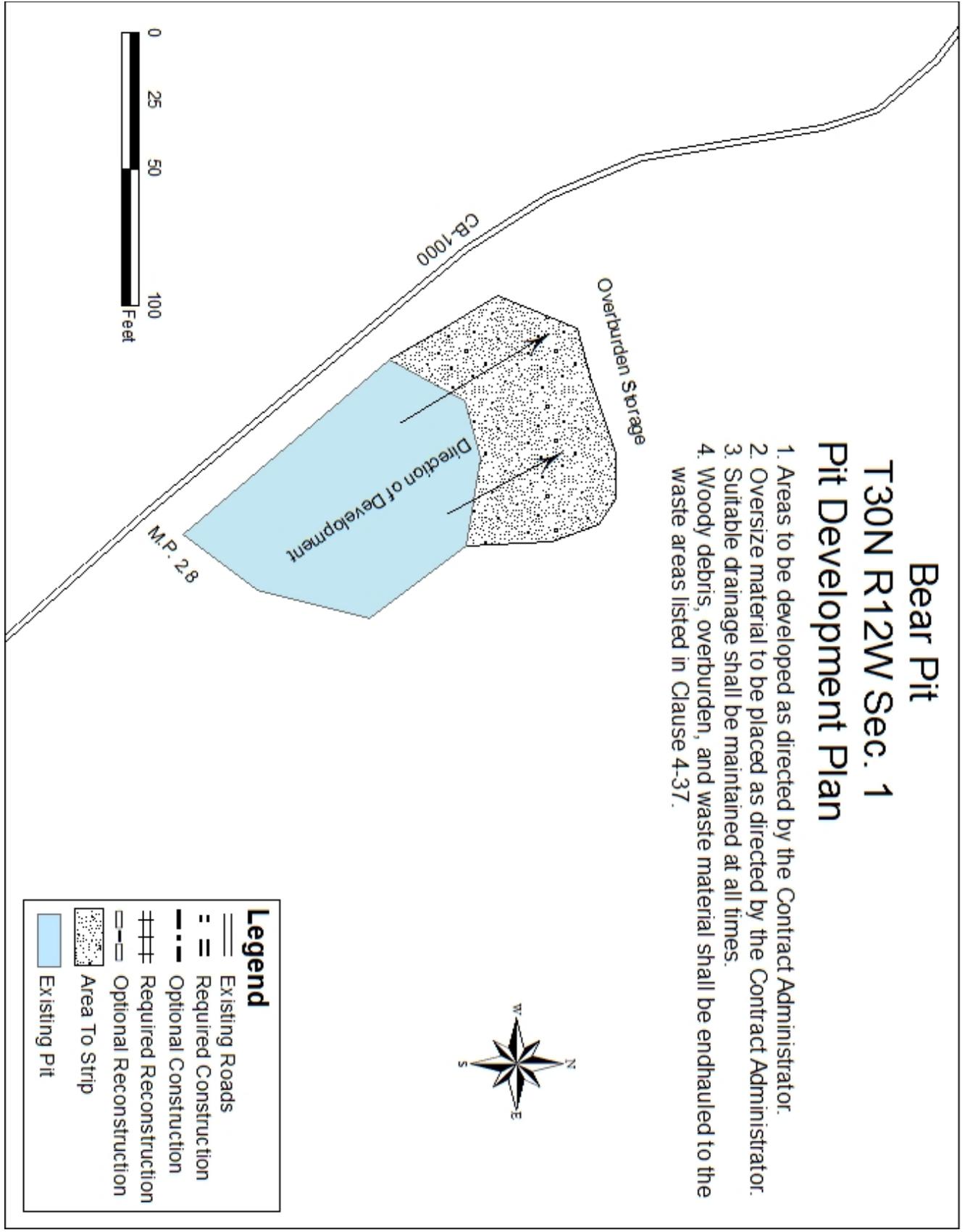


Mary Clark Pit Plan



Bear Pit T30N R12W Sec. 1 Pit Development Plan

1. Areas to be developed as directed by the Contract Administrator.
2. Oversize material to be placed as directed by the Contract Administrator.
3. Suitable drainage shall be maintained at all times.
4. Woody debris, overburden, and waste material shall be endhaauled to the waste areas listed in Clause 4-37.



FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the cut slope/fill slope ratios. Remove slides from ditches and the roadway. Repair fill-failures in accordance with Clause 4-6 Embankment Slope Ratio, and with material approved by the Contract Administrator. Remove overhanging material from the top of cut slopes.
- Waste material from slides or other sources shall be placed and compacted in stable locations identified in the road plan or approved by the Contract Administrator, so that sediment will not deliver to any streams or wetlands.
- Slide material and debris shall not be mixed into the road surface materials, unless approved by the Contract Administrator.

Surface

- Grade, shape, and compact the road surface, turnouts, and shoulders to the original shape on the Typical Section Sheet, to provide a smooth, rut-free traveled surface and maintain surface water runoff in an even, unconcentrated manner.
- Blading shall not undercut the backslope or cut into geotextile fabric on the road.
- If required by the Contract Administrator, water shall be applied as necessary to control dust and retain fine surface rock.
- Surface material shall not be bladed off the roadway. Replace surface material when lost or worn away, or as directed by the Contract Administrator.
- Remove shoulder berms, created by grading, to facilitate drainage, except as marked or directed by the Contract Administrator.
- For roads with geotextile fabric: spread surface aggregate to fill in soft spots and wheel ruts (barrel spread) to prevent damage to the geotextile fabric.

Drainage

- Prevent silt bearing road surface and ditch runoff from delivering sediment to any streams or wetlands.
- Maintain rolling dips and drivable waterbars as needed to keep them functioning as intended.
- Maintain headwalls to the road shoulder level with material that will resist erosion.
- Maintain energy dissipaters at culvert outlets with non-erodible material or rock.
- Keep ditches, culverts, and other drainage structures clear of obstructions and functioning as intended.
- Inspect and clean culverts at least monthly, with additional inspections during storms and periods of high runoff. This shall be done even during periods of inactivity.

Preventative Maintenance

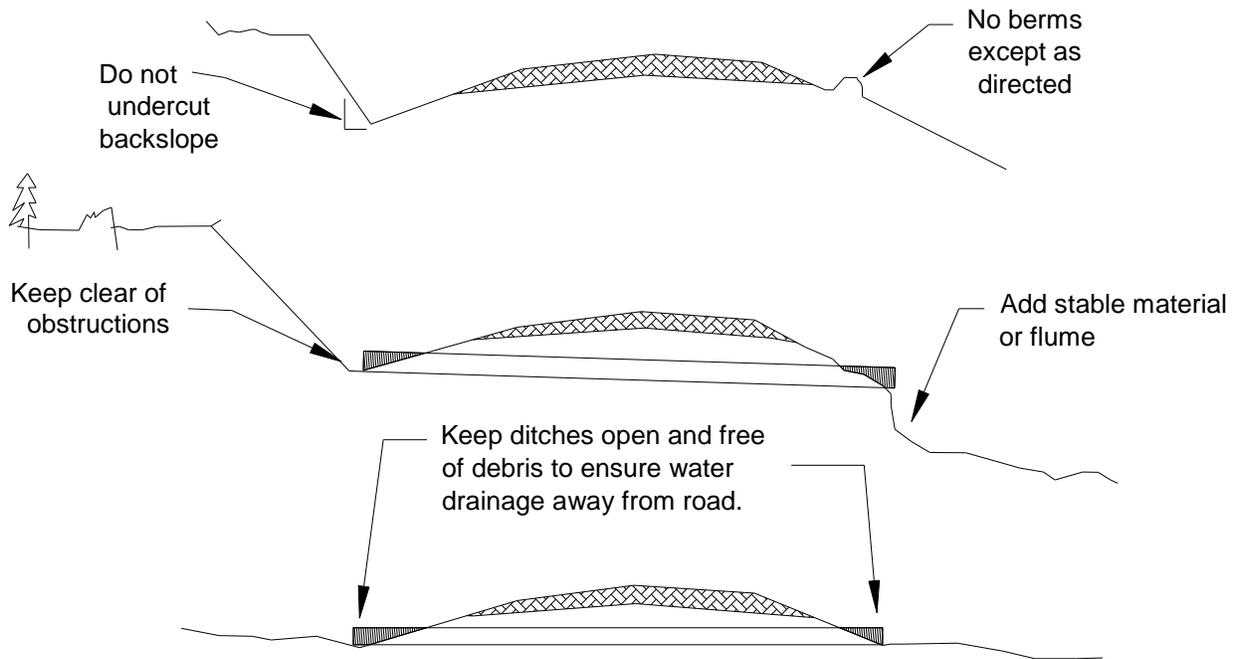
Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

At the conclusion of logging operations, ensure all conditions of these specifications have been met.

Debris

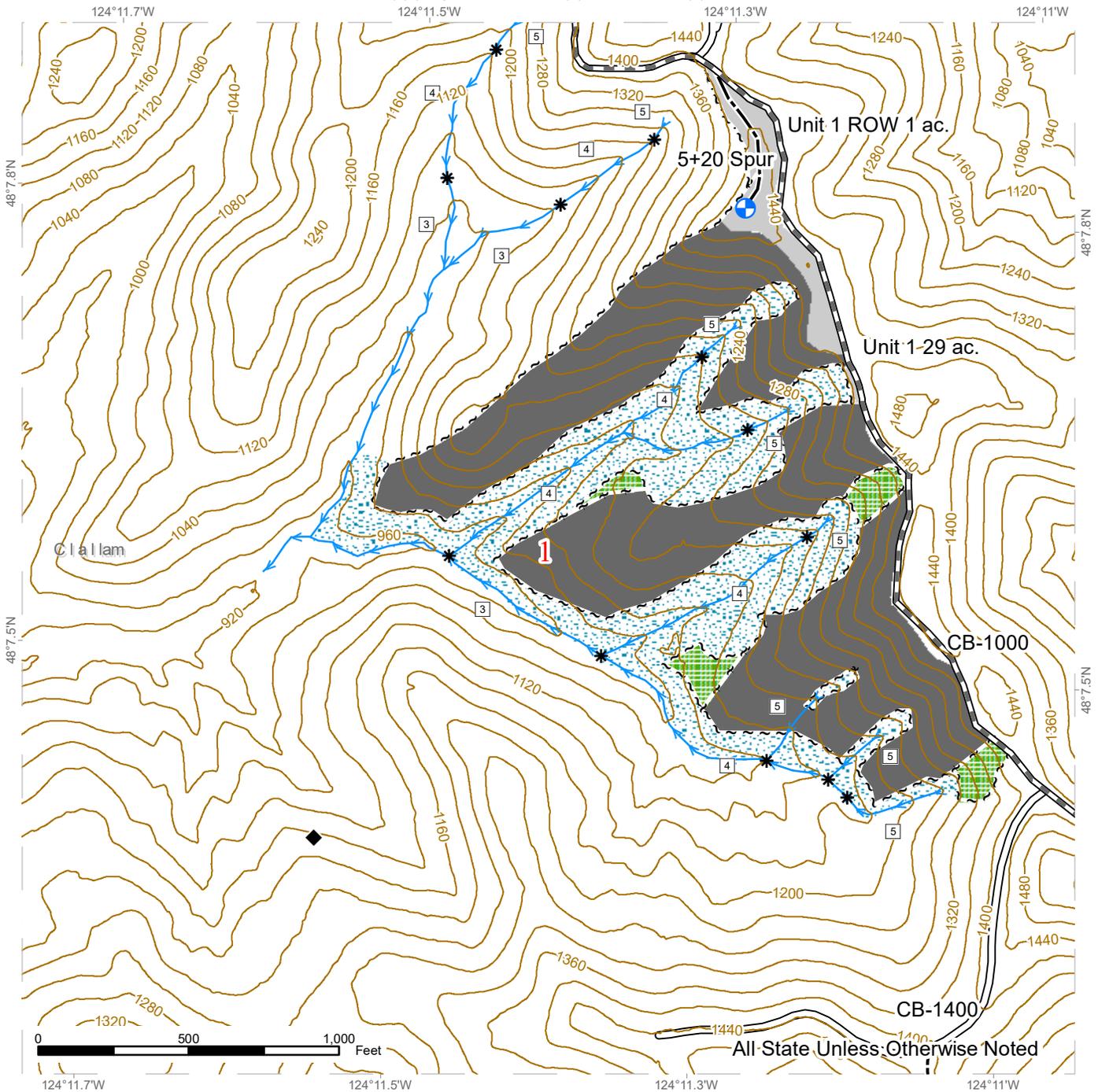
Remove fallen timber, limbs, and stumps from the slopes, roadway, ditchlines, and culvert inlets.



LOGGING PLAN MAP

SALE NAME: Claude Summit
AGREEMENT#: 30-097259
TOWNSHIP(S): T30R11W, T30R12W
TRUST(S): Common School and Indemnity(3), Agricultural School(4), Capitol Grant(7)

REGION: Olympic Region
COUNTY(S): CLALLAM
ELEVATION RGE: 880'-1930'



All State Unless Otherwise Noted

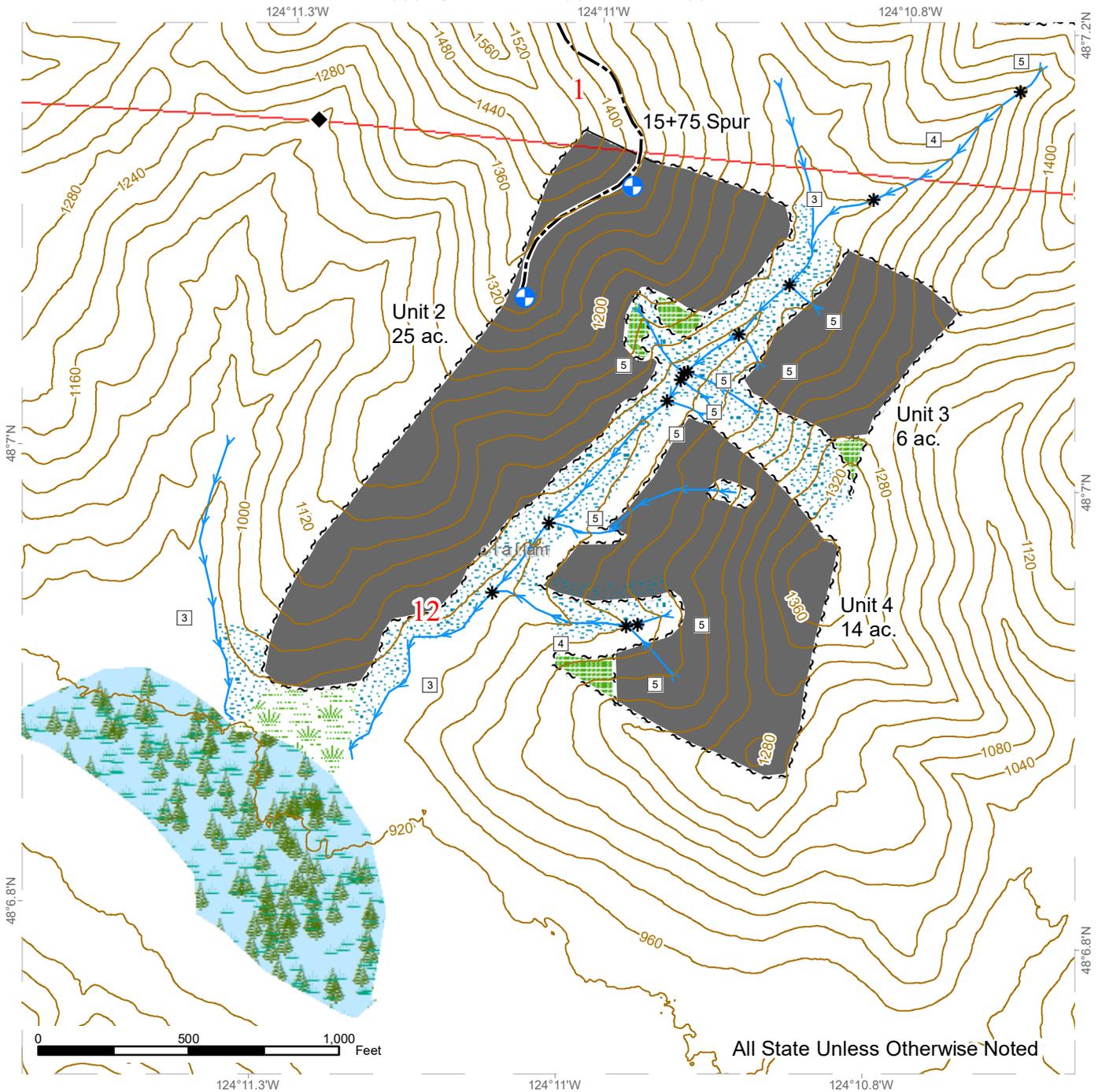
~ ~ ~ Sale Boundary Tags	Existing Roads	Leave Tree Area	Survey Monument
— Timber Type Change	Required Pre-Haul Maintenance	Riparian Mgt Zone	Contours 40 ft
~ ~ Leave Tree Tags	Optional Construction	Streams	Public Land Survey Sections
~ ~ ~ Right of Way Tags	Landing - Proposed	Stream Type	
• • • Property Line		* Stream Type Break	
Ground			
Cable			



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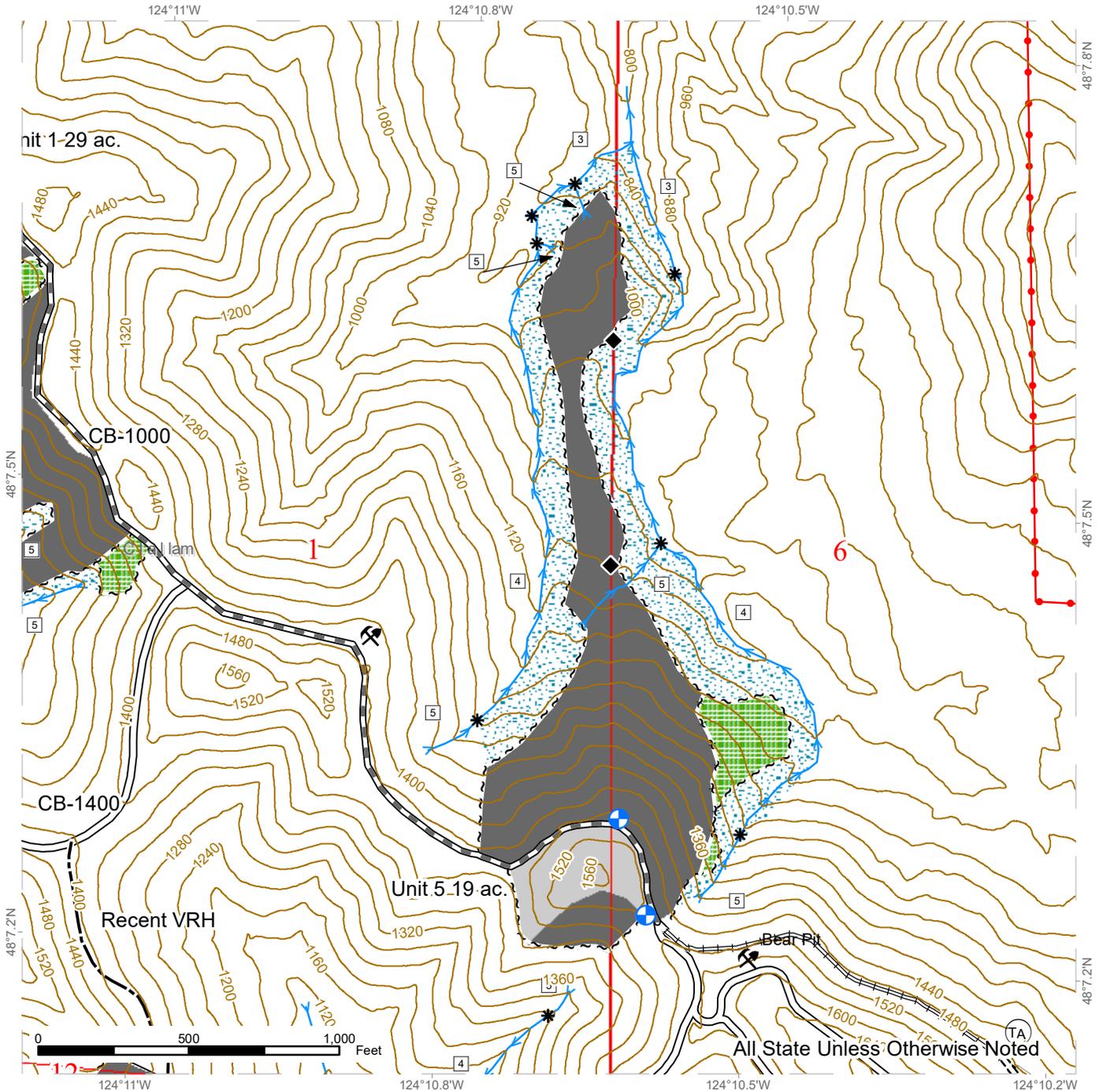
~ ~ ~ Sale Boundary Tags	--- Optional Construction	Leave Tree Area	◆ Survey Monument
— Timber Type Change	⊕ Landing - Proposed	Riparian Mgt Zone	— Contours 40 ft
~ ~ Leave Tree Tags		Forested Wetland	□ Public Land Survey Sections
~ ~ ~ Right of Way Tags		Wetland Mgt Zone	
• • • Property Line		Streams	
■ Cable		□ Stream Type	
		* Stream Type Break	



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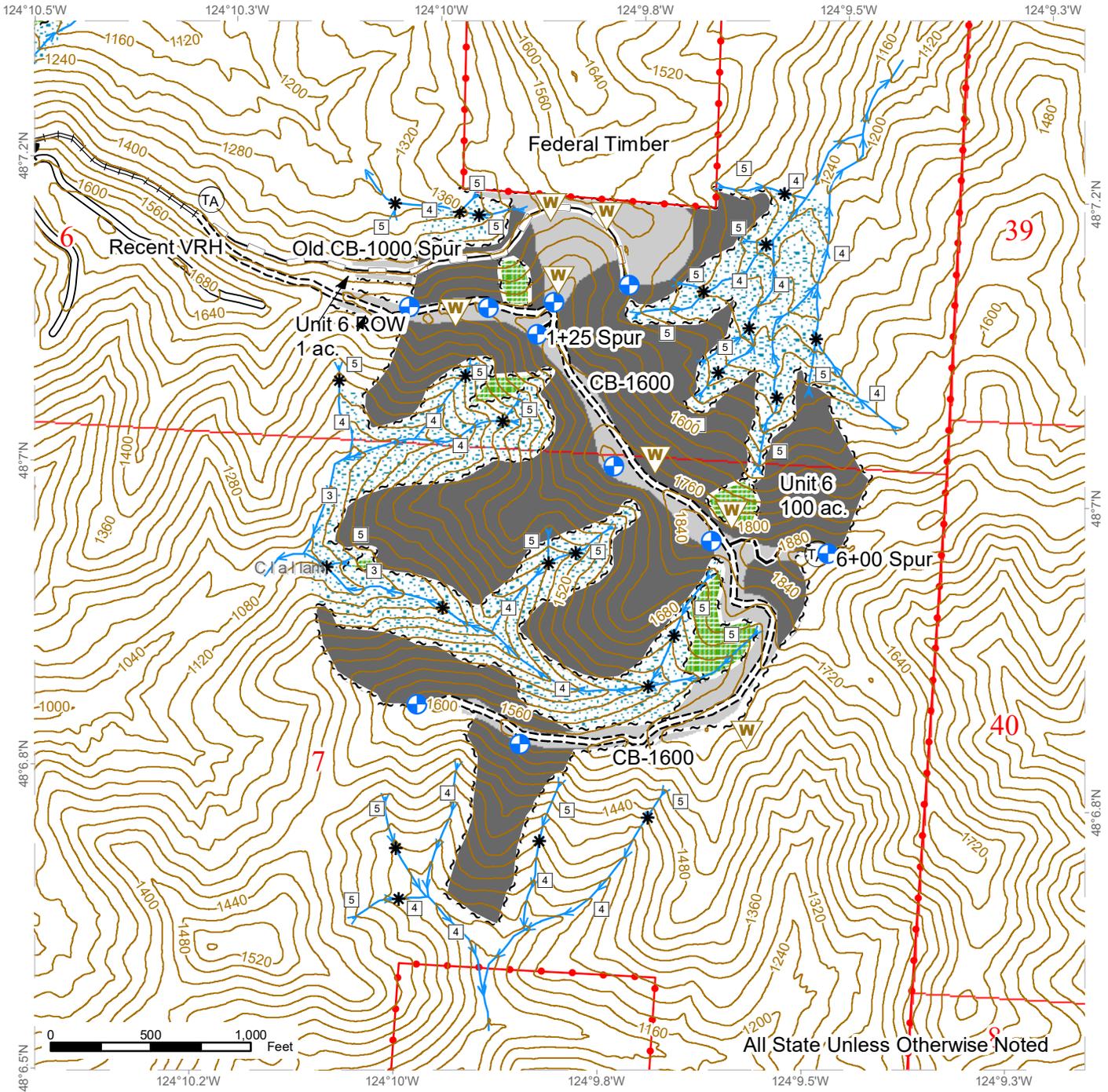


~ ~ ~ Sale Boundary Tags	Existing Roads	Leave Tree Area	Survey Monument
— Timber Type Change	Required Pre-Haul Maintenance	Riparian Mgt Zone	Contours 40 ft
~ ~ Leave Tree Tags	Required Construction	Streams	Public Land Survey Sections
~ ~ ~ Right of Way Tags	Required Reconstruction	Stream Type	
• • • Property Line	Optional Construction	* Stream Type Break	
Ground	Optional Reconstruction		
Cable	Landing - Proposed		
	Turnaround/Turnout		

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~ ~ ~ Sale Boundary Tags	Existing Roads	Leave Tree Area
— Timber Type Change	Required Construction	Riparian Mgt Zone
~ ~ ~ Leave Tree Tags	Required Reconstruction	Streams
~ ~ ~ Right of Way Tags	Optional Construction	Stream Type
• • • Property Line	Optional Reconstruction	* Stream Type Break
Ground	Landing - Proposed	Contours 40 ft
Cable	Turnaround/Turnout	Public Land Survey Sections
	Waste Area	

