



TIMBER NOTICE OF SALE

SALE NAME: *JUMPIN JACK*

AGREEMENT NO: *30-093486*

AUCTION: November 16, 2016 starting at 10:00 a.m., **COUNTY:** Skagit, Snohomish
Northwest Region Office, Sedro Woolley, WA

SALE LOCATION: Sale located approximately 7 miles north of Arlington, WA.

**PRODUCTS SOLD
AND SALE AREA:**

All timber bounded by white timber sale boundary tags and the ST-33 abandoned road grade, except forest products tagged out by yellow leave tree area tags, trees marked with blue paint on the bole and root collar and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #1.

All timber bounded by white timber sale boundary tags, adjacent young stands and the ST-1605-1005 abandoned road grade, except trees marked with blue paint on the bole and root collar and forest products tagged out by yellow leave tree area tags in Unit #2.

All timber bounded by white timber sale boundary tags, adjacent young stands and the ST-1605-10 Road, except trees marked with blue paint on the bole and root collar and forest products tagged out by yellow leave tree area tags in Unit #3.

All timber bounded by white timber sale boundary tags and ST-ML Road, except forest products tagged out by yellow leave tree area tags, trees marked with blue paint on the bole and root collar and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #4.

All timber bounded by white timber sale boundary tags, adjacent young stands and the ST-1605-08 abandoned road grade, except trees marked with blue paint on the bole and root collar and forest products tagged out by yellow leave tree area tags in Unit #5.

All timber bounded by white timber sale boundary tags, adjacent young stands and the ST-1605 and ST-1605-11 roads, except trees marked with blue paint on the bole and root collar and forest products tagged out by yellow leave tree area tags in Unit #6.

All timber bounded by white timber sale boundary tags and adjacent young stands, except trees marked with blue paint on the bole and root collar and forest products tagged out by yellow leave tree area tags in Unit #7.

All timber bounded by white timber sale boundary tags and the ST-16 Road, except forest products tagged out by yellow leave tree area tags, trees marked with blue paint on the bole and root collar and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #8.

All timber bounded by white timber sale boundary tags, adjacent young stands and the ST-16, CN-11 and CN-1138 roads, except forest products tagged out by yellow leave tree area tags, trees marked with blue paint on the bole and root collar and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #9.

The above described products on part(s) of Sections 5 and 6 all in Township 32 North, Range 6 East, Sections 1 all in Township 32 North, Range 5 East, Sections 31 all in Township 33 North, Range 6 East, Sections 36 all in Township 33 North, Range 5 East, W.M., containing 162 acres, more or less.



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

ESTIMATED SALE VOLUMES AND QUALITY:

Table with columns: Species, Avg Ring DBH, Total MBF, and MBF by Grade (1P, 2P, 3P, SM, 1S, 2S, 3S, 4S, UT). Rows include Hemlock, Douglas fir, Silver fir, Red cedar, and Sale Total.

MINIMUM BID: \$1,371,000.00

BID METHOD: Sealed Bids

PERFORMANCE SECURITY: \$100,000.00

SALE TYPE: Lump Sum

EXPIRATION DATE: March 31, 2019

ALLOCATION: Export Restricted

BID DEPOSIT: \$137,100.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Cable; cable or shovel on sustained slopes 35% or less. A self-leveling shovel and/or self-leveling harvester may operate on sustained slopes up to 50%, with prior approval from the Contract Administrator. Falling and Yarding will not be permitted from November 1 to March 31 unless authorized in writing by the Contract Administrator (THIS PERTAINS TO GROUND-BASED EQUIPMENT ONLY) to reduce soil damage and erosion.

ROADS: 35.45 stations of optional construction. 3.35 stations of optional reconstruction. 294.41 stations of required pre-haul maintenance.

Rock may be obtained from the following source(s) on State land at no charge to the Purchaser: Stimson Crow Pit at station 75+46 of the ST-1605 Road.

Development of existing rock source will involve clearing, stripping, drilling, shooting, and processing rock to generate riprap and 3-inch-minus ballast.

An estimated total quantity of rock needed for this proposal: 141 cubic yards of riprap and 3,585 cubic yards of ballast rock.

Road work and the hauling of rock will not be permitted from November 1 to March 31 unless authorized in writing by the Contract Administrator to reduce soil damage and siltation. The hauling of forest products will not be permitted from November 1 to March 31 unless authorized in writing by the Contract Administrator to reduce soil damage and siltation.

ACREAGE DETERMINATION

CRUISE METHOD: Acres determined by GPS traverse. 170.0 acres gross. 4.9 acres deducted for green tree retention clumps and 3.2 acres deducted for existing roads. 161.9 acres net. Cruised using



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variable plot method. Expansion factor used is 40.00, 54.4 and 62.5. Sighting height is 4.5 feet. A total of 85 plots were taken.

Shapefiles of units are available upon request.

FEES: \$101,618.75 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

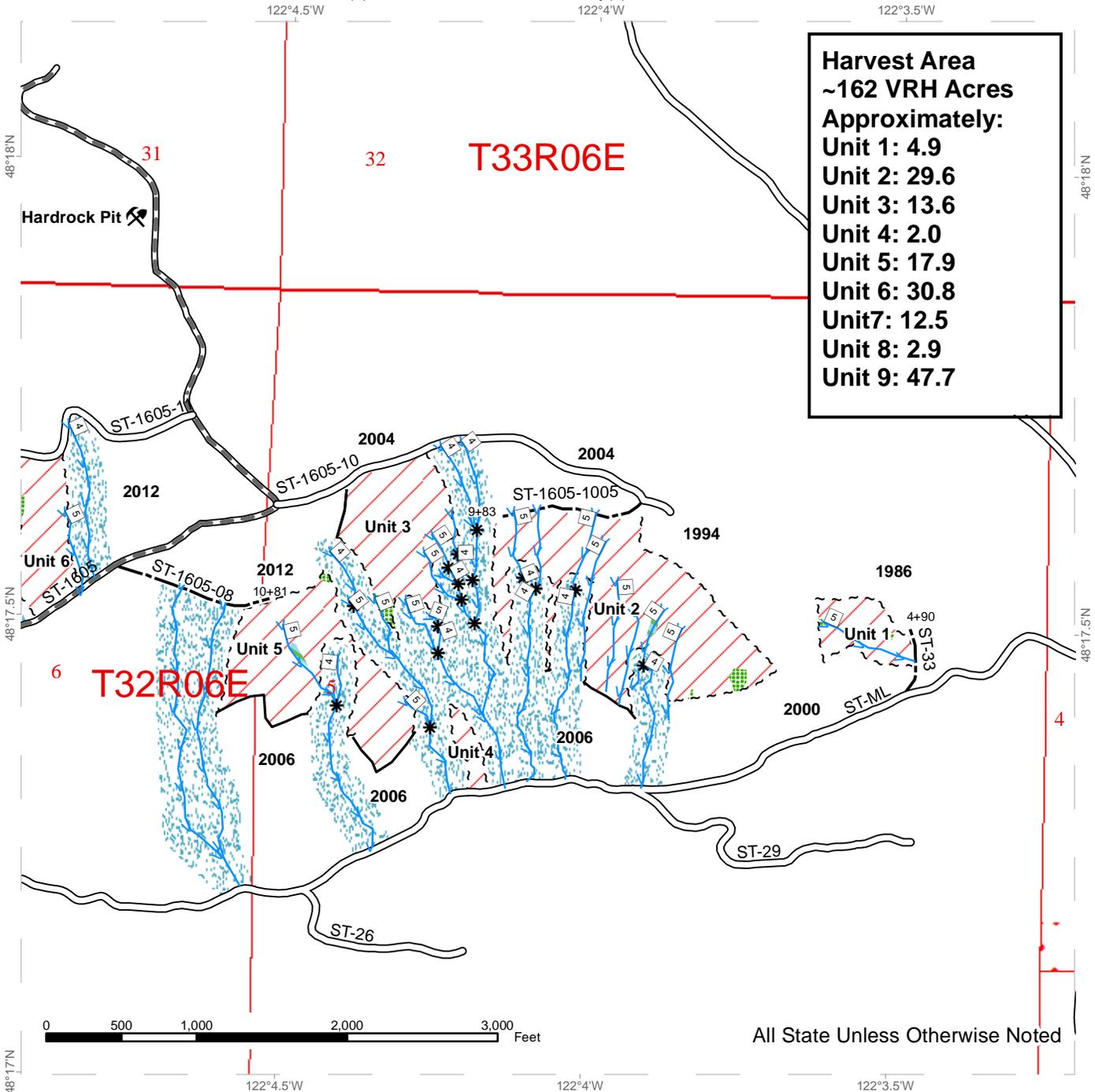
SPECIAL REMARKS: 1. CEDAR SALAVGE: The DNR's standard conversion factor is 600 board feet per cord (cord = 128 cubic feet). Cedar salvage forest products removed on a cord basis will be converted to MBF for payment purposes. Approximately 52 cords scattered throughout the Units #2, 3, 5, 6 and 7 (% shingle material and % shake material estimates were not made). This volume equates to approximately 31 mbf of cedar which was added to the 4S in the sale volume above. The cedar salvage material removed on a cord basis will be paid for at a separate rate which is fixed at \$220.00 per mbf.

2. Profiles are available upon request.

TIMBER SALE MAP

SALE NAME: JUMPIN JACK
AGREEMENT #: 93486
TOWNSHIP(S): T32R06E, T33R05E, T32R05E
TRUST(S): State Forest Transfer(1), Common School and Indemnity(3)

REGION: Northwest Region
COUNTY(S): SKAGIT, SNOHOMISH
ELEVATION RGE: 1683-2745



Harvest Area
~162 VRH Acres
Approximately:
 Unit 1: 4.9
 Unit 2: 29.6
 Unit 3: 13.6
 Unit 4: 2.0
 Unit 5: 17.9
 Unit 6: 30.8
 Unit 7: 12.5
 Unit 8: 2.9
 Unit 9: 47.7

All State Unless Otherwise Noted

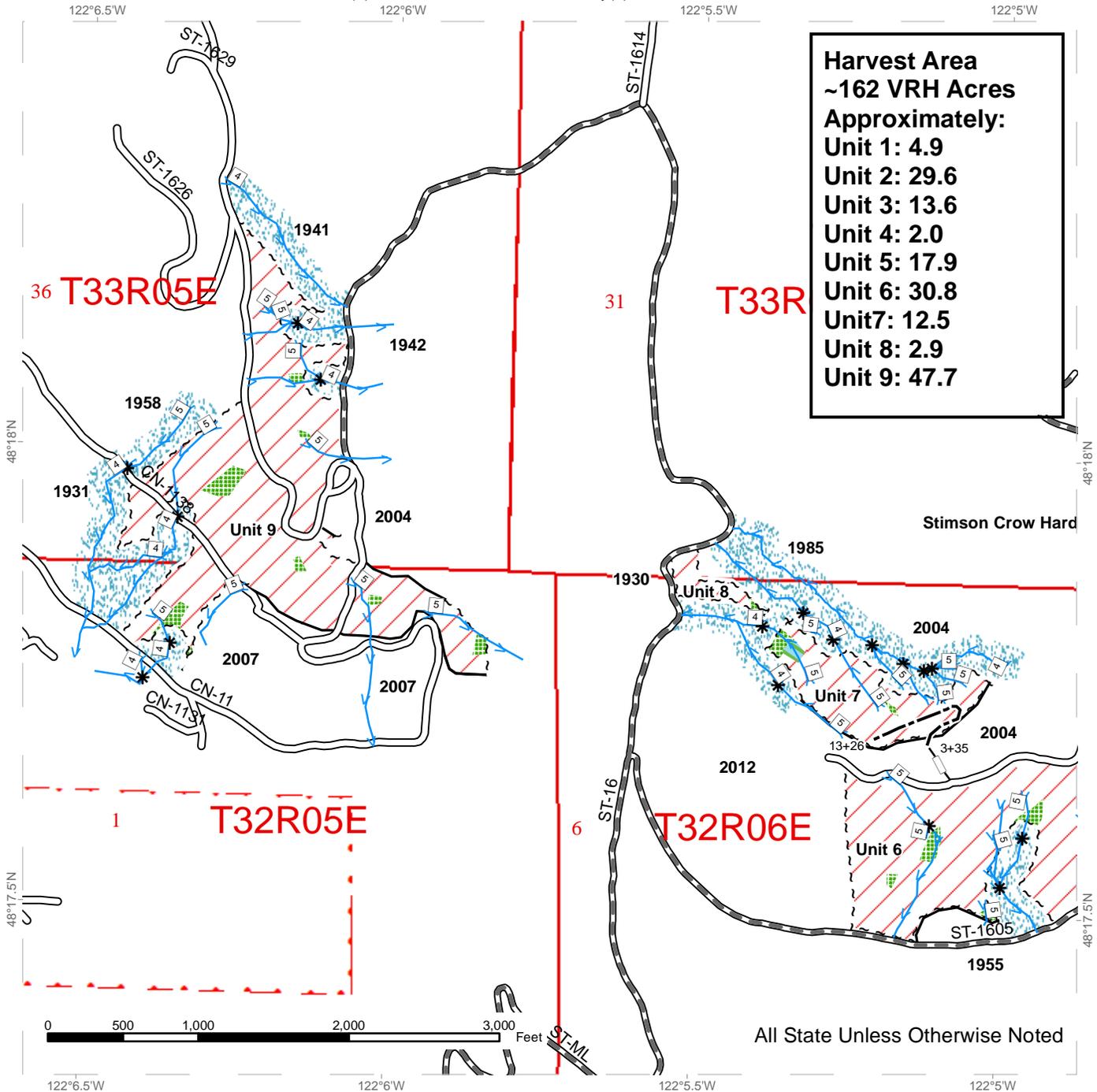
	Sale Area (VRH)		Optional Construction
	Leave Tree Clump		Stream
	RMZ		Stream Break
	Exclusion Area		Proposed Rock Pit
	Sale Boundary Tags		
	Sale Boundary (No Tags)		
	Existing Roads		
	Required Pre-Haul Maintenance		



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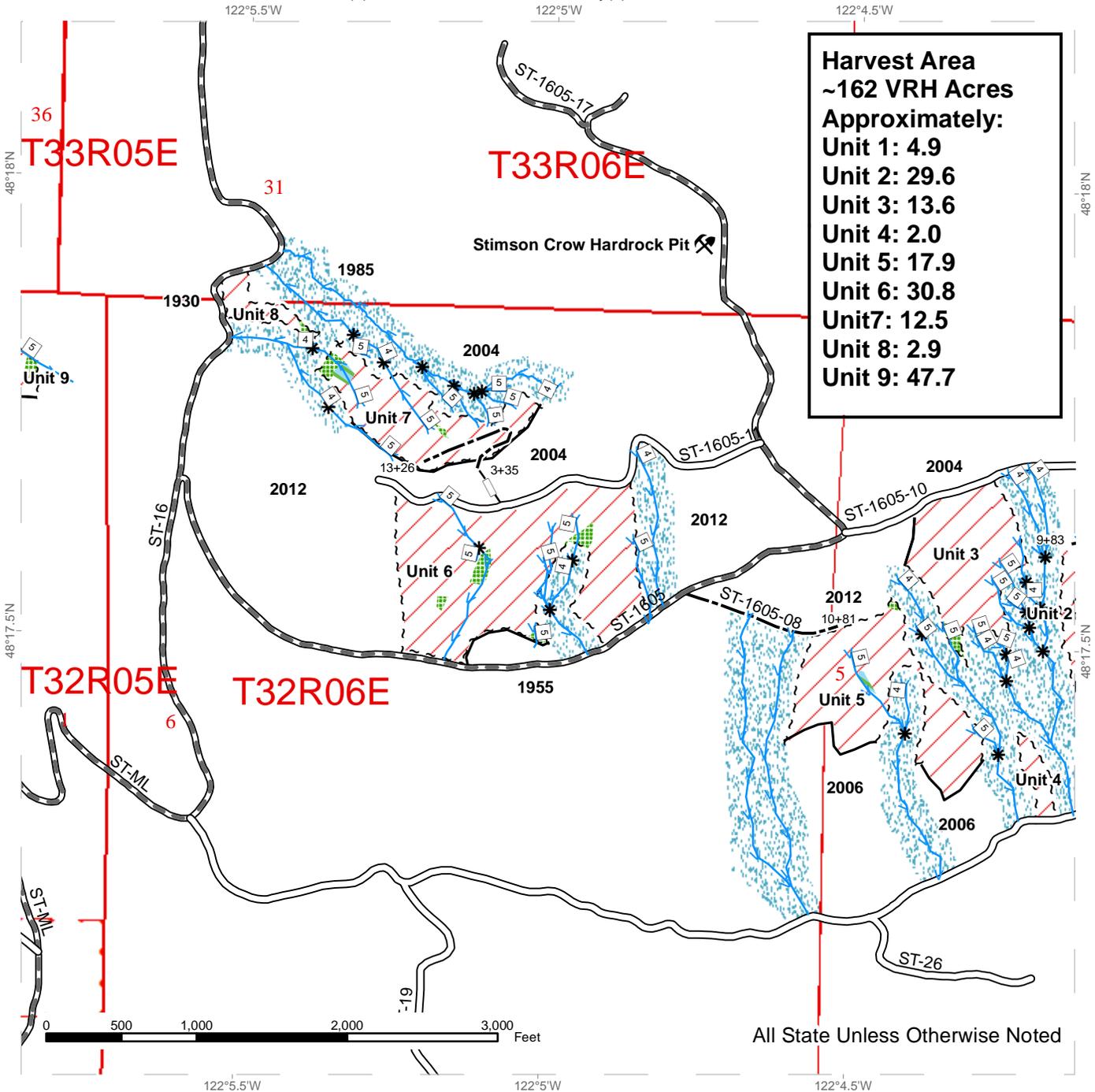
Sale Area (VRH)	Optional Construction
Leave Tree Clump	Optional Reconstruction
RMZ	Stream
Exclusion Area	Stream Break
Sale Boundary Tags	
Sale Boundary (No Tags)	
Existing Roads	
Required Pre-Haul Maintenance	



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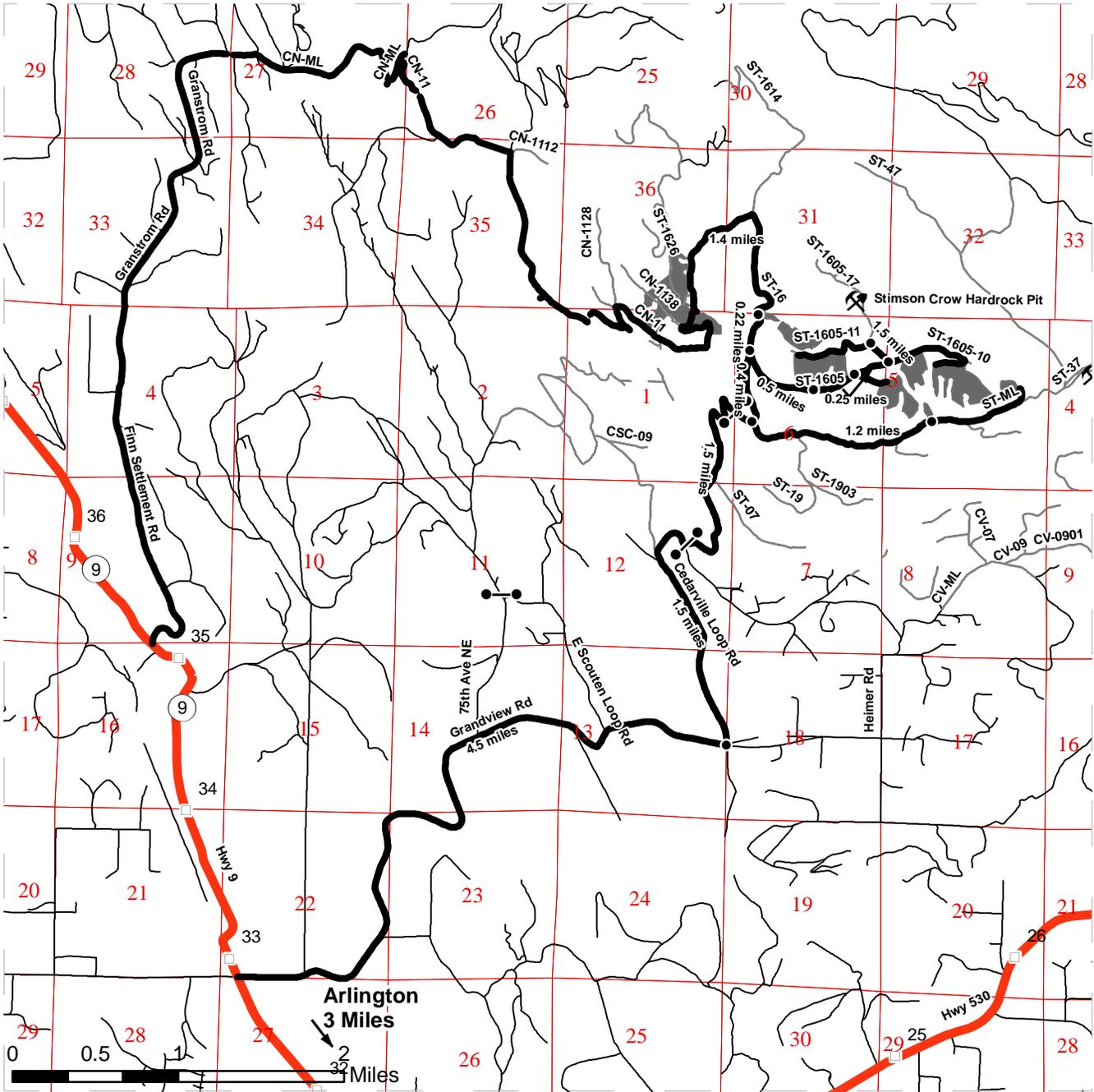
Sale Area (VRH)	Optional Construction
Leave Tree Clump	Optional Reconstruction
RMZ	Stream
Exclusion Area	Stream Break
Sale Boundary Tags	Proposed Rock Pit
Sale Boundary (No Tags)	
Existing Roads	
Required Pre-Haul Maintenance	



DRIVING MAP

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	Timber Sale Unit
	Highways
	Haul Route
	Other Route
	Milepost Markers
	Distance Indicator
	Gate (F1 Key)
	Proposed Rock Pit

DRIVING DIRECTIONS

From Arlington, travel north on US Hwy 9, turn right onto Grandview road and follow for 4.5 miles. Turn left onto Cedarville Loop Road and follow for 1.5 miles. Turn left through the gate, road becomes Stimson Hill ML (ST-ML), and continue 1.5 miles to the Intersection of ST-ML & ST-16.

Units 1 & 4: At the intersection of ST-ML & ST-16, stay to the right and continue on ST-ML for 1.2 miles to Unit 4. Continue 0.5 miles to Unit 1.

Units 5 & 6: At the intersection of ST-ML & ST-16, turn left onto the ST-16 road and go .4 miles. Turn right onto the ST-1605 and continue .5 miles to the Waste Area (26+40) and Unit 6. Drive 0.25 miles, turn right on the ST-1608, and continue for 0.20 miles to Unit 5.

Units 2 & 3: From the Waste Area, drive 0.5 miles east on ST-1605 road. Road becomes the ST-1605-10. Continue 0.1 miles to Unit 3. Continue 0.4 miles to Unit 2.

Unit 7: From the Waste Area, drive 0.5 miles east on ST-1605 road. Turn left onto ST-1605 and drive 0.15 miles. Turn left onto ST-1605-11 road. Drive 0.5 miles to Unit 7.

Unit 8 & 9: From intersection of ST-ML and ST-16, drive north on ST-16 for .62 miles to Unit 8. Continue another 1.4 miles to Unit 9.

To Stimson Crow Pit: From the Waste Area, drive 0.5 miles east on ST-1605 road. Turn left and continue 0.42 miles on ST-1605.



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Lump Sum AGREEMENT NO. 30-093486

SALE NAME: JUMPIN JACK

**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-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on November 16, 2016 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All timber bounded by white timber sale boundary tags and the ST-33 abandoned road grade, except forest products tagged out by yellow leave tree area tags, trees marked with blue paint on the bole and root collar and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #1.

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The above described products, located on approximately 162 acres on part(s) of Sections 5, and 6 all in Township 32 North, Range 6 East, Section 1 in Township 32 North, Range 5 East, Section 31 in Township 33 North, Range 6 East, Section 36 in Township 33 North, Range 5 East W.M. in Skagit, and Snohomish County(s) as designated on the sale area and as shown on the attached timber sale map.

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 (Rev 2/11/16)

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to March 31, 2019.

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-051 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 total contract price.

For the second extension, not to exceed 1 year, payment of at least 90 percent of the total contract price.

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 total contract price.

All payments, except the initial deposit, will be deducted from the total contract price to determine the unpaid portion of the contract.

- e. Payment of \$668.00 per acre per annum for the acres on which an operating release has not been issued in the sale 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-091 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, the added forest products become a part of this contract. The State shall determine the volume added and shall calculate the increase to the total contract price using the rates set forth in clause G-101, G-102, or G-103. If the sale area is reduced, the State shall determine the volume to be reduced. The State shall calculate the reduction to the total contract price using the rates set forth in clause G-101, G-102, or G-103.

G-101 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 the Scribner log scale volume, as defined by the Northwest Log Rules Advisory Group, shall be determined by the Contract Administrator. Added forest products shall be paid for at the following contract payment rates per Mbf Scribner log scale.

Contract Item	Appraised Price	Overbid Factor	Price	Fees	Contract Payment Rate
Douglas fir	\$277.82	0	\$0.00	\$9.00	\$9.00
Hemlock	\$221.69	0	\$0.00	\$9.00	\$9.00
Red cedar	\$627.95	0	\$0.00	\$9.00	\$9.00
Silver fir	\$221.64	0	\$0.00	\$9.00	\$9.00
Other	\$261.42	0	\$0.00	\$9.00	\$9.00

G-106 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 State's 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 rate set forth in clause G-101, G-102 or G-103.

G-111 Title and Risk of Loss

Title to the forest products under this contract passes to the Purchaser after they are removed from the sale area, if adequate advance payment or payment security has been provided to the State under this contract. Purchaser bears all risk of loss of, or damage to, and has an insurable interest in, the forest products described in this contract from the time the sale is confirmed under RCW 79.15.120. Breach of this contract shall have no effect on this provision.

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; CN-ML, ST-ML, CN-11, CN-1138, ST-16, ST-1605, ST-1605-08, ST-1605-10, ST-1605-1005, ST-1605-11, ST-1605-1104, ST-1605-17, ST-1614, ST-33. 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-380 Road Easement and Road Use Permit Requirements

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

Easements with:

Scott Paper Company; #55-000219; dated August 1, 1966.

W.N. and Florence J. Wesson; #55-000238; dated March 27, 1959.

Pacific Denkmann Company; #55-002035; dated May 27, 1983.

Sanfi Acres LLC; #55-088281; dated April 2, 2013.

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-011 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 Clause P-020, 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-020 Payment for Forest Products

Purchaser agrees to pay the total, lump sum contract price of \$153,143.75. The total contract price consists of a \$0.00 contract bid price plus \$153,143.75 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

THE PURCHASE PRICE SHALL NOT BE AFFECTED BY ANY FACTORS, INCLUDING: the amount of forest products actually present within the contract area, the actual acreage covered by the contract area, the amount or volume of forest products actually cut or removed by purchaser, whether it becomes physically impossible or uneconomic to remove the forest products, and whether the subject forest products have been lost or damaged by fire or any other cause. The only situations Purchaser may not be liable for the full purchase price are governed by clause G-066, concerning governmental regulatory actions taken during the term of the contract.

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-080 Payment Account Refund

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

P-090 Performance Security

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

P-100 Performance Security Reduction

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

Section H: Harvesting Operations

H-010 Cutting and Yarding Schedule

Felling 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-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 12 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-040 Purchaser Harvest Plan

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for the 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-051 Branding and Painting

Purchaser shall provide a State of Washington registered log brand, acceptable to the State, unless the State agrees to furnish the brand. 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-080 Snags Not to be Felled

Snags not required to be felled for safety reasons may be left standing. Snags felled for safety reasons shall not be removed and must remain where felled.

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 or shovel on sustained slopes 35% or less. A self-leveling shovel and/or self-leveling harvester may operate on sustained slopes up to 50%, with prior approval from the Contract Administrator, 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. The Purchaser's authorized site representative(s) shall be present on site every day in which operations occur.
- D. Marked leave trees may be traded for trees of the same size and species with prior approval from the Contract Administrator.
- F. Falling and yarding shall occur away from all typed waters where possible. Avoid parallel cable yarding in, across, or adjacent to stream channels where possible. All type 5 streams shall have a 30-foot equipment limitation zone measured from each bank. The limited crossings shall be as close to perpendicular as possible.
- G. The Contract Administrator must approve all crossings and corridors prior to cutting across type 4, and type 5 streams. Full suspension is required over type

4 streams and their RMZ buffers. Trees removed for yarding corridors shall be paid for as additional volume as set forth in Clause G-101. Trees felled for corridors within 25 feet of the stream channels shall not be removed. Front end suspension is needed over type 5 streams. No trees shall be cut or any other operations permitted on potential rule identified landforms within Unit 5 RMZ.

H. Ground-based equipment crossings over type 5 streams shall be located by Purchaser and approved by Contract Administrator before use.

I. The ST-ML gate (at pavement) and ST-ML (60+56) gate must be locked at the end of the day.

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

H-141 Additional Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

A. All trees marked with double blue rings shall not be traded.

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

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 4/26/2016 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 CN-ML, ST-ML, CN-11, CN-1138, ST-16, ST-1605, ST-1605-08, ST-1605-10, ST-1605-1005, ST-1605-11, ST-1605-1104, ST-1605-17, ST-1614, ST-33 roads. All work shall be completed to the specifications detailed in the Road Plan.

C-130 Dust Abatement

Purchaser shall abate dust on the ST-ML stations 0+00 to 60+00 from April 1 to October 31, while hauling.

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

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

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

S-010 Fire Hazardous Conditions

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

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

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

S-030 Landing Debris Clean Up

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

S-035 Logging Debris Clean Up

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

S-050 Cessation of Operations for Low Humidity

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-100 Stream Cleanout

Slash or debris which enters any type 5 stream as a result of operations under this contract and which is identified by the Contract Administrator shall be removed and

deposited in a stable position. Removal of slash or debris shall be accomplished in a manner that avoids damage to the natural stream bed and bank vegetation.

S-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-013 Liquidated Damages or Failure to Perform

The following clauses provide for payments by Purchaser to the State for breaches of the terms of this contract other than failure to perform. These payments are agreed to as liquidated damages and not as penalties. They are reasonable estimates of anticipated harm to the State, which will be 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.

Clause P-020 governs Purchaser's liability in the event Purchaser fails to perform any of the contract requirements other than the below liquidated damage clauses without written approval by the State. Purchaser's failure to pay for all or part of the forest products sold in this contract prior to expiration of the contract term results in substantial injury to the State. Therefore, Purchaser agrees to pay the State the full lump sum contract price in P-020 in the event of failure to perform.

D-041 Reserve Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-013, Reserve Tree Damage Definition, and when the Contract Administrator determines that

a suitable replacement for a damaged reserve tree is not possible, the damaged trees result in substantial injury to the State. The value of the damaged reserve trees at the time of the breach is not readily ascertainable. Therefore, the Purchaser agrees to pay the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged reserve trees that are not replaced in the sale 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
(Required for both LLC and Inc. Entities)

STATE OF _____)

COUNTY OF _____)

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

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

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

Notary Public in and for the State of

My appointment expires _____

Schedule A
NW Ground-Based Equip Specifications (Rev 2/11/16)

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 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.



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: Jumpin Jack	Region: Northwest
Agreement #: 30-093486	District: Clear Lake
Contact Forester: Jeremy Porter Phone / Location: 360-856-3500/Northern St. WC	County(s): Choose a county, Skagit
Alternate Contact: Joe Magnuson Phone / Location: 360-982-1757	Other information: Click here to enter text.

Type of Sale: Lump Sum	
Harvest System: Uphill Cable Click here to enter text.	90
Harvest System: Ground based Click here to enter text.	10
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)		
1	S5/T32/R06E	01 & 03	5.0	0	0.1	0	0	4.9	GPS (Garmin)
2	S5/T32/R06E	01	30.0	0	0.4	0	0	29.6	GPS (Garmin)
3	S5/T32/R06E	01	14.0	0	0.4	0	0	13.6	GPS (Garmin)
4	S5/T32/R06E	01	2.0	0	0	0	0	2.0	GPS (Garmin)
5	S5/T32/R06E, S6/T32/R06E	01	18.0	0	0.1	0	0	17.9	GPS (Garmin)
6	S6/T32/R06E	01	32.0	0	1.2	0	0	30.8	GPS (Garmin)
7	S6/T32/R06E	01	13.0	0	0.5	0	0	12.5	GPS (Garmin)
8	S6/T32/R06E, S31/T33/R06E	01	3.0	0	0.1	0	0	2.9	GPS (Garmin)
9	S1/T32/R05E, S36/T33/R05E	01	53.0	0	2.1	3.2	0	47.7	GPS (Garmin)
TOTAL ACRES			170.0		4.9	3.2	0	161.9	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	Variable Retention Harvest (VRH). Dispersed single leave trees marked with blue paint on bole and root collar. Leave tree clumps marked with yellow "Leave Tree Area" Tags.		40 total leave trees (27 clumped, 13 dispersed) are marked with yellow leave tree area tags and/or blue paint.
2	Variable Retention Harvest (VRH). Dispersed single leave trees marked with blue paint on bole and root collar. Leave tree clumps marked with yellow "Leave Tree Area" Tags.		240 total leave trees (116 clumped, 124 dispersed) are marked with yellow leave tree area tags and/or blue paint.
3	Variable Retention Harvest (VRH). Dispersed single leave trees marked with blue paint on bole and root collar. Leave tree clumps marked with yellow "Leave Tree Area" Tags.		112 total leave trees (52 clumped, 60 dispersed) are marked with yellow leave tree area tags and/or blue paint.
4	Variable Retention Harvest (VRH). Dispersed single leave trees marked with blue paint on bole and root collar. Leave tree clumps marked with yellow "Leave Tree Area" Tags.		16 total leave trees (0 clumped, 16 dispersed) are marked with yellow leave tree area tags and/or blue paint.
5	Variable Retention Harvest (VRH). Dispersed single leave trees marked with blue paint on bole and root collar. Leave tree clumps marked with yellow "Leave Tree Area" Tags.		144 total leave trees (61 clumped, 83 dispersed) are marked with yellow leave tree area tags and/or blue paint.
6	Variable Retention Harvest (VRH). Dispersed single leave trees marked with blue paint on bole and root collar. Leave tree clumps marked with yellow "Leave Tree Area" Tags.		257 total leave trees (229 clumped, 28 dispersed) are marked with yellow leave tree area tags and/or blue paint.
7	Variable Retention Harvest (VRH). Dispersed single leave trees marked with blue paint on bole and root collar. Leave tree clumps marked with yellow "Leave Tree Area" Tags.		104 total leave trees (100 clumped, 4 dispersed) are marked with yellow leave tree area tags and/or blue paint.
8	Variable Retention Harvest (VRH). Dispersed single leave trees marked with blue paint on bole and root collar. Leave		25 total leave trees (17 clumped, 8 dispersed) are marked with yellow

	tree clumps marked with yellow "Leave Tree Area" Tags.		leave tree area tags and/or blue paint.
9	Variable Retention Harvest (VRH). Dispersed single leave trees marked with blue paint on bole and root collar. Leave tree clumps marked with yellow "Leave Tree Area" Tags.		424 total leave trees (362 clumped, 62 dispersed) are marked with yellow leave tree area tags and/or blue paint.

OTHER PRE-CRUISE INFORMATION:

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	WH, DF/175	Access to unit is via ST-ML; F1 key required	Traverse and vicinity maps are attached.
2	WH, DF/900	Access to unit is via ST-ML; F1 key required	
3	WH, DF/420	Access to unit is via ST-ML; F1 key required	
4	WH, DF/70	Access to unit is via ST-ML; F1 key required	
5	WH, DF/630	Access to unit is via ST-ML; F1 key required	
6	WH, DF/960	Access to unit is via ST-ML; F1 key required	
7	WH, DF/455	Access to unit is via ST-ML; F1 key required	
8	WH, DF/120	Access to unit is via ST-ML; F1 key required	
9	WH, DF/ 1855	Access to unit is via CN-ML; F1 key required	
TOTAL MBF	5585		

REMARKS:

Driving Directions: See driving map.

Cedar Salvage: Units 2, 3, 5, 6 & 7 contain no more than ¼ to ½ cord per acre. Units 1, 4, 8, & 9 contain little to no cedar salvage opportunities.

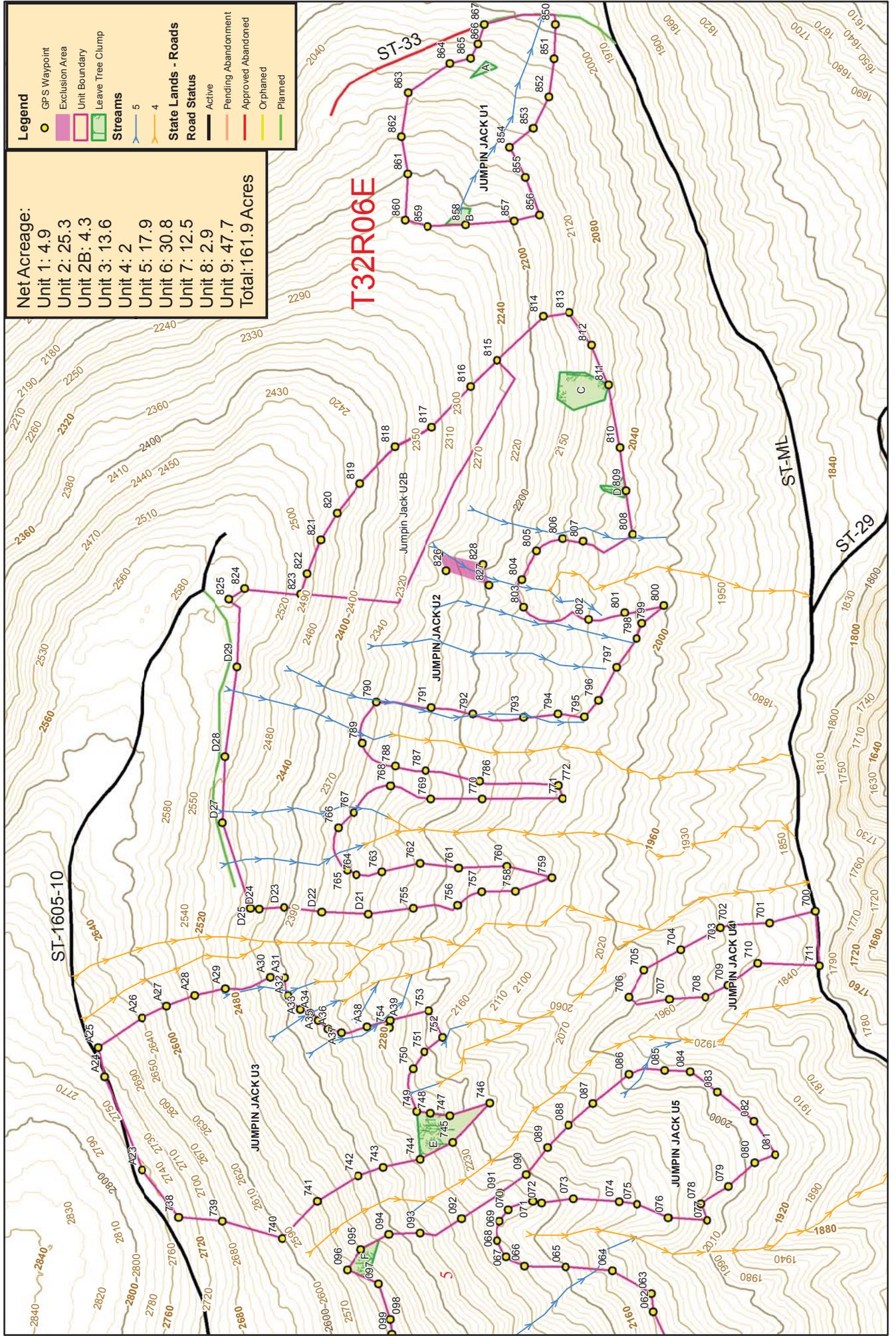
Unit 2 has been broken up into 2 separate units for the pre-cruise due to different timber types within a single unit. Unit 2A is 25.3 acres, while Unit 2B is 4.3 acres. Shown on pre-cruise maps.

Prepared By: Jeremy Porter Date: 5/31/16	Title: Pre-sales Forester	CC:
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Jumpin Jack TS

1:4,800



1 inch = 400 feet

Draft date: 5/31/2016



Jumpin Jack TS

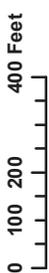
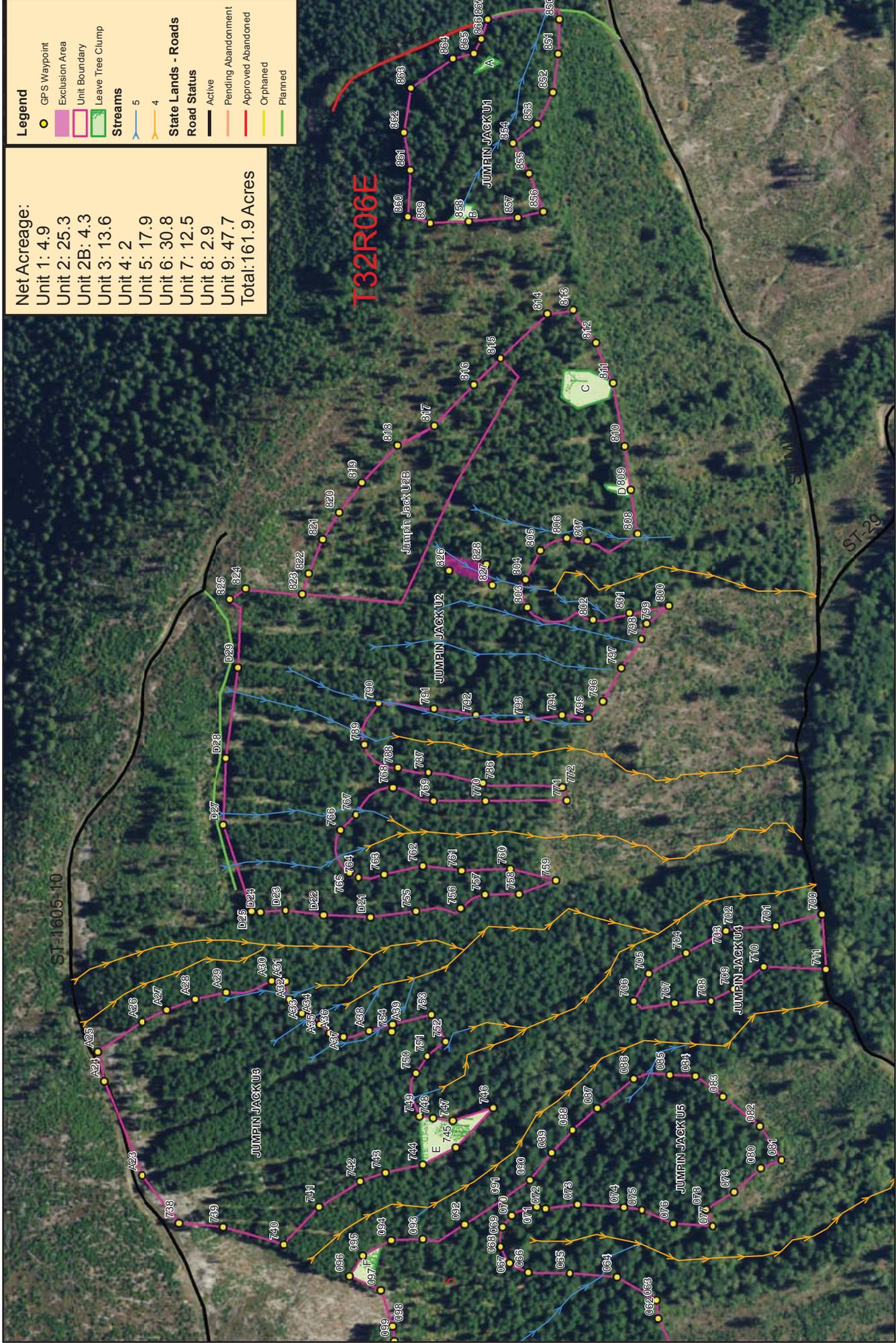
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Net Acreage:
 Unit 1: 4.9
 Unit 2: 25.3
 Unit 2B: 4.3
 Unit 3: 13.6
 Unit 4: 2
 Unit 5: 17.9
 Unit 6: 30.8
 Unit 7: 12.5
 Unit 8: 2.9
 Unit 9: 47.7
Total: 161.9 Acres

Legend

- GPS Waypoint (Yellow circle)
- Exclusion Area (Pink shaded area)
- Unit Boundary (Pink line)
- Leave Tree Clump (Green shaded area)
- Streams (Blue line with arrows)
- State Lands - Roads (Black line)
- Road Status: Active (Black line), Pending Abandonment (Red line), Approved Abandonment (Orange line), Orphaned (Yellow line), Planned (Green line)

T32R06E



1 inch = 400 feet

Draft date: 5/31/2016



Jumpin Jack TS

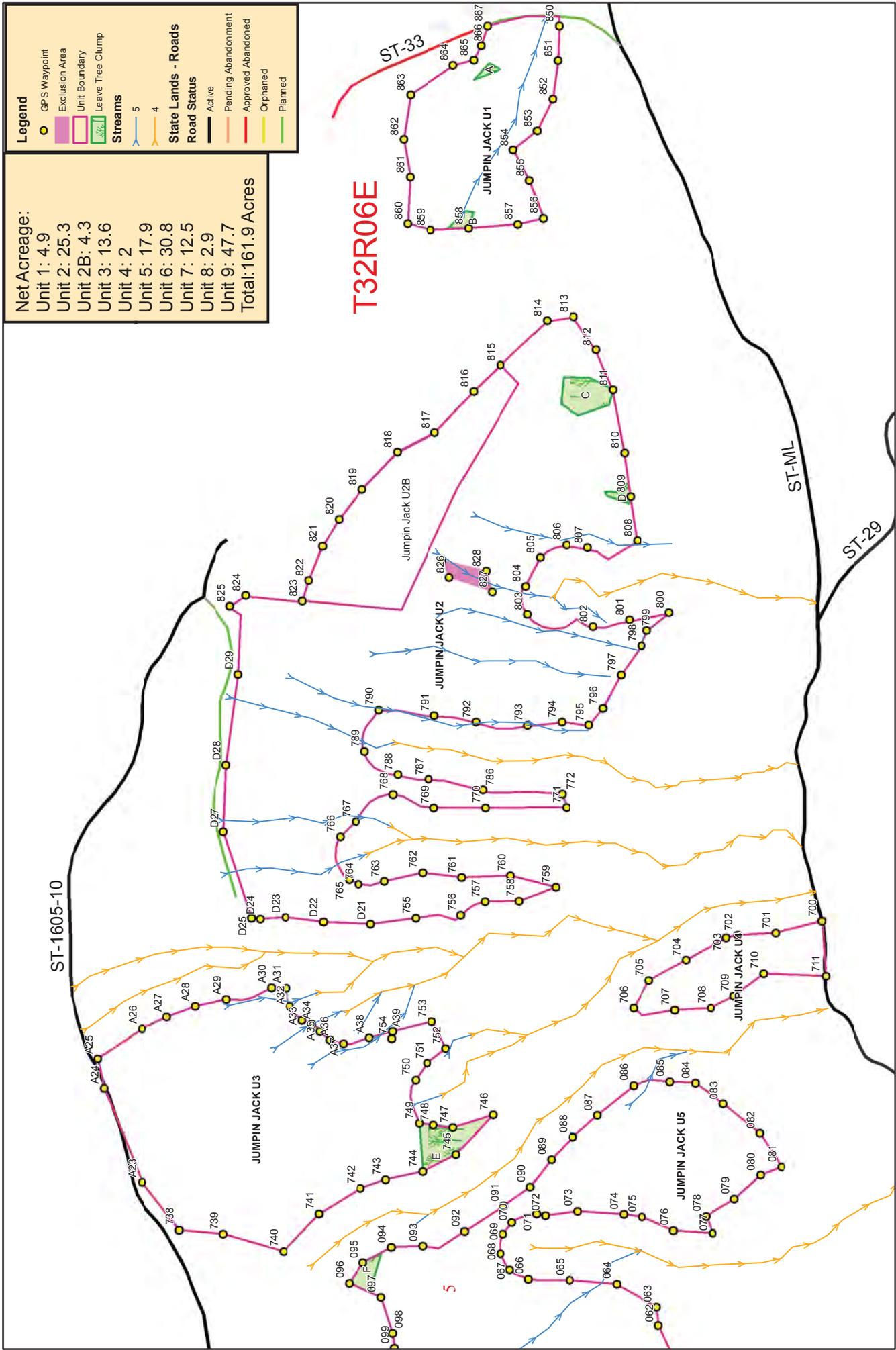
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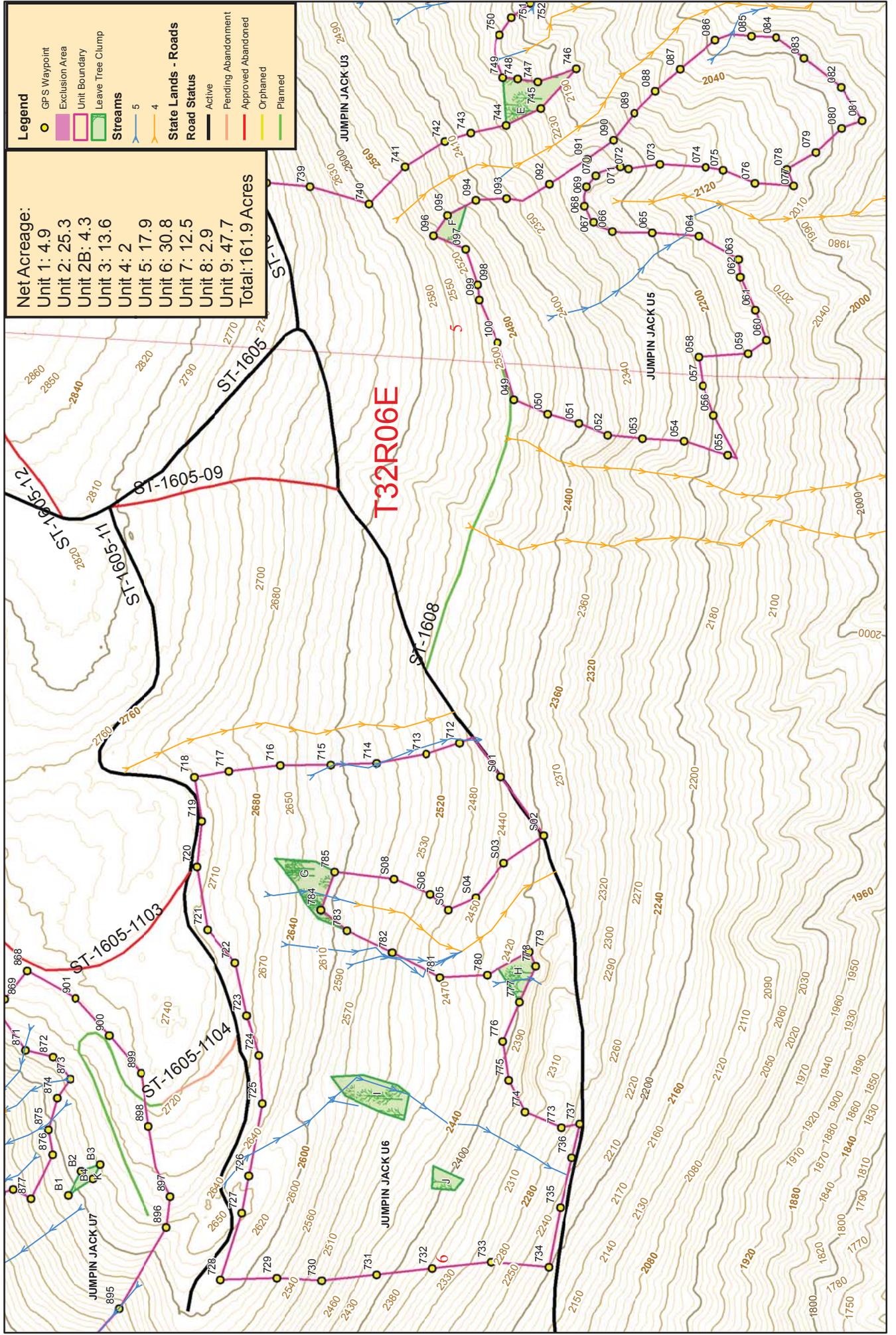
1 inch = 400 feet

Draft date: 5/31/2016



Jumpin Jack TS

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0 100 200 400 Feet

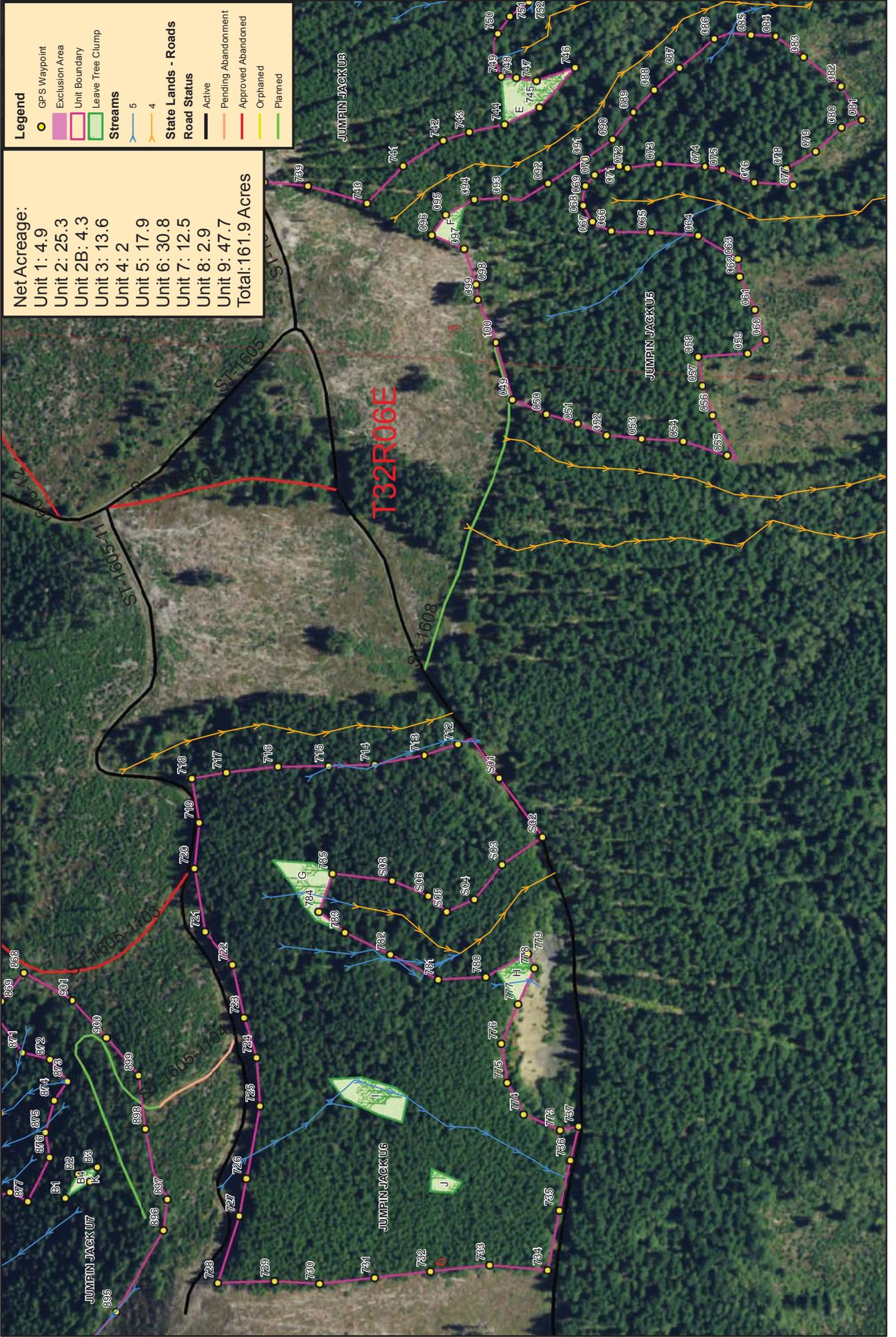
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Jumpin Jack TS

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0 100 200 400 Feet

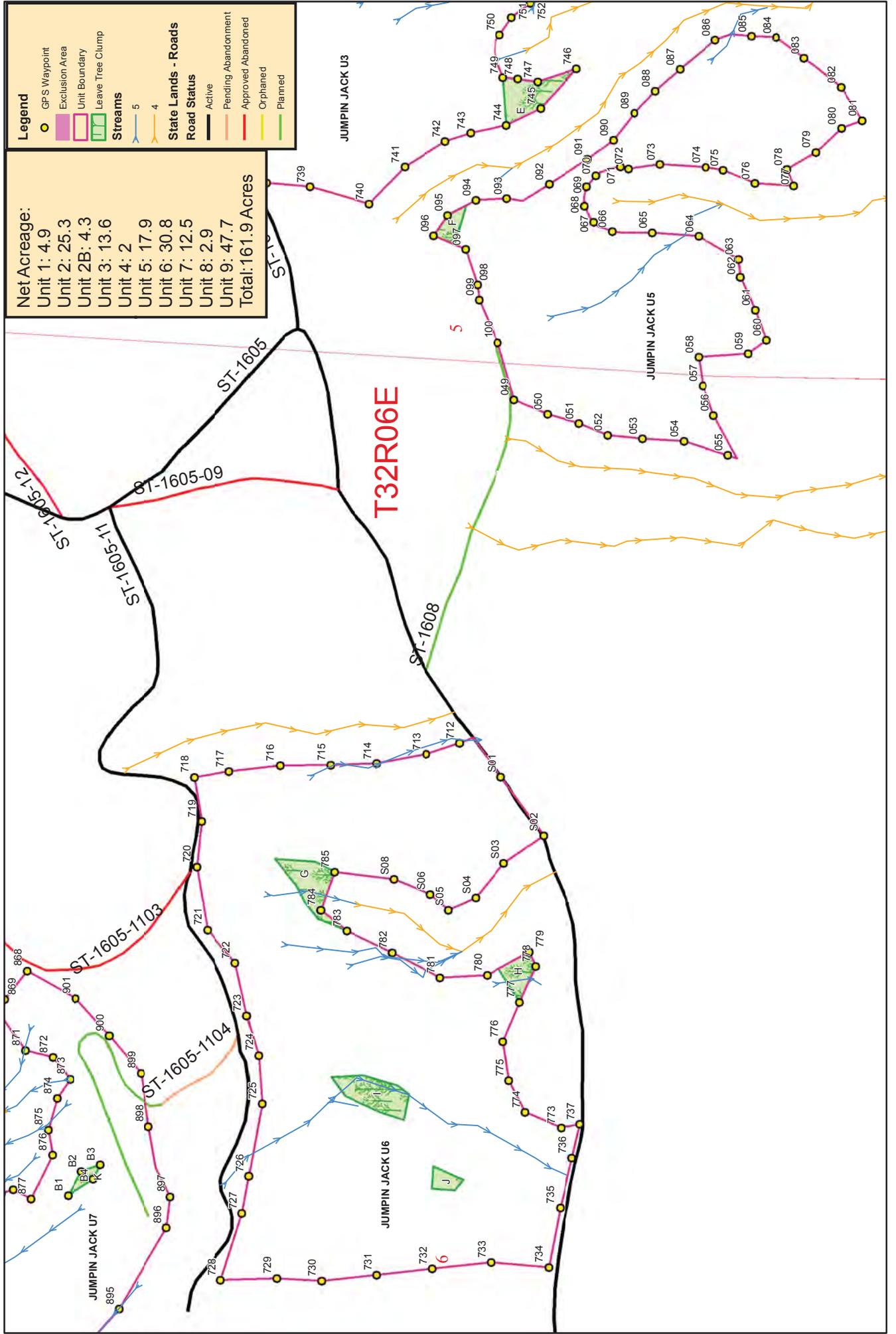
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Jumpin Jack TS

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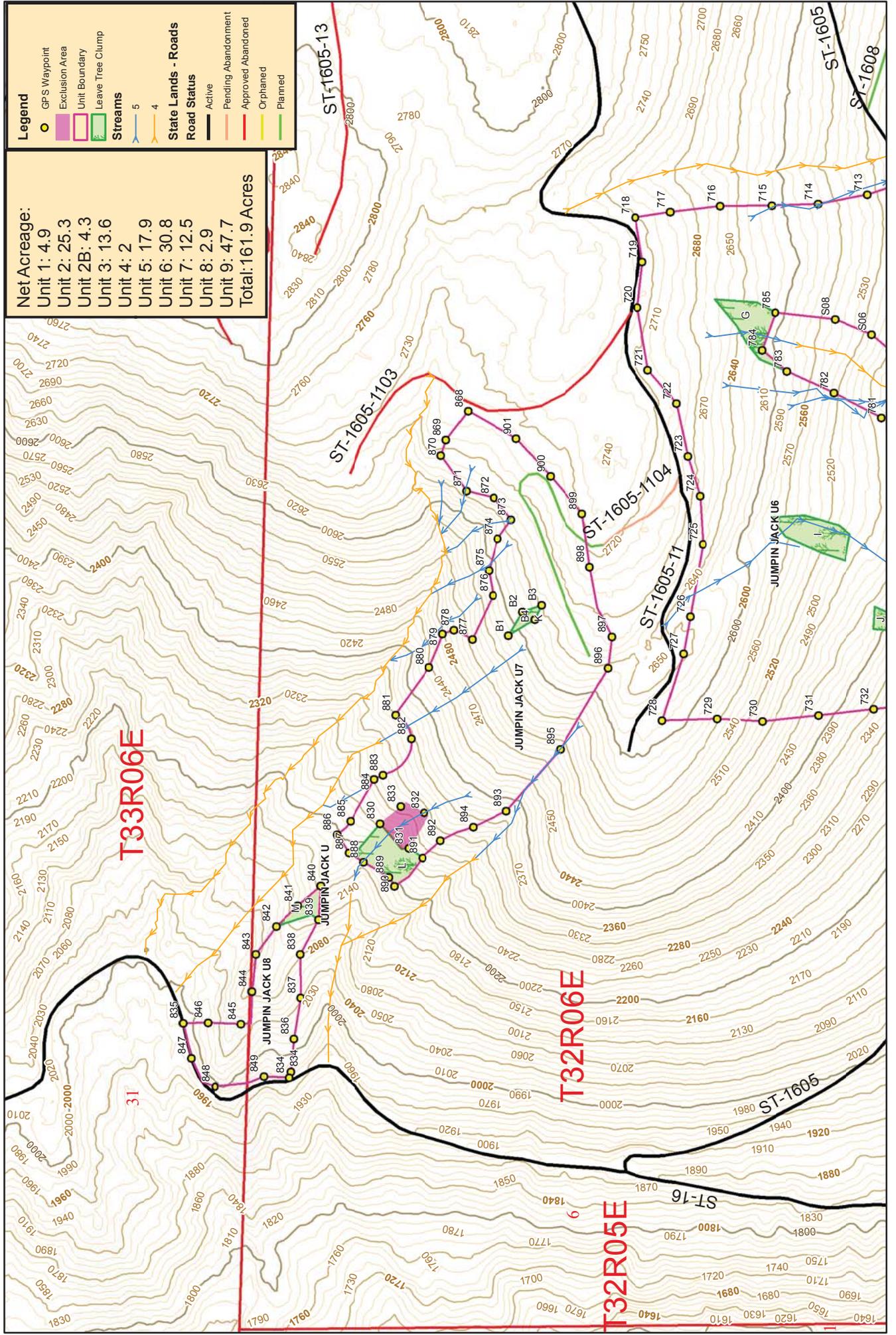
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Jumpin Jack TS

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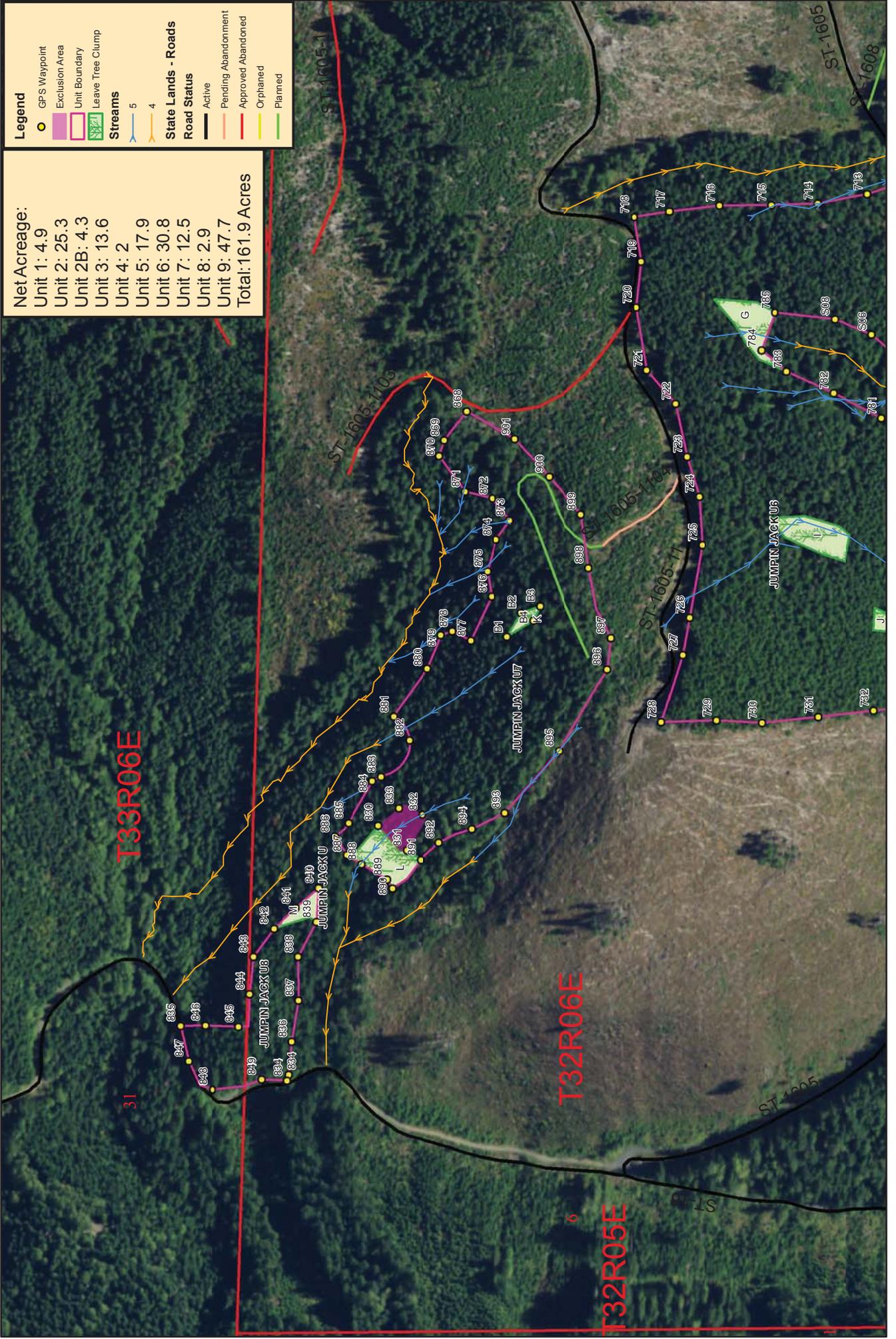
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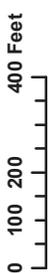


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Legend

	GPS Waypoint
	Exclusion Area
	Unit Boundary
	Leave Tree Clump
	Streams
	5
	4
	State Lands - Roads
	Road Status Active
	Pending Abandonment
	Approved Abandoned
	Orphaned
	Planned



1 inch = 400 feet

Draft date: 5/31/2016



Jumpin Jack TS

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Legend

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- ▭ Leave Tree Clump

Streams

- 5
- 4

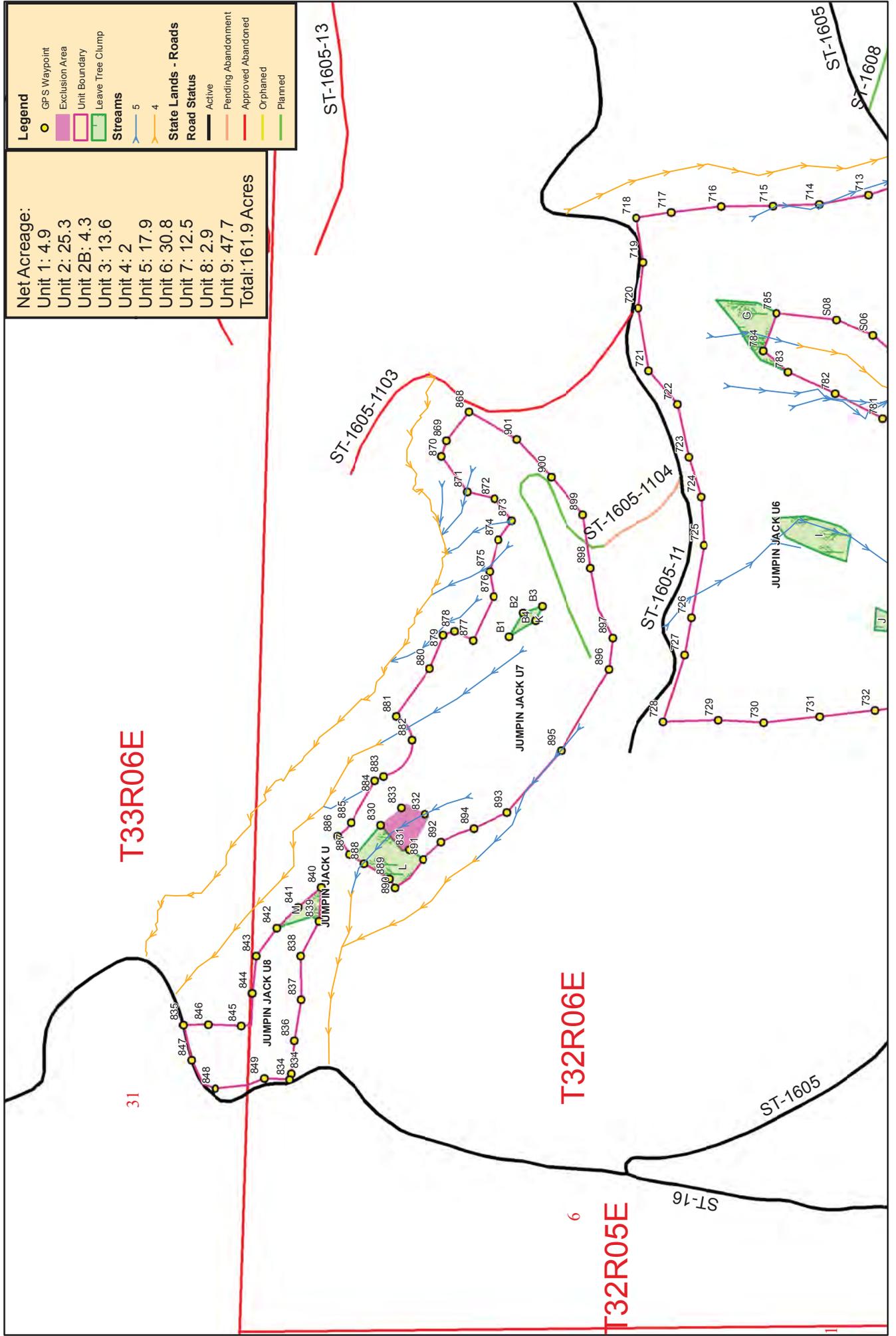
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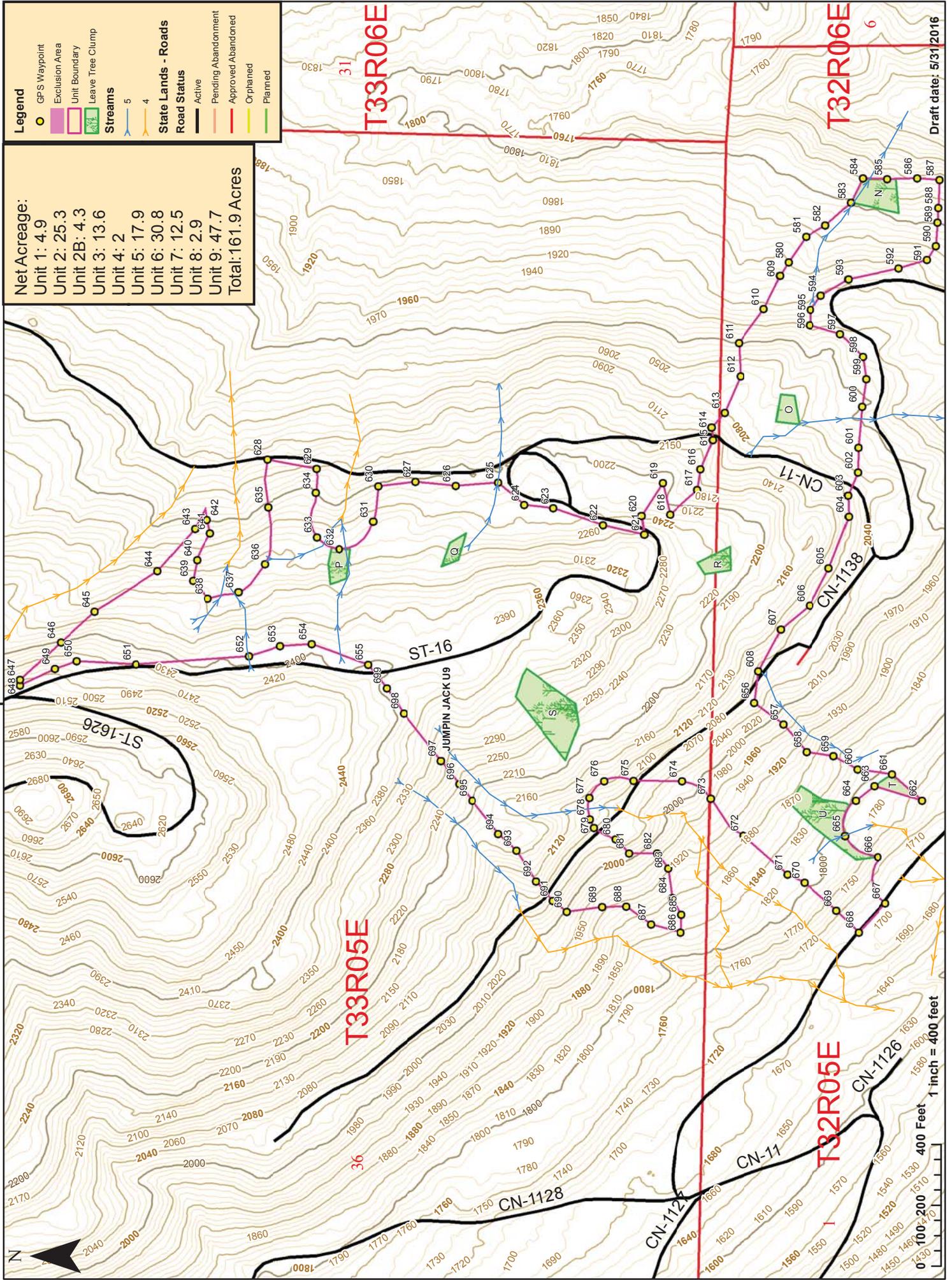
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Draft date: 5/31/2016

Jumpin Jack TS

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Jumpin Jack TS

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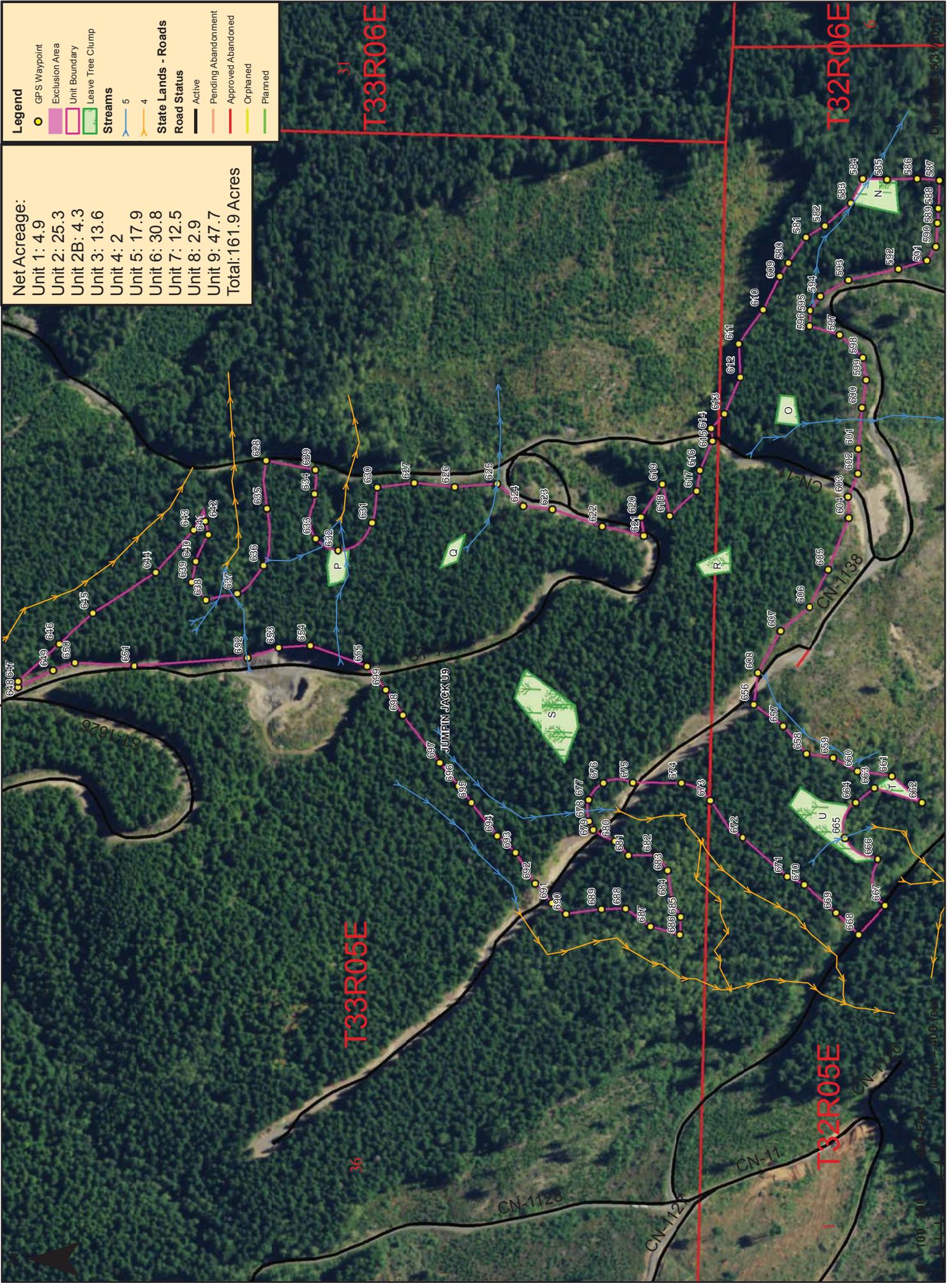
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- 5
- 4

State Lands - Roads

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Jumpin Jack TS

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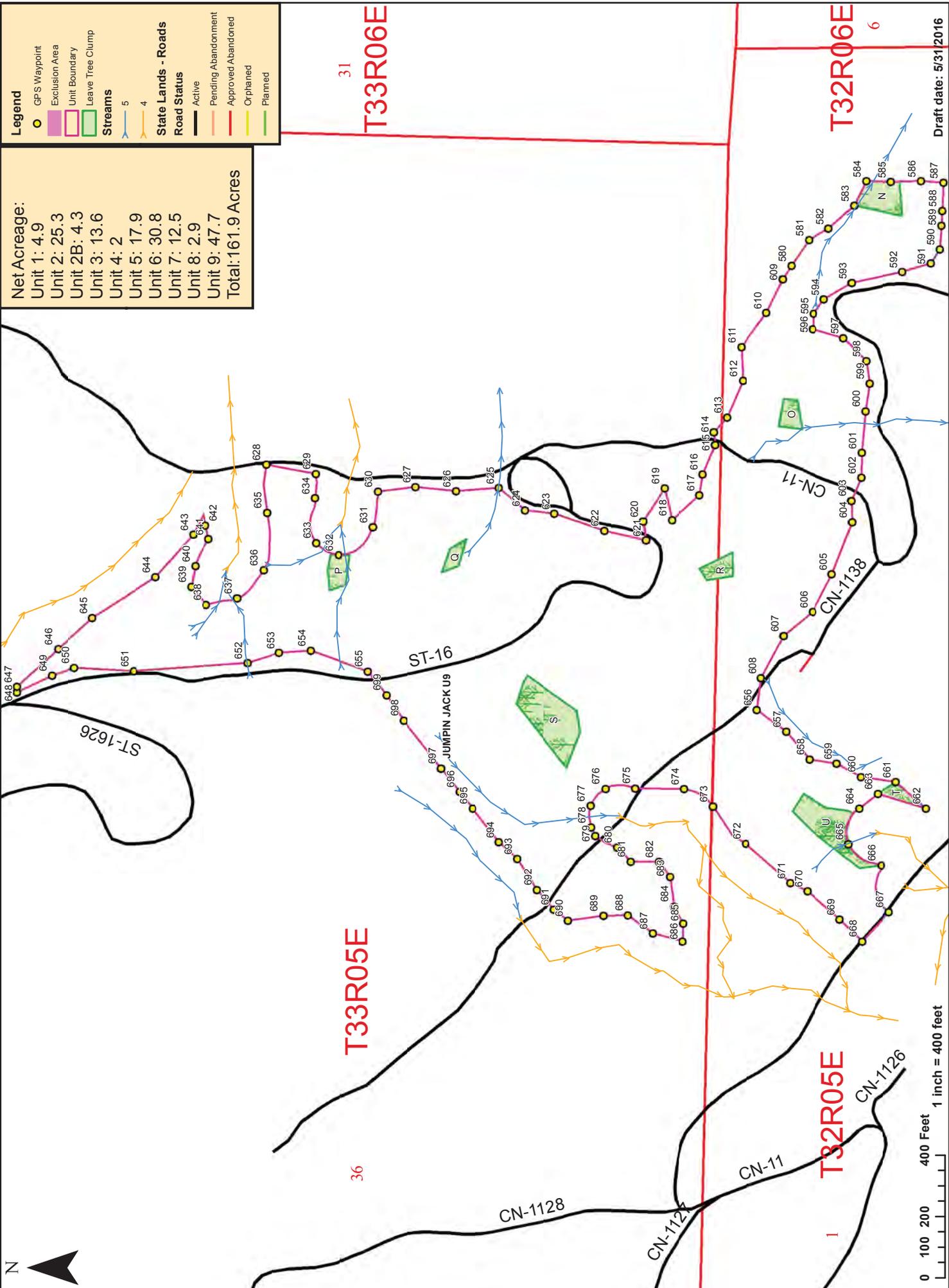


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36
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31
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T32R06E



Draft date: 5/31/2016

Cruise Narrative

Sale Name: Jumpin Jack	Region: Northwest
Agree. #: 30-093486	District: Clear Lake
Lead cruiser: Matt Llobet	Completion date: 8-5-16
Other cruisers on sale: IM,RF	

Unit acreage specifications:

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
1	4.9	Yes	
2	29.6	Yes	
3	13.6	Yes	
4	2.0	Yes	
5	17.9	Yes	
6	30.8	Yes	
7	12.5	Yes	
8	2.9	Yes	
9	47.7	Yes	
Total	161.9	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.	40.0 BAF	4.5'	300' x 300'	1:1	2
2	V.P.	54.4 BAF	4.5'	150' x 150'	1:1	20
3	V.P.	54.4 BAF	4.5'	300' x 300'	Cruise All	8
4	V.P.	62.5 BAF 40.0 BAF	4.5'	300' x 300'	1:1	2
5	V.P.	62.5 BAF 40.0 BAF	4.5'	300' x 300'	1:1	7
6	V.P.	62.5 BAF 40.0 BAF	4.5'	300' x 300'	1:1	16

7	V.P.	40.0 BAF	4.5'	300' x 300'	1:1	6
8	V.P.	54.5 BAF	4.5'	300' x 300'	1:1	2
9	V.P.	54.4 BAF	4.5'	300' x 300'	1:1	22

Sale/Cruise Description:

Minor species cruise intensity:	Units 4,5,6- Used a 40.0 BAF to capture minor species					
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 =	N/A	WH =	N/A	SS =	N/A
Leave/take tree description:	Variable Retention Harvest- Dispersed single leave trees marked with blue paint on bole and root collar. Leave tree clumps marked with yellow "Leave Tree Area" 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. Jumpin Jack timber sale consists of 90% cable logging and 10% ground base logging, with excellent road access. Jumpin Jack consists 80% Western Hemlock and 14% Douglas fir. The Western Hemlock has an average diameter of 17 inches with an average bole height of 72 feet. The Douglas fir has an average diameter of 18 inches and an average bole height of 70 feet.</p> <p>Prepared By: Matt Llobet Title: Forest Check Cruiser 1</p>

TC PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																			
T32N R05E S01 Ty00U9 THRU T32N R06E S06 Ty00U8			Project: JUMPIN			Page 1			Date 8/15/2016			Time 1:39:52PM									
			Acres 161.90																		
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
DF	D	2S		63	6.2	3,433	3,220	521			65	35			100	40	14	304	1.96	10.6	
DF	D	3S		29	1.2	1,441	1,424	231		100					100	40	8	95	0.72	15.0	
DF	D	4S		8	14.9	459	390	63	81	19			25	25	34	15	26	6	27	0.38	14.3
DF Totals				14	5.6	5,333	5,034	815	6	30	42	22	2	2	3	93	35	9	126	1.00	39.9
WH	D	2S		46	6.1	14,048	13,189	2,135			70	30			100	40	14	295	1.89	44.7	
WH	D	3S		43	3.1	12,525	12,133	1,964		100				0	3	97	39	8	97	0.73	125.5
WH	D	4S		10	3.5	2,714	2,620	424	91	9			9	41	21	30	28	5	29	0.33	89.5
WH	D	UT		1	32.9	394	264	43	27	40	32		27	12		61	20	6	32	0.40	8.2
WH Totals				80	5.0	29,681	28,206	4,567	9	44	33	14	1	4	3	92	35	8	105	0.84	267.9
RC	D	3S		76	8.1	705	648	105			60	35	5		2	98	36	9	97	0.99	6.7
RC	D	4S		24	14.1	238	204	33	79	21			18	50		32	24	5	23	0.33	8.7
RC Totals				2	9.6	943	852	138	19	51	27	4	4	12	1	83	29	7	55	0.68	15.4
SF	D	2S		8	13.0	120	104	17			100				100	40	13	230	1.75	.5	
SF	D	3S		74	1.3	948	936	152		100					1	99	40	9	128	0.92	7.3
SF	D	4S		18	8.3	248	227	37	96	4				34	66		29	5	31	0.33	7.3
SF Totals				4	3.7	1,315	1,267	205	17	75	8			6	13	81	35	7	84	0.71	15.1
Totals					5.1	37,272	35,359	5,725	9	43	33	15	1	4	3	91	35	8	105	0.85	338.3

TC PSTATS		PROJECT STATISTICS							PAGE	1	
		PROJECT JUMPIN							DATE	8/15/2016	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
32N	05E	01	JUMPIN	00U9	THR	161.90	85	427	S	W	
32N	06E	06	JUMPIN	00U8							
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			85	427	5.0						
CRUISE			48	236	4.9	29,617	.8				
DBH COUNT											
REFOREST											
COUNT			35	191	5.5						
BLANKS			2								
100 %											
STAND SUMMARY											
		SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHEMLOCK		186	144.6	16.6	72	53.5	218.0	29,681	28,206	7,927	7,889
DOUG FIR		29	21.9	18.1	70	9.2	38.9	5,333	5,034	1,396	1,396
WR CEDAR		14	8.9	14.5	58	2.7	10.3	943	852	307	307
PS FIR		7	7.5	16.2	73	2.7	10.8	1,315	1,267	370	370
TOTAL		236	182.9	16.7	71	68.0	278.0	37,272	35,359	10,000	9,962
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		67.9	5.0	256	270	283					
DOUG FIR		74.1	14.0	333	388	442					
WR CEDAR		92.3	25.6	106	143	179					
PS FIR		33.7	13.7	173	200	227					
TOTAL		72.9	4.8	262	275	288	212	108	53		
CL	68.1	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK		83.3	9.0	132	145	158					
DOUG FIR		254.7	27.6	16	22	28					
WR CEDAR		292.8	31.7	6	9	12					
PS FIR		481.1	52.1	4	8	11					
TOTAL		72.5	7.9	169	183	197	210	107	52		
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		70.8	7.7	201	218	235					
DOUG FIR		204.9	22.2	30	39	48					
WR CEDAR		235.5	25.5	8	10	13					
PS FIR		463.9	50.3	5	11	16					
TOTAL		56.2	6.1	261	278	295	126	64	32		
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		72.3	7.8	25,997	28,206	30,415					
DOUG FIR		189.2	20.5	4,002	5,034	6,066					
WR CEDAR		234.2	25.4	636	852	1,068					
PS FIR		464.6	50.3	629	1,267	1,905					
TOTAL		56.6	6.1	33,190	35,359	37,529	128	65	32		
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				119	129	140					
DOUG FIR		129.2	14.0	103	129	156					
WR CEDAR		183.2	19.9	62	83	104					

TC PSTATS		PROJECT STATISTICS							PAGE	2
		PROJECT JUMPIN							DATE	8/15/2016
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
32N	05E	01	JUMPIN	00U9	THR	161.90	85	427	S	W
32N	06E	06	JUMPIN	00U8						
CL	68.1		COEFF	V BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	7	10
PS FIR			227.7	24.7	58	117	176			
TOTAL			<i>56.1</i>	<i>6.1</i>	<i>119</i>	<i>127</i>	<i>135</i>	<i>126</i>	<i>64</i>	<i>31</i>

T32N R05E S01 T00U9									T32N R05E S01 T00U9				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
32N	05E	01	JUMPIN	00U9	47.70	22	71	S	W				

S Twp	So Rge	Gr Sec	% 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	Dia	Bd		CF/ Lf
				Def%	Gross	Net		4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft		Lf
WH	DM	2S	33	3.9	9,873	9,489	453		62	38				100	40	14	297	1.88	31.9	
WH	DM	3S	54	1.3	15,689	15,491	739		100				1	4	95	39	8	96	0.68	161.7
WH	DM	4S	13	2.5	3,792	3,698	176	87	13			12	50	15	23	26	5	27	0.34	136.6
WH	Totals		69	2.3	29,354	28,678	1,368	11	56	21	13	2	7	4	88	34	7	87	0.71	330.2
DF	DM	2S	57	5.5	7,840	7,405	353		67	33				100	40	14	284	1.82	26.1	
DF	DM	3S	33	1.1	4,184	4,137	197		100					100	40	8	91	0.70	45.3	
DF	DM	4S	10	14.1	1,448	1,244	59	86	14			26	21	37	16	27	5	27	0.37	45.4
DF	Totals		31	5.1	13,472	12,786	610	8	34	39	19	3	2	4	92	35	8	109	0.89	116.8
RC	DM	3S	52	.0	142	142	7		100					100	36	8	80	0.96	1.8	
RC	DM	4S	48	30.2	186	130	6	100				14	86		22	5	18	0.28	7.4	
RC	Totals		1	17.1	327	271	13	48	52			7	41	52	25	6	30	0.47	9.1	
Type Totals				3.3	43,153	41,736	1,991	11	49	26	14	2	6	4	89	34	8	91	0.75	456.1

T32N R06E S05 T00U1	T32N R06E S05 T00U1
Twp 32N Rge 06E Sec 05 Tract JUMPIN Type 00U1 Acres 4.90 Plots 2 Sample Trees 4 CuFt S	BdFt W

S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
								Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/	
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf	
WH	DM	2S	57	20,278	20,278	99		63	37				100	40	14	289	1.71	70.1		
WH	DM	3S	37	4.0	13,920	13,365	65	100					100	40	9	122	0.82	109.5		
WH	DM	4S	6	.0	1,898	1,898	9	83	17			17	83	32	6	34	0.41	55.5		
WH	Totals		100	1.5	36,096	35,541	174	4	39	36	21	1	99	38	10	151	1.02	235.2		
Type Totals				1.5	36,096	35,541	174	4	39	36	21	1	99	38	10	151	1.02	235.2		

T32N R06E S05 T00U2		T32N R06E S05 T00U2
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt		BdFt
32N 06E 05 JUMPIN 00U2 29.60 20 39 S		W

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre	
									Log Scale Dia.				Log Length				Ln	Dia	Bd		CF/ Lf
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft		Lf
WH		DM	2S	35	7.0	6,252	5,816	172	100				100				40	13	229	1.54	25.4
WH		DM	3S	43	6.1	7,611	7,144	211	100				1 99				39	9	105	0.77	68.1
WH		DM	4S	15	2.6	2,660	2,591	77	89	11			4	23	46	27	31	5	34	0.32	77.1
WH		DM	UT	7		1,052	1,052	31	56			44	16			84	32	10	122	1.05	8.6
WH		Totals		88	5.5	17,576	16,603	491	14	48	38	1	5	8	87	35	8	93	0.74	179.2	
DF		DM	2S	72	18.7	1,340	1,089	32	61			39	100				40	17	357	2.54	3.1
DF		DM	3S	28		421	421	12	100				100				40	10	138	1.01	3.1
DF		Totals		8	14.2	1,761	1,510	45	28	44	28	100				40	13	247	1.77	6.1	
RC		DM	3S	57	15.8	480	404	12	100				100				36	9	77	0.98	5.3
RC		DM	4S	43	23.8	389	297	9	38	62			8	30		62	28	5	30	0.40	9.9
RC		Totals		4	19.3	869	701	21	16	84			3	13	84		31	7	46	0.64	15.1
Type Totals					6.9	20,205	18,814	557	13	48	37	2	1	5	7	88	35	8	94	0.77	200.4

T32N R06E S05 T00U3									T32N R06E S05 T00U3				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
32N	06E	05	JUMPIN	00U3	13.60	8	23	S	W				

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			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	
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
WH		DM	2S	19	5.0	3,079	2,925	40	100				100				40	13	239	1.59	12.2	
WH		DM	3S	63	7.5	10,522	9,728	132	100				100				40	8	93	0.70	104.2	
WH		DM	4S	18	1.6	2,765	2,722	37	99	1			19	52	21	8	25	5	25	0.28	106.9	
WH	Totals			80	6.1	16,366	15,375	209	18	63	19			3	9	4	84	33	7	69	0.61	223.4
DF		DM	2S	88	6.0	2,302	2,165	29	55 45				100				40	16	388	2.14	5.6	
DF		DM	3S	9	16.7	260	216	3	100				100				40	9	100	0.92	2.2	
DF		DM	4S	3		68	68	1	100				100				22	8	40	0.64	1.7	
DF	Totals			13	6.9	2,631	2,449	33	12	49	40			3	97		37	13	259	1.67	9.5	
SF		DM	2S	82	13.0	1,426	1,240	17	100				100				40	13	230	1.75	5.4	
SF		DM	3S	10		155	155	2	100				100				33	7	60	0.67	2.6	
SF		DM	4S	8	20.0	141	113	2	100				100				32	6	40	0.56	2.8	
SF	Totals			8	12.4	1,721	1,508	21	18	82				18	82		36	10	140	1.24	10.8	
Type Totals					6.7	20,718	19,333	263	14	53	28	5	3	8	4	85	33	7	79	0.68	243.6	

T32N R06E S05 T00U4										T32N R06E S05 T00U4			
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
32N	06E	05	JUMPIN	00U4	2.00	2	4	S	W				

S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
								Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
WH	DM	2S	77	10.6	33,400	29,853	60		22	78				100	40	15	336	2.71	88.7	
WH	DM	3S	23		8,480	8,480	17	100						100	40	8	96	0.83	88.7	
WH	Totals		93	8.5	41,880	38,333	77	22	17	61				100	40	12	216	1.77	177.4	
RC	DM	3S	100	12.1	3,472	3,053	6	20	80					100	36	14	255	3.29	12.0	
RC	Totals		7	12.1	3,472	3,053	6	20	80					100	36	14	255	3.29	12.0	
Type Totals				8.7	45,352	41,386	83	22	16	62				100	40	12	219	1.86	189.4	

T32N R06E S05 T00U5		T32N R06E S05 T00U5
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt		BdFt
32N 06E 05 JUMPIN 00U5 17.90 7 17 S		W

S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			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
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
WH	DM	2S	74	6.7	25,163	23,470	420		75	25				100	40	14	291	1.87	80.5	
WH	DM	3S	23	1.8	7,427	7,295	131		100				7	93	38	8	88	0.77	82.9	
WH	DM	4S	3	14.0	818	703	13	100					49	51	35	5	34	0.40	20.4	
WH	Totals		86	5.8	33,407	31,468	563	2	23	56	19		3	97	39	10	171	1.23	183.9	
RC	DM	3S	79	3.2	2,236	2,164	39		43	57				100	36	10	131	0.99	16.6	
RC	DM	4S	21		569	569	10	100					49	51	33	5	34	0.37	16.6	
RC	Totals		7	2.6	2,806	2,733	49	21	34	45			10	90	34	8	83	0.69	33.1	
DF	DM	2S	73	5.6	1,886	1,781	32		100					100	40	15	340	2.46	5.2	
DF	DM	3S	27		629	629	11	100						100	40	9	120	0.83	5.2	
DF	Totals		7	4.2	2,514	2,410	43		26	74				100	40	12	230	1.65	10.5	
Type Totals				5.5	38,728	36,611	655	3	24	56	16		1	2	97	38	10	161	1.18	227.5

T32N R06E S06 T00U6									T32N R06E S06 T00U6				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
32N	06E	06	JUMPIN	00U6	30.80	16	50	S	W				

S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre	
								Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft		CF/ Lf
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
WH	DM	2S	59	7.6	25,537	23,608	727			72	28				100	40	15	311	1.98	75.9
WH	DM	3S	34	4.5	13,997	13,365	412		100					3	97	39	8	94	0.79	142.1
WH	DM	4S	6	5.8	2,400	2,261	70	95	5				30	7	63	33	5	34	0.35	65.8
WH	DM	UT	1	47.7	401	210	6	100				100				16	5	8	0.11	24.8
WH	Totals		81	6.8	42,335	39,444	1,215	6	34	43	17	1	2	1	96	36	9	128	1.01	308.7
SF	DM	3S	80	1.3	4,915	4,851	149		100						100	40	9	130	0.93	37.2
SF	DM	4S	20	7.7	1,239	1,144	35	100					36	64		29	5	31	0.32	37.2
SF	Totals		12	2.6	6,154	5,995	185	19	81				7	12	81	35	7	80	0.67	74.5
RC	DM	3S	85	14.0	1,139	979	30		51	49				5	95	36	9	90	1.06	10.9
RC	DM	4S	15		163	163	5	71	29			71	29			17	5	18	0.29	9.1
RC	Totals		2	12.3	1,302	1,142	35	10	48	42		10	4	5	81	27	7	57	0.84	20.0
DF	DM	2S	95	2.7	1,865	1,814	56		28	72					100	40	15	355	2.31	5.1
DF	DM	4S	5	25.0	102	77	2	100							100	21	8	30	0.57	2.6
DF	Totals		4	3.9	1,967	1,891	58	4	27	69		4		96	34	13	247	1.95	7.7	
Type Totals				6.3	51,758	48,472	1,493	7	39	37	16	1	2	3	94	36	8	118	0.96	410.8

T32N R06E S06 T00U7		T32N R06E S06 T00U7
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt		BdFt
32N 06E 06 JUMPIN 00U7 12.50 6 20 S		W

S T	So rt	Gr ad	%	Bd. Ft. per Acre				Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre					
									Net BdFt	Def%	Gross	Net	Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
													4-5	6-11	12-16	17+	12-20	21-30	31-35						36-99
WH	DM	2S	36	5.4	10,959	10,368	130			46	54					100	40	15	338	2.08	30.7				
WH	DM	3S	55	2.4	16,263	15,875	198			100					5	95	39	8	103	0.75	153.6				
WH	DM	4S	9	5.4	2,687	2,542	32	93	7				10	66	10	14	25	5	25	0.30	100.4				
WH	DM	UT		100.0	1,208												40	14		0.03	4.2				
WH	Totals		100	7.5	31,116	28,785	360	8	56	17	19	1	6	3	90		34	8	100	0.79	288.8				
Type	Totals			7.5	31,116	28,785	360	8	56	17	19	1	6	3	90		34	8	100	0.79	288.8				

T32N R06E S06 T00U8		T32N R06E S06 T00U8
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt		BdFt
32N 06E 06 JUMPIN 00U8 2.90 2 8 S		W

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			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
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
WH		DM	2S	31	4.3	12,555	12,019	35			43	57				100	40	15	316	1.88	38.0
WH		DM	3S	54		20,176	20,176	59		100						100	40	7	86	0.56	235.9
WH		DM	4S	10		3,702	3,702	11	100					51	49		30	5	34	0.26	108.1
WH		DM	UT	5		1,795	1,795	5	100				100				18	5	20	0.17	89.8
WH	Totals			73	1.4	38,229	37,693	109	15	54	14	18	5	5	5	85	34	7	80	0.59	471.9
RC		DM	3S	79		3,848	3,848	11		100						100	36	7	60	0.59	64.1
RC		DM	4S	21		988	988	3	100				30	70			17	5	15	0.20	64.1
RC	Totals			9		4,836	4,836	14	20	80			6	14		80	27	6	38	0.46	128.3
DF		DM	2S	72	5.6	6,788	6,411	19		100						100	40	15	340	2.06	18.9
DF		DM	3S	25		2,263	2,263	7		100						100	40	9	120	0.83	18.9
DF		DM	4S	3	50.0	377	189	1		100			100				12	7	10	0.35	18.9
DF	Totals			17	6.0	9,427	8,862	26		28	72		2			98	31	10	157	1.30	56.6
Type Totals					2.1	52,492	51,390	149	13	52	23	13	4	5	4	87	32	7	78	0.63	656.7

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT		JUMPIN		DATE	8/15/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
32N	05E	01	JUMPIN	00U9	47.70	22	140	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	22	140	6.4							
CRUISE	12	71	5.9	12,641			.6			
DBH COUNT										
REFOREST										
COUNT	10	69	6.9							
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	48	191.2	15.1	66	61.1	237.4	29,354	28,678	7,947	7,946
DOUG FIR	21	66.4	16.9	67	25.2	103.9	13,472	12,786	3,583	3,583
WR CEDAR	2	7.4	11.1	41	1.5	4.9	327	271	108	108
TOTAL	71	265.0	15.5	65	88.0	346.2	43,153	41,736	11,638	11,636
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	78.0	11.3	199	224	249					
DOUG FIR	92.9	20.8	255	322	389					
WR CEDAR	90.0	84.3	9	55	101					
TOTAL	89.4	10.6	222	248	274	319	163	80		
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK	75.0	16.3	160	191	222					
DOUG FIR	119.7	26.1	49	66	84					
WR CEDAR	469.0	102.2		7	15					
TOTAL	47.1	10.3	238	265	292	93	47	23		
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	65.8	14.3	203	237	271					
DOUG FIR	103.4	22.5	80	104	127					
WR CEDAR	469.0	102.2		5	10					
TOTAL	28.1	6.1	325	346	367	33	17	8		
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	65.7	14.3	24,571	28,678	32,785					
DOUG FIR	96.6	21.1	10,093	12,786	15,479					
WR CEDAR	469.0	102.2		271	549					
TOTAL	27.7	6.0	39,214	41,735	44,257	32	16	8		
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			104	121	138					
DOUG FIR	29.0	6.3	97	123	149					
WR CEDAR	469.0	102.2		55	111					
TOTAL	184.2	40.1	113	121	128	1,418	724	355		

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT		JUMPIN		DATE	8/15/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
32N	06E	05	JUMPIN	00U1	4.90	2	11	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	2	11	5.5							
CRUISE	1	4	4.0	537		.7				
DBH COUNT										
REFOREST										
COUNT	1	7	7.0							
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	4	109.5	19.2	87	50.2	220.0	36,096	35,541	9,121	9,121
TOTAL	4	109.5	19.2	87	50.2	220.0	36,096	35,541	9,121	9,121
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	52.5	30.0	263	375	487					
TOTAL	52.5	30.0	263	375	487	144	73	36		
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK	38.6	36.1	70	110	149					
TOTAL	38.6	36.1	70	110	149	104	53	26		
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	38.6	36.1	141	220	299					
TOTAL	38.6	36.1	141	220	299	104	53	26		
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	38.6	36.1	22,705	35,541	48,377					
TOTAL	38.6	36.1	22,705	35,541	48,377	104	53	26		
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			103	162	220					
TOTAL	377.5	353.5	103	162	220	9,996	5,100	2,499		

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				JUMPIN				DATE	8/15/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
32N	06E	05	JUMPIN	00U2	29.60	20	55	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	20	55	2.8							
CRUISE	11	39	3.5	3,111		1.3				
DBH COUNT										
REFOREST										
COUNT	7	16	2.3							
BLANKS	2									
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	33	92.2	16.0	76	32.0	127.9	17,576	16,603	4,702	4,702
DOUG FIR	3	3.1	25.6	89	2.2	10.9	1,761	1,510	433	433
WR CEDAR	3	9.9	14.2	57	2.9	10.9	869	701	299	299
TOTAL	39	105.1	16.2	75	37.2	149.7	20,205	18,814	5,433	5,434
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	42.2	7.5		210	227	244				
DOUG FIR	27.5	19.0		405	500	595				
WR CEDAR	52.7	36.5		49	77	105				
TOTAL	54.4	8.8		216	237	257	118	60	30	
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	108.6	24.9		69	92	115				
DOUG FIR	206.2	47.3		2	3	4				
WR CEDAR	249.2	57.1		4	10	16				
TOTAL	94.4	21.6		82	105	128	375	191	94	
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	86.5	19.8		103	128	153				
DOUG FIR	205.2	47.0		6	11	16				
WR CEDAR	261.6	60.0		4	11	17				
TOTAL	73.6	16.9		124	150	175	228	116	57	
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	86.2	19.8		13,323	16,603	19,883				
DOUG FIR	208.5	47.8		788	1,510	2,232				
WR CEDAR	274.0	62.8		261	701	1,141				
TOTAL	73.4	16.8		15,648	18,814	21,981	227	116	57	
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	60.1	13.8		104	130	155				
DOUG FIR	174.1	39.9		72	139	205				
WR CEDAR	248.8	57.0		24	64	105				
TOTAL	145.8	33.4		105	126	147	893	456	223	

TC TSTATS				STATISTICS				PAGE 1		
PROJECT JUMPIN				DATE 8/15/2016						
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
32N	06E	05	JUMPIN	00U3	13.60	8	23	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	8	23	2.9							
CRUISE	8	23	2.9	1,809			1.3			
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	19	123.7	13.8	69	34.7	129.2	16,366	15,375	4,418	4,418
DOUG FIR	2	3.9	25.4	96	2.7	13.6	2,631	2,449	581	581
PS FIR	2	5.4	21.5	74	2.9	13.6	1,721	1,508	487	487
TOTAL	23	133.0	14.7	70	40.8	156.4	20,718	19,333	5,486	5,486
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	60.1	14.2	142	165	189					
DOUG FIR	42.1	39.4	397	655	913					
PS FIR	10.1	9.5	254	280	306					
TOTAL	81.7	17.4	180	218	256	279	142	70		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK	110.5	41.7	72	124	175					
DOUG FIR	186.9	70.4	1	4	7					
PS FIR	282.8	106.6		5	11					
TOTAL	96.3	36.3	85	133	181	422	215	105		
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	81.0	30.5	90	129	169					
DOUG FIR	185.2	69.8	4	14	23					
PS FIR	282.8	106.6		14	28					
TOTAL	47.2	17.8	129	156	184	101	52	25		
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	77.0	29.0	10,911	15,375	19,840					
DOUG FIR	189.4	71.4	700	2,449	4,199					
PS FIR	282.8	106.6		1,508	3,116					
TOTAL	40.9	15.4	16,352	19,333	22,313	76	39	19		
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	77.0	29.0	84	119	154					
DOUG FIR	189.4	71.4	51	180	309					
PS FIR	282.8	106.6		111	229					
TOTAL	40.9	15.4	105	124	143	76	39	19		

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				JUMPIN				DATE	8/15/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
32N	06E	05	JUMPIN	00U4	2.00	2	13	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		2	13	6.5						
CRUISE		1	4	4.0	189	2.1				
DBH COUNT REFOREST COUNT		1	9	9.0						
BLANKS 100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHEMLOCK	3	88.7	25.4	86	62.0	312.5	41,880	38,333	12,573	12,573
WR CEDAR	1	6.0	35.0	75	6.8	40.0	3,472	3,053	1,416	1,416
TOTAL	4	94.7	26.1	85	69.0	352.5	45,352	41,386	13,990	13,990
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		41.2	28.5	326	457	587				
WR CEDAR										
TOTAL		33.2	19.0	381	470	559	58	29	14	
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		56.6	53.0	42	89	136				
WR CEDAR				6	6	6				
TOTAL		33.9	31.8	65	95	125	81	41	20	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		56.6	53.0	147	313	478				
WR CEDAR				40	40	40				
TOTAL				353	353	353				
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		56.6	53.0	18,028	38,333	58,637				
WR CEDAR				3,053	3,053	3,053				
TOTAL		28.8	27.0	30,208	41,386	52,564	58	30	15	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK				58	123	188				
WR CEDAR				76	76	76				
TOTAL		413.0	386.7	86	117	149	11,964	6,104	2,991	

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				JUMPIN				DATE	8/15/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
32N	06E	05	JUMPIN	00U5	17.90	7	31	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	7	31	4.4							
CRUISE	3	17	5.7	2,036			.8			
DBH COUNT										
REFOREST										
COUNT	4	14	3.5							
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	14	91.9	21.1	81	48.6	223.2	33,407	31,468	8,726	8,726
WR CEDAR	2	16.6	15.9	72	5.7	22.9	2,806	2,733	789	789
DOUG FIR	1	5.2	25.0	92	3.6	17.9	2,514	2,410	690	690
TOTAL	17	113.7	20.6	80	58.1	263.9	38,728	36,611	10,204	10,204
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	48.8	13.5	346	400	454					
WR CEDAR	33.3	31.2	117	170	223					
DOUG FIR										
TOTAL	51.3	12.8	328	376	425	112	57	28		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK	53.3	21.7	72	92	112					
WR CEDAR	94.4	38.4	10	17	23					
DOUG FIR	170.8	69.5	2	5	9					
TOTAL	43.1	17.5	94	114	134	86	44	22		
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	50.8	20.7	177	223	269					
WR CEDAR	93.5	38.1	14	23	32					
DOUG FIR	170.8	69.5	5	18	30					
TOTAL	36.8	15.0	224	264	303	63	32	16		
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	51.6	21.0	24,862	31,468	38,075					
WR CEDAR	94.2	38.4	1,685	2,733	3,782					
DOUG FIR	170.8	69.5	735	2,410	4,084					
TOTAL	37.6	15.3	31,013	36,611	42,209	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		
WHEMLOCK			111	141	171					
WR CEDAR			74	120	165					
DOUG FIR	93.5	38.1	41	135	229					
TOTAL	175.9	71.6	118	139	160	1,435	732	359		

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				JUMPIN				DATE	8/15/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
32N	06E	06	JUMPIN	00U6	30.80	16	99	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	16	99	6.2							
CRUISE	8	50	6.3	6,583		.8				
DBH COUNT										
REFOREST										
COUNT	8	49	6.1							
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	40	163.9	18.3	75	70.2	300.8	42,335	39,444	11,368	11,298
PS FIR	5	37.2	15.8	73	12.8	50.8	6,154	5,995	1,729	1,729
WR CEDAR	4	10.0	16.6	62	3.7	15.0	1,302	1,142	461	460
DOUG FIR	1	2.6	29.0	104	2.2	11.7	1,967	1,891	502	502
TOTAL	50	213.7	18.0	74	89.1	378.3	51,758	48,472	14,060	13,990
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	62.0	9.8	306	339	372					
PS FIR	27.4	13.6	145	168	191					
WR CEDAR	70.8	40.4	98	165	232					
DOUG FIR										
TOTAL	66.6	9.4	286	316	346	177	90	44		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK	46.0	11.9	144	164	183					
PS FIR	207.1	53.4	17	37	57					
WR CEDAR	177.1	45.7	5	10	15					
DOUG FIR	215.0	55.5	1	3	4					
TOTAL	43.9	11.3	190	214	238	82	42	20		
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK	45.7	11.8	265	301	336					
PS FIR	207.0	53.4	24	51	78					
WR CEDAR	165.1	42.6	9	15	21					
DOUG FIR	215.0	55.5	5	12	18					
TOTAL	32.1	8.3	347	378	410	44	22	11		
CL: 68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK	49.8	12.9	34,373	39,444	44,516					
PS FIR	206.3	53.2	2,804	5,995	9,186					
WR CEDAR	165.7	42.7	654	1,142	1,630					
DOUG FIR	215.0	55.5	842	1,891	2,939					
TOTAL	34.0	8.8	44,226	48,472	52,718	49	25	12		
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			114	131	148					
PS FIR	46.7	12.1	55	118	181					
WR CEDAR	134.1	34.6	44	76	109					
DOUG FIR	91.1	23.5	72	161	251					
TOTAL	189.9	49.0	117	128	139	1,536	784	384		

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT		JUMPIN		DATE	8/15/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
32N	06E	06	JUMPIN	00U7	12.50	6	40	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	6	40	6.7							
CRUISE	3	20	6.7	1,786			1.1			
DBH COUNT										
REFOREST										
COUNT	3	20	6.7							
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	20	142.9	16.8	76	53.7	220.0	31,116	28,785	8,155	7,843
TOTAL	20	142.9	16.8	76	53.7	220.0	31,116	28,785	8,155	7,843
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	72.5	16.6	231	277	322					
TOTAL	72.5	16.6	231	277	322	221	113	55		
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK	67.6	30.1	100	143	186					
TOTAL	67.6	30.1	100	143	186	218	111	54		
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	51.1	22.8	170	220	270					
TOTAL	51.1	22.8	170	220	270	124	63	31		
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	58.8	26.2	21,252	28,785	36,319					
TOTAL	58.8	26.2	21,252	28,785	36,319	164	84	41		
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			97	131	165					
TOTAL	173.4	77.2	97	131	165	1,431	730	358		

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT		JUMPIN		DATE	8/15/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
32N	06E	06	JUMPIN	00U8	2.90	2	15	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	2	15	7.5							
CRUISE	1	8	8.0	925		.9				
DBH COUNT										
REFOREST										
COUNT	1	7	7.0							
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	5	235.9	13.8	78	65.9	244.8	38,229	37,693	9,284	9,284
WR CEDAR	2	64.1	12.5	64	15.4	54.4	4,836	4,836	1,591	1,591
DOUG FIR	1	18.9	23.0	95	11.3	54.4	9,427	8,862	2,260	2,260
TOTAL	8	318.9	14.3	77	93.6	353.6	52,492	51,390	13,136	13,136
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	83.4	41.4	145	248	351					
WR CEDAR	9.4	8.8	68	75	82					
DOUG FIR										
TOTAL	85.8	32.3	157	233	308	335	171	84		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK	15.7	14.7	201	236	271					
WR CEDAR	141.4	132.4		64	149					
DOUG FIR			19	19	19					
TOTAL	28.8	26.9	233	319	405	58	30	15		
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK	15.7	14.7	209	245	281					
WR CEDAR	141.4	132.4		54	126					
DOUG FIR			54	54	54					
TOTAL			354	354	354					
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	15.7	14.7	32,147	37,693	43,239					
WR CEDAR	141.4	132.4		4,836	11,241					
DOUG FIR	.0	.0	8,861	8,862	8,862					
TOTAL			51,390	51,390	51,390					
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			131	154	177					
WR CEDAR	141.4	132.4		89	207					
DOUG FIR			163	163	163					
TOTAL	182.1	170.5	145	145	145	2,326	1,187	582		

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

T32N R05E S01 Ty00U9	47.7
T32N R06E S05 Ty00U1	4.9
T32N R06E S06 Ty00U	2.9

Project JUMPIN
Acres 161.90

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Date: 8/15/2016
Time 1:39:52PM

Species	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
WHEMLOCK	23,412	43,376	41,068	54.56	29.45	0.86	12,834	12,772	4,805	4,567
DOUG FIR	3,538	6,468	6,440	63.88	34.94	0.99	2,260	2,260	863	815
PS FIR	1,221	2,441	1,716	49.06	24.53	0.72	599	599	213	205
WR CEDAR	1,447	2,490	1,169	34.38	19.98	0.69	497	497	153	138
Totals	29,617	54,774	50,392	54.46	29.45	0.86	16,189	16,128	6,034	5,725

Wood Type Species	Total Trees	Total Logs	Total Tons	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
				Tree	Log		Gross	Net	Gross	Net
C	29,617	54,774	50,392	54.46	29.45	0.86	16,189	16,128	6,034	5,725
Totals	29,617	54,774	50,392	54.46	29.45	0.86	16,189	16,128	6,034	5,725



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

FPA/N No: 2815311
 Effective Date: 8/22/2016
 Expiration Date: 8/22/2019

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

Shut Down Zone: 658
 EARR Tax Credit: Eligible Non-eligible
 Reference: **Jumpin' Jack**

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

Contact the Dept. of Natural Resources, at least two (2) business days (Monday through Friday) prior to the start of operations. Call (360) 856-3500 for the Northwest Region Office - Forest Practices, or directly by cellular telephone to the Forest Practice Forester, and provide the application number and legal description for your operation.

Issued By: Joel Dryden *J.D.*

Region: Northwest

Title: Stillaguamish Forest Practice Forester

Date: 8/22/2016

Copies to: Landowner, Timber Owner and Operator

Issued in Person: Landowner, Timber Owner Operator By: *J. Utz*

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 # _____

_____ L Utgard _____

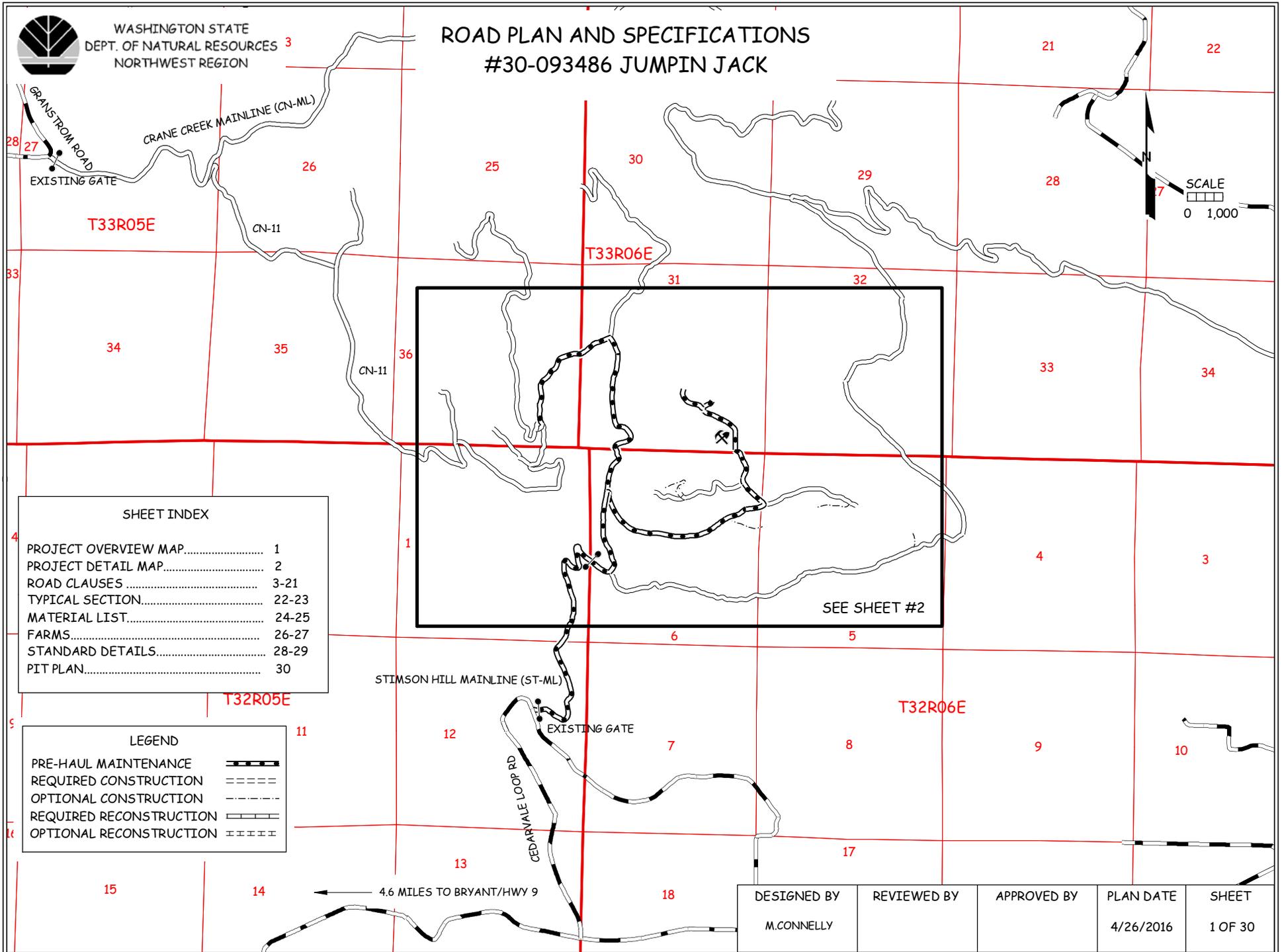
(Printed name)

(Signature)



WASHINGTON STATE
DEPT. OF NATURAL RESOURCES
NORTHWEST REGION

ROAD PLAN AND SPECIFICATIONS #30-093486 JUMPIN JACK



SHEET INDEX	
PROJECT OVERVIEW MAP.....	1
PROJECT DETAIL MAP.....	2
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TYPICAL SECTION.....	22-23
MATERIAL LIST.....	24-25
FARMS.....	26-27
STANDARD DETAILS.....	28-29
PIT PLAN.....	30

LEGEND	
PRE-HAUL MAINTENANCE	
REQUIRED CONSTRUCTION	
OPTIONAL CONSTRUCTION	
REQUIRED RECONSTRUCTION	
OPTIONAL RECONSTRUCTION	

DESIGNED BY M.CONNELLY	REVIEWED BY	APPROVED BY	PLAN DATE 4/26/2016	SHEET 1 OF 30
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← 4.6 MILES TO BRYANT/HWY 9

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

JUMPIN JACK TIMBER SALE ROAD PLAN
SNOHOMISH COUNTY
CLEAR LAKE DISTRICT

AGREEMENT NO.: 30-093486

STAFF ENGINEER: M. CONNELLY

DATE: 04/26/2016

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>
ST-ML	0+00 to 81+82	PRE-HAUL
ST-16	0+00 to 111+15	PRE-HAUL
ST-1605	0+00 to 92+44	PRE-HAUL
ST-1605-17	0+00 to 9+00	PRE-HAUL

0-3 OPTIONAL ROADS

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
ST-1605-1005*	0+00 to 9+83	CONSTRUCTION
ST-1605-1104	0+00 to 3+35	RECONSTRUCTION
ST-1605-1104	3+35 to 13+26	CONSTRUCTION
ST-1605-08*	0+00 to 10+81	CONSTRUCTION
ST-33*	0+00 to 4+90	CONSTRUCTION

*All construction is on abandoned road grades.

0-4 CONSTRUCTION

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

0-5 RECONSTRUCTION

Reconstruction includes, but is not limited to blading, shaping, and ditching the road surface and brushing.

0-6 PRE-HAUL MAINTENANCE

This project includes, but is not limited to the following pre-haul maintenance requirements:

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
ST-ML	0+00 to 81+82	Blading, shaping, and ditching the road surface, existing culvert clean out, and spot application of 200 cubic yards of 3-inch minus ballast.
ST-16	0+00 to 111+15	Blading, shaping, and ditching the road surface, culvert installation, culvert removal, existing culvert clean out, and spot application of 1000 cubic yards of 3-inch minus ballast.
ST-1605	0+00 to 92+44	Blading, shaping, and ditching the road surface, brushing, culvert installation, existing culvert clean out, and spot application of 300 cubic yards of 3-inch minus ballast.
ST-1605-17	0+00 to 9+00	Blading, shaping, and ditching the road surface, brushing, existing culvert clean out.

0-7 POST-HAUL MAINTENANCE

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

0-10 ABANDONMENT

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

0-12 DEVELOP ROCK SOURCE

Purchaser shall develop a new rock source. Rock source development will involve clearing, stripping, drilling, shooting, and processing rock to generate riprap and 3-inch-minus ballast. 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.

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

1-6 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. Road Plan Clauses.
3. Typical Section Sheet.
4. Standard Lists.
5. 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 for 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 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.

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-1 BRUSHING

On the following roads, Purchaser shall cut vegetative material up to 3 inches in diameter, including limbs, as shown on the BRUSHING DETAIL on sheet 30. Brushing must be achieved by mechanical cutting of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Purchaser shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
ST-1605	72+33 to 92+44
ST-1605-1104	0+00 to 3+35
ST-1605-17	0+00 to 9+00

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.

3-8 PROHIBITED DECKING AREAS

Purchaser shall not deck right-of-way timber in the following areas:

- Within the grubbing limits.
- Within 50 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- On slopes greater than 40%.
- Against standing trees unless approved by the Contract Administrator.

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 and brushing areas as shown on the TYPICAL SECTION SHEET and BRUSHING DETAIL.

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.

3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS

Waste areas for organic debris are located as listed below:

<u>Road</u>	<u>Disposal Location</u>
ST-1605	West side of rock pit at station 26+40 .

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 50%.
- 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.

3-32 END HAULING ORGANIC DEBRIS

On the following road, Purchaser shall end haul organic debris to the designated waste areas specified in Clause 3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS.

<u>Road</u>	<u>Stations</u>
ST-1605-08	9+81 to 10+81

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 60 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.

Purchaser shall follow these standards for switchbacks:

- Maximum adverse grades for switchbacks is 10% of the curve radius.
- Maximum favorable grades for switchbacks is 12%.
- Maximum transition grades entering and leaving switchbacks is a 5% grade change.
- Transition grades required to meet switchback grade limitations must be constructed on the tangents preceding and departing from the switchbacks.

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
Common Earth (56% to 70% side slopes)	¾:1	133
Common Earth (on slopes over 70%)	½:1	200
Fractured or loose rock	½:1	200
Hardpan or solid rock	¼:1	400

4-6 EMBANKMENT SLOPE RATIO

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.

4-37 WASTE AREA LOCATION

Purchaser shall deposit waste material in areas identified or approved by the Contract Administrator. The amount of material allowed in a waste area is at the discretion of the Contract Administrator

4-38 PROHIBITED WASTE DISPOSAL AREAS

Purchaser shall not deposit waste material in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- Within a riparian management zone.
- On side slopes steeper than 50%.
- 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 may be new or used 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%.

5-18 CULVERT DEPTH OF COVER

Cross drain culverts must be installed with a depth of cover of not less than 1 foot of compacted subgrade over the top of the culvert at the shallowest point. Stream crossing culverts must be installed with a depth of cover recommended by the culvert manufacturer for the type and size of the pipe.

5-20 ENERGY DISSIPATERS

Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL. Energy dissipater installation is subject to approval by the Contract Administrator.

The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT AND DRAINAGE SPECIFICATION DETAIL.

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.

5-27 ARMORING FOR STREAM CROSSING CULVERTS

At stream crossing culverts, Purchaser shall place riprap in conjunction with construction of the embankment. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets as designated on the MATERIALS LIST or as directed by the Contract Administrator. Rock may not restrict the flow of water into culvert inlets or catch basins. Placement must be by zero-drop-height method only. 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>
Stimson Crow Pit	STA 75+46 of the ST-1605 road	3-inch minus ballast rock, Rip rap

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.

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

Purchaser shall conduct rock source development and use at the following sources, in accordance with the written ROCK SOURCE DEVELOPMENT PLAN prepared by the state and included in this road plan. 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>
Stimson Crow Pit

6-12 ROCK SOURCE SPECIFICATIONS

Rock sources must be in accordance with the following specifications:

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

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

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

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>Size Range</u>
20% / 90%	20" - 36"
80% / --	12" - 30"
10% / 20%	3" - 8"

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>Size Range</u>
30% / 90%	36" - 54"
70% / 90%	24" - 42"
10% / 30%	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.

6-75 OPTIONAL ROCK EXCEPTION

On the following roads, if hauling takes place from May 1 to September 30, Purchaser may provide and place less rock than shown on the TYPICAL SECTION SHEET, when approved in writing by the Contract Administrator.

If less rock is applied, Purchaser shall submit a written plan, for approval, describing how these roads will be constructed, used, maintained, and treated post-haul. Purchaser shall meet post-haul specifications in Section 9 POST-HAUL ROAD WORK, the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS, or other conditions of the approved plan.

<u>Road</u>	<u>Stations</u>
ST-1605-1005	0+00 to 9+83
ST-1605-08	0+00 to 10+81
ST-33	0+00 to 4+90

6-80 WATERING FOR DUST ABATEMENT

Purchaser shall use water for dust abatement on the following roads:

<u>Road</u>	<u>Stations</u>
ST-ML	0+00 to 60+00

SECTION 8 – EROSION CONTROL

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall provide and evenly spread a 6-inch layer of straw to all exposed soils within 50 feet of a stream or wetland. Soils must be covered before the first anticipated storm event.

8-10 STABILIZE SLOPES – ROCK APPLICATION

On the following road, Purchaser shall stabilize embankment slopes by applying rock as specified below. Rock must be set in place in conjunction with pre-haul maintenance. Rock must be applied in quantities specified in the MATERIALS LIST to exposed soil on the entire embankment to a minimum depth of 36 inches. Rock must be set in place by machine. Placement must be by zero-drop-height method only. No placement by end dumping or dropping of rock is allowed. Riprap must meet the specifications in Clause 6-51 HEAVY LOOSE RIP RAP.

<u>Road</u>	<u>Stations</u>	<u>Rock Type</u>
ST-1605	10+68 to 11+20	Heavy Loose Riprap

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.

9-5 POST-HAUL MAINTENANCE

Purchaser shall perform post-haul maintenance in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface.

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

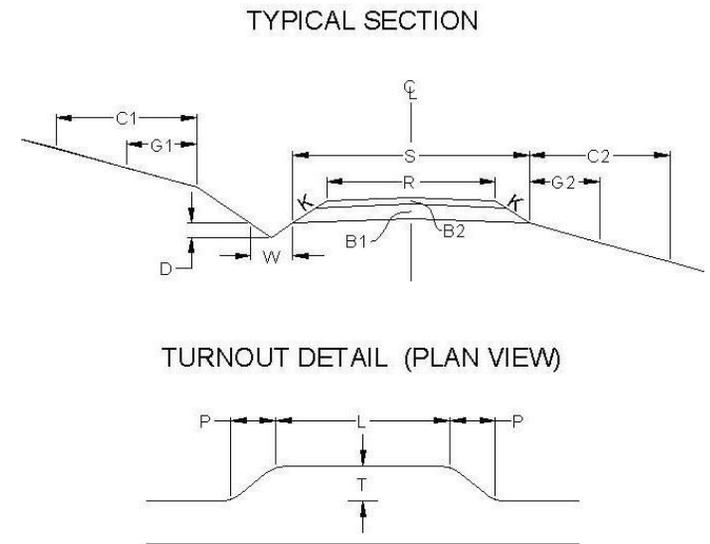
Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used.

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"

ROAD #		ST-ML	ST-16	ST-1605	ST-1605-17
REQUIRED / OPTIONAL		REQUIRED	REQUIRED	REQUIRED	REQUIRED
CONSTRUCT / RECONSTRUCT/PRE-HAUL		PRE-HAUL	PRE-HAUL	PRE-HAUL	PRE-HAUL
TOLERANCE CLASS (A/B/C)		C	C	C	C
STATION / MP TO		0+00	0+00	0+00	0+00
STATION / MP		81+82	111+15	92+44	9+00
ROAD WIDTH	R	12	12	12	12
CROWN (INCHES @ C/L)		3	3	3	3
DITCH WIDTH	W	3	3	3	3
DITCH DEPTH	D	1	1	1	1
TURNOUT LENGTH	L	-	-	-	-
TURNOUT WIDTH	T	-	-	-	-
TURNOUT TAPER	P	-	-	-	-
GRUBBING	G1	-	-	-	-
	G2	-	-	-	-
CLEARING	C1	-	-	-	-
	C2	-	-	-	-
ROCK FILLSLOPE	K:1	1 ½	1 ½	1 ½	1 ½
❖ BALLAST DEPTH	B1	-	-	-	-
CUBIC YARDS / STATION		-	-	-	-
➤ TOTAL CY BALLAST		200 ^A	1000 ^A	300 ^A	-
❖ SURFACING DEPTH	B2	-	-	-	-
CUBIC YARDS / STATION		-	-	-	-
➤ TOTAL CY SURFACING		-	-	-	-
➤ TOTAL CUBIC YARDS		200 ^A	1000 ^A	300 ^A	-
SUBGRADE WIDTH	S	-	-	-	-
BRUSHCUT (Y/N)		N	N	Y	Y
BLADE, SHAPE, & DITCH (Y/N)		Y	Y	Y	Y



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.
- A** 3-inch minus ballast for spot patching as needed at locations designated by the Contract Administrator.

Rock Totals Summary

Type	Quantity (Cubic Yards)
Ballast	3585
Rip Rap	141

ROAD #		ST-1605-1005	ST-1605-1104	ST-1605-1104	ST-1605-08	ST-33		
REQUIRED / OPTIONAL		OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL		
CONSTRUCT / RECONSTRUCT/PRE-HAUL		CONSTRUCT	RECONSTRUCT	CONSTRUCT	CONSTRUCT	CONSTRUCT		
TOLERANCE CLASS (A/B/C)		C	C	C	C	C		
STATION / MP TO		0+00	0+00	3+35	0+00	0+00		
STATION / MP		9+83	3+35	12+53	10+81	4+90		
ROAD WIDTH	R	12	12	12	12	12		
CROWN (INCHES @ C/L)		3	3	3	3	3		
DITCH WIDTH	W	2	2	2	2	2		
DITCH DEPTH	D	1	1	1	1	1		
TURNOUT LENGTH	L	25	25	25	25	25		
TURNOUT WIDTH	T	10	10	10	10	10		
TURNOUT TAPER	P	25	25	25	25	25		
GRUBBING	G1	5	5	5	5	5		
	G2	5	5	5	5	5		
CLEARING	C1	10	10	10	10	10		
	C2	10	10	10	10	10		
ROCK FILLSLOPE	K:1	1 ½	1 ½	1 ½	1 ½	1 ½		
❖ BALLAST DEPTH	B1	6	-	18	6	6		
CUBIC YARDS / STATION		34	-	114	34	34		
➤ TOTAL CY BALLAST		364	-	1139	400	182		
❖ SURFACING DEPTH	B2	-	-	-	-	-		
CUBIC YARDS / STATION		-	-	-	-	-		
➤ TOTAL CY SURFACING		-	-	-	-	-		
➤ TOTAL CUBIC YARDS		364	-	1139	400	182		
SUBGRADE WIDTH	S	13.5	15	16.5	13.5	13.5		
BRUSHCUT (Y/N)		N/A	Y	N/A	N/A	N/A		
BLADE, SHAPE, & DITCH (Y/N)		N/A	Y	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			Note: Galvanized metal culverts shall conform to the following specifications for gage and corrugation as a function of the diameter:		
												Diameter	Gage	Corrugation
		18"	16	2 2/3" x 1/2"	24" - 48"	14	2 2/3" x 1/2"	54" - 96"	14	3" x 1"				
ST-16	41+15	18	30	XX	-	-	2	3	L	NT				
ST-1605	14+79	18	30	XX	-	-	2	3	L	NT	Replace existing pipe.			
	20+21	18	30	XX	-	-	2	3	L	NT	Replace existing pipe.			
	72+82	18	30	XX	-	-	2	3	L	NT	Trench outlet.			
ST-1605-1005	2+73	18	30	XX	-	-	2	3	L	NT				
	3+41	24	40	XX	-	-	5	10	H/L	NT	Stream crossing.			
	6+51	18	30	XX	-	-	4	3	L	NT				
	7+33	24	40	XX	-	-	4	6	H/L	NT	Stream crossing.			
	8+34	18	30	XX	-	-	2	3	L	NT				
	9+17	24	36	XX	-	-	4	6	H/L	NT	Stream crossing.			
ST-1605-08	0+64	18	30	XX	-	-	2	3	L	NT				
	3+61	18	30	XX	-	-	2	3	L	NT				
	4+85	36	40	XX	-	-	10	15	H/L	NT	Stream crossing.			
	6+61	18	30	XX	-	-	2	3	L	NT				
	7+84	24	36	XX	-	-	4	6	H/L	NT	Stream crossing.			

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.

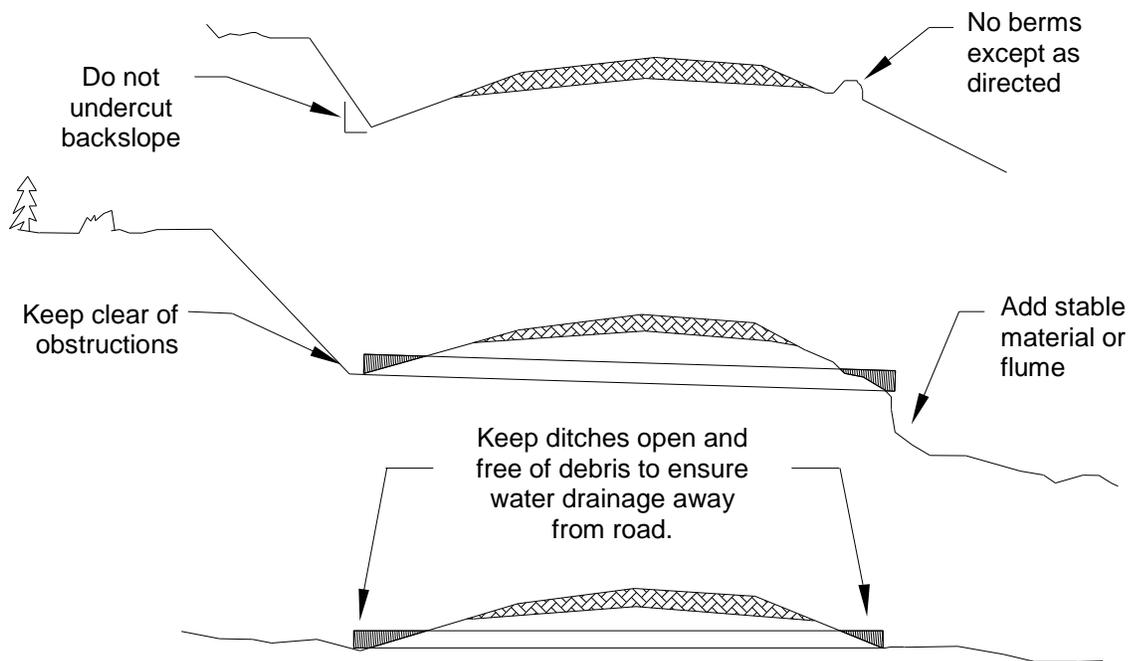
FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Termination of Use or End of Season

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

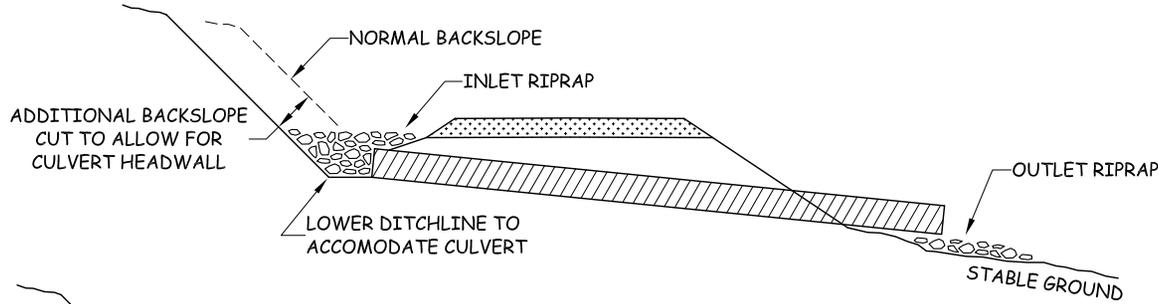
Debris

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

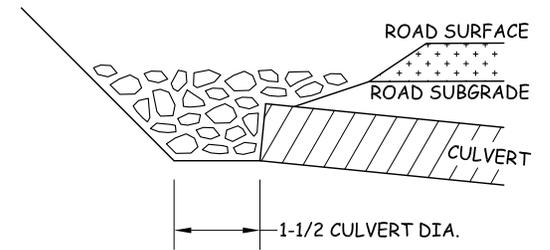


CULVERT AND DRAINAGE SPECIFICATIONS

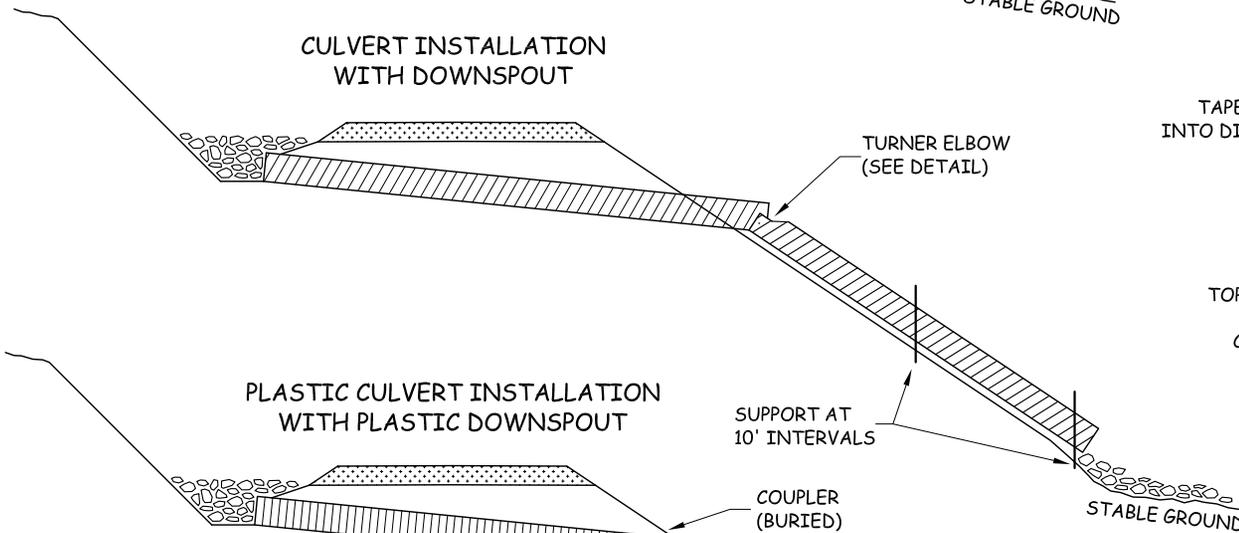
CULVERT INSTALLATION (TYPICAL)



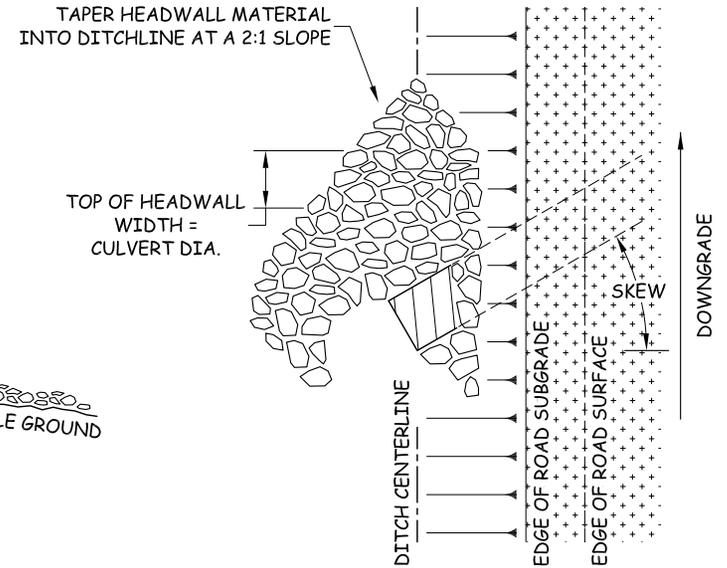
CULVERT HEADWALL - SECTION VIEW



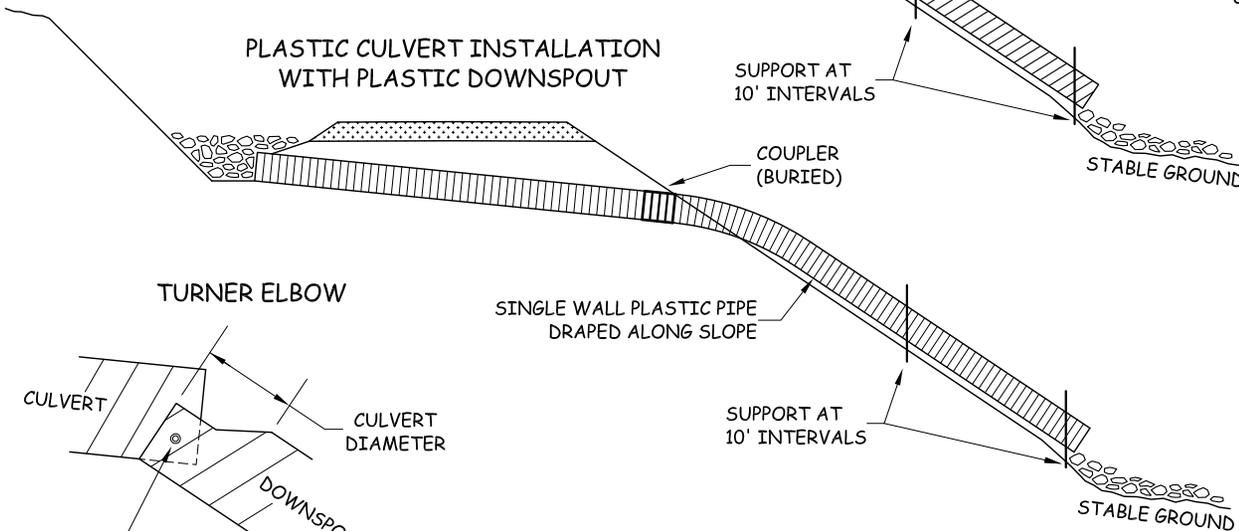
CULVERT INSTALLATION WITH DOWNSPOUT



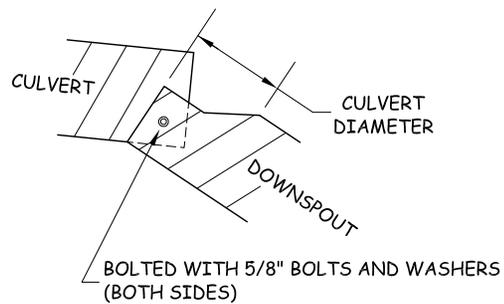
CULVERT HEADWALL - PLAN VIEW



PLASTIC CULVERT INSTALLATION WITH PLASTIC DOWNSPOUT



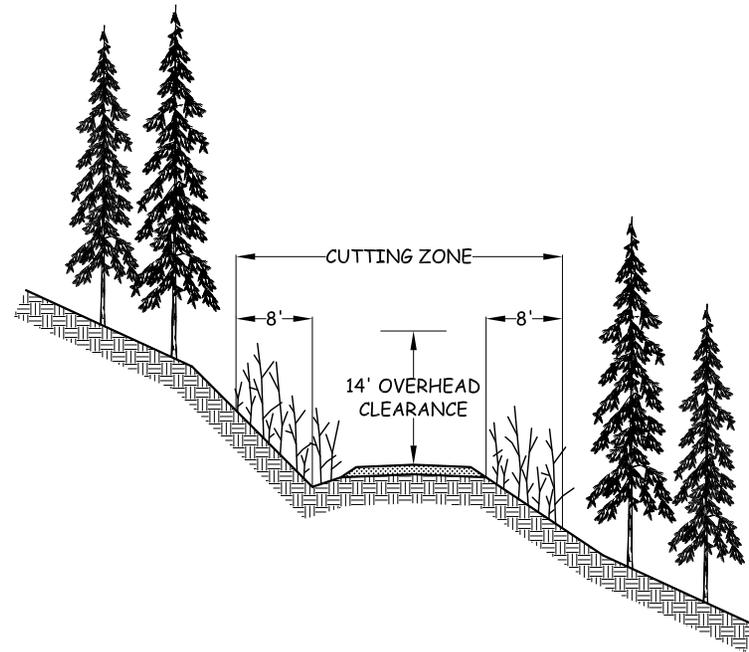
TURNER ELBOW



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

CONTRACT #	PROJECT	SHEET
30-093486	JUMPIN JACK	28 OF 30

ROAD BRUSHING DETAILS



SPECIFICATIONS

BRUSH SHALL BE CUT ON THE ROAD SURFACE AND 8 ft. BACK FROM ROAD DITCH AND OUTSIDE EDGE OF RUNNING SURFACE.

ON THE INSIDE OF SWITCHBACKS AND TIGHT CURVES, BRUSH SHALL BE CUT BACK 16 ft. FOR VISIBILITY.

ON TRUCK TURNOUTS, BRUSH SHALL BE CUT 8 ft. BACK FROM OUTSIDE EDGE.

BRUSH SHALL BE CUT TO PROVIDE AN OVERHEAD CLEARANCE OF 14 ft. ABOVE THE ROAD RUNNING SURFACE.

BRUSH SHALL BE CUT TO WITHIN 6 in. OF THE GROUND.

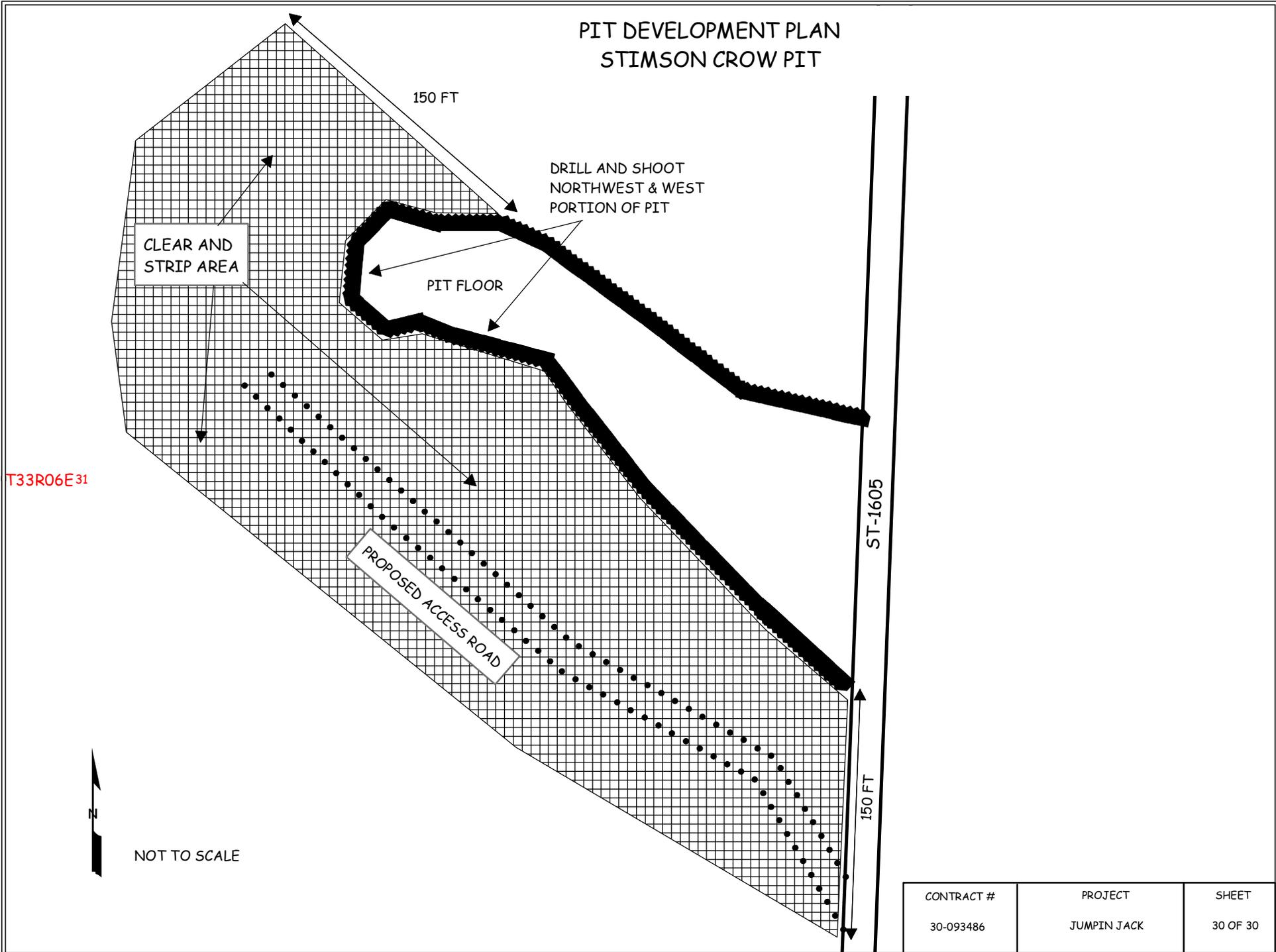
SLASH SHALL BE REMOVED FROM CUT SLOPES ABOVE THE ROAD AND SCATTERED ON EMBANKMENT SLOPES.

DITCHES SHALL BE CLEARED OF WOODY DEBRIS.

CULVERT INLETS AND OUTLETS SHALL BE CLEANED A MINIMUM DISTANCE OF TWO PIPE DIAMETERS AWAY.

CONTRACT # 30-093486	PROJECT JUMPIN JACK	SHEET 29 OF 30
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PIT DEVELOPMENT PLAN STIMSON CROW PIT



CONTRACT #	PROJECT	SHEET
30-093486	JUMPIN JACK	30 OF 30

SUMMARY - Road Development Costs

REGION: NW
DISTRICT: Cascade

SALE/PROJECT NAME: Jumpin Jack

CONTRACT #: 30-093486

ROAD NUMBERS:

ROAD STANDARD:	Construction	Reconstruction	Pre-haul
NUMBER OF STATIONS:	35.45	3.35	294.41
CLEARING & GRUBBING:	\$10,395	\$0	\$0
EXCAVATION AND FILL:	\$5,687	\$0	\$0
MISC. MAINTENANCE:	\$251	\$133.24	\$36,475
ROAD ROCK:	\$15,074	\$0	\$10,234
ROCK STOCKPILE PROD:	\$0	\$0	\$0
CULVERTS AND FLUMES:	\$11,271	\$0	\$1,048
STRUCTURES:	\$0	\$0	\$0
MOBILIZATION:	\$1,514	\$13.32	\$3,727
TOTAL COSTS:	\$44,191	\$146.56	\$51,485
COST PER STATION:	\$1,247	\$44	\$175
ROAD DEACTIVATION & ABANDONMENT COSTS:		\$0	

TOTAL (All Roads) =	\$95,822
SALE VOLUME MBF =	5,500
TOTAL \$/MBF =	\$17

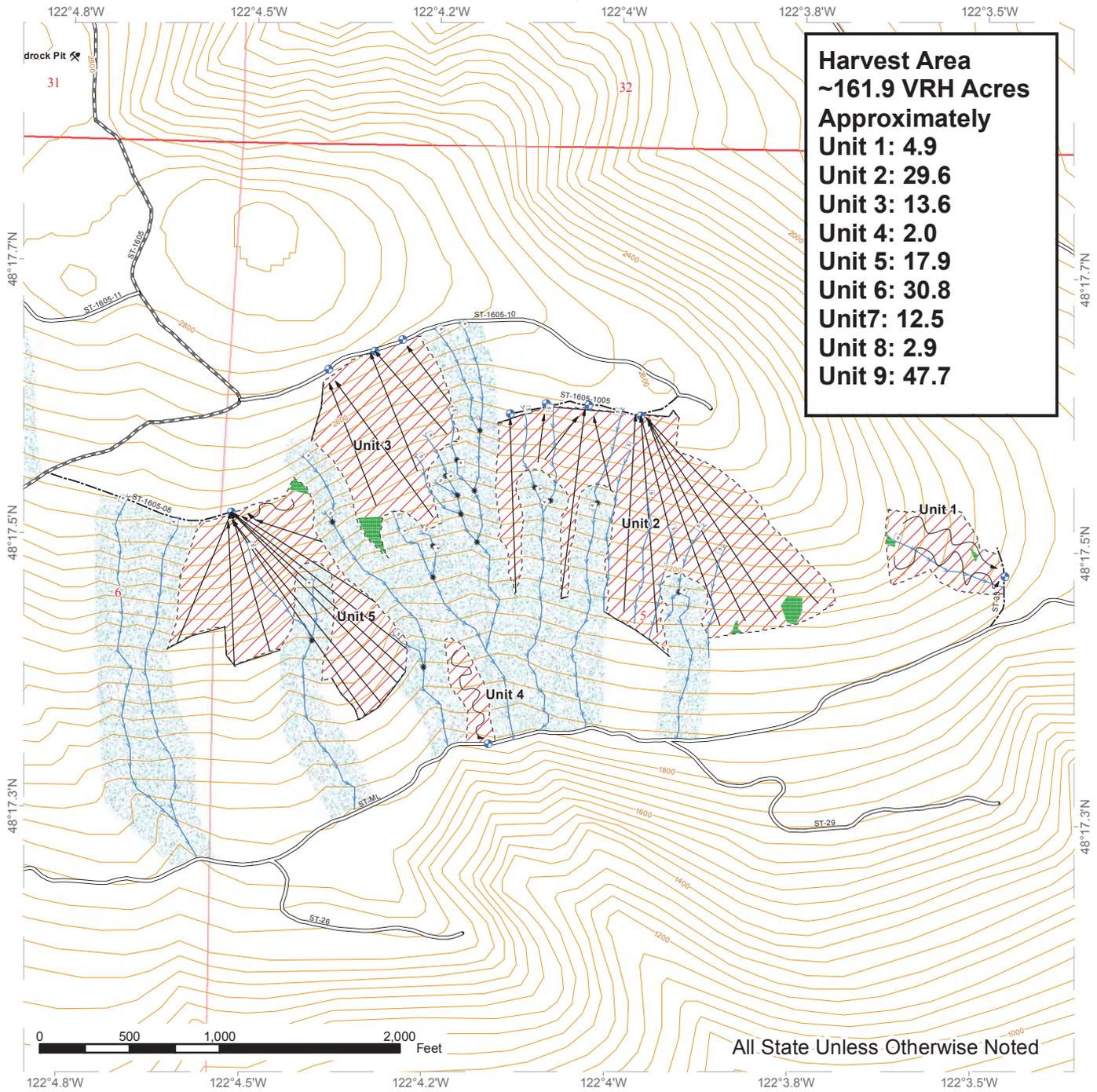
Compiled by: M. Connelly

Date: 06/22/16

LOGGING PLAN MAP

SALE NAME: JUMPIN JACK
AGREEMENT#: 93486
TOWNSHIP(S): T32R06E, T33R05E, T32R05E
TRUST(S): State Forest Transfer(1), Common School and Indemnity(3)

REGION: Northwest Region
COUNTY(S): SKAGIT, SNOHOMISH
ELEVATION RGE: 1683-2745



Harvest Area
~161.9 VRH Acres
Approximately
Unit 1: 4.9
Unit 2: 29.6
Unit 3: 13.6
Unit 4: 2.0
Unit 5: 17.9
Unit 6: 30.8
Unit 7: 12.5
Unit 8: 2.9
Unit 9: 47.7

All State Unless Otherwise Noted

Legend:

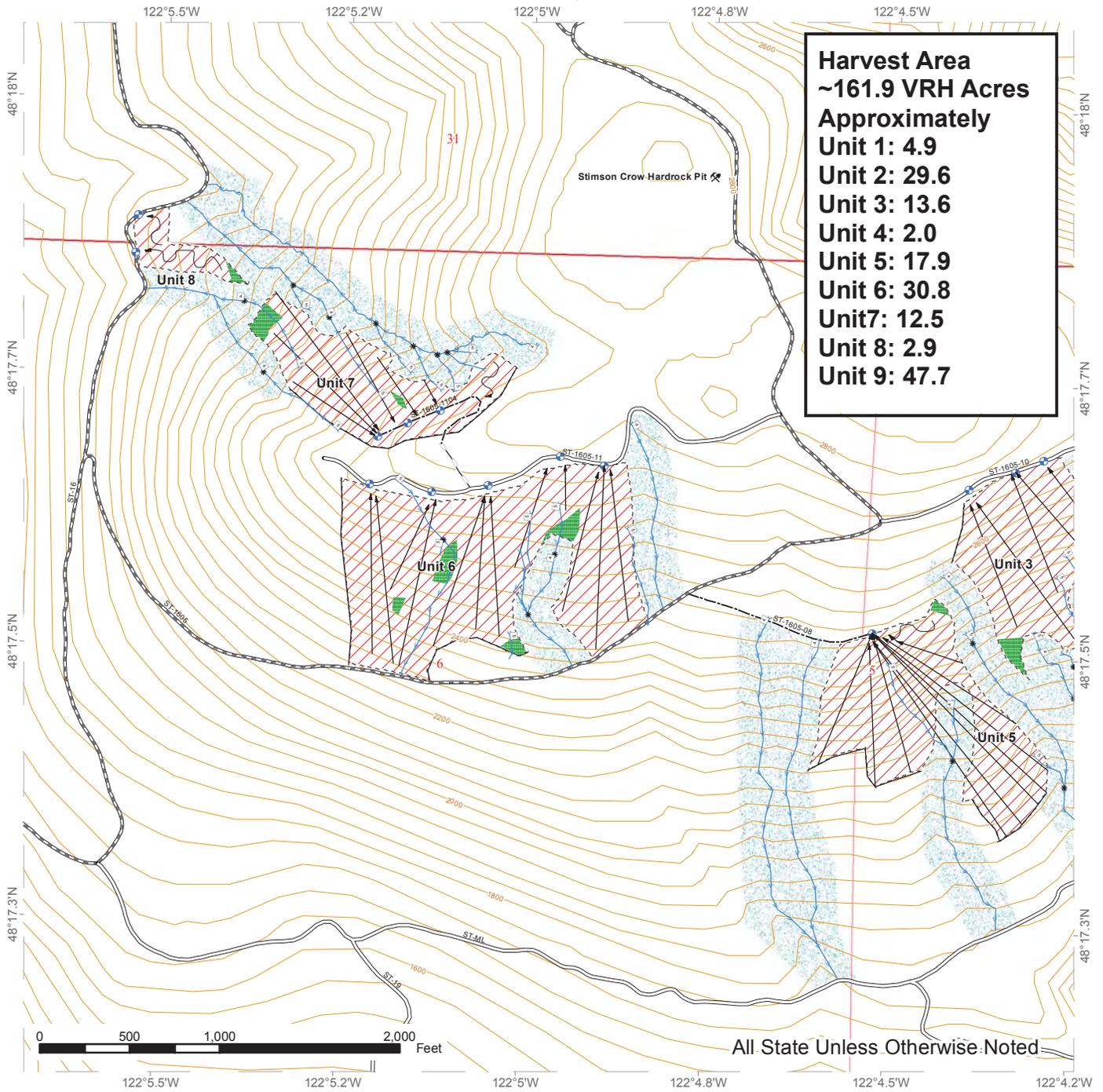
Sale Area (VRH)	Stream Break
Leave Tree Clump	Existing Rock Pit
RMZ	Landing - Proposed
Sale Boundary Tags	Cable Harvest
Sale Boundary (No Tags)	Ground Harvest
Existing Roads	
Required Pre-Haul Maintenance	
Optional Construction	
Stream	



LOGGING PLAN MAP

SALE NAME: JUMPIN JACK
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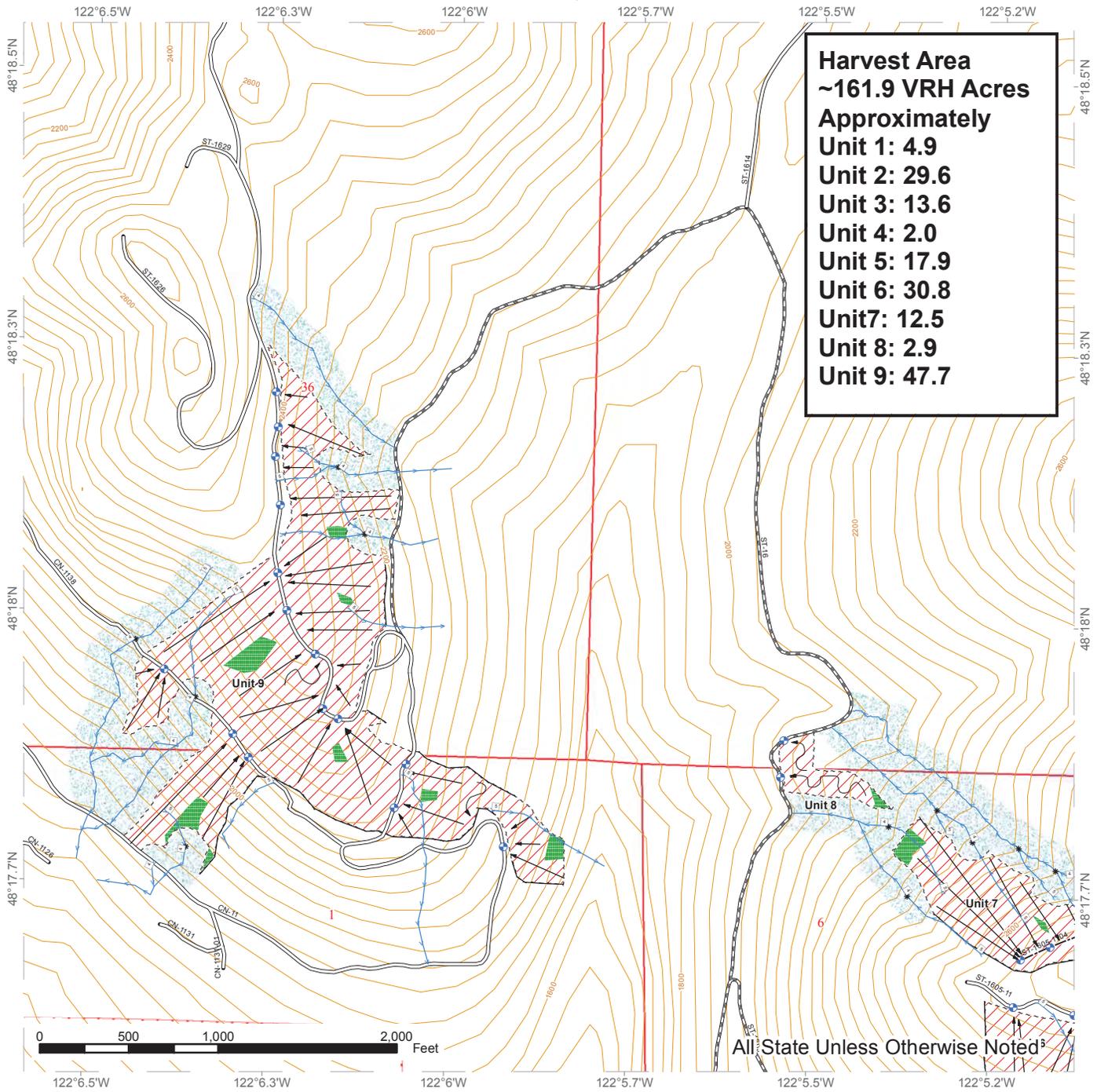
Sale Area (VRH)	Stream
Leave Tree Clump	Stream Break
RMZ	Existing Rock Pit
Sale Boundary Tags	Landing - Proposed
Sale Boundary (No Tags)	Cable Harvest
Existing Roads	Ground Harvest
Required Pre-Haul Maintenance	
Optional Construction	
Optional Reconstruction	



LOGGING PLAN MAP

SALE NAME: JUMPIN JACK
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All State Unless Otherwise Noted²

Legend:

Sale Area (VRH)	Stream Break
Leave Tree Clump	Landing - Proposed
RMZ	Cable Harvest
Sale Boundary Tags	Ground Harvest
Sale Boundary (No Tags)	
Existing Roads	
Required Pre-Haul Maintenance	
Optional Construction	
Stream	

