

TIMBER NOTICE OF SALE

SALE NAME: SKAARUP VIEW VRH & VDT

AGREEMENT NO: 30-092577

AUCTION: December 16, 2015 starting at 10:00 a.m., **COUNTY:** Skagit
Northwest Region Office, Sedro Woolley, WA

SALE LOCATION: Sale located approximately 6 miles northeast of Sedro-Woolley, WA.

**PRODUCTS SOLD
AND SALE AREA:**

All timber as described for removal in Schedule B, bounded by white timber sale boundary tags in Unit #1 (collectively labeled 1A and 1B).

All timber as described for removal in Schedule B, bounded by white timber sale boundary tags and the AL-23 Road in Unit #2A.

All timber bounded by white timber sale boundary tags, except trees marked with blue paint on the bole and root collar, forest products tagged out by yellow leave tree area tags, and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #2B.

All timber as described for removal in Schedule B, bounded by white timber sale boundary tags and the AL-ML and AL-28 roads in Unit #3 (collectively labeled 3A and 3B).

All timber bounded by white timber sale boundary tags, property lines and the AL-66 and AL-72 abandoned road grades, except trees marked with blue paint on the bole and root collar, forest products tagged out by yellow leave tree area tags, and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #4.

All timber bounded by orange right of way tags, except that title to the timber within the right of way tags is not conveyed to the Purchaser unless the road segment is actually constructed, except timber as described for removal in Schedule B.

The above described products on part(s) of Sections 2, 9, 10 and 16 all in Township 36 North, Range 4 East, W.M., containing 243 acres, more or less.

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: BV-SFIS-US09000572)

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	11	8	1,220	\$122.00						179	347	598	96
Hemlock	13	8	473	\$60.00						56	218	150	49
Silver fir	13		125	\$60.00						5	62	51	7
Red cedar	23		37	\$727.00							33	4	
Red alder	9		35	\$169.00								34	1
Birch	7		8	\$50.00									8
Maple	8		5	\$50.00									5
Spruce	22		5	\$72.00						4		1	
Sale Total			1,908										

MINIMUM BID: \$122/MBF (est. value \$218,000.00) **BID METHOD:** Sealed Bids

TIMBER NOTICE OF SALE

If permission is granted to operate during the bark slippage season the Purchaser shall be required to provide a plan outlining mitigation measure.

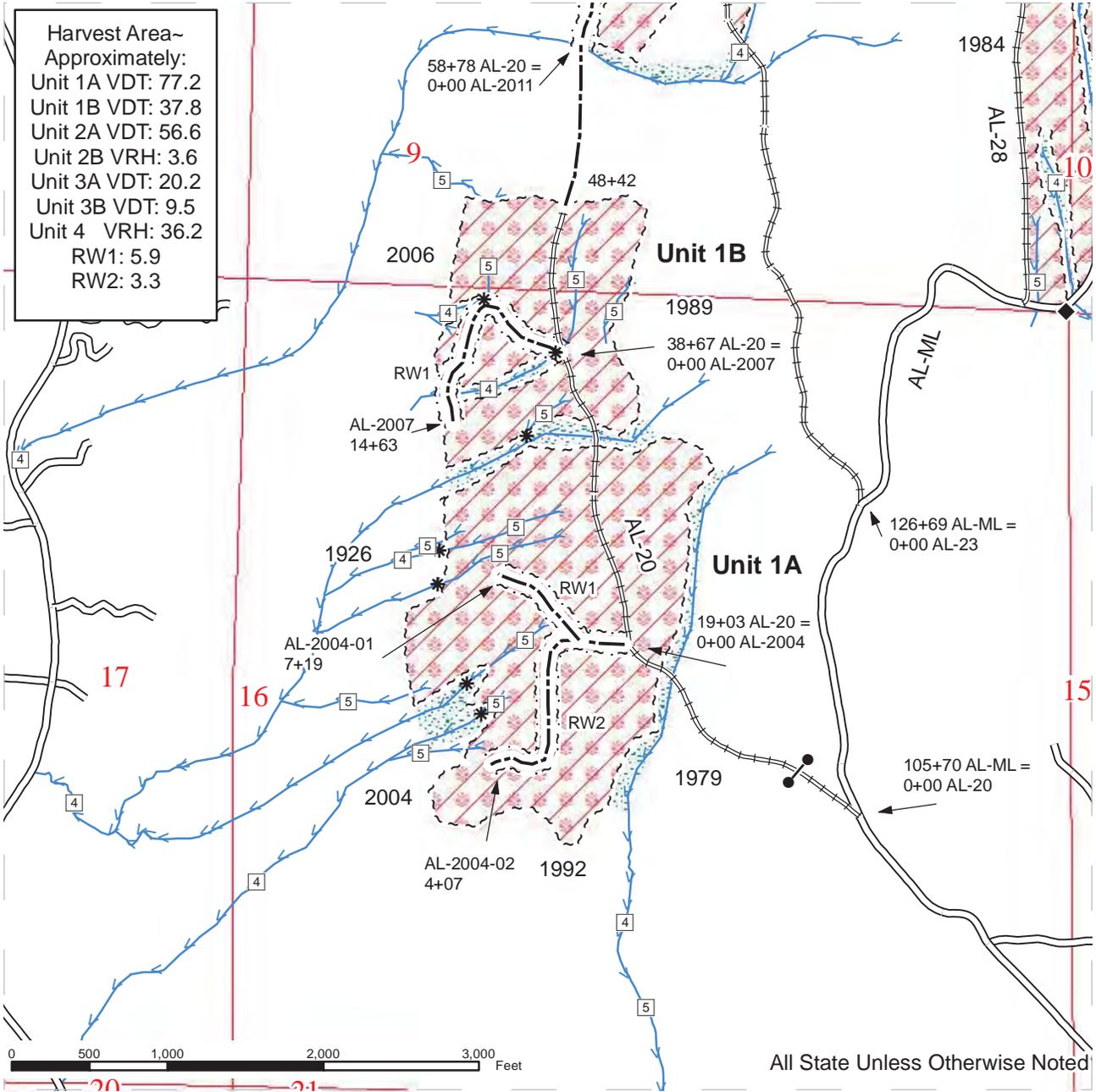
3. This sale was laid out with the intention of being harvested by ground-based method.

4. HQ DF noted within the sale area. See cruise for further details (approximately 13 mbf of the above listed DF 2S is deemed high quality by the Department).

TIMBER SALE MAP

SALE NAME: Skaarup View VRH & VDT
AGREEMENT#: 30-092577
TOWNSHIP(S): T36 R04E
TRUST(S): 01 State Forest Transfer

REGION: Northwest
COUNTY(S): Skagit
ELEVATION RGE: 720-3260



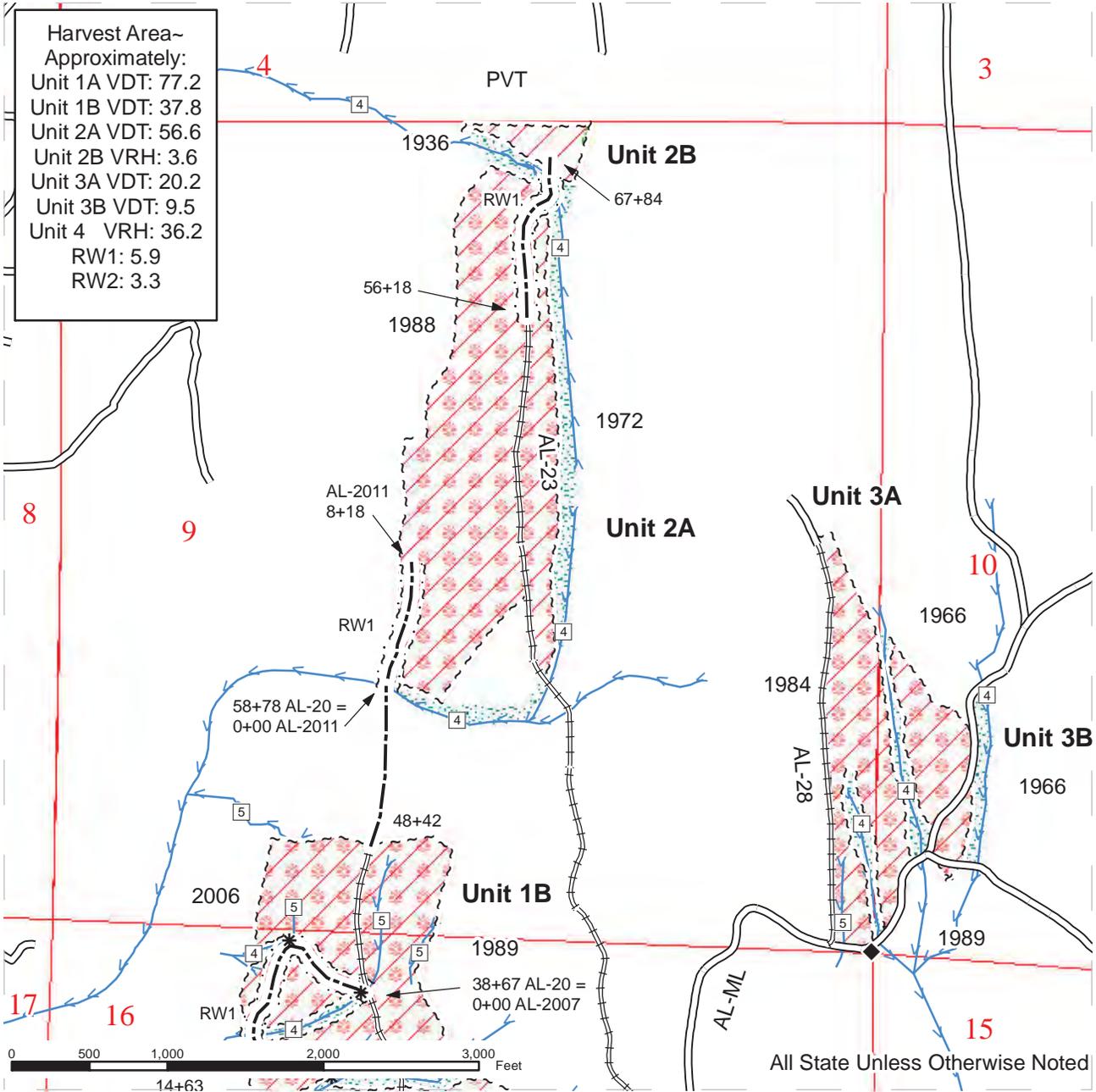
Sale Area	Sale Boundary Tags	Existing Road	Streams
Variable Density Thinning	Sale Boundary No Tags	Required Construction	Stream Type
Wetland	Right of Way Tags	Optional Construction	Stream Type Break
Wetland Buffer		Required Reconstruction	Survey Corners
Riparian Mgt Zone			
Leave Tree Area			



TIMBER SALE MAP

SALE NAME: Skaarup View VRH & VDT
AGREEMENT#: 30-092577
TOWNSHIP(S): T36 R04E
TRUST(S): 01 State Forest Transfer

REGION: Northwest
COUNTY(S): Skagit
ELEVATION RGE: 720-3260



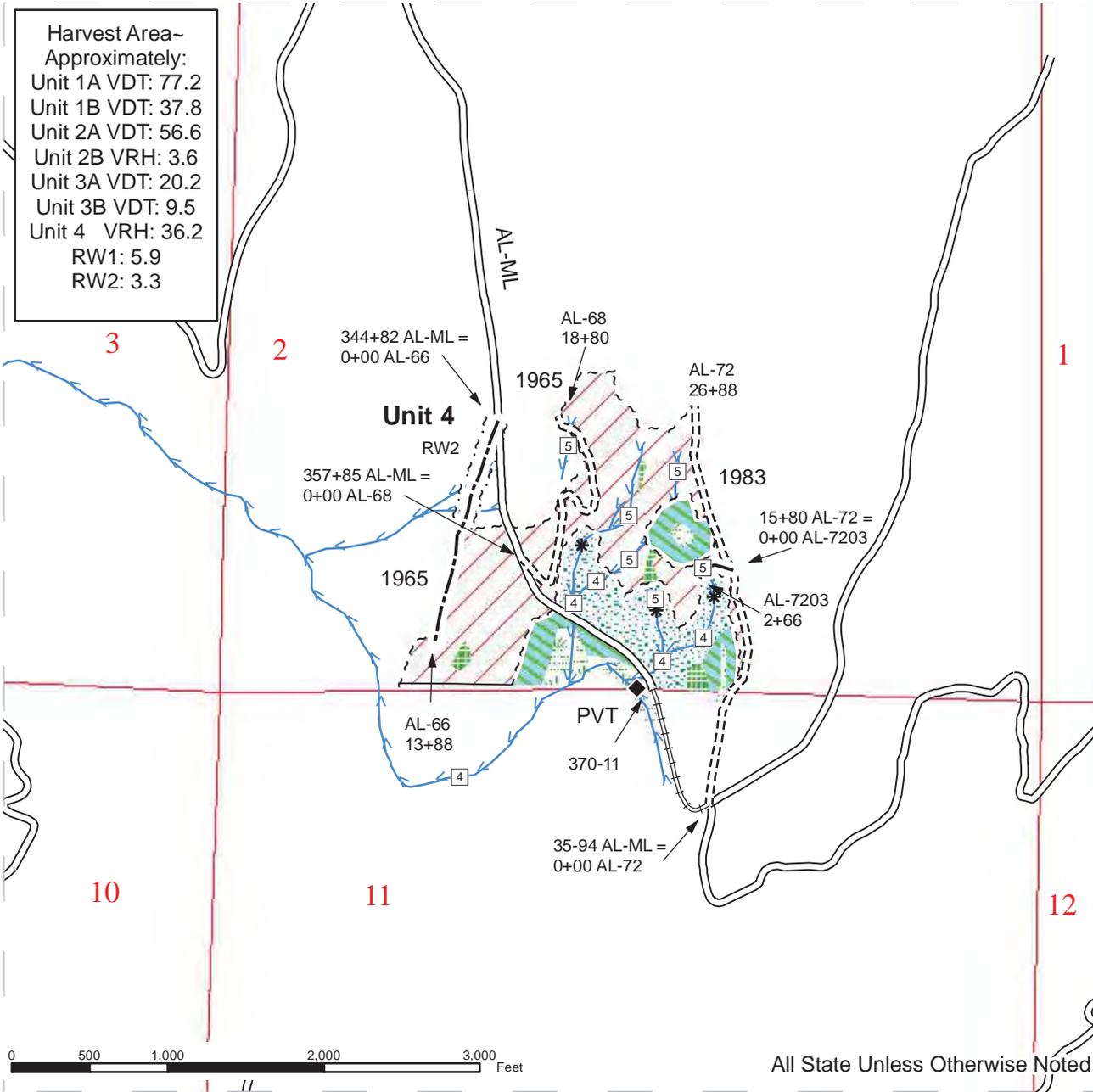
Harvest Area~
Approximately:
 Unit 1A VDT: 77.2
 Unit 1B VDT: 37.8
 Unit 2A VDT: 56.6
 Unit 2B VRH: 3.6
 Unit 3A VDT: 20.2
 Unit 3B VDT: 9.5
 Unit 4 VRH: 36.2
 RW1: 5.9
 RW2: 3.3

Sale Area	Sale Boundary Tags	Existing Road	Streams
Variable Density Thinning	Sale Boundary No Tags	Required Construction	Stream Type
Wetland	Right of Way Tags	Optional Construction	Stream Type Break
Wetland Buffer		Required Reconstruction	Survey Corners
Riparian Mgt Zone			
Leave Tree Area			

TIMBER SALE MAP

SALE NAME: Skaarup View VRH & VDT
AGREEMENT#: 30-092577
TOWNSHIP(S): T36 R04E
TRUST(S): 01 State Forest Transfer

REGION: Northwest
COUNTY(S): Skagit
ELEVATION RGE: 720-3260

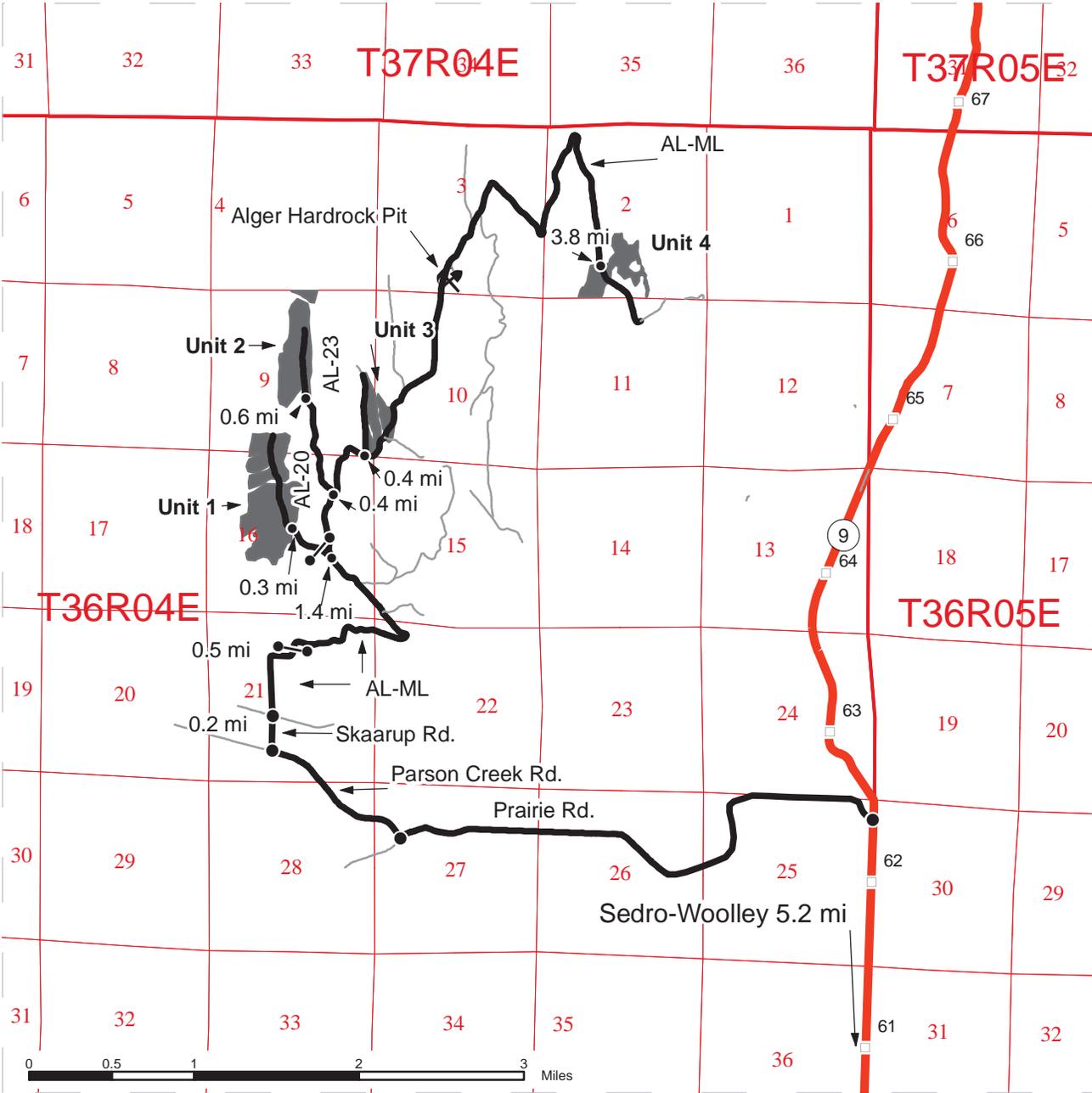


	Sale Area		Sale Boundary Tags		Existing Road		Streams
	Variable Density Thinning		Sale Boundary No Tags		Required Construction		Stream Type
	Wetland		Right of Way Tags		Optional Construction		Stream Type Break
	Wetland Buffer				Required Reconstruction		Survey Corners
	Riparian Mgt Zone						
	Leave Tree Area						

DRIVING MAP

SALE NAME: Skaarup View VRH & VDT
 AGREEMENT#: 30-092577
 TOWNSHIP(S): T36R04E
 TRUST(S): 01 State Forest Transfer

REGION: Northwest
 COUNTY(S): Skagit
 ELEVATION RGE: 720-3260



- Timber Sale Unit
- Highways
- Other Route
- Haul Route
- Milepost Markers
- Distance Indicator

DRIVING DIRECTIONS:

From the intersection of SR-20 and SR-9 in Sedro-Woolley, go north on SR-9 for approx. 5.2 miles to Prairie Rd. Turn left on and Prairie Rd. and continue for 3.4 miles to Parson Creek Rd and turn right. Continue on Parson Creek Rd. for 1 mile and turn right onto Skaarup Rd. Continue on Skaarup Rd. for 0.2 miles when Skaarup Rd. turns into the AL-ML after the 4-way stop. Continue on the AL-ML for 0.5 miles to the gate (F1-3 key).
 Unit 1: Continue past the gate on the AL-ML for 1.4 miles. Turn left and go through gate (F1-3 key) Travel 0.3 miles to unit 1.
 Unit 2: From the intersection of the AL-ML and AL-20 continue to on the AL-ML for 0.4 miles. Turn left on the AL-23. Travel 0.6 miles to Unit 2.
 Unit 3: From the Intersection of the AL-ML and AL-23 travel on the AL-ML for 0.4 miles to unit 3.
 Unit 4: From Unit 3 continue on the AL-ML for 3.8 miles.

**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted MBF Scale AGREEMENT NO. 30-092577

SALE NAME: SKAARUP VIEW VRH & VDT

**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 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 December 16, 2015 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 as described for removal in Schedule B, bounded by white timber sale boundary tags in Unit #1 (collectively labeled 1A and 1B).

All timber as described for removal in Schedule B, bounded by white timber sale boundary tags and the AL-23 Road in Unit #2A.

All timber bounded by white timber sale boundary tags, except trees marked with blue paint on the bole and root collar, forest products tagged out by yellow leave tree area tags, and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #2B.

All timber as described for removal in Schedule B, bounded by white timber sale boundary tags and the AL-ML and AL-28 roads in Unit #3 (collectively labeled 3A and 3B).

All timber bounded by white timber sale boundary tags, property lines and the AL-66 and AL-72 abandoned road grades, except trees marked with blue paint on the bole and root collar, forest products tagged out by yellow leave tree area tags, and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #4.

All timber bounded by orange right of way tags, except that title to the timber within the right of way tags is not conveyed to the Purchaser unless the road segment is actually constructed, except timber as described for removal in Schedule B.

The above described products, located on approximately 243 acres on part(s) of Sections 2, 9, 10, and 16 all in Township 36 North, Range 4 East W.M. in Skagit 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	NW Ground-Based Equip Specifications (Rev11/05/14)
B	Thinning Prescription
D	Damage Compartment Map

G-030 Contract Term

Purchaser shall remove the forest products conveyed and complete all work required by this contract prior to March 31, 2018.

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 \$30.00 per acre per annum for the acres on which an operating release has not been issued in the Variable Retention Harvest (VRH) area. Payment of \$3.00 per acre per annum for the acres on which an operating release has not been issued in Variable Density Thinning (VDT) area.
- 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. 812521 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, PRT-812521 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 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 Sedro Woolley, 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 post office address:

- 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; AL-ML (0+00 to 375+94), AL-20, AL-2004, AL-2004-01, AL-2004-02, AL-2007, AL-2011, AL-23, AL-28, AL-66, AL-68, AL-72, AL-7203. 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 AL-ML 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:

Easements with:

Robert O. and Patricia R. Strand; #55-000221; dated January 2, 1957.

Lemuel F. and Tisha B. Lunsford; #55-000222; dated January 4, 1957.

Ike M. and Josephine Richards; #55-000223; dated April 28, 1960.

Bloedel Timberlands Development, Inc; #55-073447; dated October 31, 1997.

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:

DATA MISSING

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 \$33,867.00 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.

P-027 Payment for Removal of Optional Forest Products

Purchaser agrees to 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 \$43,600.00. 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-040 Utility Logs

Utility logs are logs that meet the minimum utility log standards as described by the log scaling rules applicable for 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. The State may treat load tickets not accounted for as lost forest products. All costs associated with computing the billings for lost loads 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 24 hours 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-010 Cutting and Yarding Schedule

Falling and Yarding will not be permitted from November 1 to March 31 BY GROUND-BASED EQUIPMENT unless authorized in writing by the Contract Administrator.

H-011 Certification of Fallers and Yarder Operators

All persons engaged in the felling and yarding of timber must receive certification in writing from the Contract Administrator. Certification may be revoked when the Contract Administrator determines that non-compliance of leave tree selection criteria or cut tree selection criteria is occurring, or excessive damage to leave trees or skid trails is occurring.

Excessive damage for leave trees is defined in clause H-012.

Excessive skid trail damage is defined in clause H-015 or H-016.

When leave tree damage exceeds the limits set forth in clause H-012, Purchaser shall be subject to liquidated damages (clause D-040 or D-041).

H-012 Leave Tree Damage Definition

Leave trees are trees required for retention within the sale boundary. Purchaser shall protect leave trees from being cut, damaged, or removed during operations.

Leave tree damage exists when more than 5 percent of the leave trees are damaged in a unit and when one or more of the following criteria occur as a result of Purchaser's operation, as determined by the Contract Administrator:

- a. A leave tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 200 square inches.
- b. A leave tree top is broken or the live crown ratio is reduced below 30 percent.
- c. A leave 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 leave tree has been cut or damaged, the Purchaser may be required to pay liquidated damages for Excessive Leave Tree Damage as detailed in clause D-040.

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 200 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 area, 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-016 Skid Trail Requirements

A skid trail is defined as an area that is used for more than three passes by any equipment.

Purchaser shall comply with the following during the yarding operation:

- a. A skid trail will not exceed 14 feet in width, including rub trees.
- b. Skid trails shall not cover more than 15 percent of the total acreage on one unit.
- c. Location of the skid trails must be marked by Purchaser and approved by the Contract Administrator.
- d. Except for rub trees, skid trails shall be felled and yarded prior to the felling of adjacent timber.

- e. Rub trees shall be left standing until all timber tributary to the skid trail has been removed.
- f. Excessive soil damage is not permitted. Excessive soil damage is described in clause H-017.
- g. Purchaser will not have more than two skid trails open to active skidding at any one time. All other skid trails used for skidding timber will be closed.
- h. Once a skid trail is closed, Purchaser will not reopen a skid trail unless approved in writing by the Contract Administrator.
- i. Skid trails will be water barred at the time of completion of yarding, if required by the Contract Administrator.

Purchaser shall not deviate from the requirements set forth in this clause without prior written approval from the Contract Administrator.

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 4 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-035 Fall Trees Into Sale Area

Trees shall be felled into the sale area unless otherwise approved by the Contract Administrator.

H-040 Purchaser Harvest Plan

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for sale area. The plan shall address the falling, yarding and hauling of forest products, which are part(s) of this contract. The harvest plan shall be approved by the Contract Administrator prior to beginning the harvest operation. Purchaser shall not deviate from the harvest plan without prior written approval by the Contract Administrator.

H-050 Rub Trees

Trees designated for cutting along skid trails and cable corridors shall be left standing as rub trees until all timber that is tributary to the skid trail or cable corridor has been removed.

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 felled by chainsaw and yarded by cable; felled by chainsaw or feller-buncher and yarded by cable, forwarder or tracked skidder (on skid trails as approved in writing by the Contract Administrator) on sustained slopes 35% or less in the variable density thinning units; felled by chainsaw or feller-buncher and yarded by cable, shovel or tracked skidder (on skid trails as approved in writing by the Contract Administrator) on sustained slopes 35% or less in the variable retention harvest units. unless authority to use other equipment is granted in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

H-130 Hauling Schedule

The hauling of forest products will not be permitted on any road from November 1 to March 31 unless authorized in writing by the Contract Administrator .

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

- A. An on-site pre-work meeting shall be scheduled with the Contract Administrator, which shall include the operator and fallers, prior to commencement of any activities on site.
- B. A copy of the timber sale map and contract shall be present on site during active operations.
- C. All ground-based equipment must operate on a mat of slash. Tops of trees shall be cut and scattered where trees are felled and/or placed on skid trails to create a mat for equipment to operate on in the variable density thinning units.

- D. Trees must be felled away from stream channels and any standing water or wet swales when feasible.
- E. Location of yarding corridors must be pre-marked by Purchaser and approved in writing by the Contract Administrator.
- F. Cutting and yarding shall not be permitted during the bark slippage season, unless authorized in writing by the Contract Administrator. This season is estimated to run from April 1 to July 15, but shall vary depending on weather conditions. If permission is granted to operate during the bark slippage season, the Purchaser shall be required to provide a plan outlining mitigation measures.
- G. Single blue-ring painted leave trees in the variable retention harvest portion of the sale area may be exchanged for unmarked trees of similar size and wildlife characteristics upon prior approval by the Contract Administrator.
- H. Corridors shall be parallel to one another wherever possible.
- I. Temporary log crossings that protect stream bank integrity are required for type 5 water crossings during yarding operations and must be approved in writing by the Contract Administrator. Structures shall be limited to crossing points approved in writing by the Contract Administrator. Streambeds and banks shall be protected by the use of log puncheon or other approved structures at these crossing points and removed upon the completion of yarding activities. This applies to both cable and ground-based yarding.
- J. There are eight damage unit compartments within the variable density thinning units of this sale, which are delineated on the damage compartment map (Schedule D).
- K. If trees need to be cut within WMZ areas along the AL-72 for road construction, prior to felling of trees, a mitigation plan must be developed by the Purchaser and approved in writing by the Contract Administrator. The plan shall require the on-site and in-kind equal acreage extension of the buffer adjacent to the WMZ.

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 species	10	12	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-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-170 Utility Log Removal

All utility logs shall be yarded concurrently with the yarding of other logs and shall be removed from the sale area.

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.

Section C: Construction and Maintenance

C-040 Road Plan

Road construction and associated work provisions of the Road Plan for this sale, dated 6/19/2015 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on the AL-ML (242+21 to 375+94), AL-20, AL-2004, AL-2004-01, AL-2004-02, AL-2007, AL-2011, AL-23, AL-28, AL-66, AL-68, AL-72, AL-7203 roads. 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 AL-ML (0+00 to 242+21) road. 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 State current Equipment Rate Schedule on file at the region and Olympia offices. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

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-050 Cessation of Operations for Low Humidity

During the "closed season", 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-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 4 to 6 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: Interest = $r \times LD \times N$.

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 within 24 hours of log removal, and \$250 each time a ticket is either lost or otherwise unaccounted for.

D-040 Leave Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-012, Leave Tree Damage Definition, the trees damaged result in substantial injury to the State. The value of the damaged leave trees at the time of the breach is not readily ascertainable. Therefore, Purchaser agrees to pay the State as liquidated damages at the rate of \$50.00 per tree for all damaged trees in the Variable Density Thinning area.

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

DRAFT

DRAFT

DRAFT

the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged reserve trees that are not replaced in the Variable Retention Harvest area.

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Jean Fike
Northwest Region Manager

Date: _____
Address: _____

Date: _____

CORPORATE ACKNOWLEDGEMENT

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
NW Ground-Based Equip Specifications (Rev11/05/14)

The following types of equipment are considered ground-based equipment: feller-buncher, processor, forwarder, skidder and shovel.

SHOVEL is defined as a low ground pressure track-mounted machine with hydraulic boom and grapple capable of picking up one end of the largest log 25 feet from the center of the machine.

LOG PROCESSOR/DE-LIMBER is defined as a mobile machine with a hydraulic boom capable of simultaneously bucking, delimiting and/or debarking and chipping whole trees while sitting stationary at the landing.

FELLER-BUNCHER/HARVESTER is defined as a track mounted machine with hydraulic boom and cutter head capable of felling, bucking, limbing, and decking logs in one operation.

FORWARDER is defined as a track or rubber tire machine used for transporting logs to a landing by use of a bunk with self loading boom in which logs are carried free of the ground.

RUBBER-TIRED SKIDDER is defined as a skidder mounted on rubber tires used to drag logs to a landing. Logs are generally pulled in groups of six or less, with one end on the ground.

TRACKED SKIDDER is defined as any tracked tractor or skidder, fixed or articulated, used to drag logs to landings. Logs are generally pulled in groups of six or less, with one end on the ground.

Harvester shall not deviate from the requirements set forth in this Schedule without prior written approval from the Contract Administrator.

FOR ALL YARDING:

Equipment will remain at least 30 feet from all water courses or areas of wet/soft soils, except as necessary to cross at approved locations. Water course crossing structures must be approved by a HPA or by the Contract Administrator.

Logging debris created by the operation will be removed from water courses concurrently with yarding.

WHEN SHOVEL YARDING IS AUTHORIZED:

S1. When yarding and loading operations are occurring simultaneously, an additional shovel will be required for loading to avoid extra trips to the landing.

S2. Shovel yarding will not be allowed to create ruts or soil puddling. Shovel routes should be dispersed to prevent creation of definable trails.

S3. Within shovel logged areas, to facilitate proper reforestation, logging debris will be dispersed as necessary to create clear, plantable spots at approximately a 11 foot x 11 foot spacing. Planting spots will be created concurrently with yarding.

LOG PROCESSORS will be allowed within the sale area only under one of the following conditions:

1. No tops or limbs will be allowed to accumulate on any landings, and all tops and limbs will be re-distributed into the unit, to the satisfaction of the Contract Administrator, and will provide for plantable spots every 11 feet by 11 feet.
2. Harvester must provide a written slash treatment plan, acceptable to the Contract Administrator, to address the additional slash accumulation. The Slash Treatment Plan will be a part of the Plan of Operations.

Schedule B
Thinning Prescription

Thinning Prescription

Units 1-3: Thinning from below, leave the “best” 130-140 trees per acre across entire unit, including yarding corridors, (approximately 18x18 foot spacing). The residual stand must have a basal area greater than or equal to 140.

To accomplish these criteria, the take tree preference is as follows:

1. Cut hardwoods
2. Cut hemlock
3. Cut Douglas-fir up to 12 inches DBH, unless there is severe deformity as defined below or need to be removed for corridors.
4. Western redcedar shall only be cut for the purpose of yarding corridors.

Best tree definition is having the following characteristics:

1. Free of disease, major defect, and damage
2. Fullest and most vigorous crowns
3. Best form: tallest tree, straightest boles, and smallest limb diameters

Special Thinning Conditions

Openings created by felling trees shall not exceed 30 feet between leave trees. In areas where thinning is not necessary, i.e., prescription is met already; do not put in corridors. If natural openings in the stand exceed this distance, sufficient trees shall be left on the perimeter of the opening to maintain the appropriate trees per acre and basal area as determined by compliance plots described in compliance methods.

Riparian Management Zones

Five conifer trees per thinned RMZ acre from the largest diameter class of thinned trees shall be felled and left as down woody debris. These trees are in addition to the residual stocking targets mentioned above. Trees shall be cut within 25 feet of the white timber sale boundary tags in all RMZ thinning areas. Trees shall be felled toward the stream channel and shall be proportionally distributed across all type 4 streams. The Contract Administrator needs to review and approve trees marked (Yellow paint) 21 trees (5 per acre) by the Purchaser from the largest thinned DBH class in streams H, I, L, M, Y, W, U, T, S, Q, P, N; as labeled on damage compartment map (Schedule D) for large down wood.

Leave tree definition

Leave trees in the unit will be selected by comparing their characteristics with other trees in the stand. Leave trees will be the best trees from the largest diameter classes available and evenly distributed over the landscape.

Diseased tree:

A tree that is infested with Dwarf Mistletoe or other pathogen to the point that at least 2/3 of its crown contains is infected.

Deformed tree:

A tree that has forked tops, broken tops, sinuosity, or severe cat faces (bark removed on more than half of the circumference of the tree).

Ground-based yarding corridors:

Corridors are limited to 14 feet wide (including rub trees) and no less than 70 feet apart as measured from the center of the corridor. Where possible corridors should be located in a manner that minimizes the chance of damaging or needing to remove any leave trees. No yarding will take place on slopes greater than 35%.

Compliance:

A 1/20 acre fixed radius plot (26.3 feet) will be measured to determine trees per acre. The number of trees in a plot will be multiplied by 20 to determine the trees per acre for that plot. The average of all plots in a unit will determine the trees per acre for that unit. Only trees greater than or equal to 6.5 inches DBH will be measured.

In addition from plot center, a 40 BAF prism will be used to determine average basal area. Each tree captured in the plot will represent 40 basal area, needing and average of 3-4 trees per plot to meet the prescription of 140.

Certification of fallers and yarder operators (additional requirements beyond those outlined in the H-011)

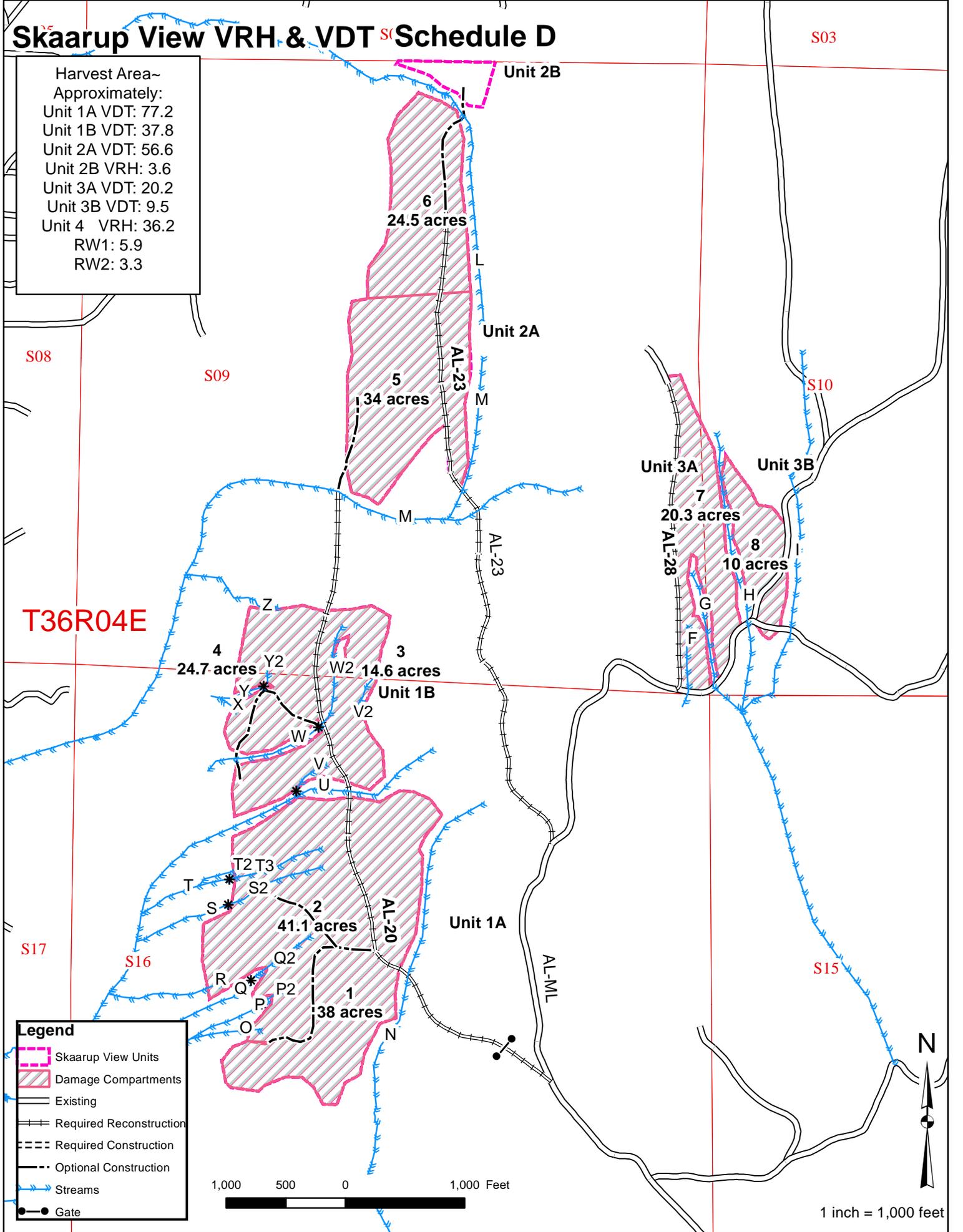
The Contract Administrator and faller/harvest operator will jointly review the take tree selection criteria as outlined in Schedule B of the sale contract. In conjunction with the Contract Administrator, the faller/harvest operator will mark a designated area as a test plot within the sale boundary. Satisfactory thinning of the test plot completes the certification process.

Certifications will be issued to individuals when they demonstrate to the Contract Administrator their ability to perform within the requirements set forth in the contract.

Skaarup View VRH & VDT Schedule D

S03

Harvest Area~
Approximately:
Unit 1A VDT: 77.2
Unit 1B VDT: 37.8
Unit 2A VDT: 56.6
Unit 2B VRH: 3.6
Unit 3A VDT: 20.2
Unit 3B VDT: 9.5
Unit 4 VRH: 36.2
RW1: 5.9
RW2: 3.3



T36R04E

Legend

- Skaarup View Units
- Damage Compartments
- Existing
- Required Reconstruction
- Required Construction
- Optional Construction
- Streams
- Gate



1 inch = 1,000 feet



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 6/13)

PRE-CRUISE NARRATIVE

Sale Name: Skaarup View VRH & VDT	Region: Northwest
Agreement #: 30-092577	District: Baker
Contact Forester: Joe Magnuson Phone / Location: 425-503-9097	County(s): Skagit
Alternate Contact: Click here to enter text. Phone / Location: Click here to enter text.	Other information: Click here to enter text.

Type of Sale: MBF Scale	
Harvest System: Ground based Click here to enter text.	100
Harvest System: Select harvest system Click here to enter text.	Click here to enter percent sale acres.
Enter % of sale acres	
Harvest System: Select harvest system Click here to enter text.	Click here to enter percent sale acres.

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ WMZ	Legal Description (Enter only one legal for each unit) Sec/Twp/Rng	Grant or Trust	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination (List method and error of closure if applicable)
				RMZ/ WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1A	S16/T36/R04E	01	75.4			1.8		73.6	GPS (Garmin)
1B	S16,9/T36/R04E	01	37.7			1.6		36.1	GPS (Garmin)
2A	S9/T36/R04E	01	56.6			2		54.6	GPS (Garmin)
2B	S9/T36/R04E	01	3.7		0.1			3.6	GPS (Garmin)
3A	S9,10/T36/R04E	01	20.2					20.2	GPS (Garmin)
3B	S10/T36/R04E	01	10			0.5		9.5	GPS (Garmin)
4	S2/T36/R04E	01	38.4		1.3	0.9		36.2	GPS (Garmin)

RW1	S16,2/T36/R04E	01	7.3					7.3	30' each side of centerline.
RW2	S9,16/T36R04E	01	1.9					1.9	30' each side of centerline.
TOTAL ACRES			251.2		1.4	6.8		243.0	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1A	Variable Density Thinning. Trees will be thinned as per the prescription listed in Schedule B.	N/A	See attached Schedule B for prescription.
1B			
2A			
3A			
3B			
2B	Variable Retention Harvest. Take all timber bound by white timber sale boundary tags, roads, and young stands, except trees marked with blue paint or bound out with yellow leave tree tags.	N/A	30 trees have been retained in one leave tree clump.
4			299 trees have been retained in four leave tree clumps. 8 individual trees have been marked for retention as well. The total number of leave trees is 307.
RW1	Marked with orange right-of-way boundary tags.	N/A	
RW2			

OTHER PRE-CRUISE INFORMATION:

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1A	DF, WH, 386MBF		See attached driving and traverse maps.
1B	DF,WH,189MBF		
2A	DF, WH,283MBF		
3A	DF, WH, 101MBF		
3B	DF, WH, 47MBF		
2B	DF, WH, 216MBF		
4	WH, SF, 543MBF		
RW1	DF, 82MBF		
RW2	DF, 16MBF		
*Corridors	DF, WH, 434MBF		
TOTAL MBF	1867MBF		

REMARKS:

Units 1A, 1B, 2A, 3A, 3B is almost entirely Douglas fir with a mix of Western hemlock and hardwoods, and will be thinned according to the schedule B. All existing road acreage has been subtracted from the net acres. Unit 2B is a mix of Douglas fir, cedar and hemlock. Unit 4 is high elevation timber mixed with predominately Western hemlock and Pacific silver fir a few Douglas fir are mixed in places. RW1 is inside of the thinning units. RW2 is right-of-way along old over grown abandoned roads. Traverse points on the unit edge are marked with pink and green flagging and labeled with the traverse point number. Traverse points on leave tree groups are marked the same way.

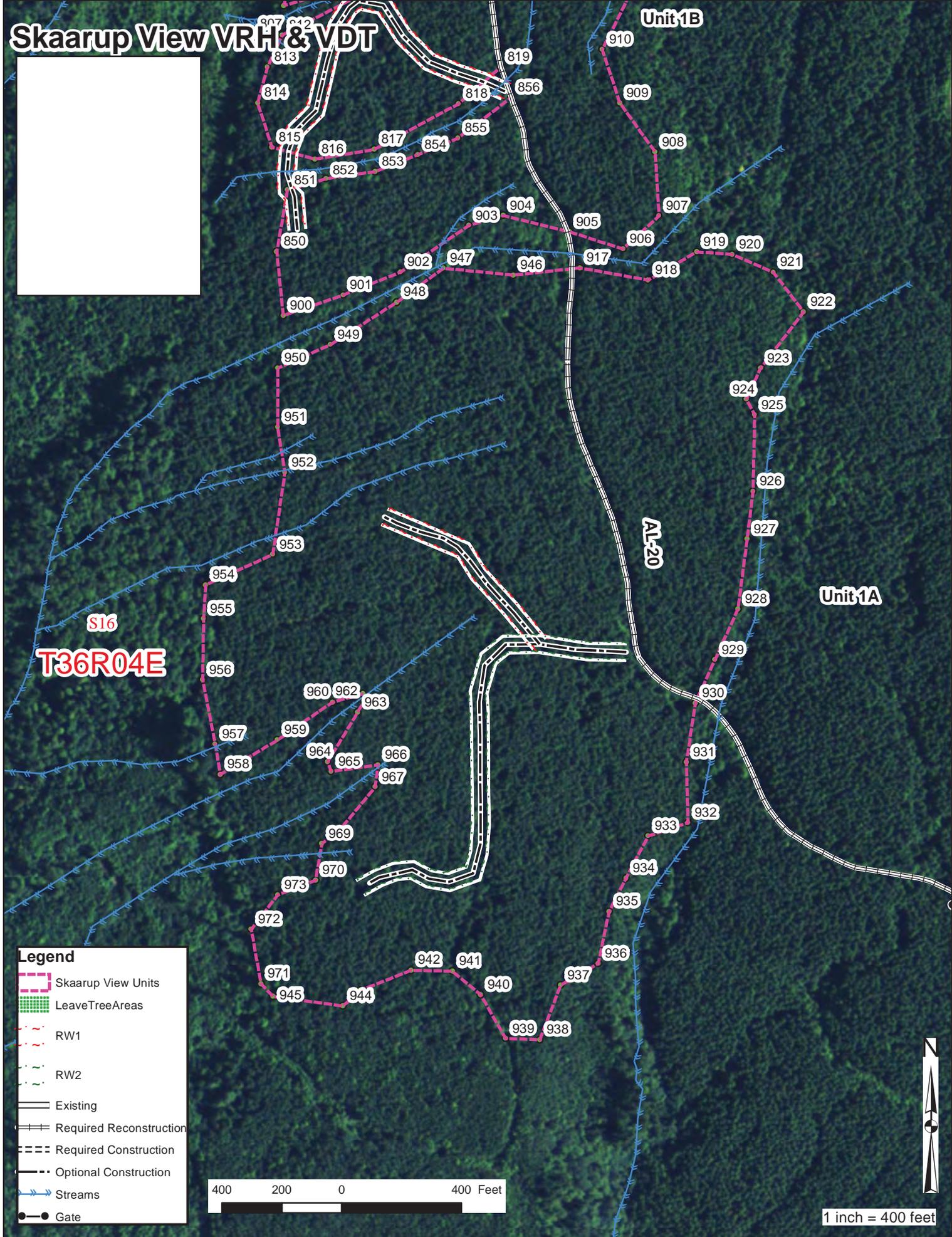
*Approximately 31 acres of corridor are expected with this sale.

GIS measure tool used to get length. Length then multiplied by 50'.
 Estimated 31 acres of corridor. Approximately 434MBF
 Total estimated sale volume with corridors 2298MBF

ROW 1 is internal ROW.
 ROW 2 is external ROW.

Prepared By: Joe Magnuson Date: 6/16/2015	Title: Forester	CC:
--	-----------------	-----

Skaarup View VRH & VDT



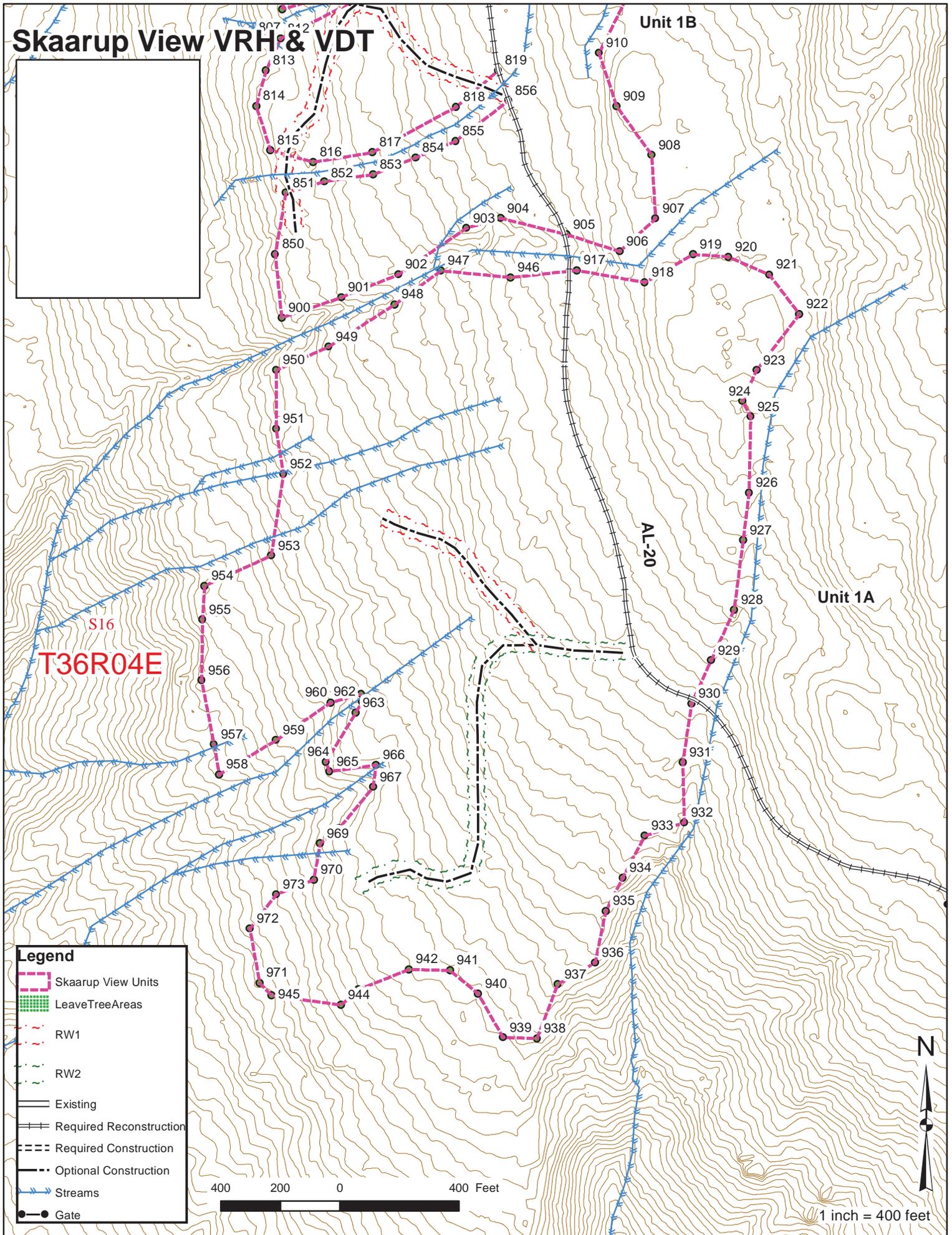
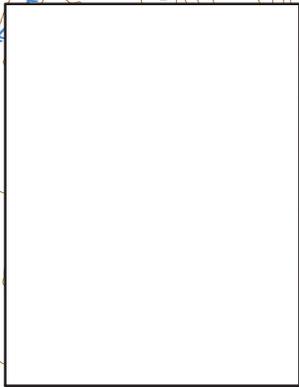
Legend

- Skaarup View Units
- Leave Tree Areas
- RW1
- RW2
- Existing
- Required Reconstruction
- Required Construction
- Optional Construction
- >>> Streams
- Gate



1 inch = 400 feet

Skaarup View VRH & VDT



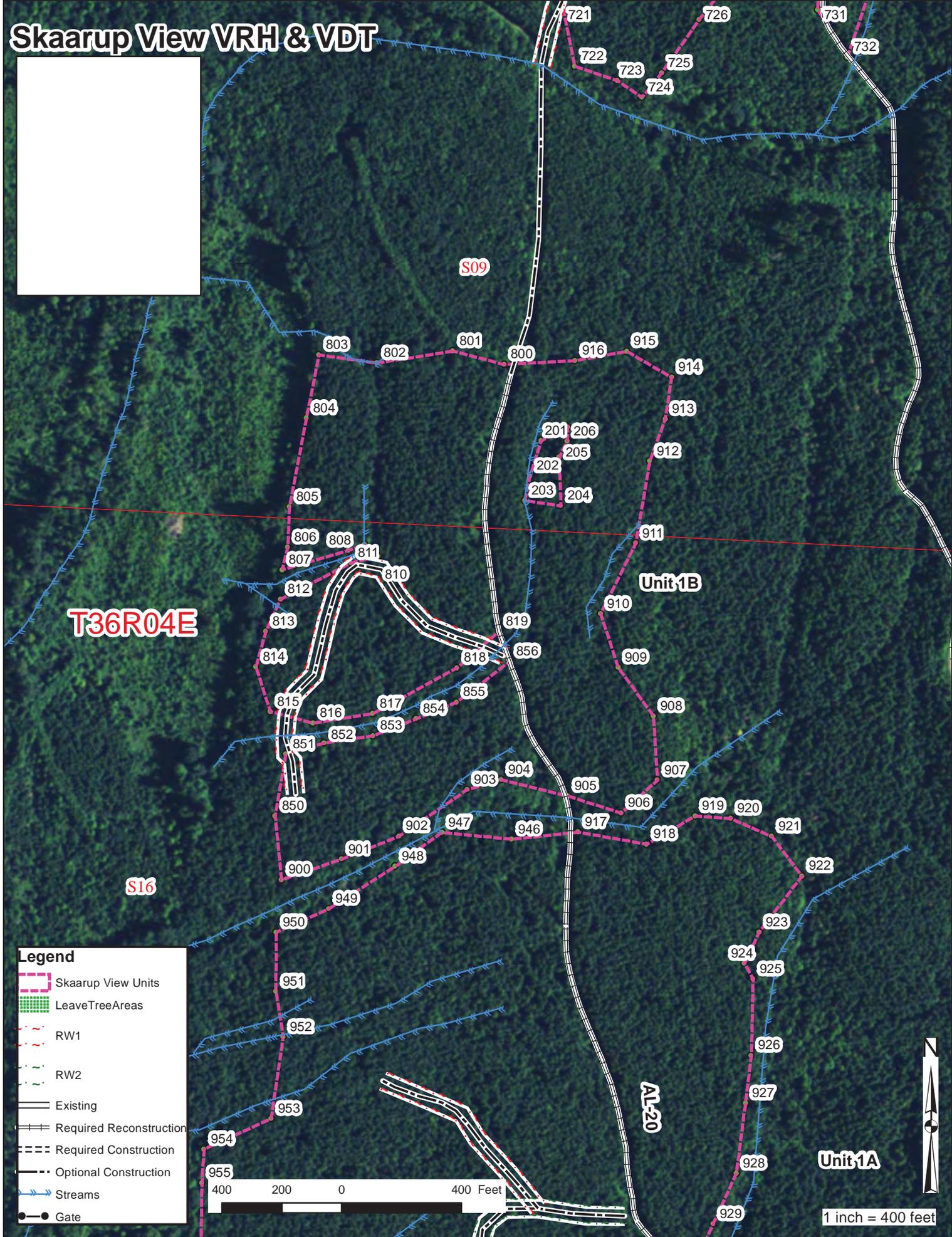
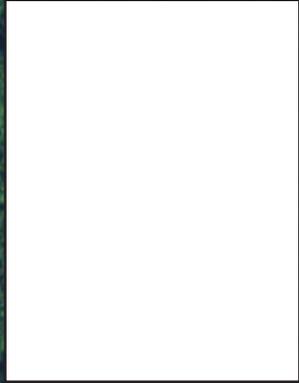
Legend

- Skaarup View Units
- LeaveTreeAreas
- RW1
- RW2
- Existing
- Required Reconstruction
- Required Construction
- Optional Construction
- Streams
- Gate

400 200 0 400 Feet

1 inch = 400 feet

Skaarup View VRH & VDT



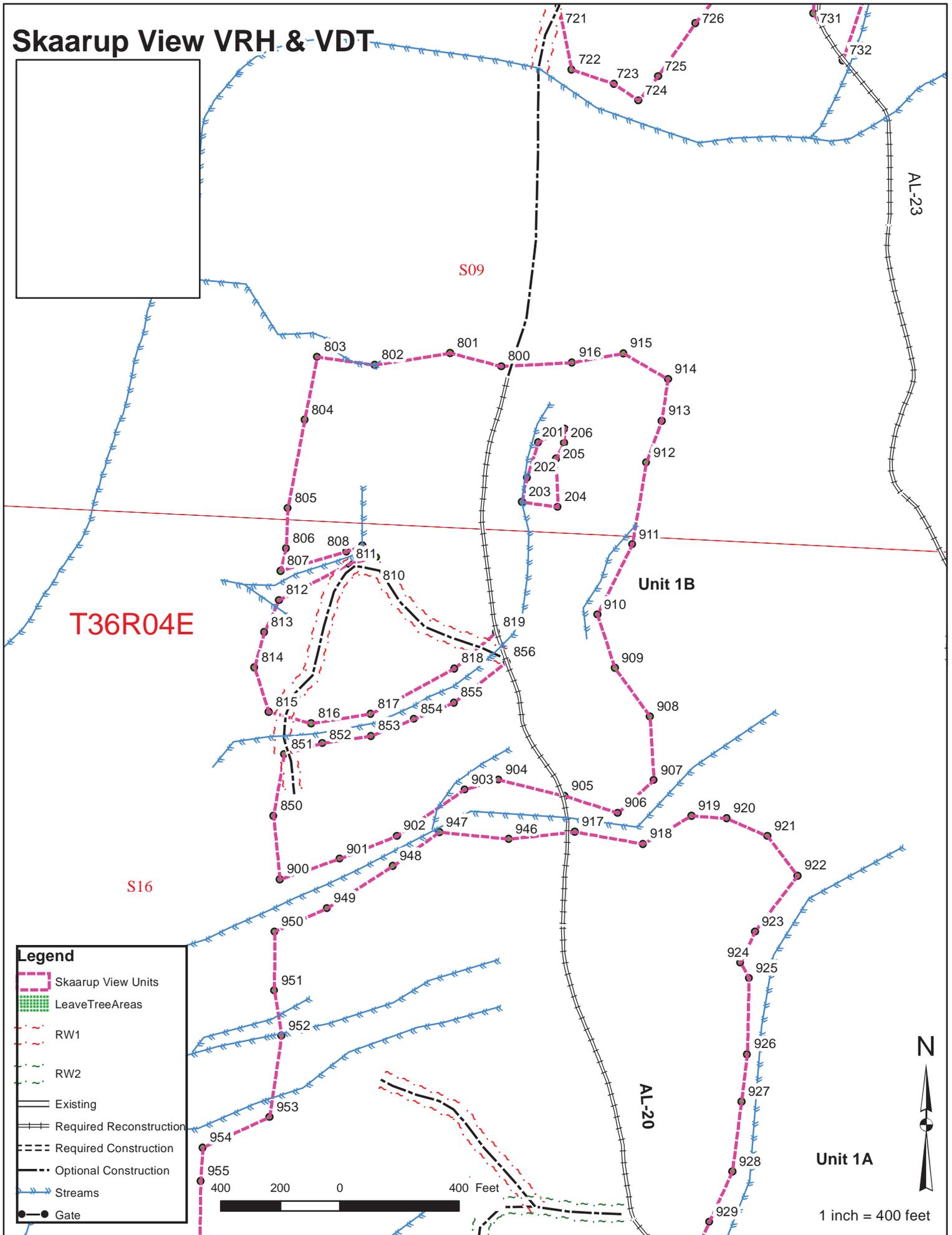
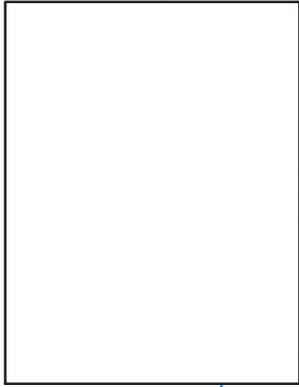
Legend

- Skaarup View Units
- Leave Tree Areas
- RW1
- RW2
- Existing
- Required Reconstruction
- Required Construction
- Optional Construction
- >>> Streams
- Gate



Unit 1A
1 inch = 400 feet

Skaarup View VRH & VDT



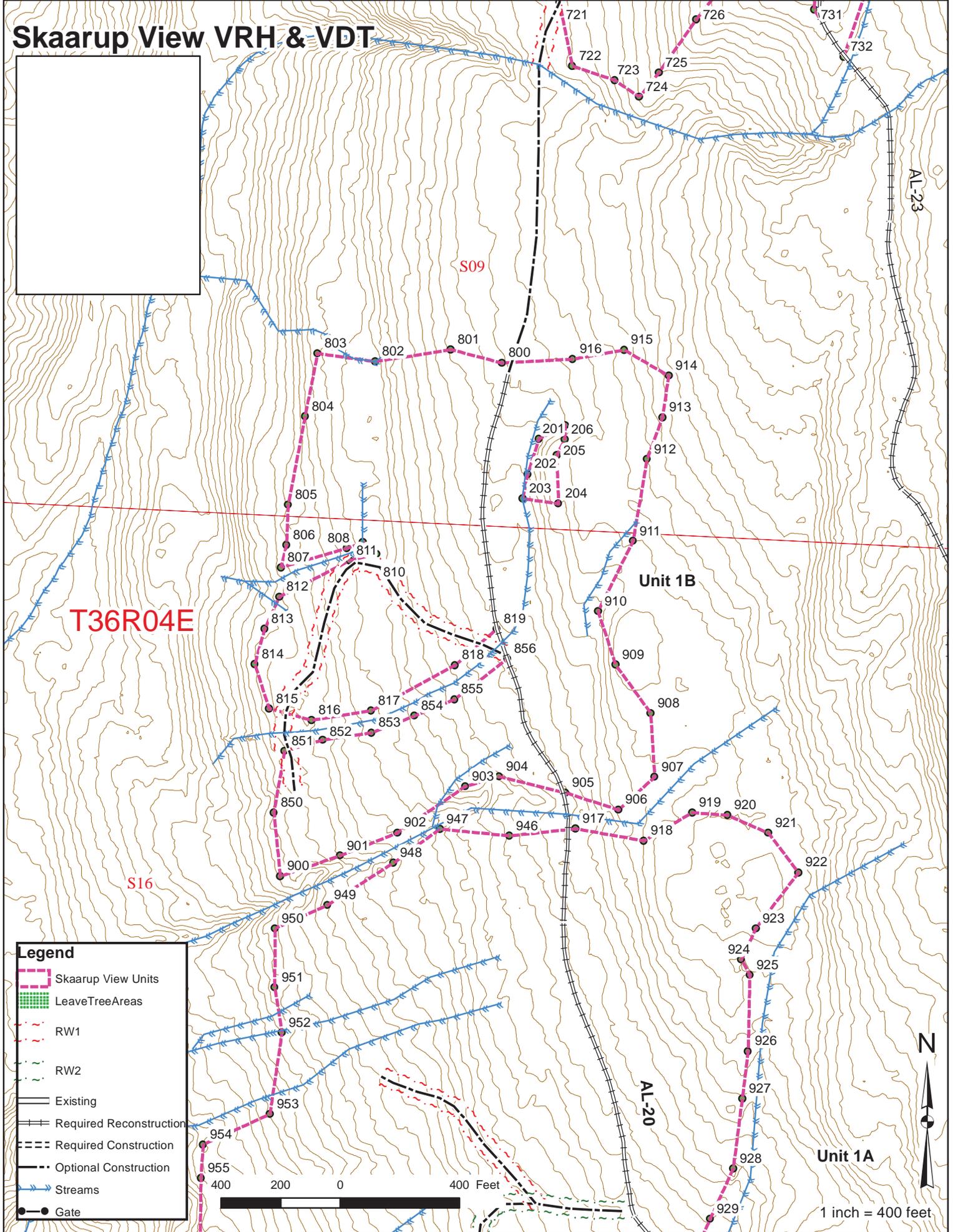
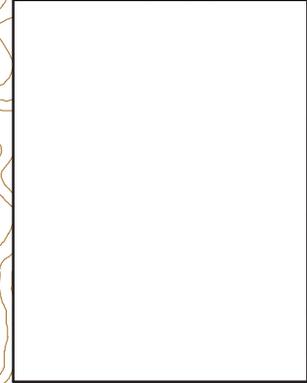
Legend

- Skaarup View Units
- Leave Tree Areas
- RW1
- RW2
- Existing
- Required Reconstruction
- Required Construction
- Optional Construction
- Streams
- Gate



Unit 1A
1 inch = 400 feet

Skaarup View VRH & VDT



Legend

- Skaarup View Units
- Leave Tree Areas
- RW1
- RW2
- Existing
- Required Reconstruction
- Required Construction
- Optional Construction
- ↗ Streams
- Gate

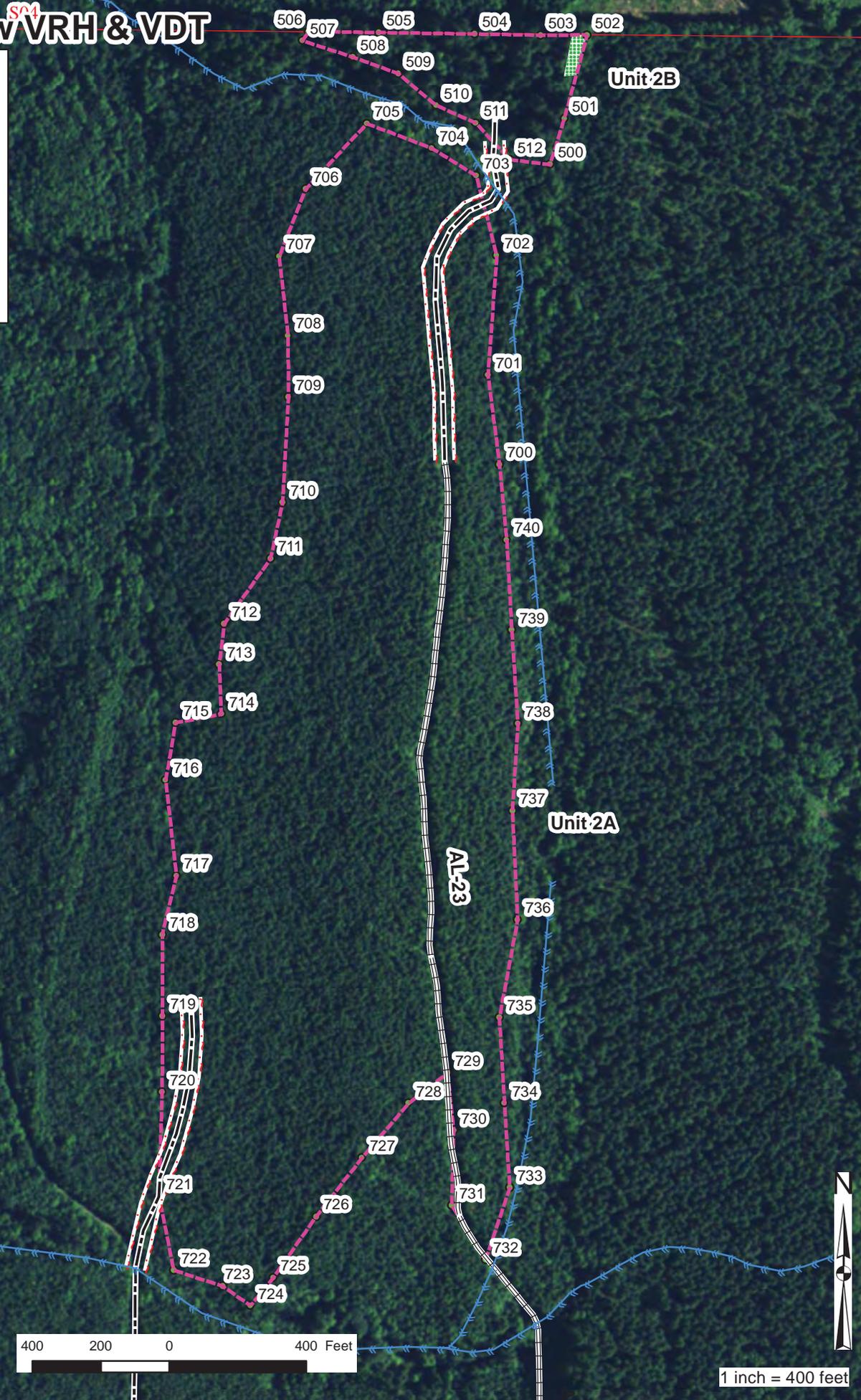


N

Unit 1A

1 inch = 400 feet

Skaarup View VRH & VDT



T36R04E

S09

Legend

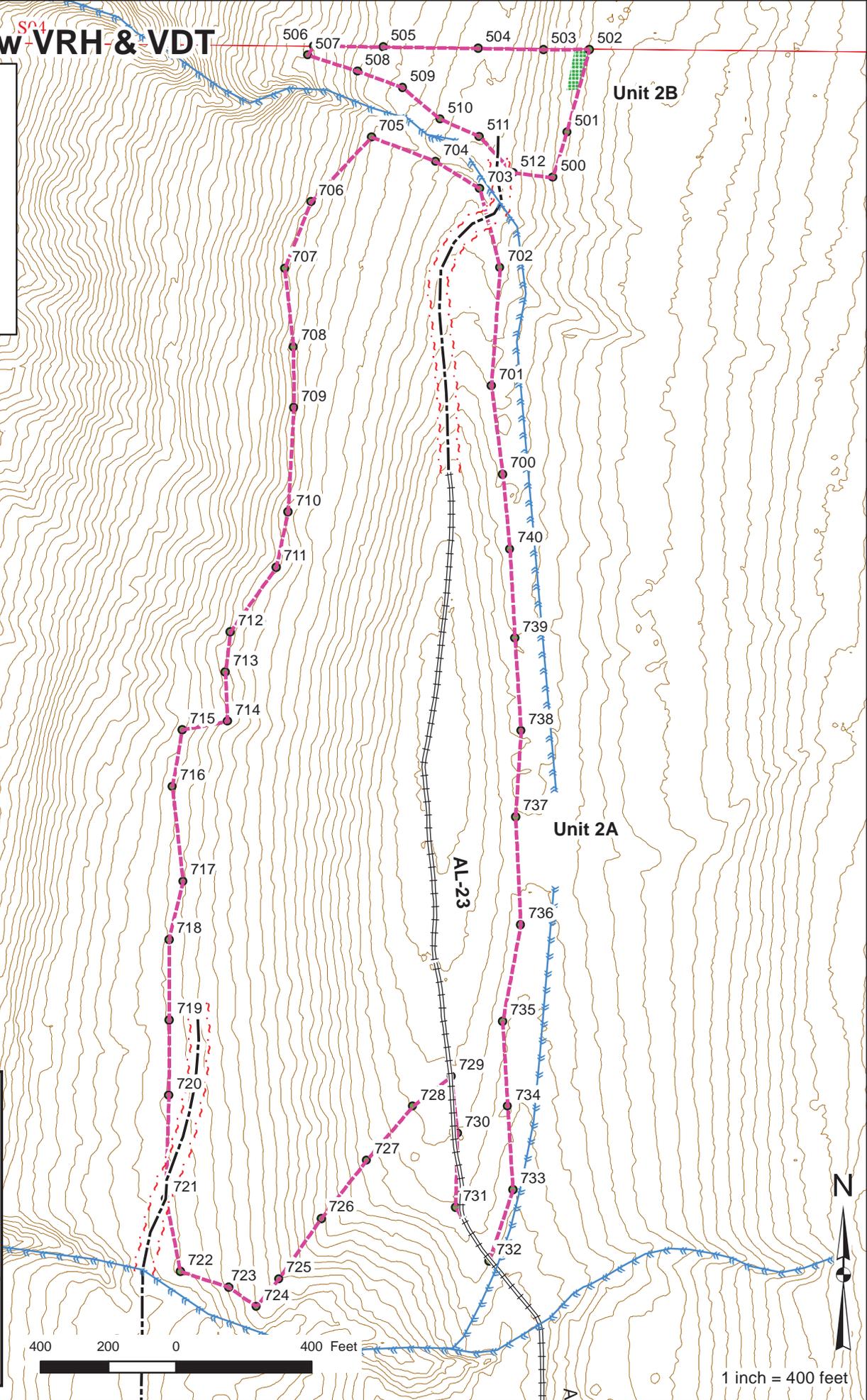
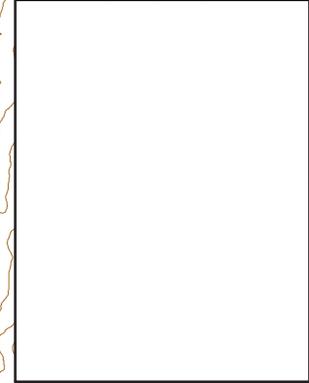
- Skaarup View Units
- Leave Tree Areas
- RW1
- RW2
- Existing
- Required Reconstruction
- Required Construction
- Optional Construction
- >>> Streams
- Gate



1 inch = 400 feet



Skaarup View VRH & VDT



T36R04E

S09

Unit 2B

Unit 2A

AL-23

Legend

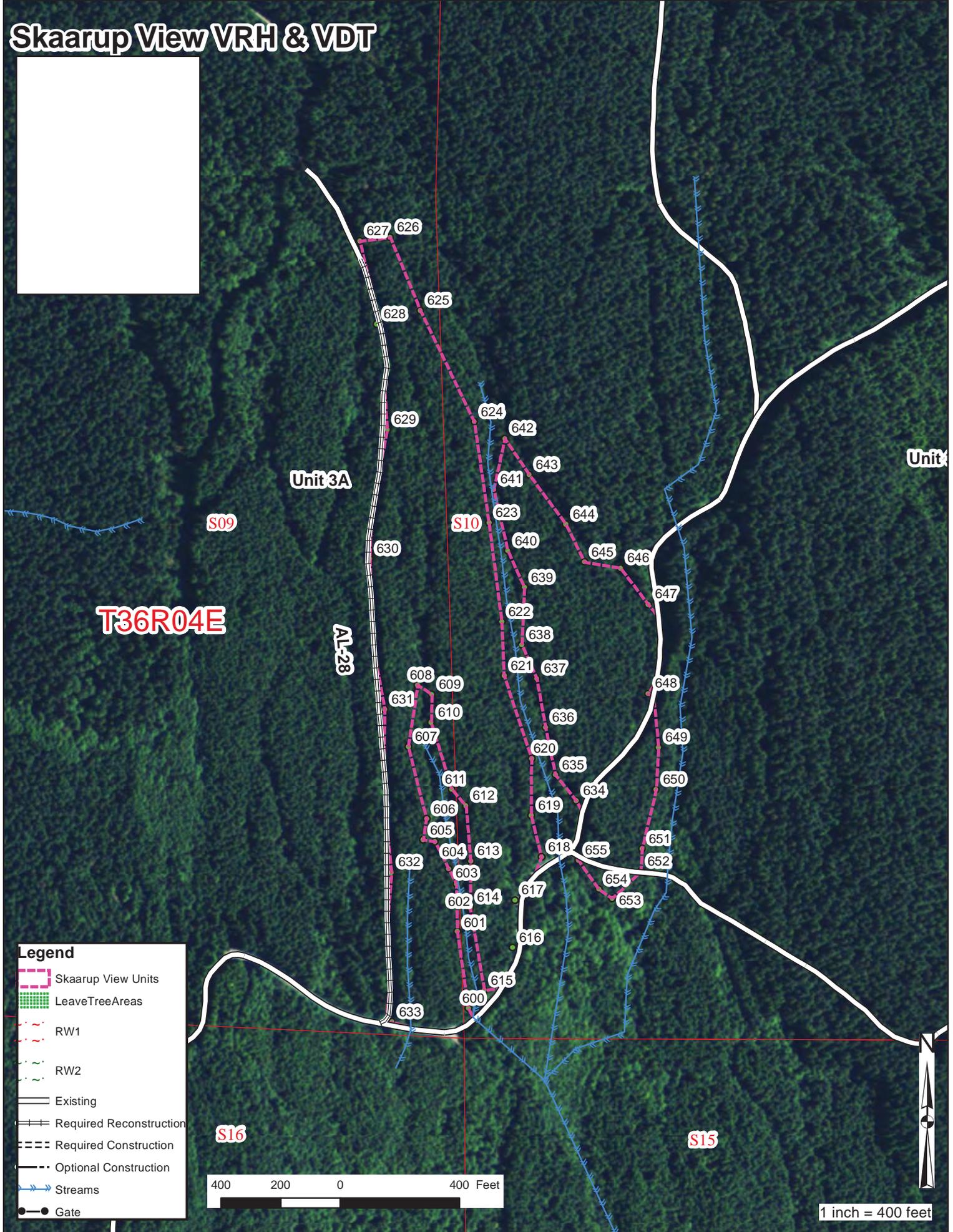
- Skaarup View Units
- Leave Tree Areas
- RW1
- RW2
- Existing
- Required Reconstruction
- Required Construction
- Optional Construction
- Streams
- Gate

400 200 0 400 Feet

1 inch = 400 feet



Skaarup View VRH & VDT



Unit 3A

Unit 4

S09

S10

T36R04E

AL-28

S16

S15

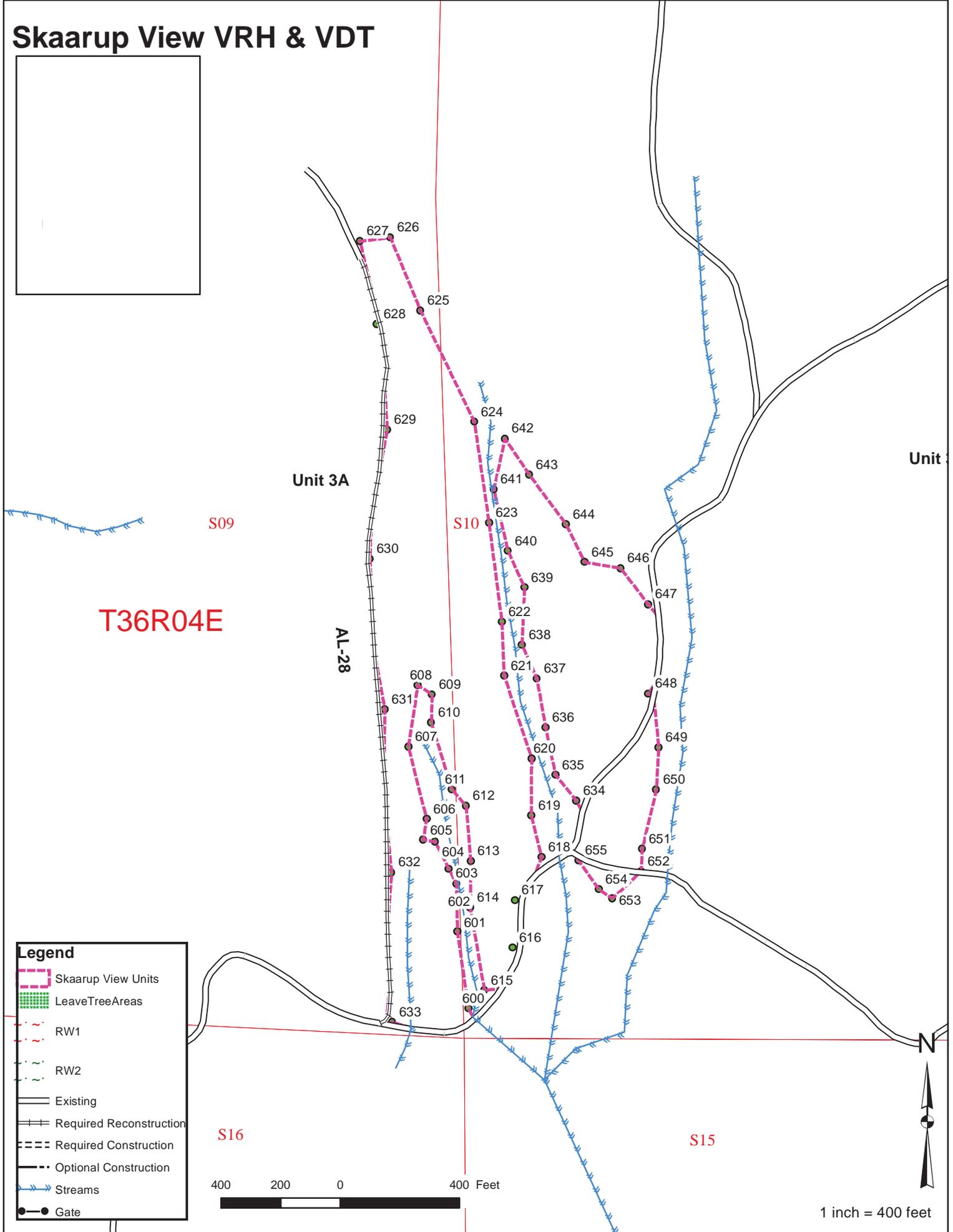
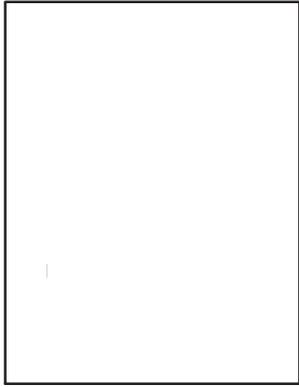
Legend

- Skaarup View Units
- Leave Tree Areas
- RW1
- RW2
- Existing
- Required Reconstruction
- Required Construction
- Optional Construction
- Streams
- Gate

400 200 0 400 Feet

1 inch = 400 feet

Skaarup View VRH & VDT



T36R04E

Unit 3A

Unit

S09

S10

AL-28

S16

S15

Legend

- Skaarup View Units
- Leave Tree Areas
- RW1
- RW2
- Existing
- Required Reconstruction
- Required Construction
- Optional Construction
- > Streams
- Gate

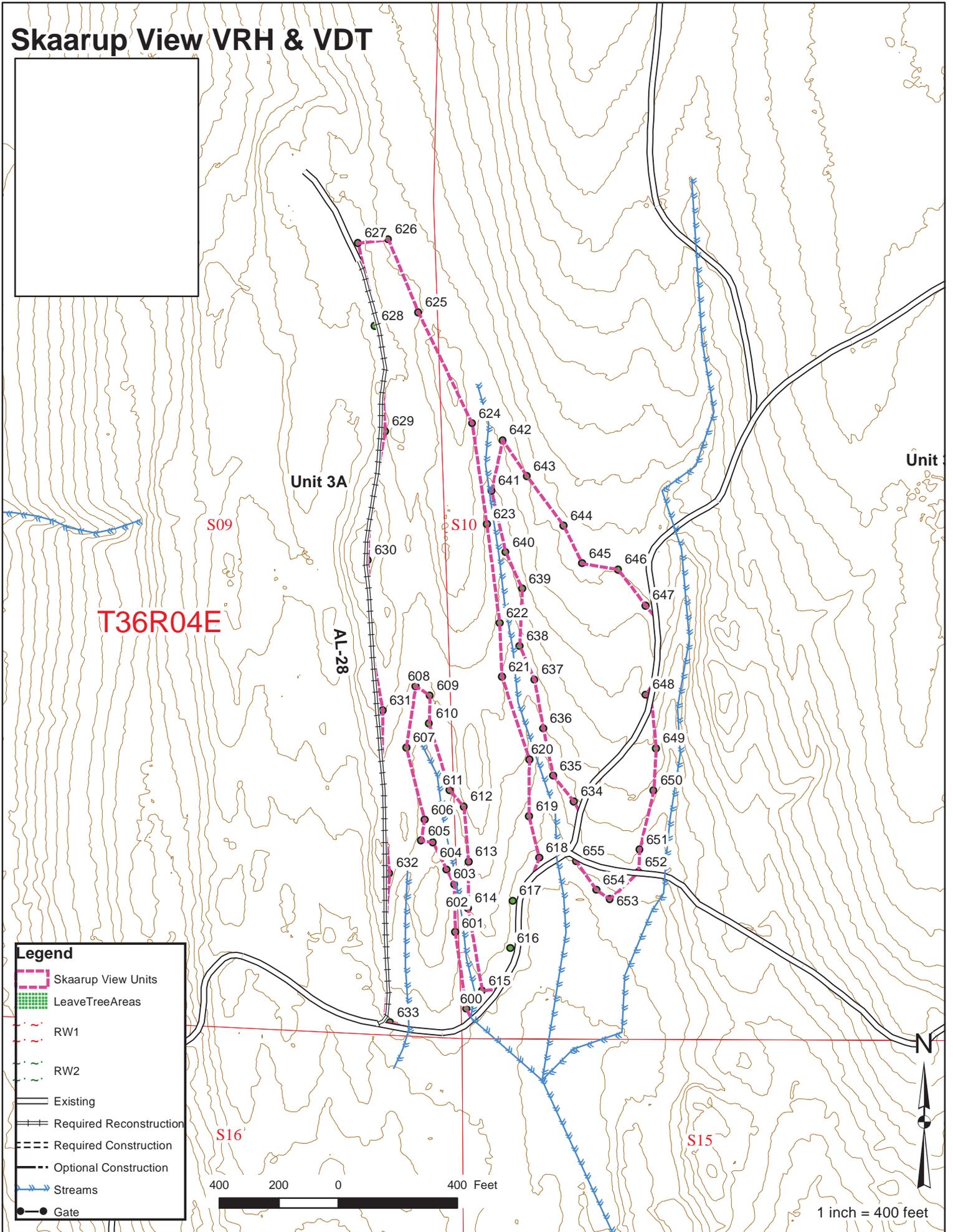
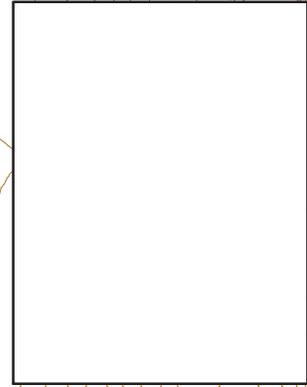
400 200 0 400 Feet



1 inch = 400 feet



Skaarup View VRH & VDT



Legend

- Skaarup View Units
- Leave Tree Areas
- RW1
- RW2
- Existing
- Required Reconstruction
- Required Construction
- Optional Construction
- Streams
- Gate

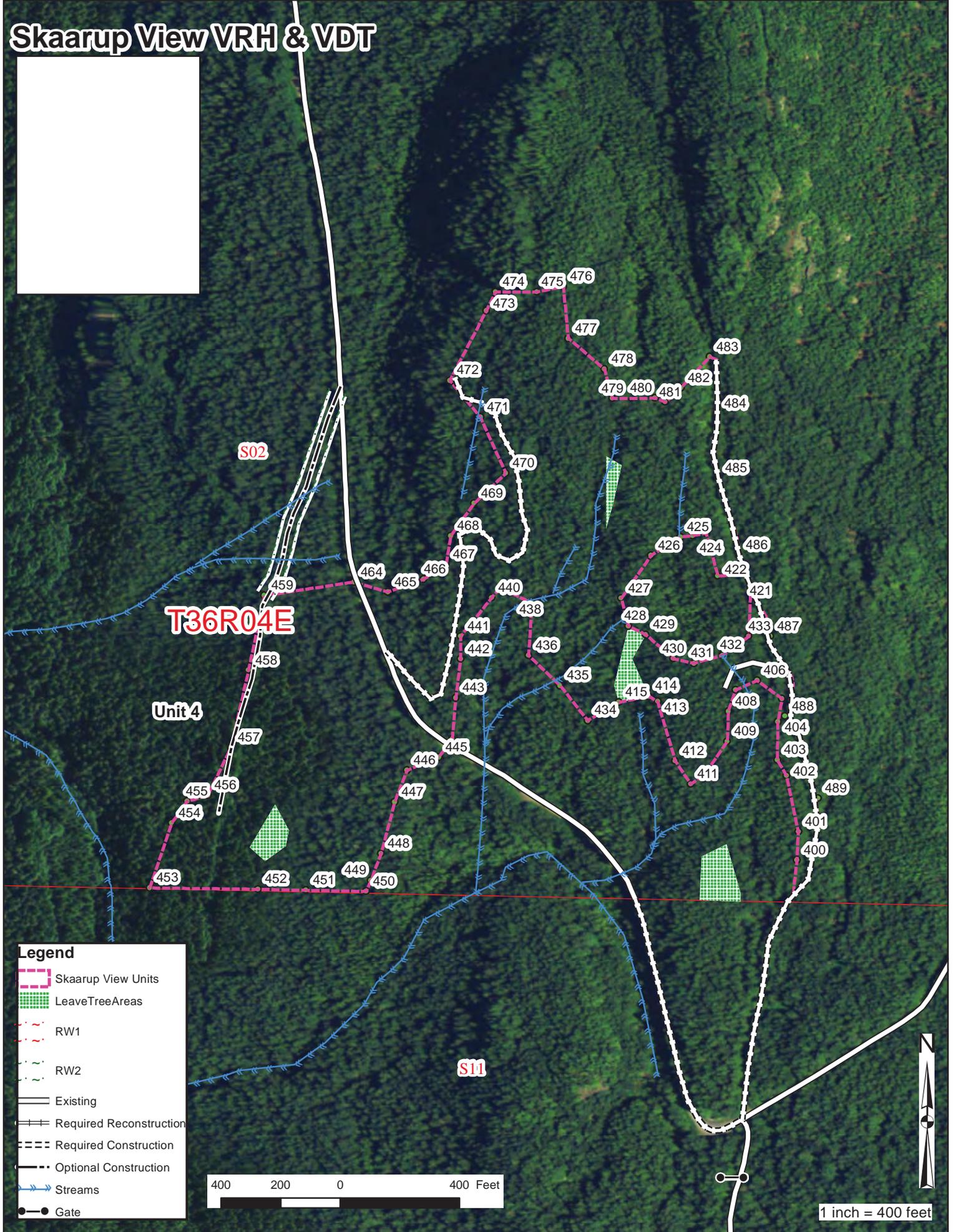
400 200 0 400 Feet



1 inch = 400 feet



Skaarup View VRH & VDT



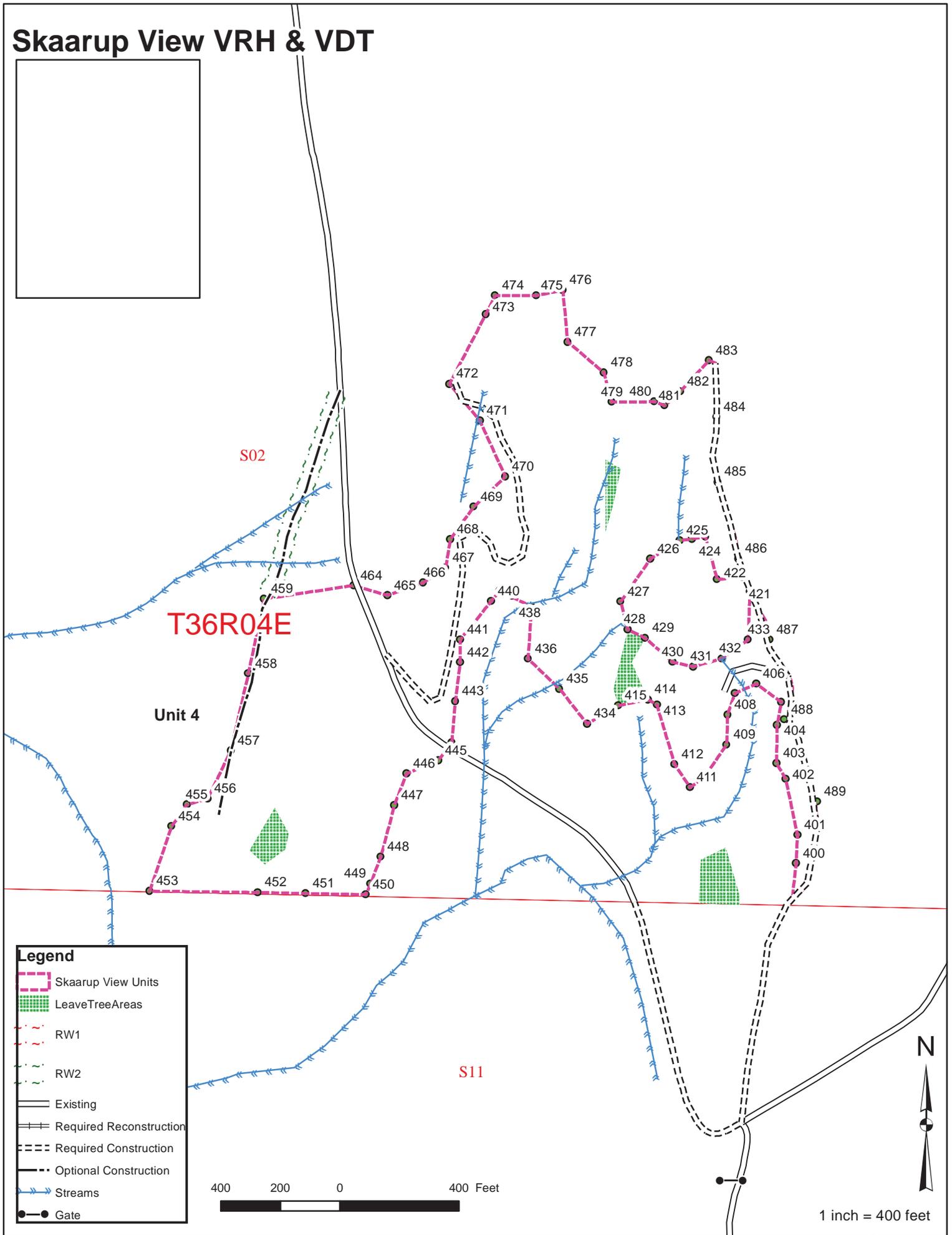
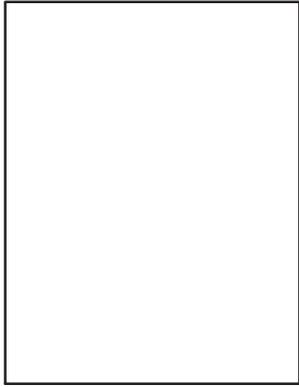
Legend

- Skaarup View Units
- Leave Tree Areas
- RW1
- RW2
- Existing
- Required Reconstruction
- Required Construction
- Optional Construction
- Streams
- Gate

400 200 0 400 Feet

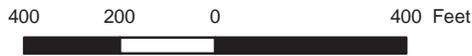
1 inch = 400 feet

Skaarup View VRH & VDT



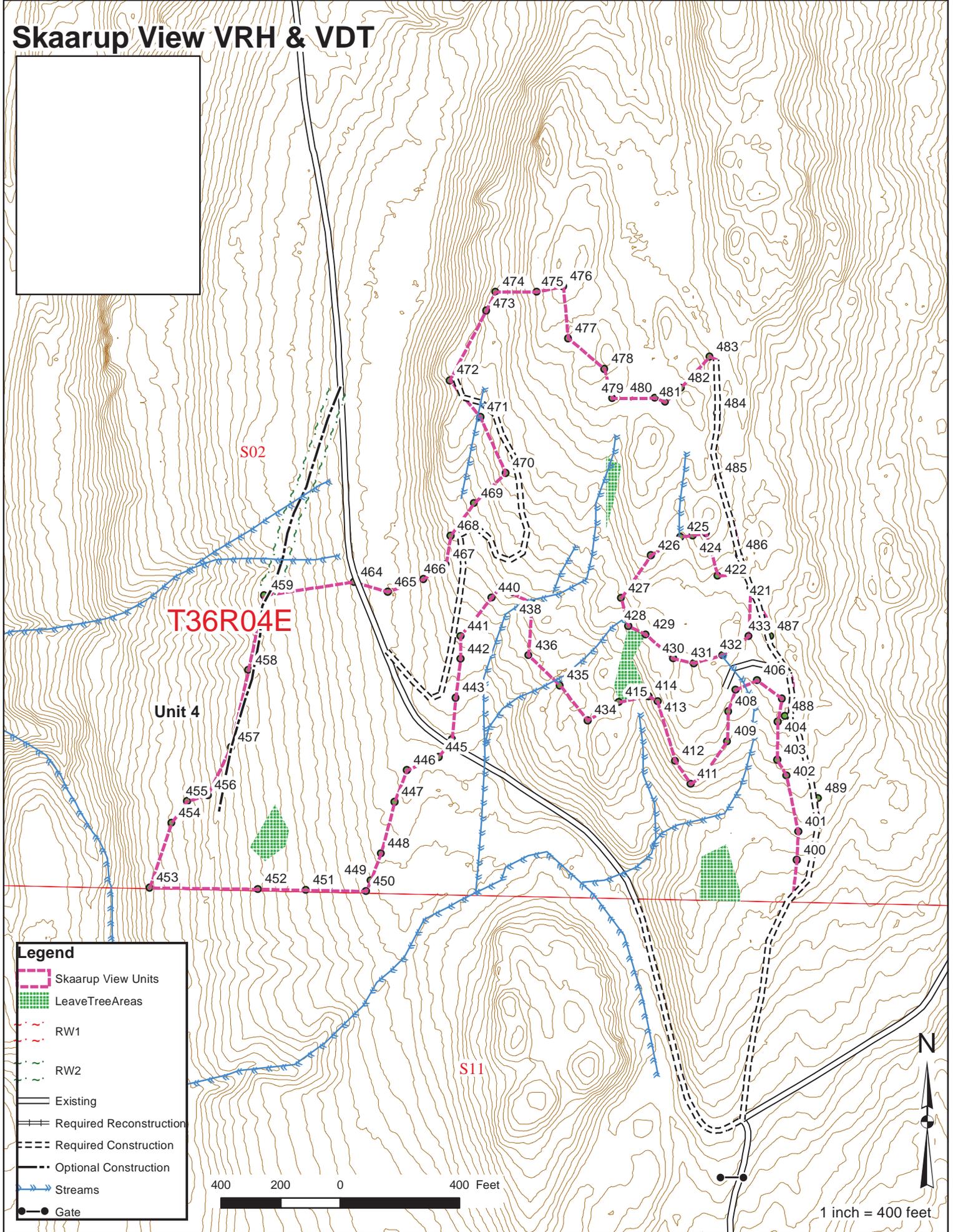
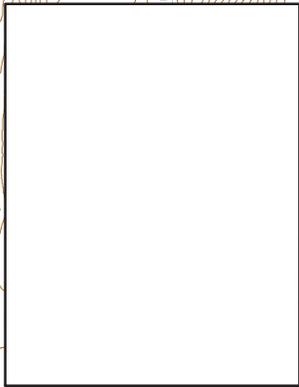
Legend

- Skaarup View Units
- Leave Tree Areas
- RW1
- RW2
- Existing
- Required Reconstruction
- Required Construction
- Optional Construction
- ~ Streams
- Gate



1 inch = 400 feet

Skaarup View VRH & VDT



T36R04E

Unit 4

S02

S11

Legend

- Skaarup View Units
- Leave Tree Areas
- RW1
- RW2
- Existing
- Required Reconstruction
- Required Construction
- Optional Construction
- Streams
- Gate

400 200 0 400 Feet

1 inch = 400 feet



Cruise Narrative

Sale Name: Skaarup View VRH & VDT	Region: Northwest
Agree. #: 30-092577	District: Baker
Lead cruiser: Matt Llobet	Completion date: 7-30-15
Other cruisers on sale: N/A	

Unit acreage specifications:

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
1	163	No	Combined units 1a,1b,2a,3a,3b
2B	3.6	Yes	
4	36.2	Yes	
ROW1	7.3	Yes	
ROW2	1.9	Yes	
CORR	31	Yes	
Total	243	Yes	

Unit cruise specifications:

Unit #	Sample type (VP, FP, ITS,100%)	Expansion factor (BAF, full/half)	Sighting height (4.5 ft, 16 ft.)	Grid size (Plot spacing or % of area)	Plot ratio (cruise:count)	Total number of plots
1	V.P.	46.9 BAF	4.5'	500' x 500'	Cruise All	50
2B	V.P.	62.5 BAF 40.0 BAF	4.5'	200' x 200'	Cruise All	4
4	V.P.	54.4 BAF	4.5'	200' x 200'	Cruise All	34
ROW1	V.P.	46.9 BAF	4.5'	1plot/ac	Cruise All	7
ROW2	V.P.	20.0 BAF	4.5'	3plots/1.9ac	Cruise All	3
CORR	V.P.	46.9 BAF	4.5'	1plot/ac	Cruise All	31

Sale/Cruise Description:

Minor species cruise intensity:	Used a 40 prism to capture minors species in unit 2b
Minimum cruise spec:	Minimum DBH 8 inches, 10 Net Board feet, Minimum Top Diameter 5 inches or 40% of 16-foot form point

Avg ring count by sp:	DF =	8	WH =	8	SS =
Leave/take tree description:	Unit- 1a,1b,2a,3a,3b- Variable Density Thinning – See Schedule B Unit- 2b,4- Variable Retention Harvest- Take all timber bound by white timber sale boundary tags, roads, and young stands, except trees marked with blue paint or bound out with yellow leave tree tags. ROW- Take all timber within orange right-of-way boundary tags				
Other conditions					

Field observations:

<p>All timber was graded in variable log lengths with the Scaling Bureaus Westside/ Northwest log rules. The utility wood was given a board ft. volume. Skaarup timber sale was cruised using the variable plot sample method. Skaarup timber sale is 243 acres, with good road access. Skaarup timber sale is 100% ground base logging. The species composition of the sale is: Western Hemlock, at 13 %, Douglas Fir, at 34%.</p> <p>General Location- Alger area (off Skaarup road)</p> <p>Harvest Method- Ground Base</p> <p>Stand Health- Overall good health</p> <p>Sample Points Dropped- Sample points were dropped due to leave tree clumps and sale boundary</p> <p>Elevation- 720' -3260'</p>

Prepared by: Matt Llobet

Title: Northwest
Region: Timber
Cruiser:

TC PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																			
T36N R04E S02 Ty00U4 THRU T36N R04E S17 Ty00U1				Project: SKARUPP				Page 1													
				Acres 243.00				Date 8/17/2015				Time 9:38:40AM									
S Spp	So T	Gr rt	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					
WH	T	D	2S	12	6.5	264	247	60			79	21	10	16	74	30	13	180	1.69	1.4	
WH	T	D	3S	45	2.5	903	881	214	20	80				0	1	99	37	8	96	0.91	9.2
WH	T	D	4S	32	5.2	653	619	150	96	4			26	34	14	26	25	5	28	0.40	22.1
WH	T	D	PU	11		199	199	48	75	18	7			94	6		16	5	21	0.30	9.5
WH Totals				13	3.7	2,019	1,945	473	47	39	11	3	19	14	5	62	26	6	46	0.59	42.2
DF	L	D	2S			52	52	13			100				100	36	12	180	1.38	.3	
DF	L	D	3S	78	4.2	5,775	5,532	1,344	34	66					100	37	8	78	0.73	70.9	
DF	L	D	4S	21	2.7	1,570	1,527	371	100				35	25	4	36	23	5	23	0.37	67.5
DF	L	D	PU	1		28	28	7	100				100			16	5	17	0.24	1.6	
DF Totals				48	3.9	7,425	7,139	1,735	48	51	1		8	5	1	86	30	6	51	0.60	140.2
DF	T	D	2S	13	7.6	738	682	166			27	73	2	8	90	33	16	373	2.51	1.8	
DF	T	D	3S	29	5.9	1,519	1,429	347	33	67				1	1	98	37	8	78	0.75	18.3
DF	T	D	4S	49	3.7	2,558	2,463	598	100	0			7	34	12	48	30	5	31	0.35	79.9
DF	T	D	PU	7		395	395	96	79	2	18		41	59		19	5	23	0.35	16.9	
DF	T	HQ2S		2		54	54	13			100				100	40	16	400	2.54	.1	
DF Totals				34	4.6	5,264	5,022	1,220	64	19	5	11	7	23	6	64	30	6	43	0.47	117.1
SF	T	D	2S	4		22	22	5			100				100	36	12	180	1.28	.1	
SF	T	D	3S	50	4.1	266	255	62	17	83					100	37	9	107	0.94	2.4	
SF	T	D	4S	40	8.4	230	210	51	100				17	42	12	29	27	5	28	0.39	7.6
SF	T	D	PU	6		26	26	6	100				49	51		20	5	22	0.31	1.2	
SF Totals				3	5.6	544	513	125	55	41	4		9	20	5	66	29	6	45	0.54	11.3
RC	T	D	3S	94	9.9	160	144	35	12	4	52	32		3	2	94	35	11	175	1.81	.8
RC	T	D	4S	5	67.4	22	7	2	100					50		50	28	7	19	1.06	.4
RC	T	D	PU	1		0	0	0		100			100			11	9	20	0.68	.0	
RC Totals				1	16.9	183	152	37	16	4	50	30	0	6	2	92	32	10	124	1.60	1.2
SS	T	D	2S	86	13.6	20	17	4			100				100	36	13	190	1.78	.1	
SS	T	D	4S	14		3	3	1	100				100			17	7	30	0.59	.1	
SS Totals				0	12.0	23	20	5	14		86		14		86	27	10	110	1.40	.2	
RA	T	D	4S	95	5.9	147	138	34	100				2	79	19	23	5	21	0.27	6.5	
RA	T	D	PU	5		6	6	1	100				51	49		20	5	24	0.32	.2	
RA Totals				1	5.6	153	144	35	100				4	78	18	23	5	21	0.27	6.7	
BM	T	D	PU	100		21	21	5	100				100			13	5	10	0.29	2.1	
BM Totals				0		21	21	5	100				100			13	5	10	0.29	2.1	
BR	T	D	PU	100		35	35	8	100				100			12	5	10	0.17	3.5	
BR Totals				0		35	35	8	100				100			12	5	10	0.17	3.5	
Totals					4.3	15,666	14,992	3,643	54	37	4	4	9	13	3	74	29	6	46	0.55	324.6

1,908 Take

TC PSTATS		PROJECT STATISTICS							PAGE	1	
		PROJECT SKARUPP							DATE	8/17/2015	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
36N	04E	02	SKARUPP	00U4	THR	243.00	129	582	S	W	
36N	04E	17	SKARUPP	00U1							
		PLOTS	TREES	TREES PER PLOT		ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		129	582	4.5							
CRUISE		129	582	4.5		60,010	1.0				
DBH COUNT											
REFOREST											
COUNT											
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-L	157	87.1	14.4	55	26.0	98.9	7,425	7,139	2,526	2,526	
DOUG FIR-T	245	102.7	11.4	46	21.6	73.0	5,264	5,022	1,633	1,633	
WHEMLOCK-T	118	34.5	12.5	41	8.3	29.2	2,019	1,945	644	644	
WR CEDAR-T	13	.7	22.9	60	0.4	2.0	183	152	63	63	
PS FIR-T	35	9.5	12.5	42	2.3	8.2	544	513	178	178	
R ALDER-T	9	6.7	8.5	37	0.9	2.6	153	144	41	41	
BL MAPLE-T	2	2.1	8.4	30	0.3	.8	21	21	8	8	
BIRCH-T	2	3.5	6.6	30	0.3	.8	35	35	7	7	
S SPRUCE-T	1	.1	22.0	55	0.1	.2	23	20	7	7	
TOTAL	582	247.0	12.7	48	60.7	215.8	15,666	14,992	5,107	5,107	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR-L		43.2	3.4	85	88	91					
DOUG FIR-T		244.8	15.7	119	141	163					
WHEMLOCK-T		94.9	8.8	88	96	104					
WR CEDAR-T		64.2	19.3	267	331	395					
PS FIR-T		83.9	14.2	67	78	89					
R ALDER-T		19.8	7.0	21	22	24					
BL MAPLE-T				10	10	10					
BIRCH-T		.0	.0	10	10	10					
S SPRUCE-T											
TOTAL		203.5	8.5	105	115	125	1,654	844	413		
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-L		144.6	12.7	76	87	98					
DOUG FIR-T		129.1	11.4	91	103	114					
WHEMLOCK-T		199.2	17.5	28	34	41					
WR CEDAR-T		617.4	54.3	0	1	1					
PS FIR-T		290.7	25.6	7	10	12					
R ALDER-T		492.9	43.4	4	7	10					
BL MAPLE-T		907.3	79.8	0	2	4					
BIRCH-T		907.3	79.8	1	3	6					
S SPRUCE-T		1135.8	99.9	0	0	0					
TOTAL		79.5	7.0	230	247	264	252	129	63		
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-L		141.9	12.5	87	99	111					
DOUG FIR-T		96.0	8.4	67	73	79					
WHEMLOCK-T		182.2	16.0	25	29	34					

TC PSTATS		PROJECT STATISTICS						PAGE 2		
		PROJECT SKARUPP						DATE 8/17/2015		
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
36N	04E	02	SKARUPP	00U4	THR	243.00	129	582	S	W
36N	04E	17	SKARUPP	00U1						
CL	68.1	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
WR CEDAR-T		575.3	50.6	1	2	3				
PS FIR-T		276.7	24.3	6	8	10				
R ALDER-T		488.0	42.9	1	3	4				
BL MAPLE-T		907.3	79.8	0	1	1				
BIRCH-T		907.3	79.8	0	1	1				
S SPRUCE-T		1135.8	99.9	0	0	0				
TOTAL		65.6	5.8	203	216	228	172	88	43	
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-L		149.2	13.1	6,202	7,139	8,076				
DOUG FIR-T		109.2	9.6	4,540	5,022	5,505				
WHEMLOCK-T		203.5	17.9	1,597	1,945	2,294				
WR CEDAR-T		611.2	53.8	70	152	234				
PS FIR-T		301.5	26.5	377	513	650				
R ALDER-T		484.1	42.6	83	144	205				
BL MAPLE-T		907.3	79.8	4	21	38				
BIRCH-T		907.3	79.8	7	35	62				
S SPRUCE-T		1135.8	99.9	0	20	40				
TOTAL		74.2	6.5	14,013	14,992	15,970	220	112	55	
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-L		149.2	13.1	63	72	82				
DOUG FIR-T		102.7	9.0	62	69	75				
WHEMLOCK-T		201.2	17.7	55	67	78				
WR CEDAR-T		611.2	53.8	35	75	116				
PS FIR-T		299.8	26.4	46	63	80				
R ALDER-T		456.9	40.2	31	55	78				
BL MAPLE-T		907.1	79.8	5	26	47				
BIRCH-T		907.1	79.8	8	42	76				
S SPRUCE-T		1135.8	99.9	0	83	167				
TOTAL		75.3	6.6	65	69	74	226	116	57	

T36N R04E S02 T00U4										T36N R04E S02 T00U4			
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
36N	04E	02	SKARUPP	00U4	36.20	34	167	S	W				

Spp	T	D	Gr	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre	
									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					
WH	T	D	2S	12	7.1	1,447	1,345	49		91	9	12	20	68	29	13	161	1.64	8.3		
WH	T	D	3S	52	2.6	5,861	5,710	207	21	79				1	99	37	8	95	0.91	60.2	
WH	T	D	4S	27	7.0	3,253	3,024	109	95	5		26	42	19	13	24	5	26	0.42	114.6	
WH	T	D	PU	9		878	878	32	62	27	10	91	9			15	6	21	0.36	40.9	
WH	T	Totals		64	4.2	11,439	10,956	397	42	45	12	1	16	15	6	64	26	6	49	0.65	224.0
SF	T	D	2S	4		146	146	5		100				100	36	12	180	1.28	.8		
SF	T	D	3S	50	4.1	1,788	1,715	62	17	83				100	37	9	107	0.94	16.1		
SF	T	D	4S	40	8.5	1,531	1,401	51	100			17	41	12	30	27	5	28	0.38	50.9	
SF	T	D	PU	6		173	173	6	100			49	51			20	5	22	0.31	7.9	
SF	T	Totals		20	5.6	3,639	3,435	124	55	41	4		9	19	5	66	29	6	45	0.54	75.7
DF	T	D	2S	26	15.3	834	706	26		84	16	14	53	33	24	13	139	1.84	5.1		
DF	T	D	3S	40	8.9	1,182	1,077	39	18	82			11	5	84	35	9	90	0.93	12.0	
DF	T	D	4S	12	7.9	331	305	11	91	9		33	37	8	23	23	6	26	0.43	11.7	
DF	T	D	PU	22		581	581	21	13	10	77	36	64			21	9	73	1.11	8.0	
DF	T	Totals		16	8.8	2,928	2,669	97	20	36	39	4	15	36	3	45	27	8	73	0.94	36.7
RC	T	D	4S		100.0	92										24	9		1.77	1.0	
RC	T	Totals			100.0	92										24	9		1.77	1.0	
SS	T	D	2S	86	13.6	133	115	4		100				100	36	13	190	1.78	.6		
SS	T	D	4S	14		18	18	1	100			100			17	7	30	0.59	.6		
SS	T	Totals		1	12.0	152	133	5	14	86		14		86	27	10	110	1.40	1.2		
Type	Totals				5.8	18,249	17,194	622	41	42	15	1	14	19	5	61	27	7	51	0.66	338.6

T36N R04E S02 TROW1									T36N R04E S02 TROW1				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
36N	04E	02	SKARUPP	ROW1	7.30	7	29	S	W				

S Spp	So T	Gr rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
									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						
DF	T	D	3S	58	5.4	8,664	8,192	60	10	90							100	37	8	87	0.76	94.0
DF	T	D	4S	38	3.1	5,488	5,319	39	100					15	21	15	50	29	5	31	0.38	173.4
DF	T	D	PU	4		517	517	4	100					19	81			26	5	27	0.29	18.9
DF	T	Totals		100	4.4	14,669	14,029	102	48	52				6	11	6	77	32	6	49	0.52	286.3
Type	Totals				4.4	14,669	14,029	102	48	52				6	11	6	77	32	6	49	0.52	286.3

T36N R04E S02 TROW2										T36N R04E S02 TROW2				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
36N	04E	02	SKARUPP	ROW2	1.90	3	13	S	W					

Spp	S	So	Gr	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre		
									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						
DF	T	D	3S	37		916	916	2	100								100	36	6	60	0.82	15.3
DF	T	D	4S	39	5.5	981	927	2	100					41		18	41	27	5	27	0.40	34.1
DF	T	D	PU	24		573	573	1			100			100				12	12	60	1.01	9.5
DF	T	Totals		54	2.2	2,470	2,415	5	76		24			40		7	54	27	7	41	0.59	58.9
RA	T	D	4S	33		382	382	1	100					100				20	5	20	0.24	19.1
RA	T	D	PU	67		749	749	1	100					51	49			20	5	24	0.32	31.3
RA	T	Totals		25		1,131	1,131	2	100					68	32			20	5	22	0.29	50.4
WH	T	D	3S	71	.0	489	489	1		100				100				24	10	90	0.89	5.4
WH	T	D	4S	29		191	191	0	100							100		37	5	40	0.77	4.8
WH	T	Totals		15		680	680	1	28	72				72	28			30	8	67	0.82	10.2
SF	T	D	4S	100		217	217	0	100					100				28	5	30	0.53	7.2
SF	T	Totals		5		217	217	0	100					100				28	5	30	0.53	7.2
Type Totals					1.2	4,497	4,443	8	76	11	13			39	24	4	34	24	6	35	0.51	126.7

T36N R04E S09 T0U2B	T36N R04E S09 T0U2B
Twp 36N Rge 04E Sec 09 Tract SKARUPP Type 0U2B Acres 3.60 Plots 4 Sample Trees 29 CuFt S	BdFt W

Spp	S	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log			Logs Per /Acre						
									Net BdFt	Def%	Gross	Net	Net MBF	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
DF	T	D	2S	84	6.1	40,320	37,844	136		15	85				100	39	18	569	2.92	66.5						
DF	T	D	3S	6	4.1	2,698	2,589	9	100				7	93	38	10	144	1.01	17.9							
DF	T	D	4S	1	15.6	836	706	3	100				52	48	29	7	40	0.53	17.6							
DF	T	D	PU			68	68	0		100				100		8	12	40	1.01	1.7						
DF	T	HQ	2S	9		3,667	3,667	13			100				40	16	400	2.54	9.2							
DF	T	Totals		71	5.7	47,590	44,874	162	2	6	13	80	0	1	1	98	37	15	397	2.28	113.0					
RC	T	D	3S	94	9.9	10,808	9,733	35	12	4	52	32		3	2	94	35	11	175	1.81	55.7					
RC	T	D	4S	5	14.4	567	485	2	100					50	50	31	6	32	0.70	15.1						
RC	T	D	PU	1		34	34	0		100				100		11	9	20	0.68	1.7						
RC	T	Totals		16	10.1	11,408	10,252	37	16	4	50	30	0	6	2	92	33	10	141	1.59	72.5					
WH	T	D	2S	38	3.9	3,263	3,136	11		28	72				100	40	16	370	2.04	8.5						
WH	T	D	3S	22		1,784	1,784	6		100					100	40	11	180	1.12	9.9						
WH	T	D	4S	29	.0	2,334	2,334	8	93	7			30	53	17	26	5	28	0.32	84.9						
WH	T	D	PU	11		895	895	3	100					100		17	5	20	0.24	44.8						
WH	T	Totals		13	1.5	8,277	8,150	29	38	24	11	28	20	15	65	25	6	55	0.55	148.0						
Type	Totals				5.9	67,275	63,276	228	9	8	18	65	3	4	1	93	31	10	190	1.50	333.5					

T36N R04E S09 TCORR									T36N R04E S09 TCORR				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
36N	04E	09	SKARUPP	CORR	31.00	31	121	S	W				

Spp	S	So	Gr	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
									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					
DF	T	D	2S	1	126	126	4	100				100				36	12	180	1.38	.7	
DF	T	D	3S	62	4.3	7,406	7,090	220	40	60	100				38	8	76	0.74	93.8		
DF	T	D	4S	34	4.0	3,981	3,822	118	100	18 28 8 46				27	5	28	0.37	138.8			
DF	T	D	PU	3	337	337	10	100	40 60				18	5	18	0.29	19.1				
DF	T	Totals		96	4.0	11,851	11,374	353	61	37	1	7	11	3	79	30	6	45	0.54	252.4	
RA	T	D	4S	100	275	275	9	100	100				21	5	20	0.21	13.7				
RA	T	Totals		2	275	275	9	100	100				21	5	20	0.21	13.7				
WH	T	D	PU	100	101	101	3	100	100				18	5	20	0.20	5.1				
WH	T	Totals		1	101	101	3	100	100				18	5	20	0.20	5.1				
BM	T	D	PU	100	39	39	1	100	100				13	5	10	0.29	3.9				
BM	T	Totals		0	39	39	1	100	100				13	5	10	0.29	3.9				
BR	T	D	PU	100	64	64	2	100	100				10	5	10	0.17	6.4				
BR	T	Totals		1	64	64	2	100	100				10	5	10	0.17	6.4				
Type	Totals				3.9	12,330	11,853	367	63	36	1	9	13	3	76	29	6	42	0.52	281.5	

T36N R04E S17 T00U1									T36N R04E S17 T00U1				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
36N	04E	17	SKARUPP	00U1	163.00	50	223	S	W				

Spp	S	So	Gr	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre			
									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							
DF	L	D	2S		78	78	13	100				100				36	12	180	1.38	.4			
DF	L	D	3S	78	4.2	8,610	8,246	1,344	34	66					100				37	8	78	0.73	105.6
DF	L	D	4S	21	2.7	2,340	2,276	371	100					35	25	4	36	23	5	23	0.37	100.6	
DF	L	D	PU	1		42	42	7	100					100				16	5	17	0.24	2.4	
DF	L	Totals		75	3.9	11,070	10,642	1,735	48	51	1	8	5	1	86	30	6	51	0.60	209.1			
DF	T	D	3S	3	20.3	135	108	18	59	41					100				39	7	54	0.55	2.0
DF	T	D	4S	85	3.5	2,708	2,612	426	100					2	36	12	49	31	5	32	0.34	81.6	
DF	T	D	PU	12		364	364	59	100					43	57			19	5	19	0.28	18.8	
DF	T	Totals		22	3.8	3,207	3,084	503	99	1	7	37	10	45	29	5	30	0.34	102.5				
WH	T	D	4S	75		197	197	32	100					27			73	28	5	35	0.36	5.6	
WH	T	D	PU	25		63	63	10	100					100				18	5	20	0.20	3.1	
WH	T	Totals		2		260	260	42	100					45			55	25	5	30	0.32	8.8	
RA	T	D	4S	100	7.9	162	149	24	100					74	26			24	5	22	0.29	6.8	
RA	T	Totals		1	7.9	162	149	24	100					74	26			24	5	22	0.29	6.8	
BM	T	D	PU	100		24	24	4	100					100				13	5	10	0.29	2.4	
BM	T	Totals		0		24	24	4	100					100				13	5	10	0.29	2.4	
BR	T	D	PU	100		40	40	6	100					100				12	5	10	0.17	4.0	
BR	T	Totals		0		40	40	6	100					100				12	5	10	0.17	4.0	
Type Totals					3.8	14,762	14,199	2,314	61	39	1	9	13	3	75	29	6	43	0.51	333.6			

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT SKARUPP				DATE	8/17/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
36N	04E	02	SKARUPP	00U4	36.20	34	167	S	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
				PLOTS	TREES	TREES	TREES				
TOTAL	34	167	4.9	9,400		1.8					
CRUISE	34	167	4.9								
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	
WHEMLOCK-T	106	174.0	13.4	41	46.4	169.6	11,439	10,956	3,782	3,783	
PS FIR-T	34	63.6	12.5	42	15.4	54.4	3,639	3,435	1,191	1,191	
DOUG FIR-T	25	20.9	18.7	54	9.2	40.0	2,928	2,669	917	917	
WR CEDAR-T	1	.5	24.0	50	0.3	1.6	92		42	42	
S SPRUCE-T	1	.6	22.0	55	0.3	1.6	152	133	45	45	
TOTAL	167	259.7	13.7	42	72.1	267.2	18,249	17,194	5,978	5,979	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10			
WHEMLOCK-T	69.0	6.7	88	94	100						
PS FIR-T	83.0	14.2	68	79	90						
DOUG FIR-T	41.2	8.4	133	145	157						
WR CEDAR-T											
S SPRUCE-T											
TOTAL	68.6	5.3	94	99	104	188	96	47			
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10			
WHEMLOCK-T	81.0	13.9	150	174	198						
PS FIR-T	124.4	21.3	50	64	77						
DOUG FIR-T	149.2	25.6	16	21	26						
WR CEDAR-T	583.1	99.9	0	1	1						
S SPRUCE-T	583.1	99.9	0	1	1						
TOTAL	49.5	8.5	238	260	282	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-T	63.5	10.9	151	170	188						
PS FIR-T	115.5	19.8	44	54	65						
DOUG FIR-T	147.1	25.2	30	40	50						
WR CEDAR-T	583.1	99.9	0	2	3						
S SPRUCE-T	583.1	99.9	0	2	3						
TOTAL	35.9	6.2	251	267	284	52	26	13			
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-T	85.4	14.6	9,353	10,956	12,559						
PS FIR-T	130.7	22.4	2,666	3,435	4,204						
DOUG FIR-T	154.3	26.4	1,964	2,669	3,375						
WR CEDAR-T											
S SPRUCE-T	583.1	99.9	0	133	267						
TOTAL	52.9	9.1	15,636	17,194	18,751	112	57	28			

TC TSTATS				STATISTICS			PAGE	2		
				PROJECT SKARUPP			DATE	8/17/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	04E	02	SKARUPP	00U4	36.20	34	167	S	W	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E. %	LOW	AVG	HIGH	5	7	10	
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-T		85.4	14.6	55	65	74				
PS FIR-T		130.7	22.4	49	63	77				
DOUG FIR-T		154.3	26.4	49	67	84				
WR CEDAR-T										
S SPRUCE-T		583.1	99.9	0	83	167				
TOTAL		52.9	9.1	59	64	70	112	57	28	

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				SKARUPP				DATE	8/17/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	04E	02	SKARUPP	ROW	7.30	7	29	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	7	29	4.1							
CRUISE	7	29	4.1	1,506			1.9			
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-T	29	206.3	13.1	51	53.6	194.5	14,669	14,029	4,694	4,694
TOTAL	29	206.3	13.1	51	53.6	194.5	14,669	14,029	4,694	4,694
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR-T	52.5	9.9	71	79	87					
TOTAL	52.5	9.9	71	79	87	114	58	28		
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-T	45.6	18.6	168	206	245					
TOTAL	45.6	18.6	168	206	245	96	49	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		
DOUG FIR-T	35.3	14.4	167	194	222					
TOTAL	35.3	14.4	167	194	222	58	30	14		
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-T	51.5	20.9	11,091	14,029	16,966					
TOTAL	51.5	20.9	11,091	14,029	16,966	123	63	31		
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-T	51.5	20.9	57	72	87					
TOTAL	51.5	20.9	57	72	87	123	63	31		

TC TSTATS				STATISTICS				PAGE	1	
PROJECT SKARUPP								DATE	8/17/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	04E	02	SKARUPP	ROW	1.90	3	13	S	W	
				TREES	ESTIMATED		PERCENT			
				PER PLOT	TOTAL		SAMPLE			
				PLOTS	TREES		TREES			
TOTAL		3	13	4.3						
CRUISE		3	13	4.3	223		5.8			
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-T	7	49.3	13.2	41	12.9	46.7	2,470	2,415	922	922
R ALDER-T	3	50.4	8.5	29	6.8	20.0	1,131	1,131	288	288
WHEMLOCK-T	2	10.2	15.5	42	3.4	13.3	680	680	251	251
PS FIR-T	1	7.2	13.0	32	1.8	6.7	217	217	107	107
TOTAL	13	117.2	11.6	36	25.4	86.7	4,497	4,443	1,568	1,568
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR-T				86	86	86				
R ALDER-T	24.7	17.1		19	23	27				
WHEMLOCK-T	54.4	50.9		32	65	98				
PS FIR-T										
TOTAL	36.5	11.5		53	60	67	59	30	15	
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-T	59.2	41.0		29	49	70				
R ALDER-T	93.9	65.0		18	50	83				
WHEMLOCK-T	173.2	119.8			10	22				
PS FIR-T	173.2	119.8			7	16				
TOTAL	50.1	34.7		77	117	158	144	74	36	
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-T	24.7	17.1		39	47	55				
R ALDER-T	100.0	69.2		6	20	34				
WHEMLOCK-T	173.2	119.8			13	29				
PS FIR-T	173.2	119.8			7	15				
TOTAL	13.3	9.2		79	87	95	10	5	3	
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-T	25.7	17.8		1,986	2,415	2,845				
R ALDER-T	99.3	68.7		354	1,131	1,908				
WHEMLOCK-T	173.2	119.8			680	1,495				
PS FIR-T	173.2	119.8			217	477				
TOTAL	18.3	12.7		3,881	4,443	5,005	19	10	5	
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-T	25.7	17.8		43	52	61				
R ALDER-T	99.3	68.7		18	57	95				
WHEMLOCK-T	173.2	119.8			51	112				
PS FIR-T	173.2	119.8			33	72				
TOTAL	18.3	12.7		45	51	58	19	10	5	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT SKARUPP				DATE	8/17/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	04E	09	SKARUPP	0U2B	3.60	4	29	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	4	29	7.3							
CRUISE	4	29	7.3	753		3.9				
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-T	12	37.1	30.4	119	34.0	187.5	47,590	44,874	9,587	9,587
WR CEDAR-T	12	42.3	22.8	61	25.1	120.0	11,408	10,252	3,816	3,816
WHEMLOCK-T	5	129.6	10.5	38	24.1	78.1	8,277	8,150	2,029	2,029
TOTAL	29	209.1	18.4	57	89.9	385.6	67,275	63,276	15,432	15,432
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR-T	40.8	12.9	1,375	1,579	1,783					
WR CEDAR-T	53.8	17.0	300	361	422					
WHEMLOCK-T	153.1	76.1	51	214	377					
TOTAL	92.9	18.2	679	830	981	358	183	90		
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-T	69.2	39.5	22	37	52					
WR CEDAR-T	77.8	44.5	24	42	61					
WHEMLOCK-T	172.1	98.3	2	130	257					
TOTAL	99.0	56.6	91	209	327	512	261	128		
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-T	47.1	26.9	137	188	238					
WR CEDAR-T	60.9	34.8	78	120	162					
WHEMLOCK-T	120.0	68.6	25	78	132					
TOTAL	20.9	12.0	339	386	432	23	12	6		
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-T	39.7	22.7	34,685	44,874	55,062					
WR CEDAR-T	49.0	28.0	7,379	10,252	13,124					
WHEMLOCK-T	128.6	73.5	2,163	8,150	14,137					
TOTAL	29.2	16.7	52,735	63,276	73,816	44	23	11		
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-T	39.7	22.7	185	239	294					
WR CEDAR-T	49.0	28.0	61	85	109					
WHEMLOCK-T	128.6	73.5	28	104	181					
TOTAL	25.3	14.5	137	164	191	34	17	8		

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT SKARUPP				DATE	8/17/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	04E	09	SKARUPP	CORR	31.00	31	121	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	31	121	3.9							
CRUISE	31	121	3.9	6,787		1.8				
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-T	115	189.8	13.0	50	48.3	174.0	11,851	11,374	4,115	4,115
R ALDER-T	3	13.7	7.8	38	1.6	4.5	275	275	63	63
WHEMLOCK-T	1	5.1	7.4	42	0.6	1.5	101	101	18	18
BL MAPLE-T	1	3.9	8.4	30	0.5	1.5	39	39	15	15
BIRCH-T	1	6.4	6.6	30	0.6	1.5	64	64	11	11
TOTAL	<i>121</i>	<i>218.9</i>	<i>12.4</i>	<i>48</i>	<i>52.0</i>	<i>183.1</i>	<i>12,330</i>	<i>11,853</i>	<i>4,221</i>	<i>4,221</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR-T	57.5	5.4		69	73	77				
R ALDER-T				20	20	20				
WHEMLOCK-T										
BL MAPLE-T										
BIRCH-T										
TOTAL	<i>60.9</i>	<i>5.5</i>		<i>67</i>	<i>71</i>	<i>74</i>	<i>148</i>	<i>76</i>	<i>37</i>	
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-T	39.7	7.1		176	190	203				
R ALDER-T	311.4	55.9		6	14	21				
WHEMLOCK-T	556.8	99.9		0	5	10				
BL MAPLE-T	556.8	99.9		0	4	8				
BIRCH-T	556.8	99.9		0	6	13				
TOTAL	<i>34.6</i>	<i>6.2</i>		<i>205</i>	<i>219</i>	<i>233</i>	<i>48</i>	<i>24</i>	<i>12</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-T	28.0	5.0		165	174	183				
R ALDER-T	310.6	55.7		2	5	7				
WHEMLOCK-T	556.8	99.9		0	2	3				
BL MAPLE-T	556.8	99.9		0	2	3				
BIRCH-T	556.8	99.9		0	2	3				
TOTAL	<i>23.3</i>	<i>4.2</i>		<i>175</i>	<i>183</i>	<i>191</i>	<i>22</i>	<i>11</i>	<i>5</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-T	31.6	5.7		10,730	11,374	12,019				
R ALDER-T	311.4	55.9		121	275	428				
WHEMLOCK-T	556.8	99.9		0	101	203				
BL MAPLE-T	556.8	99.9		0	39	79				
BIRCH-T	556.8	99.9		0	64	127				
TOTAL	<i>29.1</i>	<i>5.2</i>		<i>11,234</i>	<i>11,853</i>	<i>12,472</i>	<i>34</i>	<i>17</i>	<i>8</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-T	31.6	5.7		62	65	69				

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT SKARUPP				DATE	8/17/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	04E	09	SKARUPP	CORR	31.00	31	121	S	W	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
R ALDER-T		311.4	55.9	27	61	94				
WHEMLOCK-T		556.8	99.9	0	67	134				
BL MAPLE-T		556.8	99.9	0	26	52				
BIRCH-T		556.8	99.9	0	42	84				
TOTAL		<i>29.1</i>	<i>5.2</i>	<i>61</i>	<i>65</i>	<i>68</i>	<i>34</i>	<i>17</i>	<i>8</i>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT SKARUPP				DATE	8/17/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	04E	17	SKARUPP	00U1	163.00	50	223	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	50	223	4.5							
CRUISE	50	223	4.5	41,342			.5			
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-L	157	129.9	14.4	55	38.8	147.4	11,070	10,642	3,766	3,766
DOUG FIR-T	57	101.8	9.8	44	17.1	53.5	3,207	3,084	1,016	1,016
WHEMLOCK-T	4	8.8	8.9	40	1.3	3.8	260	260	69	69
R ALDER-T	3	6.8	8.7	38	1.0	2.8	162	149	46	46
BL MAPLE-T	1	2.4	8.4	30	0.3	.9	24	24	9	9
BIRCH-T	1	4.0	6.6	30	0.4	.9	40	40	8	8
TOTAL	223	253.6	12.3	49	59.7	209.4	14,762	14,199	4,914	4,914
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR-L	43.2	3.4		85	88	91				
DOUG FIR-T	30.8	4.1		32	33	34				
WHEMLOCK-T	54.7	31.3		24	35	46				
R ALDER-T	24.7	17.1		19	23	27				
BL MAPLE-T										
BIRCH-T										
TOTAL	57.9	3.9		69	71	74	134	68	33	
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-L	44.3	6.3		122	130	138				
DOUG FIR-T	101.7	14.4		87	102	116				
WHEMLOCK-T	363.9	51.4		4	9	13				
R ALDER-T	420.8	59.5		3	7	11				
BL MAPLE-T	707.1	99.9		0	2	5				
BIRCH-T	707.1	99.9		0	4	8				
TOTAL	41.3	5.8		239	254	268	68	35	17	
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-L	40.7	5.8		139	147	156				
DOUG FIR-T	100.3	14.2		46	54	61				
WHEMLOCK-T	342.6	48.4		2	4	6				
R ALDER-T	399.8	56.5		1	3	4				
BL MAPLE-T	707.1	99.9		0	1	2				
BIRCH-T	707.1	99.9		0	1	2				
TOTAL	30.5	4.3		200	209	218	37	19	9	
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-L	49.8	7.0		9,893	10,642	11,392				
DOUG FIR-T	107.4	15.2		2,616	3,084	3,552				
WHEMLOCK-T	345.1	48.8		133	260	386				
R ALDER-T	406.3	57.4		64	149	235				
BL MAPLE-T	707.1	99.9		0	24	49				

TC TSTATS				STATISTICS			PAGE	2		
				PROJECT	SKARUPP		DATE	8/17/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	04E	17	SKARUPP	00U1	163.00	50	223	S	W	
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
BIRCH-T		707.1	99.9	0	40	79				
TOTAL		40.3	5.7	13,391	14,199	15,008	65	33	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-L		49.8	7.0	67	72	77				
DOUG FIR-T		107.4	15.2	49	58	66				
WHEMLOCK-T		345.1	48.8	35	69	103				
R ALDER-T		406.3	57.4	23	53	83				
BL MAPLE-T		707.1	99.9	0	26	52				
BIRCH-T		707.1	99.9	0	42	84				
TOTAL		40.3	5.7	64	68	72	65	33	16	

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

T36N R04E S02 Ty00U4	36.2
T36N R04E S02 TyROW	7.3
T36N R04E S17 Ty00U	163.0

Project SKARUPP
Acres 243.00

Page No 1
Date: 8/17/2015
Time 9:38:40AM

Species	S T	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
		Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
DOUG FIR	L	21,169	34,080	17,493	29.00	18.01	0.62	6,138	6,138	1,804	1,735
DOUG FIR	T	24,963	28,467	11,312	15.90	13.94	0.47	3,969	3,969	1,279	1,220
WHEMLOCK	T	8,376	10,250	5,006	18.68	15.27	0.58	1,564	1,565	491	473
PS FIR	T	2,315	2,753	1,241	18.72	15.74	0.54	433	433	132	125
WR CEDAR	T	171	298	359	89.40	51.25	1.61	153	153	44	37
R ALDER	T	1,633	1,633	276	6.15	6.15	0.28	100	100	37	35
BIRCH	T	841	841	44	1.92	1.92	0.17	16	16	8	8
BL MAPLE	T	519	519	52	3.76	3.76	0.29	20	20	5	5
S SPRUCE	T	22	44	42	74.21	37.11	1.43	16	16	5	5
Totals		60,010	78,886	35,826	20.68	15.73	0.55	12,410	12,410	3,807	3,643

Wood Type Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
C	57,016	75,892	35,454	21.53	16.17	0.56	12,274	12,274	3,756	3,594
H	2,994	2,994	372	4.55	4.55	0.26	136	136	51	49
Totals	60,010	78,886	35,826	20.68	15.73	0.55	12,410	12,410	3,807	3,643



WASHINGTON STATE DEPARTMENT OF
Natural Resources
 Peter Goldmark - Commissioner of Public Lands

FPA/N No: 2814814
 Effective Date: 9/22/2015
 Expiration Date: 9/22/2018
 Shut Down Zone: 656
 EARR Tax Credit: Eligible Non-eligible
 Reference: **Skaarup View**

**Forest Practices Application/Notification
 Notice of Decision**

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

Number of Years Granted on Multi-Year Request

Class II Class III Class IVG Class IVS 4yrs 5 yrs

Conditions on Approval / Reasons for Disapproval

Issued By: Dave Klingbiel *BIA*

Region: Northwest

Title: Chuckanut Forest Practice Forester

Date: 9/22/2015

Copies to: Landowner, Timber Owner and Operator

Issued in Person: Landowner, Timber Owner Operator By: *[Signature]*

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
Northwest Region
919 N Township Street
Sedro-Woolley, WA 98284

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.

Hydraulic Project Approval (HPA) (Chapter 77.55RCW and WAC 222-50-020(2))

The Department of Fish and Wildlife (WDFW), as the jurisdictional agency issuing HPAs, has final authority for approving water crossing structures in Type S and F waters. WDFW continues to have authority on Type N waters and may exercise that authority on some Type N waters.

Notice: The HPA water crossing requirements supersede what is indicated on the FPA. Landowners are required by law to follow the provisions as directed on the HPA.

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 Division 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 Sedro-Woolley, WA, postage paid,
a true and accurate copy of the attached document. Notice of Decision FPA # __2814814_____

Braelyn Hamilton
(Printed name)

(Signature)

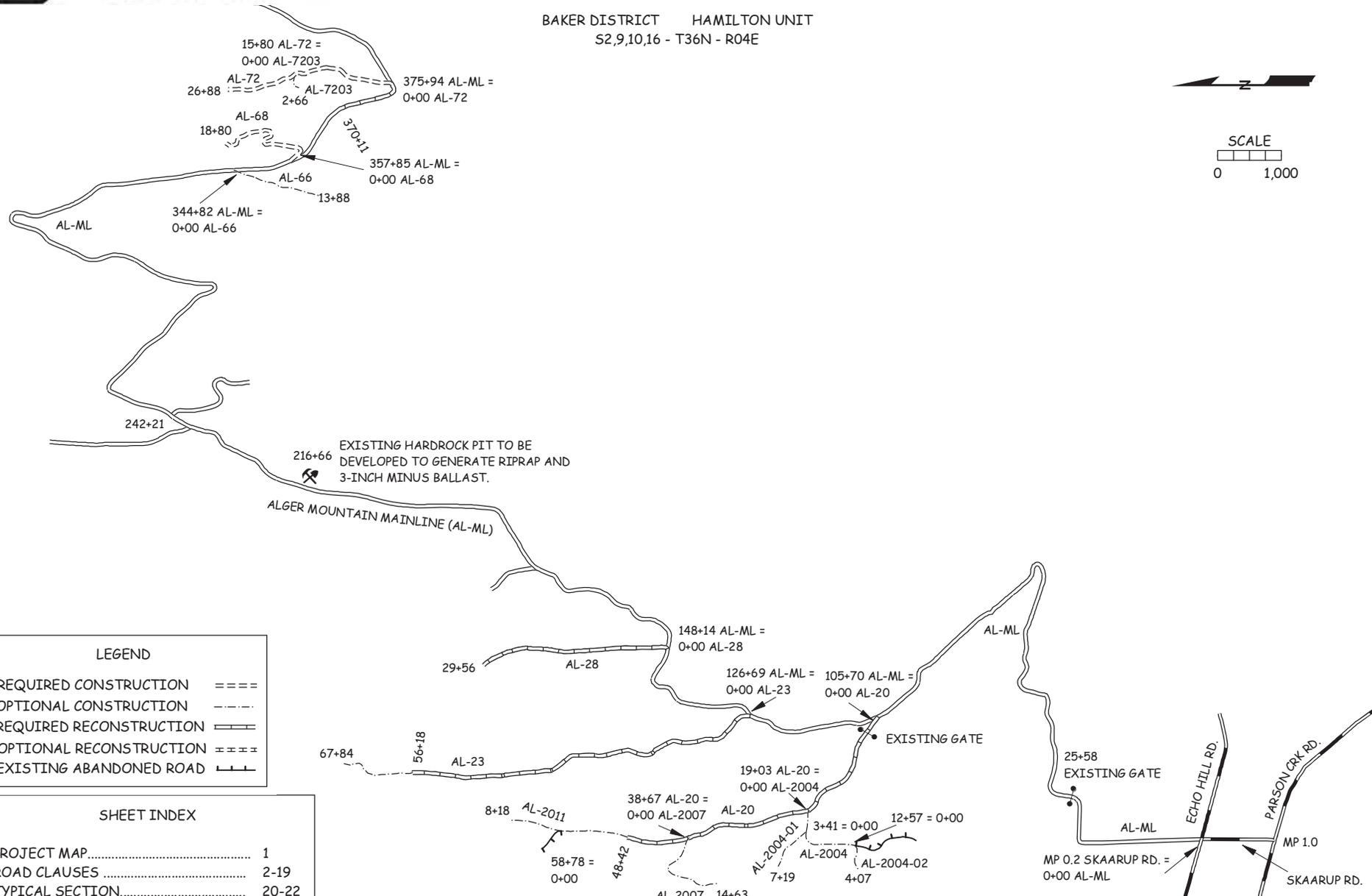


ROAD PLAN AND SPECIFICATIONS #92577 SKAARUP VIEW VRH & VDT

BAKER DISTRICT HAMILTON UNIT
S2,9,10,16 - T36N - R04E



SCALE
0 1,000



LEGEND	
REQUIRED CONSTRUCTION	=====
OPTIONAL CONSTRUCTION	- - - - -
REQUIRED RECONSTRUCTION	=====
OPTIONAL RECONSTRUCTION	- - - - -
EXISTING ABANDONED ROAD	-----

SHEET INDEX	
PROJECT MAP.....	1
ROAD CLAUSES	2-19
TYPICAL SECTION.....	20-22
MATERIAL LIST.....	23-25
FARMS.....	26-27
DRAINAGE SPECIFICATIONS.....	28

DESIGNED BY M. CONNELLY	REVIEWED BY Stuart 6/24/2015	APPROVED BY Fike 6/24/2015	PLAN DATE 06/19/2015	SHEET 1 OF 28
----------------------------	------------------------------------	----------------------------------	-------------------------	------------------

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

SKAARUP VIEW VRH & VDT TIMBER SALE ROAD PLAN
SKAGIT COUNTY
BAKER DISTRICT

AGREEMENT NO.: 30-092577

STAFF ENGINEER: M. CONNELLY

DATE: 06/19/2015

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>
AL-ML	370+11 to 375+94	RECONSTRUCTION
AL-20	0+00 to 48+42	RECONSTRUCTION
AL-23	0+00 to 56+18	RECONSTRUCTION
AL-28	0+00 to 29+56	RECONSTRUCTION
AL-68	0+00 to 18+80	CONSTRUCTION
AL-72*	0+00 to 26+88	CONSTRUCTION

*Construction on AL-72 is on an abandoned grade.

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>
AL-20**	48+42 to 58+78	CONSTRUCTION
AL-2004***	0+00 to 12+57	CONSTRUCTION
AL-2004-01	0+00 to 7+19	CONSTRUCTION
AL-2004-02****	0+00 to 4+07	CONSTRUCTION
AL-2007	0+00 to 14+63	CONSTRUCTION
AL-2011	0+00 to 8+18	CONSTRUCTION
AL-23	56+18 to 67+84	CONSTRUCTION
AL-66*****	0+00 to 13+88	CONSTRUCTION
AL-7203	0+00 to 2+66	CONSTRUCTION

**Construction on AL-20 is on an abandoned grade.

***Construction on AL-2004 is on an abandoned grade.

****Construction on AL-2004-02 is on an abandoned grade.

*****Construction on AL-66 is on an abandoned grade.

0-4 CONSTRUCTION

Construction includes, but is not limited to clearing, grubbing, excavation and embankment to sub-grade, landing and turnout construction, culvert installation, and application of 3-inch-minus ballast rock.

0-5 RECONSTRUCTION

Reconstruction includes, but is not limited to blading, shaping, and ditching the road surface, existing culvert clean out, and spot application of 3-inch-minus ballast rock. See SECTION 11 Clause 11-1 RECONSTRUCTION DETAILS for more information.

0-10 ABANDONMENT

This project includes abandonment listed in Clause 9-21 ROAD ABANDONMENT.

0-12 DEVELOP ROCK SOURCE

Purchaser shall develop an existing rock source. Rock source development will involve drilling, shooting, and processing rock to generate riprap and 3-inch-minus ballast rock. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

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 must be submitted in writing to the Contract Administrator for consideration. Before work begins, Purchaser shall obtain approval from the State for the submitted plan.

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

Purchaser shall perform road work in accordance with the dimensions shown on the TYPICAL SECTION SHEET and the specifications within this road plan, unless controlled by construction stakes.

1-4 ROAD TOLERANCES

Purchaser shall perform road work within the tolerances listed below. The tolerance class for each road is listed on the TYPICAL SECTION SHEET.

<u>Tolerance Class</u>	<u>A</u>	<u>B</u>	<u>C</u>
Road and Subgrade Width (feet)	+1.5	+1.5	+2.0
Subgrade Elevation (feet +/-)	0.5	1.0	2.0
Centerline alignment (feet lt./rt.)	1.0	1.5	3.0

1-5 DESIGN DATA

Design data is available upon request at the Department of Natural Resources Northwest Region Office in Sedro Woolley, WA.

1-6 ORDER OF PRECEDENCE

Any conflict or inconsistency in the road plan will 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.

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

Purchaser shall repair or replace all materials, roadway infrastructure, and road components damaged during road work or operation activities. The Contract Administrator will direct repairs and replacements. Repairs to structural materials must be made in accordance with the manufacturer’s recommendation.

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.

1-18 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.

1-21 HAUL APPROVAL

Purchaser shall not use roads under this road plan any hauling other than timber cut on the right-of-way, without written approval from the Contract Administrator.

1-25 ACTIVITY TIMING RESTRICTION

The specified activities are not allowed during the listed closure period(s) unless authorized in writing by the Contract Administrator.

<u>Activity</u>	<u>Closure Period</u>
All activities.	November 1 to March 31

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION, Purchaser shall provide a maintenance plan to include further protection of state resources. Purchaser shall obtain written approval from the Contract Administrator for the maintenance plan, and shall put preventative measures in place before operating during the closure period. Purchaser is 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 must 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 will suspend road work or hauling right-of-way timber, forest products, or rock under the following conditions:

- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.
- When, 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, Purchaser shall cease operations, or perform corrective maintenance or repairs, subject to specifications within this road plan. Before and during any suspension, Purchaser shall protect the work from damage or deterioration.

1-33 SNOW PLOWING RESTRICTION

Snowplowing will be allowed after the execution of a SNOW PLOWING AGREEMENT, which is available from the Contract Administrator upon request. If damage occurs while plowing, further permission to plow may be revoked 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.

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

Purchaser shall clean ditches, headwalls, and catch basins. Work must be completed before application of rock and must be done in accordance with the TYPICAL SECTION.

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-5 CLEARING

Purchaser shall fall all vegetative material larger than 2 inches DBH or over 5 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.

3-10 GRUBBING

Purchaser shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Purchaser shall also remove stumps with undercut roots outside the grubbing limits. Grubbing must be completed before starting excavation and embankment.

3-20 ORGANIC DEBRIS DEFINITION

Organic debris is defined as all vegetative material not eligible for removal by Contract Clause 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 clearing limits as shown on the TYPICAL SECTION SHEET.

3-21 DISPOSAL COMPLETION

Purchaser shall remove organic debris from the road surface, ditchlines, and culvert inlets and outlets. Purchaser shall complete all disposal of organic debris before the application of rock.

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 30 feet of a cross drain culvert.
- Within 30 feet of a live stream, or wetland.
- On embankments.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 40%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

Purchaser shall not bury organic debris unless otherwise stated in this plan.

3-25 SCATTERING ORGANIC DEBRIS

Purchaser shall scatter organic debris outside of the clearing limits in natural openings unless otherwise detailed in this road plan.

SECTION 4 – EXCAVATION

4-2 PIONEERING

Pioneering may not extend past construction that will be completed during the current construction season. Pioneering may not extend more than 500 feet beyond completed construction unless approved in writing by the Contract Administrator. In addition, the following actions must be taken as pioneering progresses:

- Drainage must be provided on all uncompleted construction.
- Road pioneering operations may not undercut the final cut slope or restrict drainage.
- Culverts at live stream crossings must be installed during pioneering operations prior to embankment.

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Purchaser shall follow these standards for road grade and alignment:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 15 percent adverse.
- Minimum curve radius is 50 feet at centerline.
- Maximum grade change for sag vertical curves is 5% in 100 feet.
- Maximum grade change for crest vertical curves is 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 switchback.

4-5 CUT SLOPE RATIO

Purchaser shall construct excavation slopes no steeper than shown on the following table, unless construction staked or designed:

<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
Fractured or loose rock	½:1	200
Hardpan or solid rock	¼:1	400

4-6 EMBANKMENT SLOPE RATIO

Purchaser shall construct embankment slopes no steeper than shown on the following table, unless construction staked or designed:

<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

Purchaser shall construct excavation and embankment slopes 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.

Purchaser shall apply embankment widening equally to both sides of the road to achieve the required width.

4-21 TURNOUTS

Purchaser shall construct turnouts intervisible with a maximum distance of 1,000 feet between turnouts unless otherwise shown on drawings. Locations may be adjusted to fit the final subgrade alignment and sight distances. Locations are subject to written approval by the Contract Administrator. Minimum dimensions are shown on the TYPICAL SECTION SHEET.

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

Purchaser shall construct or reconstruct ditches into the subgrade as specified on the TYPICAL SECTION SHEET. Ditches must be constructed concurrently with construction of the subgrade.

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

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 50% if the waste material is compacted and free of organic debris. On side slopes greater than 50%, all waste material must be end hauled or pushed to the designated embankment sites and waste areas identified in Clause 4-37 WASTE AREA LOCATION.

4-38 PROHIBITED WASTE DISPOSAL AREAS

Purchaser shall not deposit waste material in the following areas, except as otherwise specified in this plan:

- Within 30 feet of a cross drain culvert.
- Within 30 feet of a live stream or wetland.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Against standing timber.
- Outside the clearing limits.

4-55 ROAD SHAPING

Purchaser shall shape the subgrade and surface as shown on the TYPICAL SECTION SHEET. The subgrade and surface shape must ensure runoff in an even, un-concentrated manner, and must be uniform, firm, and rut-free.

4-60 FILL COMPACTION

Purchaser shall compact all embankment and waste material by routing equipment over the entire width of each lift.

4-61 SUBGRADE COMPACTION

Purchaser shall compact constructed and reconstructed subgrades by routing equipment over the entire width.

SECTION 5 – DRAINAGE

5-5 CULVERTS

Purchaser shall install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on MATERIALS LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts must be new material and must meet the specifications in Clauses 10-15 through 10-23. Purchaser shall obtain approval from the Contract Administrator for the quality of used culverts before installation.

5-11 UNUSED MATERIALS STATE PROPERTY

On required roads, any materials listed on the MATERIALS LIST that are not installed will become the property of the state. Purchaser shall stockpile materials as directed by the Contract Administrator.

5-15 CULVERT INSTALLATION

Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL and 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".

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

Purchaser shall obtain written approval from the Contract Administrator for the installation of culverts 36 inches in diameter and over before backfilling.

5-17 CROSS DRAIN SKEW AND SLOPE

Cross drains, on road grades in excess of 3%, must 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 culverts will not be skewed. Cross drain culverts must be installed at a slope steeper than the incoming ditch grade, but not less than 3% or more than 10%.

5-25 CATCH BASINS

Purchaser shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 2 feet wide and 4 feet long.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts. Rock used for headwalls must weigh at least 50 pounds. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Rock may not restrict the flow of water into culvert inlets or catch basins. No placement by end dumping or dropping of rock is allowed.

SECTION 6 – ROCK AND SURFACING

6-2 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the TYPICAL SECTION and MATERIALS LIST may be obtained from the following source on state land at no charge to the Purchaser. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source. If other operators are using, or desire to use the rock source, a joint operating plan must be developed. All parties shall follow this plan.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Alger hardrock pit	STA 216+66 of the AL-ML road.	3-inch-minus ballast rock, Riprap

6-5 ROCK FROM COMMERCIAL SOURCE

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

6-11 ROCK SOURCE DEVELOPMENT PLAN BY PURCHASER

Purchaser shall conduct rock source development and use at the following sources, in accordance with a written ROCK SOURCE DEVELOPMENT PLAN to be prepared by the Purchaser. The plan is subject to written approval by the Contract Administrator before any rock source operations. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN, and approved in writing by the Contract Administrator.

<u>Source</u>
Alger hardrock pit

Rock source development plans prepared by the Purchaser must show the following information:

- Rock source location.
- Rock source overview showing access roads, development areas, stockpile locations, waste areas, and floor drainage.
- Rock source profiles showing development areas, bench locations including widths, and wall faces including heights.

6-20 ROCK GRADATION TYPES

Purchaser shall provide rock in accordance with the types and amounts listed in the TYPICAL SECTION and MATERIALS LIST. Rock must meet the following specifications for gradation and uniform quality when placed in hauling vehicles or during manufacture and placement into a stockpile. The exact point of evaluation for conformance to specifications will be determined by the Contract Administrator.

6-34 3-INCH MINUS BALLAST ROCK

Ballast rock must be 100% equal to, or smaller than, 3 inches in at least one dimension.

Rock may contain no more than 5 percent organic debris, dirt, and trash. All percentages are by weight.

6-50 LIGHT LOOSE RIP RAP

Rip rap must consist of angular, hard, sound, and durable stone. It must be free from segregation, seams, cracks, and other defects. Light loose rip rap must be free of rock fines, soil, organic debris or other extraneous material, and must meet the following requirements:

<u>At Least/Not More Than</u>	<u>Weight Range</u>
20% / 90%	300 lbs. to 1 ton
80% / --	50 lbs. to ½ ton
10% / 20%	50 lbs. max

6-51 HEAVY LOOSE RIP RAP

Rip rap must consist of angular, hard, sound, and durable stone. It must be free from segregation, seams, cracks, and other defects. Heavy loose riprap must be free of rock fines, soil, organic debris or other extraneous material, and must meet the following requirements:

<u>At Least/Not More Than</u>	<u>Weight Range</u>	<u>Size Range</u>
30% / 90%	1 ton to 3 ton	36" - 54"
70% / 90%	500 lbs. to 1 ½ ton	24" - 42"
10% / 30%	50 lbs. max	3" - 8"

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 TYPICAL SECTION are loose 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.

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for culvert installation, ditch construction, ditch reconstruction, headwall construction, and headwall reconstruction before rock application.

6-71 ROCK APPLICATION

Purchaser shall apply rock in accordance with the specifications and quantities shown on the TYPICAL SECTION. Rock must be spread, shaped, and compacted full width concurrent with rock hauling operations. The Contract Administrator will direct locations for rock that is to be applied as spot patching. Road surfaces must be compacted in accordance with the TYPICAL SECTION by routing equipment over the entire width.

6-73 ROCK FOR WIDENED PORTIONS

Purchaser shall apply rock to turnarounds, turnouts, and areas with curve widening to the same depth and specifications as the traveled way

SECTION 8 – EROSION CONTROL

8-15 REVEGETATION

Purchaser shall spread seed and fertilizer on all exposed soils within the grubbing limits resulting from road work activities. Cover all exposed soils using manual dispersal of grass seed and fertilizer. Other methods of covering must be approved in writing by the Contract Administrator.

8-17 REVEGETATION TIMING

Purchaser shall revegetate during the first available opportunity after road work is completed. Soils may not be allowed to sit exposed for longer than one month without receiving revegetation treatment unless otherwise approved in writing by the Contract Administrator.

8-18 PROTECTION FOR SEED

Purchaser shall provide a protective cover for seed if revegetation occurs between July 1 and March 31. The protective cover may consist of dispersed straw, jute matting, or clear plastic sheets. The protective cover requirement may be waived in writing by the Contract Administrator if Purchaser is able to demonstrate a revegetation plan that will result in the establishment of a uniform dense crop (at least 50% coverage) of 3-inch tall grass by October 31.

8-19 ASSURANCE FOR SEEDED AREA

Purchaser shall ensure the growth of a uniform and dense crop (at least 50% coverage) of 3-inch tall grass. Purchaser shall reapply the grass seed and fertilizer in areas that have failed to germinate or have been damaged through any cause. Restore eroded or disturbed areas, clean up and properly dispose of eroded materials, and reapply the seed and fertilizer at no addition cost to the state.

8-25 GRASS SEED

Purchaser shall evenly spread the seed mixture listed below on all exposed soil inside the grubbing limits at a rate of 50 pounds per acre of exposed soil. Grass seed must 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
5. Seed must conform to the following mixture.

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>
Creeping Red Fescue	50
Elf Perennial Rye Grass	25
Highland Colonial Bentgrass	15
White Clover	10
Inert and Other Crop	0.5

8-27 FERTILIZER

Purchaser shall evenly spread the fertilizer listed below on all exposed soil inside the grubbing limits at a rate of 200 pounds per acre of exposed soil. Fertilizer must meet the following specifications:

<u>Chemical Component</u>	<u>% by Weight</u>
Nitrogen	16
Phosphorous	16
Potassium	16
Sulphur	3
Inerts	49

SECTION 9 – POST-HAUL ROAD WORK

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND

Culverts removed from roads become the property of the Purchaser and must be removed from state land.

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface.

9-12 LANDING EMBANKMENT REMOVAL

Purchaser shall reduce or relocate the landing embankment. Place excavated material in a waste area approved in writing by the Contract Administrator.

9-21 ROAD ABANDONMENT

Purchaser shall abandon the following before the termination of this contract.

<u>Road</u>	<u>Stations</u>
AL-23	STA 56+18 to 67+84
AL-7203	0+00 to 2+66

9-22 ABANDONMENT

- Remove all ditch relief culverts. The resulting slopes must be 1:1 or flatter. Place and compact the removed fill material in a location that will not erode into any Type 1 through 5 waters or wetlands.
- Remove all culverts in natural drainages. The resulting slopes must be 1:1 or flatter. Strive to match the existing native stream bank gradient. The natural streambed width must be re-established. Place and compact the removed fill material in a location that will not erode into any Type 1 through 5 waters or wetlands.
- Transport all removed culverts off site. All removed culverts are the property of the Purchaser.
- Construct non-drivable waterbars at natural drainage points and at a spacing that will produce a vertical drop of no more than 20 feet between waterbars and with a maximum horizontal spacing of 400 feet.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must be on stable locations.
- Inslope or outslope the road as appropriate.
- Remove bridges and other structures.
- Pull back unstable fill that has potential of failing and entering any Type 1 through 5 waters or wetlands. Place and compact removed material in a stable location.
- Remove berms except as designed.

- Block the road by constructing an aggressive barrier of dense interlocked large woody debris (logs, stumps, root wads, etc.) so that four wheel highway vehicles cannot pass the point of abandonment. Typical barrier dimensions are 10 feet high by 20 feet deep, spanning the entire road prism from top of cutslope to toe of fillslope. Long term effectiveness is the primary objective. If necessary construct a vehicular turn-around near the point of abandonment.
- Apply grass seed to all exposed soils resulting from the abandonment work and in accordance with Section 8 EROSION CONTROL

SECTION 10 MATERIALS

10-15 CORRUGATED STEEL CULVERT

Metallic coated steel culverts must meet AASHTO M-36 (ASTM A-760) specifications. Culverts must be galvanized (zinc coated meeting AASHTO M-218).

10-16 CORRUGATED ALUMINUM CULVERT

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

10-17 CORRUGATED PLASTIC CULVERT

Polyethylene culverts must meet AASHTO M-294 specifications, or ASTM F-2648 specifications for recycled polyethylene. Culverts must be Type S – double walled with a corrugated exterior and smooth interior.

10-21 METAL BAND

Metal coupling and end bands must meet the AASHTO specification designated for the culvert and must have matching corrugations. Culverts 24 inches and smaller must have bands with a minimum width of 12 inches. Culverts over 24 inches must have bands with a minimum width of 24 inches.

10-22 PLASTIC BAND

Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used.

10-24 GAGE AND CORRUGATION

Metal culverts must 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 48"	14 (0.079")	2 2/3" X 1/2"
54" to 96"	14 (0.079")	3" X 1"

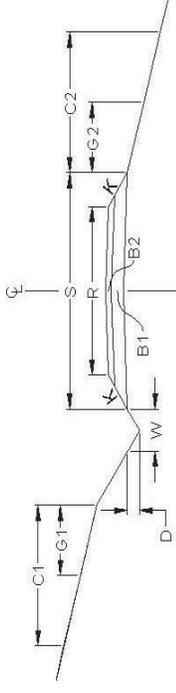
SECTION 11 SPECIAL NOTES

11-1 RECONSTRUCTION DETAILS

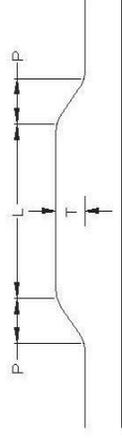
<u>Roads</u>	<u>Stations</u>	<u>Reconstruction Items</u>
AL-ML	370+11 to 375+94	<ul style="list-style-type: none"> • Blade, shape, and ditch road surface. • Clean out catch basins and outlets of all existing pipes. • Apply 6-inch lift of 3-inch-minus ballast rock.
AL-20	0+00 to 48+42	<ul style="list-style-type: none"> • Blade, shape, and ditch road surface. • Clean out catch basins and outlets of all existing pipes. • Spot patch existing road surface with 100 cubic yards of 3-inch-minus ballast rock as needed at locations designated by contract administrator.
AL-23	0+00 to 56+18	<ul style="list-style-type: none"> • Blade, shape, and ditch road surface. • Clean out catch basins and outlets of all existing pipes. • Spot patch existing road surface with 200 cubic yards of 3-inch-minus ballast rock as needed at locations designated by contract administrator.
AL-28	0+00 to 29+56	<ul style="list-style-type: none"> • Blade, shape, and ditch road surface. • Clean out catch basins and outlets of all existing pipes. • Spot patch existing road surface with 100 cubic yards of 3-inch-minus ballast rock as needed at locations designated by contract administrator.

ROAD #	AL-ML	AL-20	AL-23	AL-28
REQUIRED / OPTIONAL	REQUIRED	REQUIRED	REQUIRED	REQUIRED
CONSTRUCT / RECONSTRUCT	RECONSTRUCT	RECONSTRUCT	RECONSTRUCT	RECONSTRUCT
TOLERANCE CLASS (A/B/C)	C	C	C	C
STATION / MP TO	370+11	0+00	0+00	0+00
STATION / MP	375+94	48+42	56+18	29+56
ROAD WIDTH	12	12	12	12
CROWN (INCHES @ C/L)	3	3	3	3
DITCH WIDTH	3	3	3	3
DITCH DEPTH	1	1	1	1
TURNOUT LENGTH	50	50	50	50
TURNOUT WIDTH	10	10	10	10
TURNOUT TAPER	25	25	25	25
GRUBBING	5	5	5	5
	5	5	5	5
CLEARING	10	10	10	10
	10	10	10	10
ROCK FILLSLOPE	1 ½	1 ½	1 ½	1 ½
❖ BALLAST DEPTH	6	--	--	--
CUBIC YARDS / STATION	34	--	--	--
➤ TOTAL CY BALLAST	199	--	--	--
❖ SURFACING DEPTH	--	--	--	--
CUBIC YARDS / STATION	--	--	--	--
➤ TOTAL CY SURFACING	--	--	--	--
➤ TOTAL CUBIC YARDS	199	100 ^A	200 ^A	100 ^A
SUBGRADE WIDTH	S	--	--	--
BRUSHCUT (Y/N)	N	N	N	N
BLADE, SHAPE, & DITCH (Y/N)	Y	Y	Y	Y

TYPICAL SECTION



TURNOUT DETAIL (PLAN VIEW)



SYMBOL NOTES

- ❖ Specified Rock Depth is FINISHED COMPACTED DEPTH in inches.
- Specified Rock Quantity is LOOSE MEASURE (Truck Cubic Yards) needed to accomplish specified FINISHED COMPACTED DEPTH. Rock quantities include volume for turnouts, curve widening and landings.
- * Construction on AL-72 is on an abandoned grade.
- ** Construction on AL-20 is on an abandoned grade.
- *** Construction on AL-2004 is on an abandoned grade.
- **** Construction on AL-2004-02 is on an abandoned grade.
- ***** Construction on AL-66 is on an abandoned grade.
- A. 3-inch minus-ballast rock for spot patching as needed at locations designated by Contract Administrator.

ROAD #	AL-20**	AL-2004***	AL-2004-01	AL-2004-02****	AL-2007	AL-2011	AL-23
REQUIRED / OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
CONSTRUCT / RECONSTRUCT	CONSTRUCT	CONSTRUCT	CONSTRUCT	CONSTRUCT	CONSTRUCT	CONSTRUCT	CONSTRUCT
TOLERANCE CLASS (A/B/C)	C	C	C	C	C	C	C
STATION / MP TO	48+42	0+00	0+00	0+00	0+00	0+00	56+18
STATION / MP	58+78	12+57	7+19	4+07	14+63	8+18	67+84
ROAD WIDTH	R 12	12	12	12	12	12	12
CROWN (INCHES @ C/L)	3	3	3	3	3	3	3
DITCH WIDTH	W 2	2	2	2	2	2	2
DITCH DEPTH	D 1	1	1	1	1	1	1
TURNOUT LENGTH	L 25	25	25	25	25	25	25
TURNOUT WIDTH	T 10	10	10	10	10	10	10
TURNOUT TAPER	P 25	25	25	25	25	25	25
GRUBBING	G1 5	5	5	5	5	5	5
	G2 5	5	5	5	5	5	5
CLEARING	C1 10	10	10	10	10	10	10
	C2 10	10	10	10	10	10	10
ROCK FILLSLOPE	K:1 1 ½	1 ½	1 ½	1 ½	1 ½	1 ½	1 ½
❖ BALLAST DEPTH	B1 6	6	18	6	18	18	18
CUBIC YARDS / STATION	34	34	114	34	114	114	114
➤ TOTAL CY BALLAST	353	428	820	139	1668	933	1330
❖ SURFACING DEPTH	B2 --	--	--	--	--	--	--
CUBIC YARDS / STATION	--	--	--	--	--	--	--
➤ TOTAL CY SURFACING	--	--	--	--	--	--	--
➤ TOTAL CUBIC YARDS	353	428	820	139	1668	933	1330
SUBGRADE WIDTH	S 13.5	13.5	16.5	13.5	16.5	16.5	16.5
BRUSHCUT (Y/N)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BLADE, SHAPE, & DITCH (Y/N)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

ROAD #	AL-66*****	AL-68	AL-72*	AL-7203
REQUIRED / OPTIONAL	OPTIONAL	REQUIRED	REQUIRED	OPTIONAL
CONSTRUCT / RECONSTRUCT	CONSTRUCT	CONSTRUCT	CONSTRUCT	CONSTRUCT
TOLERANCE CLASS (A/B/C)	C	C	C	C
STATION / MP TO	0+00	0+00	0+00	0+00
STATION / MP	13+88	18+80	26+88	2+66
ROAD WIDTH	R 12	12	12	12
CROWN (INCHES @ C/L)	3	3	3	3
DITCH WIDTH	W 2	3	3	2
DITCH DEPTH	D 1	1	1	1
TURNOUT LENGTH	L 25	50	50	25
TURNOUT WIDTH	T 10	10	10	10
TURNOUT TAPER	P 25	25	25	25
GRUBBING	G1 5	5	5	5
	G2 5	5	5	5
CLEARING	C1 10	10	10	10
	C2 10	10	10	10
ROCK FILLSLOPE	K:1 1 ½	1 ½	1 ½	1 ½
❖ BALLAST DEPTH	B1 6	18	6	18
CUBIC YARDS / STATION	34	114	34	114
➤ TOTAL CY BALLAST	472	2144	914	304
❖ SURFACING DEPTH	B2 --	--	--	--
CUBIC YARDS / STATION	--	--	--	--
➤ TOTAL CY SURFACING	--	--	--	--
➤ TOTAL CUBIC YARDS	472	2144	914	304
SUBGRADE WIDTH	S 13.5	16.5	13.5	16.5
BRUSHCUT (Y/N)	N/A	N/A	N/A	N/A
BLADE, SHAPE, & DITCH (Y/N)	N/A	N/A	N/A	N/A

MATERIALS LIST

LOCATION		CULVERT			DWNSPT		RIPRAP			FILL TYPE		TOLERANCE		REMARKS	
ROAD #	STATION	Diameter	Length	Type	Length	Type	Inlet	Outlet	Type	C	C	Diameter	Gage	Corrugation	
		18	40	PD	--	--	2	3	L						16
AL-ML	357+85	18	40	PD	--	--	2	3	L	NT	C	18"	16	2 2/3" x 1/2"	
	375+94	18	50	PD	--	--	2	4	L	NT	C	24" - 48"	14	2 2/3" x 1/2"	
												54" - 96"	14	3" x 1"	
AL-20	50+12	18	30	PD	--	--	2	3	L	NT	C				
	54+72	18	30	PD	--	--	2	3	L	NT	C				
	57+03	18	34	PD	--	--	2	4	L	NT	C				
	57+93	60	60	GM	--	--	30	45	H/L	NT	C				
AL-2004	3+41	18	30	PD	--	--	2	3	L	NT	C				
	5+78	18	32	PD	--	--	2	3	L	NT	C				
	10+35	18	30	PD	--	--	2	3	L	NT	C				
AL-2004-01	0+80	18	34	PD	--	--	2	4	L	NT	C				
AL-2004-02	2+39	18	30	PD	--	--	2	3	L	NT	C				
AL-2007	3+87	18	30	PD	--	--	2	3	L	NT	C				
	8+11	18	30	PD	--	--	2	3	L	NT	C				
	10+29	18	30	PD	--	--	2	3	L	NT	C				
	12+31	18	32	PD	--	--	2	3	L	NT	C				
	12+71	18	32	PD	--	--	2	3	L	NT	C				
	13+52	24	34	PD	--	--	4	8	H/L	NT	C				

GM – Galvanized Metal PS – Polyethylene Pipe Single Wall PD – Polyethylene Pipe Dual Wall AM – Aluminized Metal C – Concrete XX – PD or GM
H – Heavy Loose Riprap L – Light Loose Riprap SR – Shot Rock NT – Native (Bank Run) QS – Quarry Spalls

MATERIALS LIST

LOCATION		CULVERT			DWNSPT		RIPRAP			FILL TYPE		TOLERANCE		REMARKS	
ROAD #	STATION	DIAMETER	LENGTH	TYPE	LENGTH	TYPE	INLET	OUTLET	TYPE						
AL-2011	3+60	18	30	PD	--	--	2	3	L	NT	C				
AL-23	60+96	--	--	--	--	--	--	--	--	--	--				
	63+29	--	--	--	--	--	--	--	--	--	--				
	64+67	48	40	XX	--	--	15	25	H/L	NT	C				
AL-66	2+15	18	30	PD	--	--	2	3	L	NT	C				
	3+91	24	34	PD	--	--	4	8	H/L	NT	C				
	6+17	24	36	PD	--	--	4	8	H/L	NT	C				
	7+29	18	30	PD	--	--	2	3	L	NT	C				
	8+62	18	34	PD	--	--	2	4	L	NT	C				
	11+16	18	32	PD	--	--	2	3	L	NT	C				
	12+91	18	32	PD	--	--	2	3	L	NT	C				
AL-68	5+15	18	30	PD	--	--	2	3	L	NT	C				
	6+93	18	30	PD	--	--	2	3	L	NT	C				
	9+34	18	34	PD	--	--	2	4	L	NT	C				
	13+33	18	32	PD	--	--	2	3	L	NT	C				
	16+36	24	36	PD	--	--	5	10	H/L	NT	C				
	17+47	18	30	PD	--	--	2	3	L	NT	C				

GM – Galvanized Metal PS – Polyethylene Pipe Single Wall PD – Polyethylene Pipe Dual Wall AM – Aluminized Metal C – Concrete XX – PD or GM
H – Heavy Loose Riprap L – Light Loose Riprap SR – Shot Rock NT – Native (Bank Run) QS – Quarry Spalls

MATERIALS LIST

LOCATION		CULVERT			DWNSPT		RIPRAP			FILL TYPE	TOLERANCE	REMARKS												
		DIAMETER	LENGTH	TYPE	LENGTH	TYPE	INLET	OUTLET	TYPE															
ROAD #	STATION																							
AL-72	2+39	18	30	PD	--	--	2	3	L	NT	C	Note: Galvanized metal culverts shall conform to the following specifications for gage and corrugation as a function of the diameter: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><u>Diameter</u></td> <td style="text-align: center;"><u>Gage</u></td> <td style="text-align: center;"><u>Corrugation</u></td> </tr> <tr> <td style="text-align: center;">18"</td> <td style="text-align: center;">16</td> <td style="text-align: center;">2 2/3" x 1/2"</td> </tr> <tr> <td style="text-align: center;">24" - 48"</td> <td style="text-align: center;">14</td> <td style="text-align: center;">2 2/3" x 1/2"</td> </tr> <tr> <td style="text-align: center;">54" - 96"</td> <td style="text-align: center;">14</td> <td style="text-align: center;">3" x 1"</td> </tr> </table>	<u>Diameter</u>	<u>Gage</u>	<u>Corrugation</u>	18"	16	2 2/3" x 1/2"	24" - 48"	14	2 2/3" x 1/2"	54" - 96"	14	3" x 1"
<u>Diameter</u>	<u>Gage</u>	<u>Corrugation</u>																						
18"	16	2 2/3" x 1/2"																						
24" - 48"	14	2 2/3" x 1/2"																						
54" - 96"	14	3" x 1"																						
	4+13	18	34	PD	--	--	2	3	L	NT	C													
	5+22	18	34	PD	--	--	2	3	L	NT	C													
	7+74	18	30	PD	--	--	2	3	L	NT	C													
	9+93	18	30	PD	--	--	2	3	L	NT	C													
	11+84	18	30	PD	--	--	2	3	L	NT	C													
AL-7203	2+24	24	32	PD	--	--	4	8	H/L	NT	C													

GM – Galvanized Metal PS – Polyethylene Pipe Single Wall PD – Polyethylene Pipe Dual Wall AM – Aluminized Metal C – Concrete XX – PD or GM
 H – Heavy Loose Riprap L – Light Loose Riprap SR – Shot Rock NT – Native (Bank Run) QS – Quarry Spalls

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the construction materials. Remove slides from ditches and the roadway. Repair fill-failures, in accordance with Clause 4-6 EMBANKMENT SLOPE RATIO, with selected material or 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 and shape the road surface, turnouts, and shoulders to the original shape on the TYPICAL SECTION SHEET. Inslope or outslope as directed 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

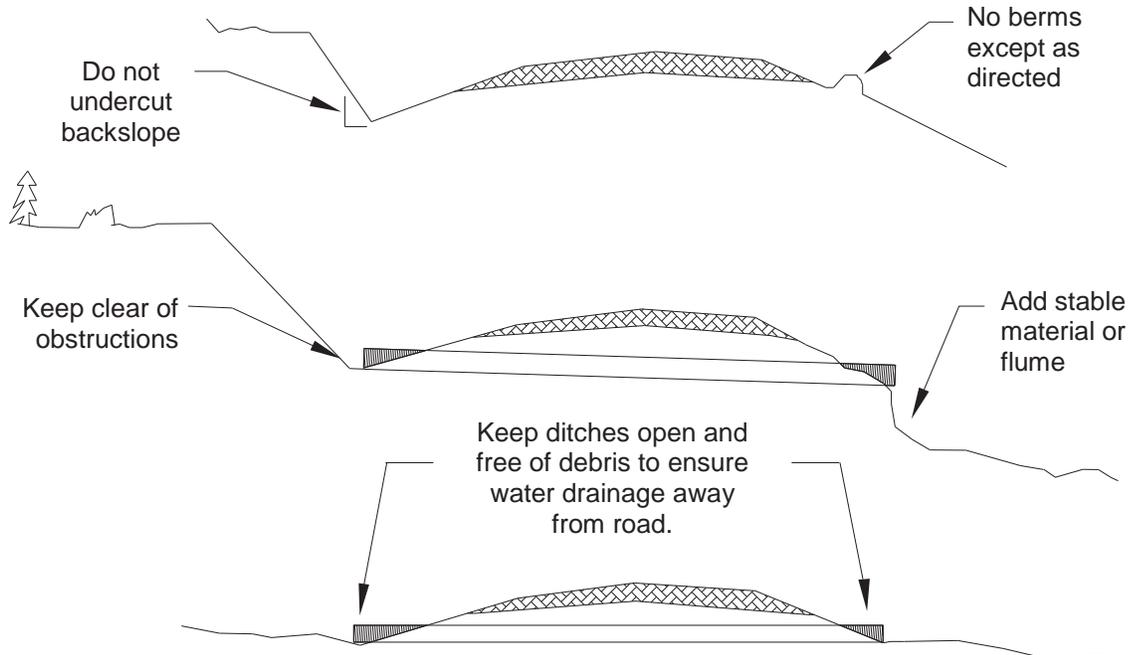
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

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

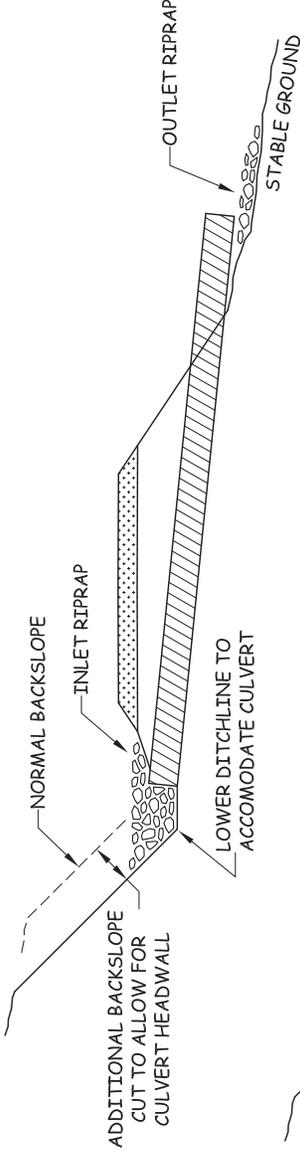
Debris

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

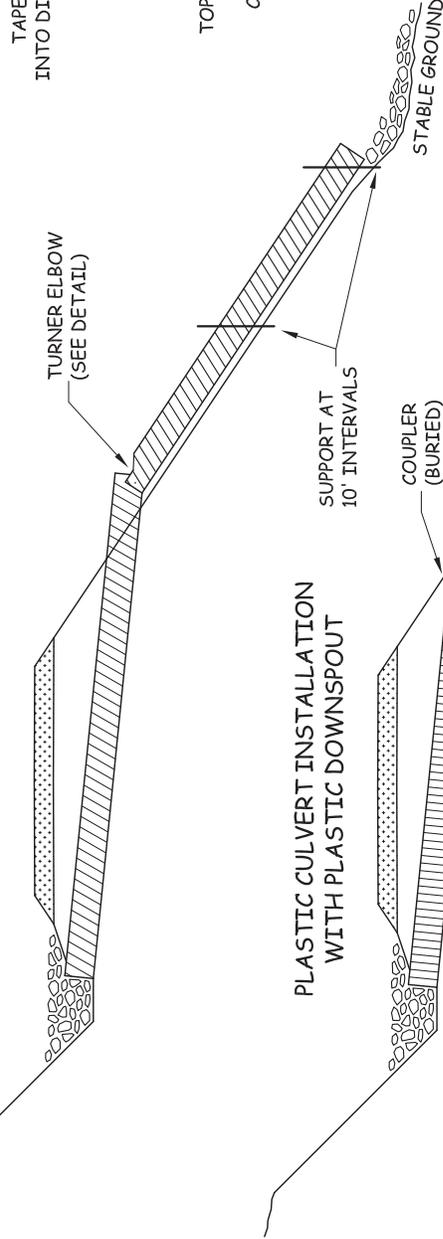


CULVERT AND DRAINAGE SPECIFICATIONS

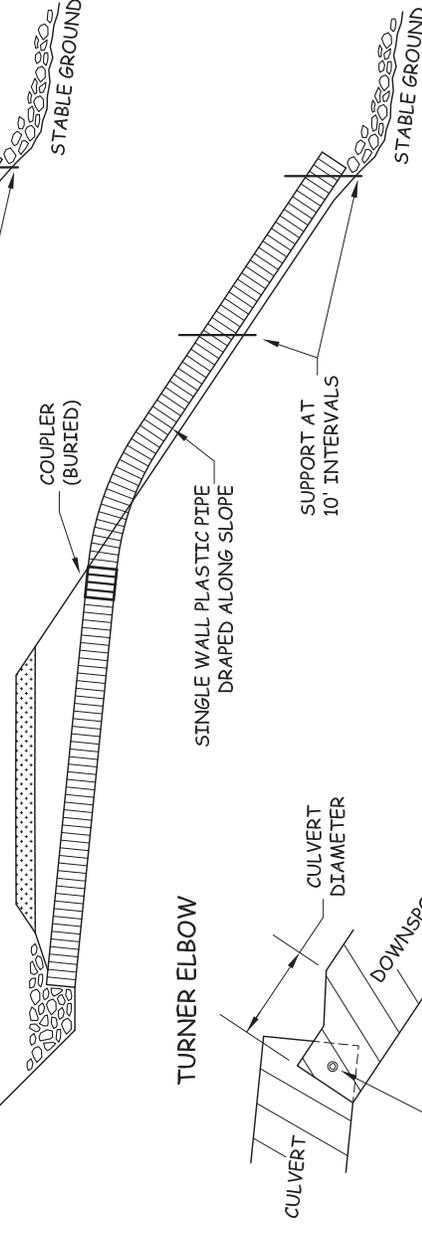
CULVERT INSTALLATION (TYPICAL)



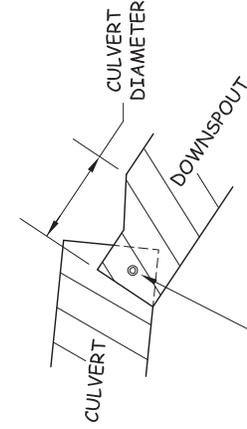
CULVERT INSTALLATION WITH DOWNSPOUT



PLASTIC CULVERT INSTALLATION WITH PLASTIC DOWNSPOUT

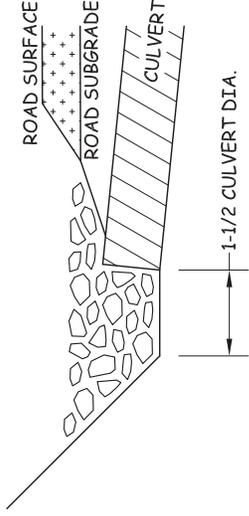


TURNER ELBOW

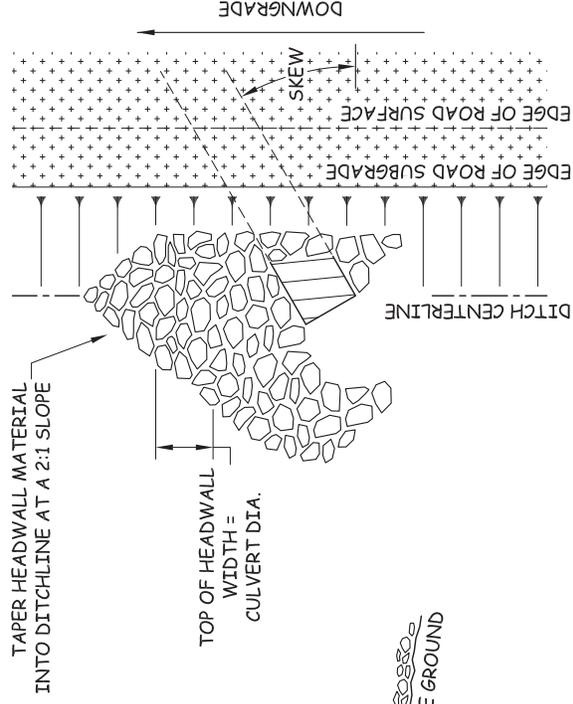


BOLTED WITH 5/8" BOLTS AND WASHERS (BOTH SIDES)

CULVERT HEADWALL - SECTION VIEW



CULVERT HEADWALL - PLAN VIEW



HEADWALL NOTE:

HEADWALL TO BE CONSTRUCTED OF IMPERVIOUS MATERIAL THAT WILL RESIST EROSION AND ARMORED WITH RIPRAP QUANTITY SPECIFIED IN ROAD PLAN.

CONTRACT #

30-092577

PROJECT

SKAARUP VIEW VRH & VDT

SHEET

28 OF 28

SUMMARY - Road Development Costs

REGION: NW
DISTRICT: Cascade

SALE/PROJECT NAME: Skaarup View VRH & VDT

CONTRACT #: 30-092577

ROAD NUMBERS: AL-20, AL-2004, AL-2004-01, AL-ML, AL-20, AL-23, AL-28 -
AL-2004-02, AL-2007, AL-2011,
AL-23, AL-66, AL-68, AL-72, AL-
7203

ROAD STANDARD:	Construction	Reconstruction	Maintenance
NUMBER OF STATIONS:	130.88	139.99	0
CLEARING & GRUBBING:	\$11,189	\$0	
EXCAVATION AND FILL:	\$27,972	\$0	-
MISC. MAINTENANCE:	\$6,993	\$5,628	-
ROAD ROCK:	\$69,931	\$13,131	-
ROCK STOCKPILE PROD:	\$0	\$0	-
CULVERTS AND FLUMES:	\$13,986	\$0	-
STRUCTURES:	\$0	\$0	-
MOBILIZATION:	\$9,790	\$0	-
TOTAL COSTS:	\$139,861	\$18,759	\$0
COST PER STATION:	\$1,069	\$134	
ROAD DEACTIVATION & ABANDONMENT COSTS:		\$8,126	

TOTAL (All Roads) = \$166,746
SALE VOLUME MBF = 1,867
TOTAL \$/MBF = \$89

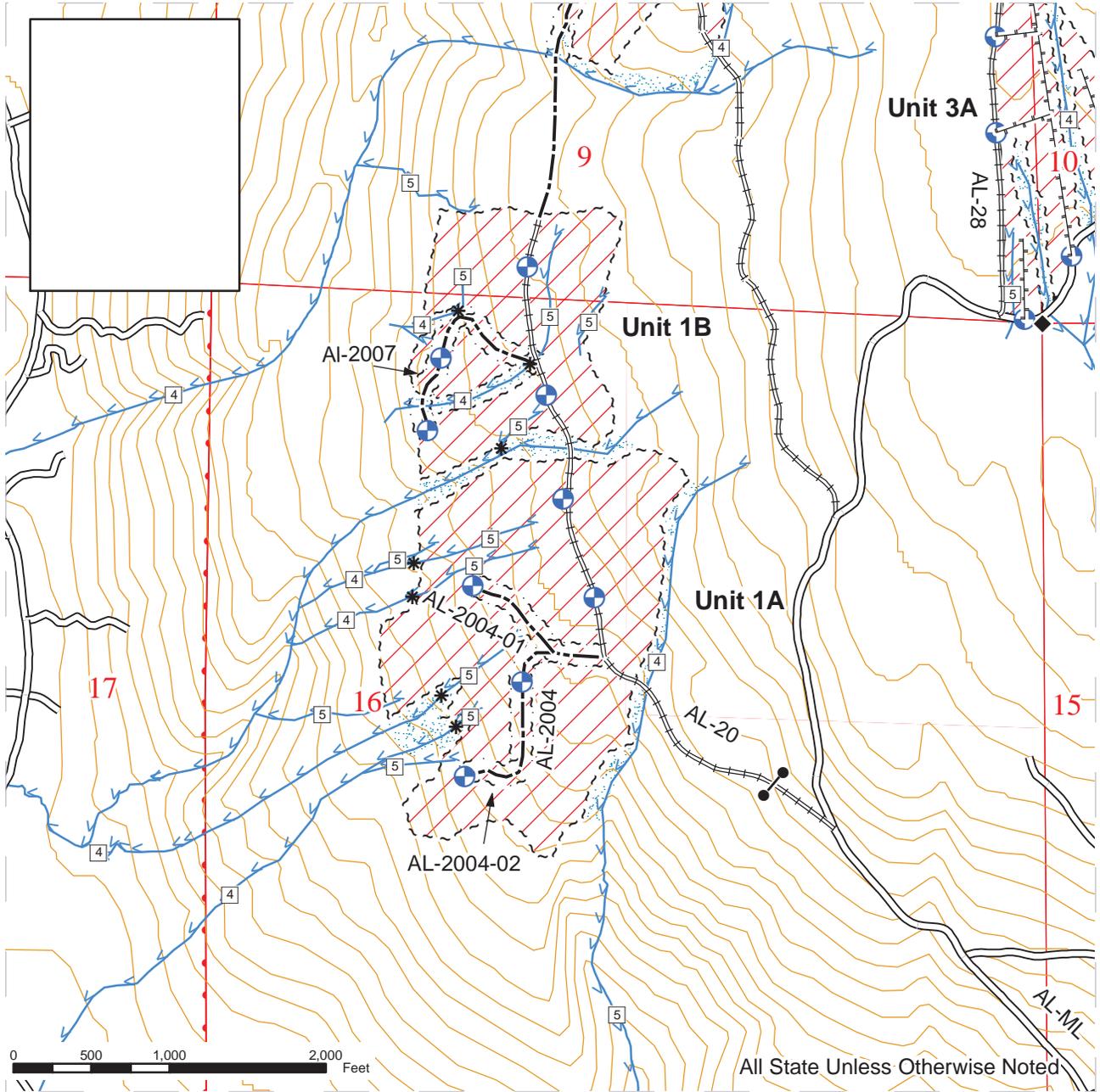
Compiled by: Connelly

Date: 06/19/15

LOGGING PLAN MAP

SALE NAME: Skaarup View VRH & VDT
AGREEMENT#: 30-092577
TOWNSHIP(S): T36R04E
TRUST(S): 01 State Forest Transfer

REGION: Northwest
COUNTY(S): Skagit
ELEVATION RGE: 720-3260



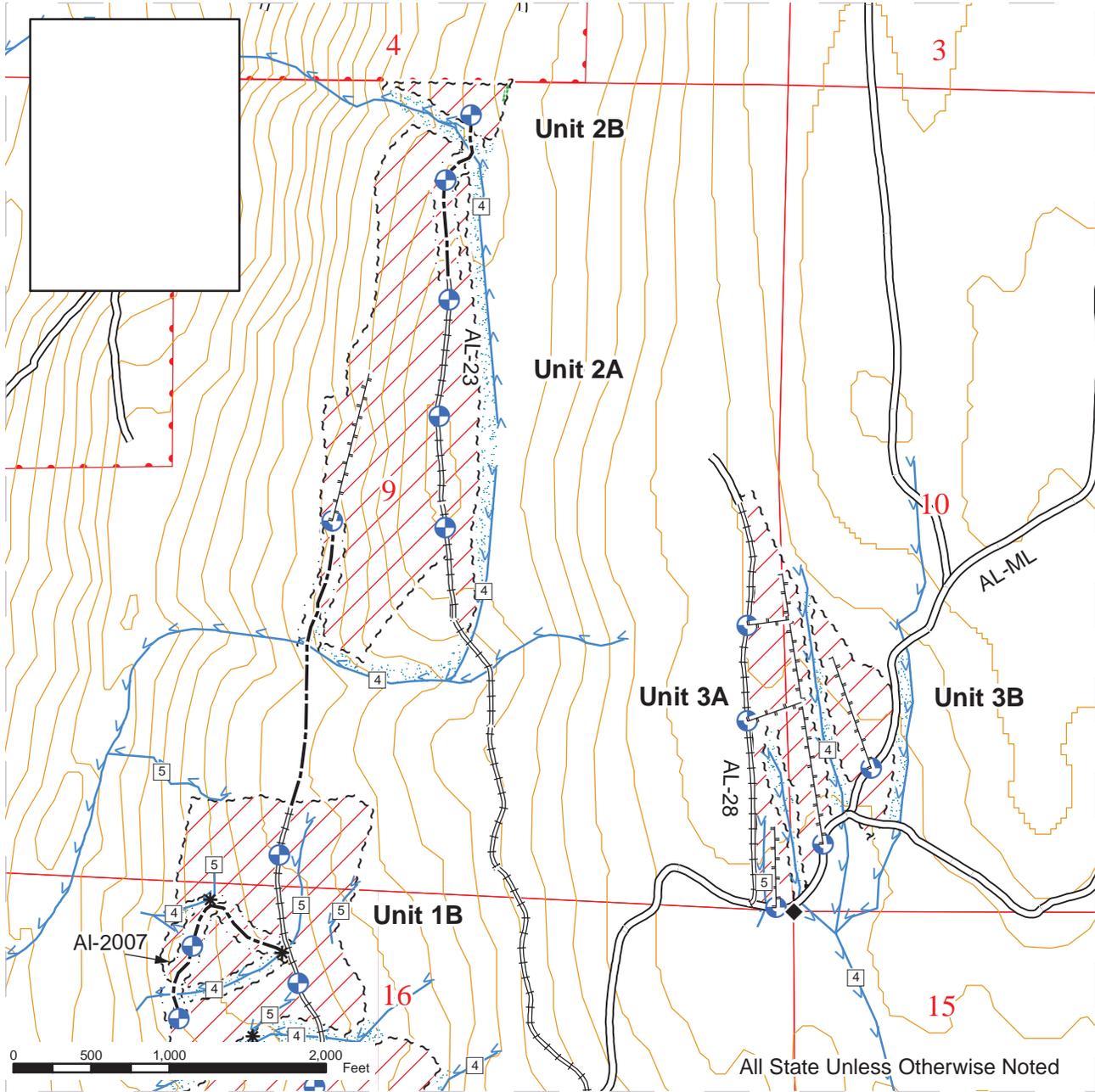
Ground Based	Sale Boundary Tags	Existing Roads	Streams
Wetland Buffer	Right of Way Tags	Required Construction	Stream Type
Riparian Mgt Zone	Reprod	Optional Construction	Stream Type Break
Leave Tree Area		Required Reconstruction	Survey Corners
Wetland			



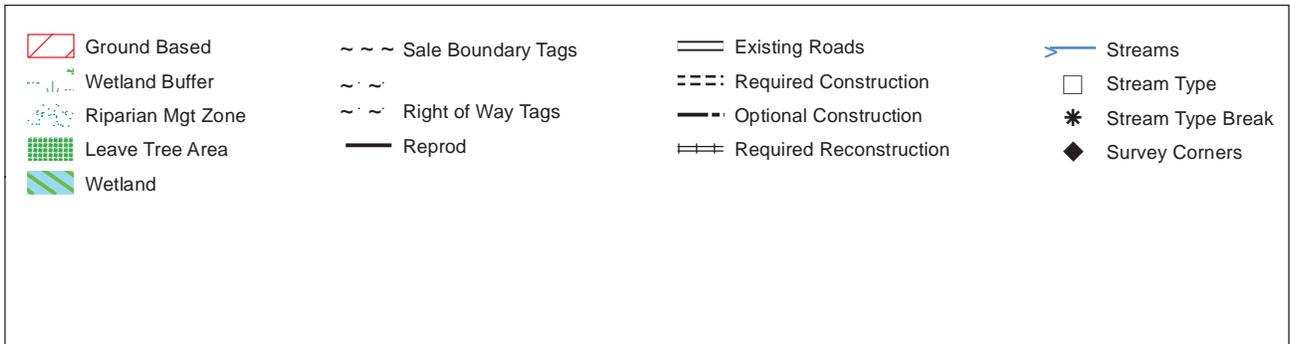
LOGGING PLAN MAP

SALE NAME: Skaarup View VRH & VDT
AGREEMENT#: 30-092577
TOWNSHIP(S): T36R04E
TRUST(S): 01 State Forest Transfer

REGION: Northwest
COUNTY(S): Skagit
ELEVATION RGE: 720-3260



All State Unless Otherwise Noted



LOGGING PLAN MAP

SALE NAME: Skaarup View VRH & VDT
AGREEMENT#: 30-092577
TOWNSHIP(S): T36R04E
TRUST(S): 01 State Forest Transfer

REGION: Northwest
COUNTY(S): Skagit
ELEVATION RGE: 720-3260

