



TIMBER NOTICE OF SALE

SALE NAME: DICKEY MOUNTAIN

AGREEMENT NO: 30-093926

AUCTION: November 16, 2016 starting at 10:00 a.m., COUNTY: Clallam
Olympic Region Office, Forks, WA

SALE LOCATION: Sale located approximately 11 miles - 22 northwest of Forks, WA

PRODUCTS SOLD AND SALE AREA: All timber except trees marked with a band of blue paint or bounded out by leave tree area tags, bounded by timber sale boundary tags and the RY-9000 Road in Units 1, 2 and 9; timber sale boundary tags, the RY-9000 Road and the RY-9500 Road in Unit 4; timber sale boundary tags in Units 3, 9, 16 and 18; timber sale boundary tags and timber type changes in Units 5, 6, 7, 8, 10, 11, 12, 13, 17 and 18; timber sale boundary tags, timber type changes and orange blazed lines in Units 14 and 15; all timber bounded by right of way boundary tags on part(s) of Sections 8 all in Township 29 North, Range 14 West, Sections 10 and 22 all in Township 30 North, Range 14 West, Sections 3, 4, 5, 13 and 16 all in Township 30 North, Range 13 West, W.M., containing 199 acres, more or less.

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

ESTIMATED SALE VOLUMES AND QUALITY:

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

MINIMUM BID: \$1,051,000.00 BID METHOD: Sealed Bids

PERFORMANCE SECURITY: \$100,000.00 SALE TYPE: Lump Sum

EXPIRATION DATE: October 31, 2018 ALLOCATION: Export Restricted

BID DEPOSIT: \$105,100.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: 20% - Cable/80% - Ground - no rubber tire skidders unless skid trail and rutting requirements can be met and a harvest plan is submitted and approved. Falling and Yarding will not be permitted from October 15 to April 15 in Units 1 and 2 and from October 15 to June 15 in Units 3, 7 and 13 unless authorized in writing by the Contract Administrator

ROADS: 6.90 stations of required construction. 56.10 stations of optional construction. 34.5 stations of required pre-haul maintenance. 126.05 stations of optional pre-haul



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maintenance. 22.00 stations of required deactivation. Road construction will not be permitted from October 15 to June 15 unless authorized in writing by the Contract Administrator on the 4+75 Spur and 5+89 spur and pre-haul maintenance on the 10+45 spur; all activities are restricted from October 15 through April 15 on the 0+65 Spur, 1+10 Spur, and the 0+75 Spur. Purchaser shall complete pre-haul maintenance and construction on the RY-9501.1 by December 31, 2017. All construction and deactivation work on the 4+75 Spur, 5+89 Spur and 10+45 Spur must be completed before October 15, 2018. The three temporary fish pipes must be installed and removed between June 15 and October 15 and must be removed in the same hydraulic season they are installed. The RY-9000 Road may be closed during right of way harvest and haul for no more than 30 minutes at a time and must remain open overnight and on weekends. See Road Plan for details on bridgework on the RY-9500.

ACREAGE DETERMINATION

CRUISE METHOD: Sale acreage was 99% GPS'd and 1% photo traversed. Sale units were cruised using a variable plot sample.

FEES: On day of sale, Purchaser must provide the DNR with a cashier's check made payable to Rayonier, in the amount of \$108,955.15 for a Road Use Permit. \$125,173.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

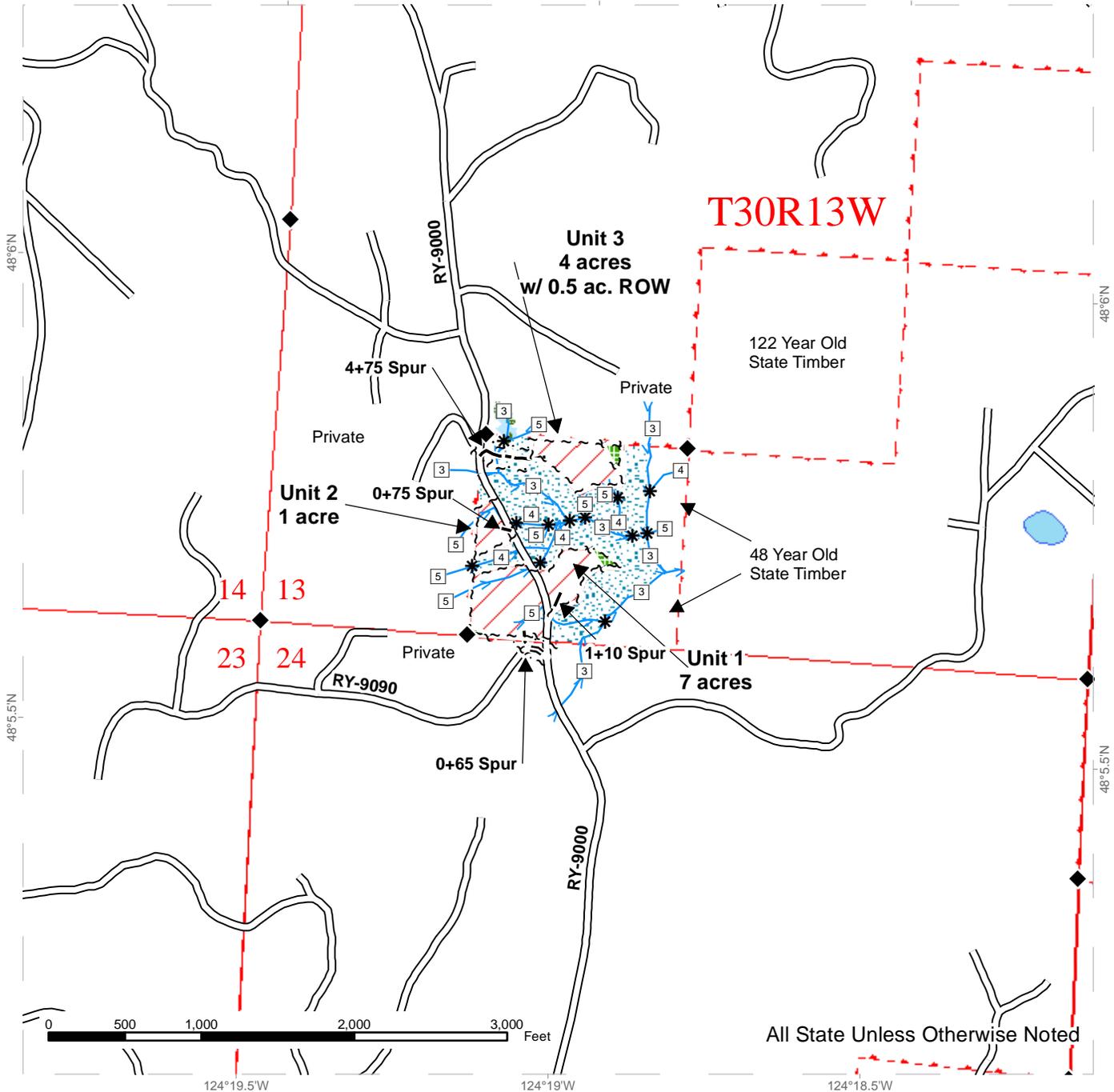
SPECIAL REMARKS: There are locked gates on the RY-9000, RY-9500, D-5000, D-5230, 47E, Mora Pit, Elk Valley Pit and Mary Clark Pit - contact the Olympic Region Dispatch Center at 360-374-2811 to obtain a AA1 key.

TIMBER SALE MAP

SALE NAME: DICKEY MOUNTAIN
AGREEMENT #: 30-093926
TOWNSHIP(S): T29R14W, T30R13W, T30R14W
TRUST(S): State Forest Transfer(1), Common School and Indemnity(3), Agricultural School(4), Capitol Grant(7)

REGION: Olympic Region
COUNTY(S): CLALLAM
ELEVATION RGE: 106-822

124°19.5'W 124°19'W 124°18.5'W



All State Unless Otherwise Noted

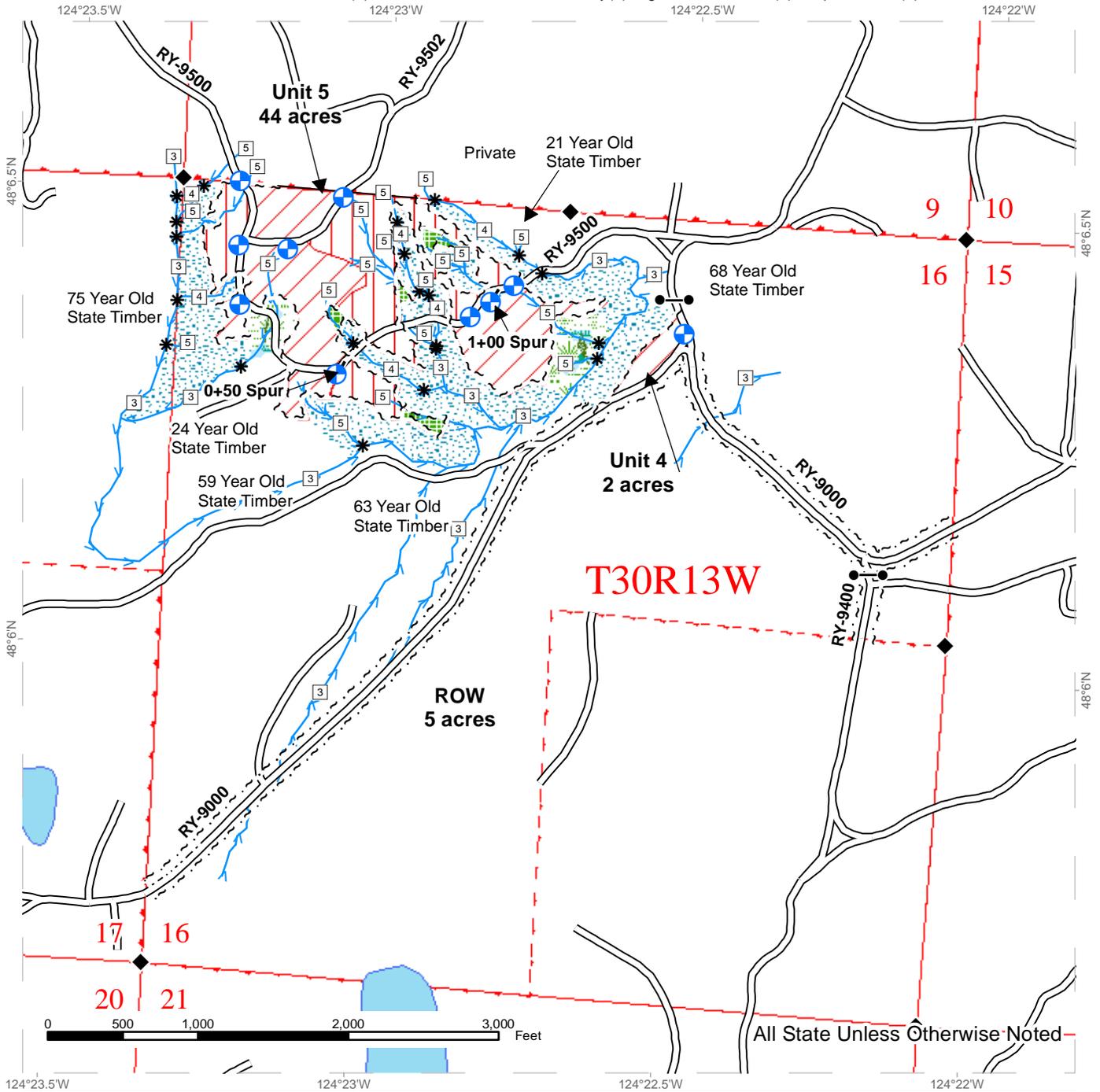
Ground	Existing Roads	Timber Sale Boundary Tags
Cable	Optional Construction	Leave Tree Area Tags
Leave Tree Area	Optional Pre-Haul Maintenance	Right of Way Tags
Riparian Management Zone	Required Construction	Timber Type Change
Forested Wetland	Required Pre-Haul Maintenance	Orange Blaze
Wetland Management Zone	Streams	Landing - Proposed
Open Water	Stream Type	Existing Rock Pit
DNR Managed Lands	Stream Type Break	Gate (AA-1)
	Monumented Corners	



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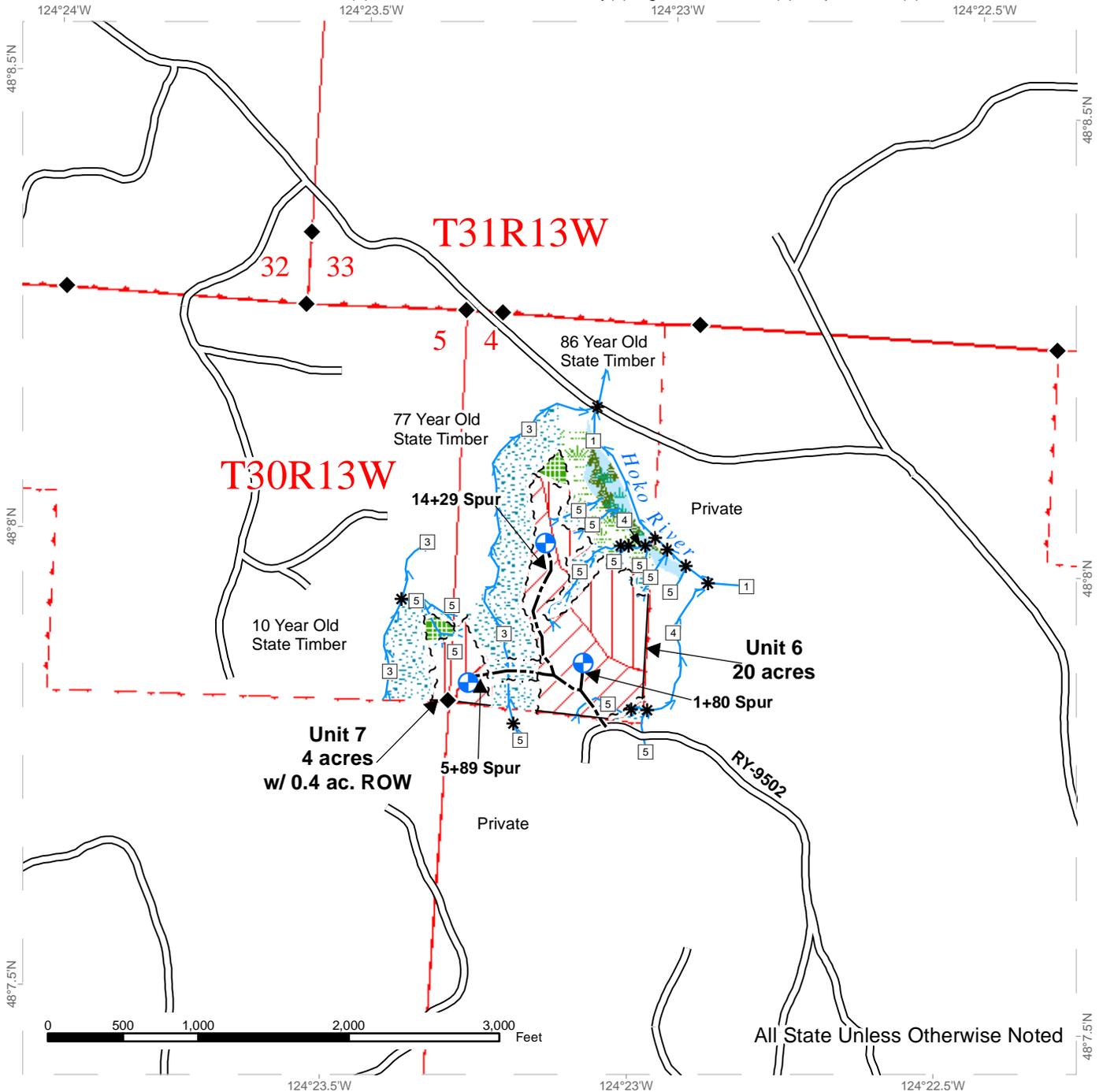
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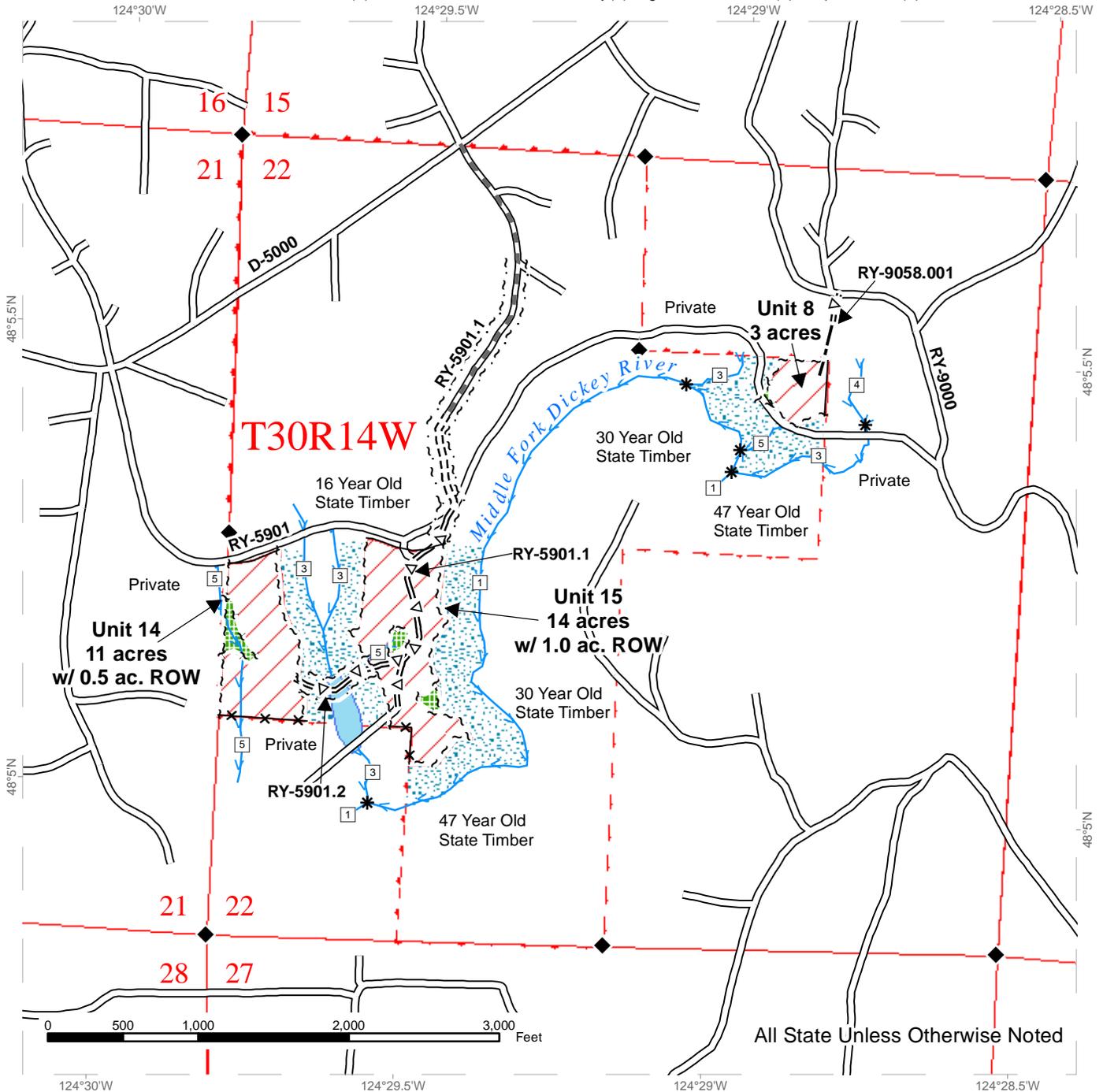
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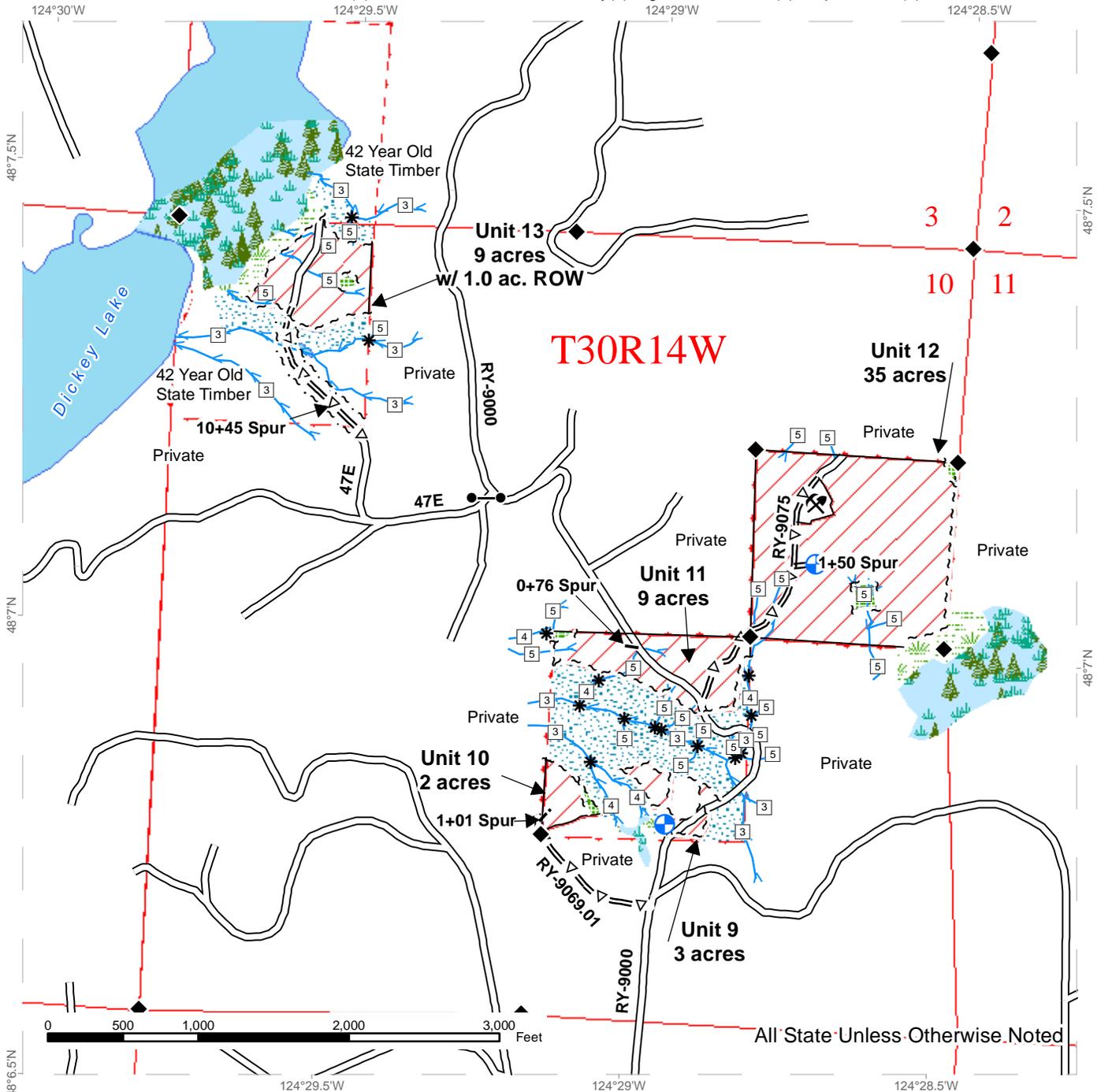
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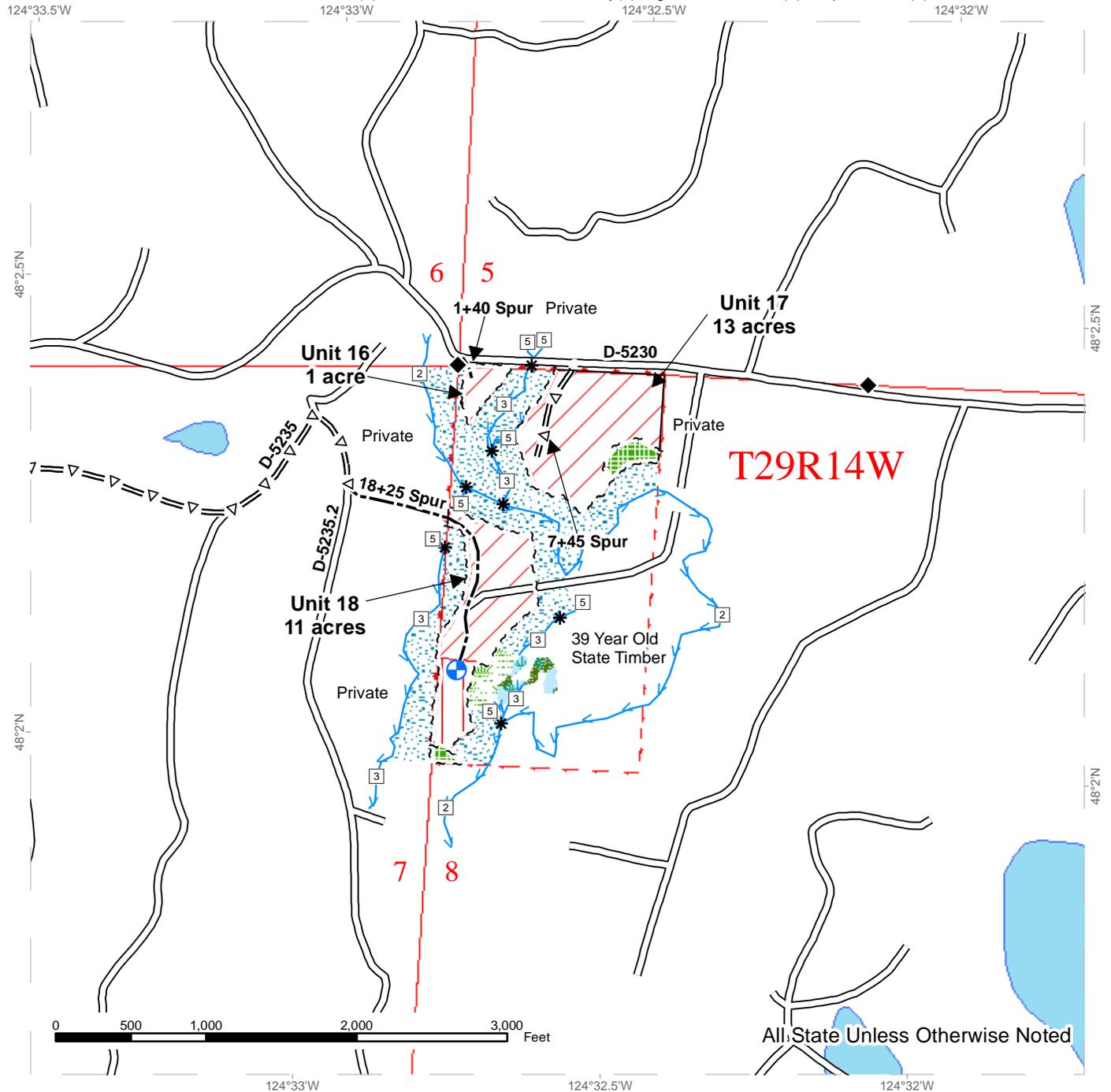
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REGION: Olympic Region
COUNTY(S): CLALLAM
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T29R14W

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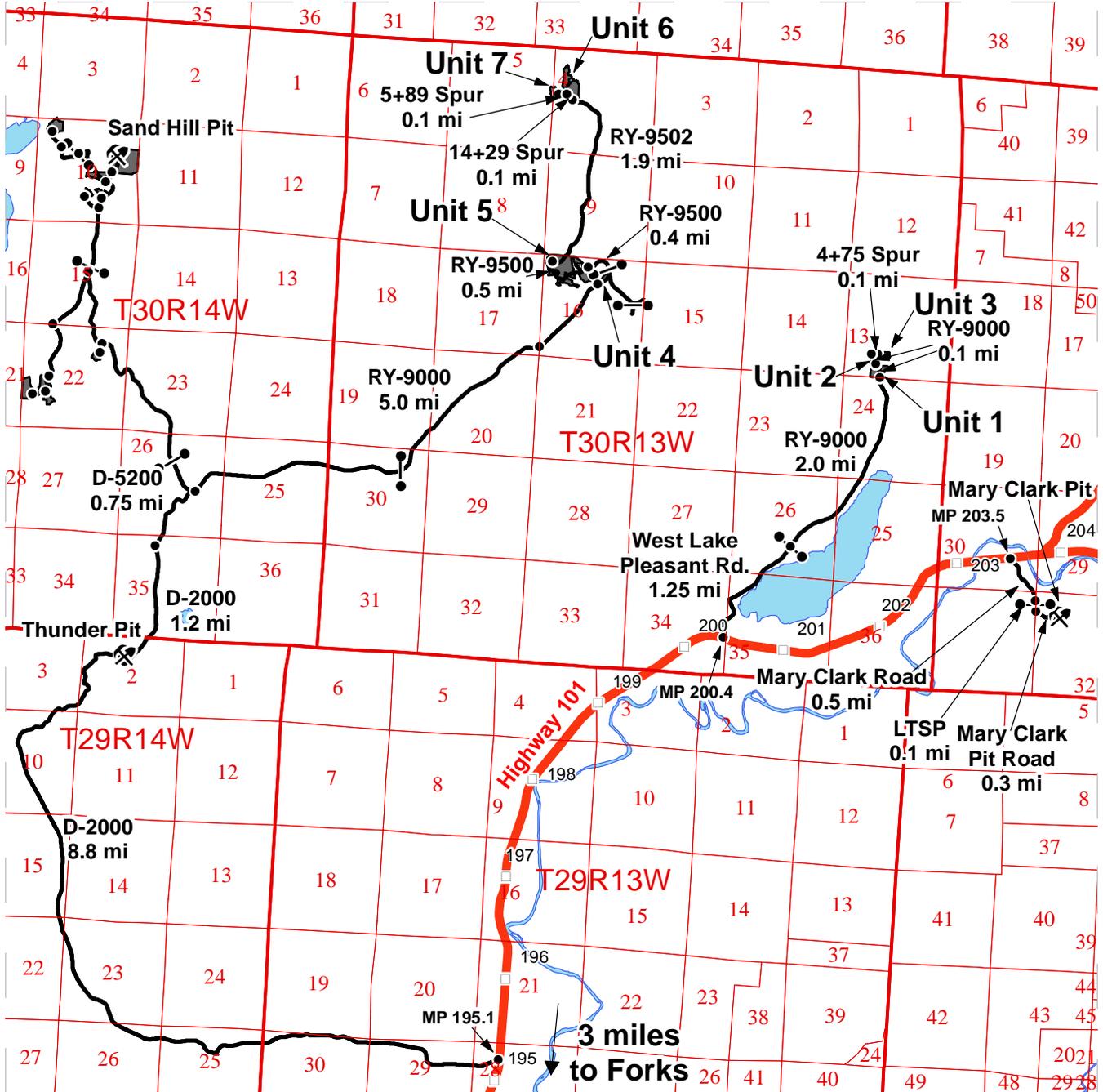
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DRIVING MAP

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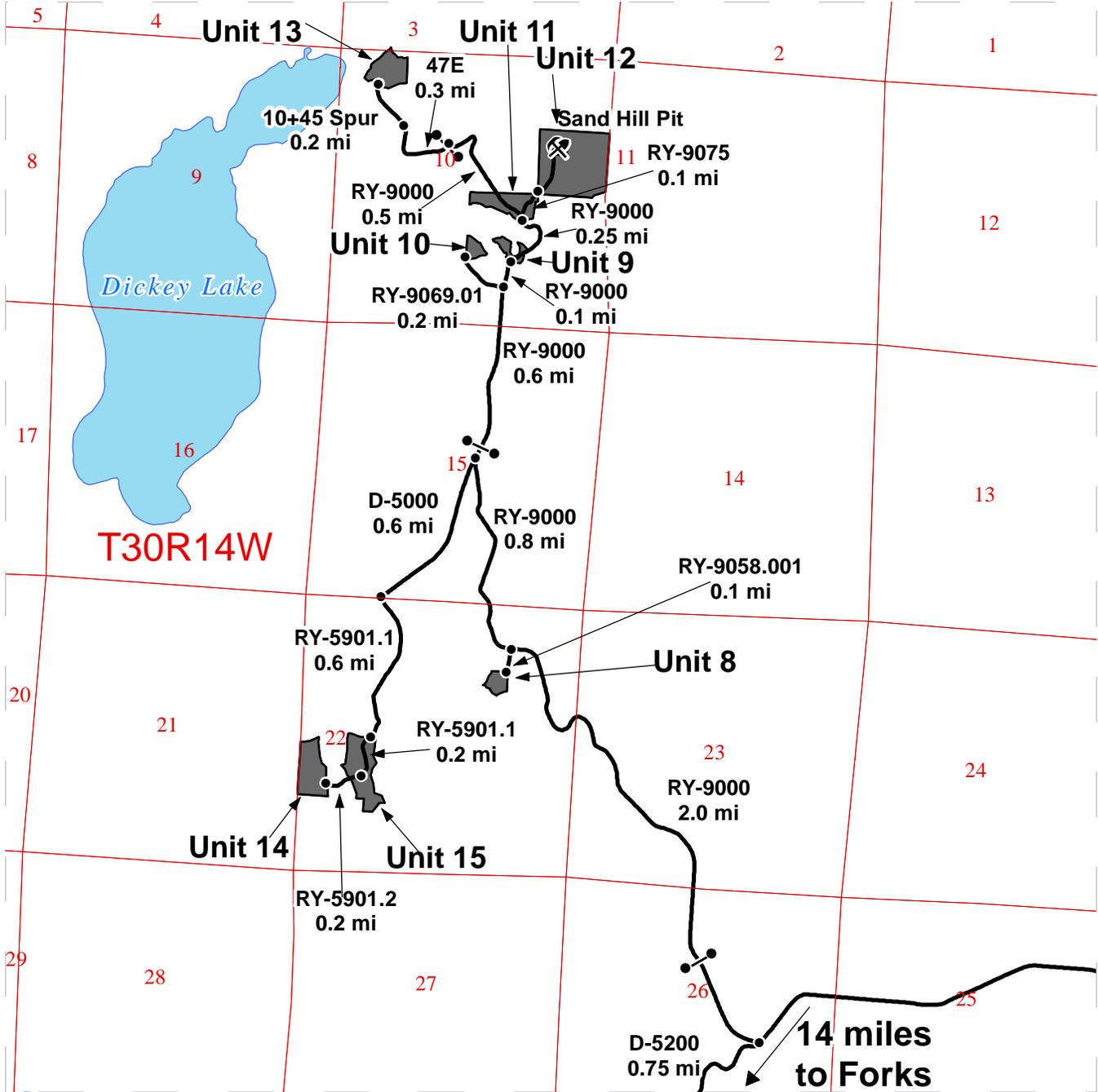
	Timber Sale Unit
	Highways
	Haul Route
	Milepost Markers
	Distance Indicator
	Existing Rock Pit
	Gate

DRIVING DIRECTIONS:
Units 1-3: From Forks, travel 8 miles north to West Lake Pleasant Road at MP 200.4 and turn left. Continue for 1.25 miles and go through the gate (AA-1) on to the RY-9000. Continue for 2.0 miles to Unit 1. Continue on the RY-9000 for 0.1 miles and Unit 2 is on the left. Continue on the RY-9000 for 0.1 miles and turn right on to the 4+75 Spur and travel for 0.1 miles into Unit 3.
Units 4-7 and Thunder Pit: From Forks, travel 3 miles north to the D-2000 at MP 195.1 and turn left. Continue for 8.8 miles to Thunder Pit. Continue on the D-2000 for 1.2 miles to the D-5200 and turn right. Continue for 0.75 miles and turn right on to the RY-9000. Continue for 5.0 miles (through gate AA-1) to Unit 4 on the left and turn left on to the RY-9500 (ROW continues on RY-9000 and RY-9400 for 0.5 miles). Go through the gate (AA-1) and continue for 0.4 miles to Unit 5. Continue on the RY-9500 for 0.5 miles and turn right on to the RY-9502. Continue for 1.9 miles and turn right on to the 14+29 Spur into Unit 6. Continue for 0.1 miles and turn left on to the 5+89 Spur. Continue for 0.1 miles into Unit 7.
Mary Clark Pit: From Forks, drive 11.5 miles north to Mary Clark Road at MP 203.5 and turn right. Travel 0.5 miles to LTSP and turn right through gate (AA-1). Drive 0.1 miles to Mary Clark Pit Road into the pit.

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- Timber Sale Unit
- Haul Route
- Distance Indicator
- Existing Rock Pit
- Gate

DRIVING DIRECTIONS:

Units 8-13 and Sand Hill Pit: From Forks, travel 3 miles north to the D-2000 at MP 195.1 and turn left. Continue for 10.0 miles to the D-5200 and turn right. Continue for 0.75 miles and turn left on to the RY-9000. Continue for 2.0 miles (through gate AA-1) and turn left on to the RY-9058.001 for 0.1 miles into Unit 8. Continue on the RY-9000 for 1.4 miles and turn left on to the RY-9069.01 and drive 0.2 miles to Unit 10. Continue on the RY-9000 for 0.1 miles to Unit 9. Continue on the RY-9000 for 0.25 miles to Unit 11. Turn right on the RY-9075 and drive for 0.1 miles to Unit 12. Continue on the RY-9075 for 0.2 miles to Sand Hill Pit. From the RY-9000, continue for 0.5 miles and turn left on to the 47E through the gate(AA-1). Continue for 0.3 miles and turn right on to the 10+45 Spur and drive for 0.2 miles to Unit 13.

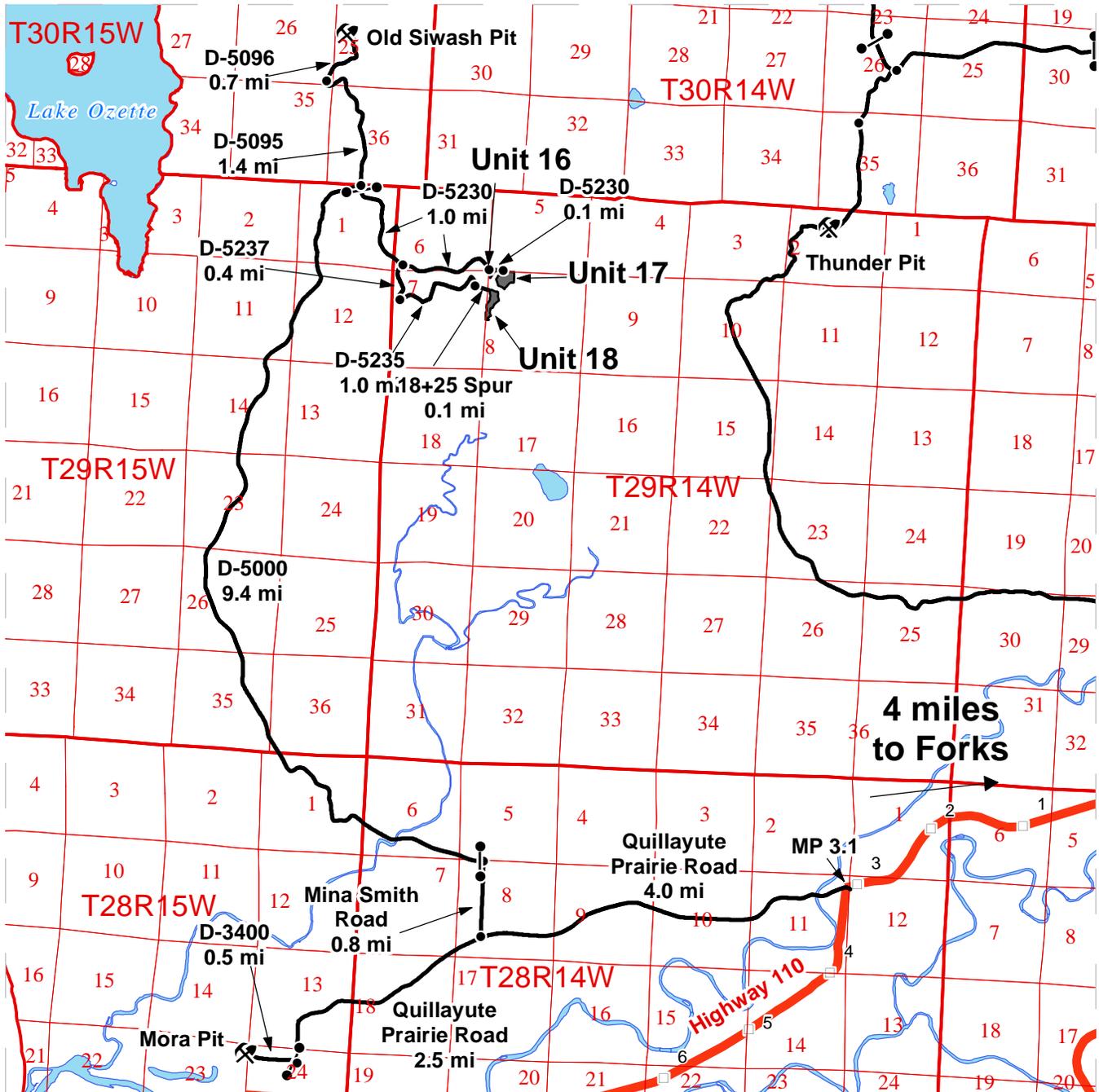
Units 14 and 15: From the RY-9000 and D-5000 junction, travel south on the D-5000 for 0.6 miles. Turn left on to the RY-5901.1 and continue for 0.6 miles to Unit 15. Continue on the RY-5901.1 for 0.2 miles and turn right on to the RY-5901.2 and continue for 0.2 miles to Unit 14.



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DRIVING DIRECTIONS:

Units 16-18: From Forks, travel one mile north to Highway 110 and turn left. Continue for 3.1 miles to MP 3:1 and turn right on to Quillayute Prairie Road. Continue for 4.0 miles and turn right on to Mina Smith Road. Continue for 0.8 miles and turn left on to the D-5000 through gate (AA-1). Continue for 9.4 miles and turn right on to the D-5230 through gate (AA-1). Continue for 2.0 miles and Unit 16 is on the right. Continue on the D-5230 for 0.1 miles and Unit 17 is on the right. From the D-5230 and D-5000 junction, drive 1.0 miles and turn right on to the D-5237. Continue for 0.4 miles and turn left on to the D-5235. Continue for 1.0 miles and turn left on to the 18+25 Spur and drive 0.1 miles to Unit 18.

Mora Pit: From the Mina Smith Road, turn right (west) on to Quillayute Prairie Road and drive 2.5 miles. Turn right on to the D-3400 (gate AA-1) and travel 0.5 miles to Mora Pit.

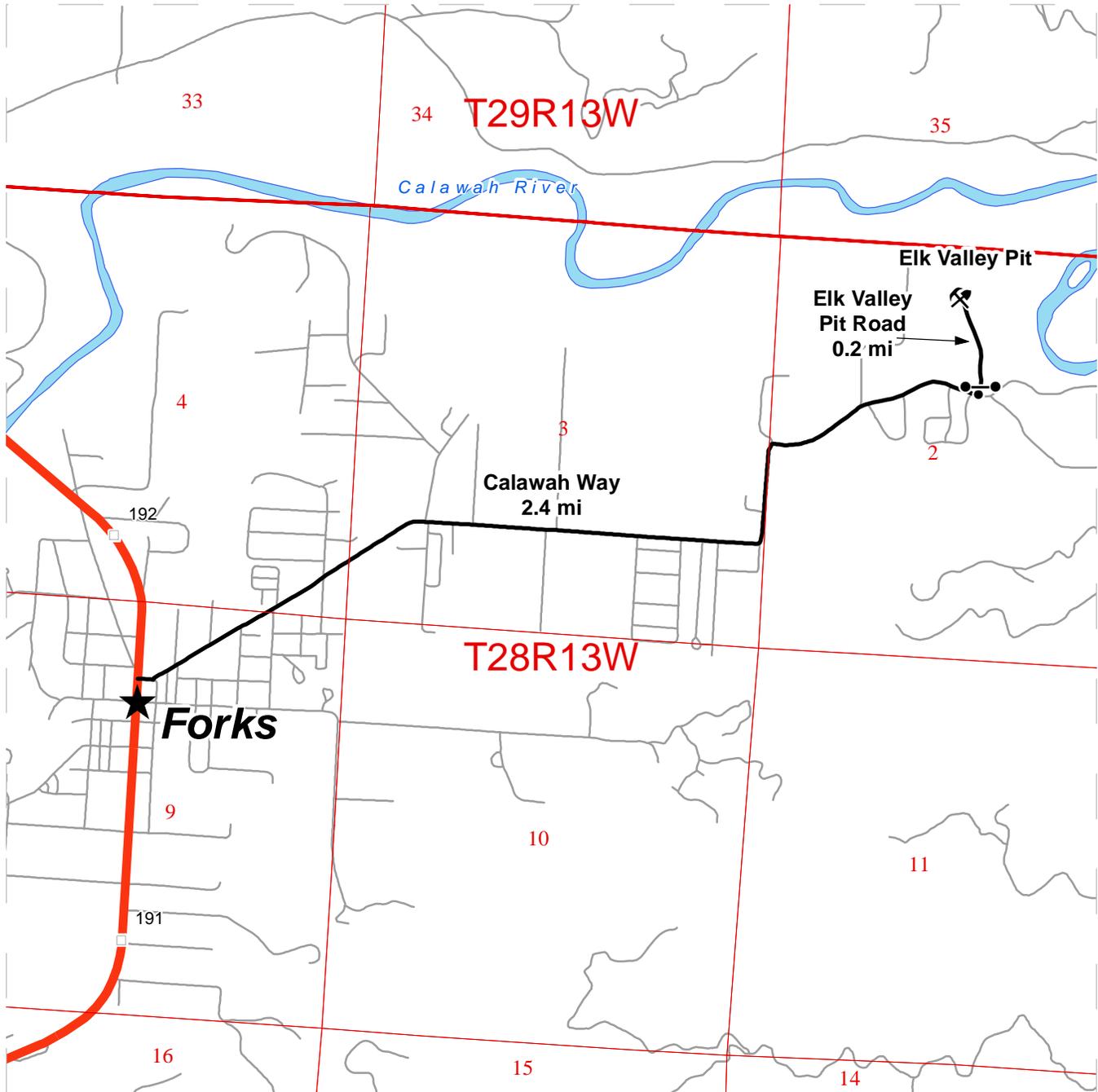
Old Siwash Pit: From the D-5230, drive straight on to the D-5095. Continue for 1.4 miles and turn right on to the D-5096. Continue for 0.7 miles to Old Siwash Pit.



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- Highways
- Haul Route
- Other Route
- Milepost Markers
- Distance Indicator
- ⚒ Existing Rock Pit
- ★ Town
- Gate

DRIVING DIRECTIONS:

Elk Valley Pit:
 From Forks, turn on to Calawah Way and drive 2.4 miles. Turn left on to Elk Valley Pit Road (gate AA-1) and drive 0.2 miles to Elk Valley Pit.



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Lump Sum AGREEMENT NO. 30-093926

SALE NAME: DICKEY MOUNTAIN

**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 except trees marked with a band of blue paint or bounded out by leave tree area tags, bounded by timber sale boundary tags and the RY-9000 Road in Units 1, 2 and 4; by timber sale boundary tags in Units 3, 9, 16 and 18; by timber sale boundary tags and timber type changes in Units 5, 6, 7, 8, 10, 11, 12, 13 and 17; by timber sale boundary tags, timber type changes and orange blazed lines in Units 14 and 15; all timber bounded by right of way boundary tags, located on approximately 199 acres on part(s) of Sections 2, and 8 all in Township 29 North, Range 14 West, Sections 10, and 22 all in Township 30 North, Range 14 West, Sections 3, 4, 5, 13, and 16 all in Township 30 North, Range 13 West W.M. in Clallam 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 also eligible for removal under the terms of this contract.

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

G-020 Inspection By Purchaser

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

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	SLASH PILING SPECS
B	GREEN TREE RETENTION PLAN

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2018.

G-040 Contract Term Adjustment - No Payment

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

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

G-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 \$641.00 per acre per annum for the acres on which an operating release has not been issued.
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

G-053 Surveys - Sensitive, Threatened, Endangered Species

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

G-060 Exclusion of Warranties

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

- a. The MERCHANTABILITY of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.
- b. The CONDITION of the forest products. The forest products will be conveyed "AS IS."
- c. The ACREAGE contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.
- d. The VOLUME, QUALITY, OR GRADE of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.
- e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL

OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE.
These documents have been prepared for the State's appraisal purposes only.

- f. THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any threatened or endangered species, or the presence of their habitat, within the sale area.
- g. THAT THE FORESTRY OPERATIONS to be performed under this contract WILL BE FREE FROM REGULATORY ACTIONS by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.
- h. Items contained in any other documents prepared for or by the State.

G-062 Habitat Conservation Plan

The State has entered into a Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services) to address state trust land management issues relating to compliance with the Federal Endangered Species Act. The activities to be carried out under this contract are located within the State's HCP area and are subject to the terms and conditions of the HCP, and the Services' Incidental Take Permit Nos. 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.

The pricing schedule has not been set for the sale.

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 Forks, Washington. The Region Manager will notify Purchaser in writing who is responsible for administering the contract. The Region Manager has sole authority to waive, modify, or amend the terms of this contract in the manner prescribed in clause G-180. No agent, employee, or representative of the State has any authority to bind the State to any affirmation, representation, or warranty concerning the forest products conveyed beyond the terms of this contract.

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

G-170 Assignment and Delegation

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

G-180 Modifications

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

G-190 Contract Complete

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

G-200 Notice

Notices required to be given under the following clauses shall be in writing and shall be delivered to Purchaser's authorized agent or sent by certified mail to Purchaser's 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; D-2000, D-5000, D-5230, D-5235, D-5235.2, D-5237, RY-5901, RY-5901.1, RY-5901.2, RY-9000, RY-9058.001, RY-9069.01, RY-9075, RY-9090, RY-9400, RY-9500, RY-9502, 47E, 0+65 Spur, 0+75 Spur, 0+76 Spur, 1+00 Spur, 1+01 Spur, 1+10 Spur, 1+40 Spur, 1+50 Spur, 1+80 Spur,

4+75 Spur, 5+89 Spur, 7+45 Spur, 10+45 Spur, 14+29 Spur, 18+25 Spur, and the access roads for the Mary Clark, Elk Valley, Mora, Thunder, Sand Hill and Siwash Pits. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

G-330 Pre-work Conference

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

G-340 Preservation of Markers

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

G-360 Road Use Reservation

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

G-370 Blocking Roads

Purchaser shall not block the RY-9000, RY-9500, D-5000 or the D-5230 (the RY-9000 Road may be closed during right of way harvest and haul for no more than 30 minutes at a time and must remain open overnight and on weekends), unless authority is granted in writing by the Contract Administrator.

G-380 Road Easement and Road Use Permit Requirements

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

Easement #50-00050 with Rayonier, dated XXXXX.

RUP with Rayonier, dated XXXX.

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 \$188,641.00. The total contract price consists of a \$0.00 contract bid price plus \$188,641.00 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 \$0.00. 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

Falling and Yarding will not be permitted from October 15 to April 15 in Units 1, 2 and 13 unless authorized in writing by the Contract Administrator.

H-013 Reserve Tree Damage Definition

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

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

- a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 100 square inches.
- b. A reserve tree top is broken or the live crown ratio is reduced below 30 percent.

- c. A reserve tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.

If the Contract Administrator determines that a reserve tree has been cut or damaged, the Purchaser shall provide a replacement reserve tree of like condition, size, and species within the sale 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 6 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-018 Temporary Stream Crossings

A temporary stream crossing is required to access Units 3, 7 and 13.

Purchaser shall comply with the following during the yarding operation:

- a. Adhere to the approved Hydraulic Permit Application (HPA) or Forest Practice Application (FPA) with approved hydraulic project work, if required, amend a current FPA or obtain a new FPA prior to commencing any new stream crossing construction.
- b. Location of the temporary stream crossing must be approved by the Contract Administrator.
- c. A temporary stream crossing shall not exceed 20 feet in width, including rub trees.
- d. Purchaser shall suspend operations during periods of wet weather when a high potential for sediment delivery into typed waters may occur.
- e. Temporary stream crossings shall be removed at the time of completion of yarding as 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-035 Fall Trees Into Sale Area

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

H-040 Purchaser Harvest Plan

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for utilizing rubber tire skidders in the sale area. The plan shall address the timing and location of desired use, 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-120 Harvesting Equipment

Forest products sold under this contract shall be harvested with ground and cable methods (no rubber tire skidders allowed unless skid trail and rutting requirements can be met and a harvest plan is submitted and approved), unless authority to use other equipment is granted in writing by the State.

H-126 Tailholds on State Land

If Purchaser tailholds on State land, methods to minimize damage to live trees outside the sale area shall be employed and must be approved in writing by the Contract Administrator.

H-127 Tailholds on Private Land

If Purchaser chooses to tailhold on private property, Purchaser shall obtain permit(s) and assumes responsibility for all costs and damages associated with the permit(s). Purchaser must provide the State with a copy of the executed permit(s) or a letter from the landowner indicating that a satisfactory tailhold permit(s) has been consummated between Purchaser and the landowner.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

1. Purchaser must locate utility lines before beginning operations or digging next to the RY-9000 Road.
2. Purchaser shall immediately repair all gate damage resulting from operations to an equal or better condition than existed at the time of the sale.
3. Yarding equipment shall not cross live streams without an HPA.

4. The Purchaser shall notify all employees and contractors working on this sale that any danger tree, marked or unmarked may be felled. Any felled marked danger tree shall be replaced with a suitable tree of similar size and species as approved by the Contract Administrator.

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

H-230 Tops and Limbs Outside the Sale Boundary

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

Section C: Construction and Maintenance

C-040 Road Plan

Road construction and associated work provisions of the Road Plan for this sale, dated 6/17/2016 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 47E, D-5230, RY-9075, RY-9500, RY-9502, 0+65 Spur, 0+75 Spur, 0+76 Spur, 1+00 Spur, 1+01 Spur, 1+10 Spur, 1+40 Spur, 1+50 Spur, 1+80 Spur, 4+75 Spur, 5+89 Spur, 7+45 Spur, 10+45 Spur, 14+29 Spur, 18+25 Spur. All work shall be completed to the specifications detailed in the Road Plan.

C-060 Designated Road Maintainer

If required by the State, Purchaser shall perform maintenance and replacement work as directed by the Contract Administrator on the D-2000, D-5000, RY-9000 and all other roads not listed in C-050. Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the State current Equipment Rate Schedule on file at the region and Olympia offices. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

C-140 Water Bars

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

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

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

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

S-010 Fire Hazardous Conditions

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

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

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

S-030 Landing Debris Clean Up

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

S-035 Logging Debris Clean Up

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

S-050 Cessation of Operations for Low Humidity

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 typed waters 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-110 Resource Protection

No equipment may operate within the 30' of any stream unless authority is granted in writing by the Contract Administrator.

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 \$500.00 per tree for all damaged reserve trees that are not replaced in the units.

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Susan K. Trettevik
Olympic Region Manager

Date: _____
Address:

Date: _____

CORPORATE ACKNOWLEDGEMENT

STATE OF _____)

COUNTY OF _____)

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

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

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

Notary Public in and for the State of

My appointment expires _____

Schedule A
SLASH PILING SPECS

Specifications for Slash Piling

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

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

Schedule B
GREEN TREE RETENTION PLAN

Leave the following as directed by the Contract Administrator:

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

Unit #	# of Individually Marked Trees	# of Clumps	# of Trees Clumped	Total # of Leave Trees
1	5	2	59	64
2	12	0	0	12
3	0	1	32	32
4	16	0	0	16
5	59	4	293	352
6	68	1	92	160
7	0	1	38	38
8	0	1	32	32
9	24	0	0	24
10	0	1	18	18
11	48	1	26	74
12	72	2	208	280
13	21	1	51	72
14	12	1	78	90
15	4	2	108	112
16	10	0	0	10
17	23	1	89	112
18	8	1	80	88



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 4/09)

PRE-CRUISE NARRATIVE

Sale Name: Dickey Mountain	Region: Olympic
Agreement #:	District: Coast
Contact Forester: Elliot Mann Phone / Location: 360-640-9200 / Forks, WA	County(s): Clallam
Alternate Contact: Mike Potter Phone / Location: 360-640-0722 / Forks, WA	Other information:

Type of Sale: Lump Sum	
Harvest System: Ground based	80%
Harvest System: Uphill Cable	19%
Harvest System: Downhill Cable	1%

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/ Skip Acres	Leave Tree Acres	Existing Road Acres	Other Acres		
1	Sec. 13, T30, R13W	07	7.9	0	0.4	0.4	0	7.1	GPS (Garmin)
2	Sec. 13, T30, R13W	07	1.5	0	0	0.2	0	1.3	GPS (Garmin)
3	Sec. 13, T30, R13W	07	3.5	0	0.3	0	0	3.2	GPS (Garmin)
ROW-3	Sec. 13, T30, R13W	07	0.5	0	0	0	0	0.5	
4	Sec. 16, T30, R13W	03	2.4	0	0	0.3	0	2.1	GPS (Garmin)
ROW-4	Sec. 16 T30, R13W	01	13.0	0	0	8.0	0	5.0	
5	Sec. 16, T30, R13W	03	48.0	0	1.9	2.2	0	43.9	GPS (Garmin)
6	Sec. 4, T30, R13W	07	20.3	0	0.7	0	0	19.6	GPS (Garmin)
7	Sec. 4,5, T30, R13W	07/04	4.6	0	0.7	0	0	3.9	GPS (Garmin)
ROW-7	Sec. 4, T30, R13W	07	0.4	0	0	0	0	0.4	
8	Sec. 22, T30, R14W	07	3.5	0	0.2	0	0	3.3	GPS (Garmin)
9	Sec. 10, T30, R14W	01	3.0	0	0	0.3	0	2.7	GPS (Garmin)
10	Sec. 10, T30, R14W	01	2.6	0	0.3	0	0	2.3	GPS (Garmin)
11	Sec. 10, T30, R14W	01	10.5	0	0.1	1.0	0	9.4	GPS (Garmin)
12	Sec. 10, T30, R14W	01	36.2	0	0.8	0.9	0	34.5	GPS (Garmin)
13	Sec. 10, T30, R14W	01	9.1	0	0.2	0.4	0	8.5	GPS (Garmin)
ROW-13	Sec. 10, T30, R14W	01	1.2	0	0	0.4	0	0.8	
14	Sec. 22, T30, R14W	07	11.4	0	1.0	0	0	10.4	GPS (Garmin)
ROW-14	Sec. 22, T30, R14W	07	0.5	0	0	0.2	0	0.3	
15	Sec. 22, T30, R14W	07	15.1	0	0.8	1.0	0	13.3	GPS (Garmin)
ROW-15	Sec. 22, T30, R14W	07	2.1	0	0	0.8	0	1.3	
16	Sec. 8, T29, R14W	01	1.4	0	0	0	0	1.4	GPS (Garmin)
17	Sec. 8, T29, R14W	01	14.7	0	1.0	0.4	0	13.3	GPS (Garmin)
18	Sec. 8, T29, R14W	01	11.9	0	0.3	0.7	0	10.9	GPS (Garmin)
TOTAL ACRES			225.3	0	8.7	17.2	0	199.4	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint; or the RY-9000. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt-marks.		Total Leave Trees 64 -LTA 2 w/ 59 trees -Individual 5 trees
2	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint, or the RY-9000. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt-marks.		Total Leave Trees 12 -Individual 12 trees
3	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt-marks.		Total Leave Trees 32 -LTA 1 w/ 32 trees
4	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint; or the RY-9000. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt-marks.		Total Leave Trees 16 -Individual 16 trees
5	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint; or a distinct timber-type-change; or the RY-9500. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt-marks.		Total Leave Trees 352 -LTA 293 trees -Individual 41 trees
6	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint; or a distinct timber-type-change. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink		Total Leave Trees 157 -LTA 89 trees -Individual 68 trees

	ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt-marks.		
7	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint; or a distinct timber-type-change. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint.		Total Leave Trees 38 -LTA 1 w/ 38 trees
8	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint; or a distinct timber-type-change. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint.		Total Leave Trees 30 -LTA 1 w/ 30 trees
9	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint; or the RY-9000. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt-marks.		Total Leave Trees 23 -Individual 23 trees
10	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint; or a distinct timber-type-change. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint.		Total Leave Trees 18 -LTA 1 w/ 18 trees
11	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint; or a distinct timber-type-change. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt-marks.		Total Leave Trees 74 -LTA 1 w/ 26 trees - -Individual 48 trees
12	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint; or a distinct timber-type-change. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt-marks.		Total Leave Trees 280 -LTA 2 w/ 208 trees -Individual 72 trees
13	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and		Total Leave Trees 72 -LTA 51 trees

	blue paint; or a distinct timber-type-change. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt-marks.		-Individual 21 trees
14	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint; or a distinct timber-type-change; or the orange-blaze-line. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt-marks.		Total Leave Trees 90 -LTA 1 w/ 78 trees -Individual 12 trees
15	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint; or a distinct timber-type-change; or the orange-blaze-line. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt-marks.		Total Leave Trees 109 -LTA 2 w/ 105 trees -Individual 4 trees
16	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt-marks.		Total Leave Trees 10 -Individual 10 trees
17	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint; or a distinct timber-type-change. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt-marks.		Total Leave Trees 112 -LTA 89 trees -Individual 23 trees
18	<u>Unit Boundaries</u> are marked with white Unit Boundary tags, red flashers, pink ribbon, and blue paint, or a distinct timber-type-change. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the		Total Leave Trees 88 -LTA 80 trees -Individual 8 trees

	tree approximately at DBH, and blue paint butt-marks.		
ROW-1	<u>Right-of-Way Boundaries</u> are marked with orange Right-of-Way tags, red flashers, orange ribbon, and orange paint		
ROW-2	<u>Right-of-Way Boundaries</u> are marked with orange Right-of-Way tags, red flashers, orange ribbon, and orange paint		

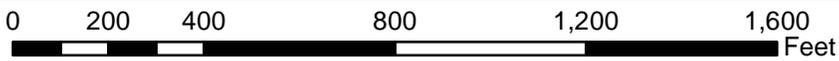
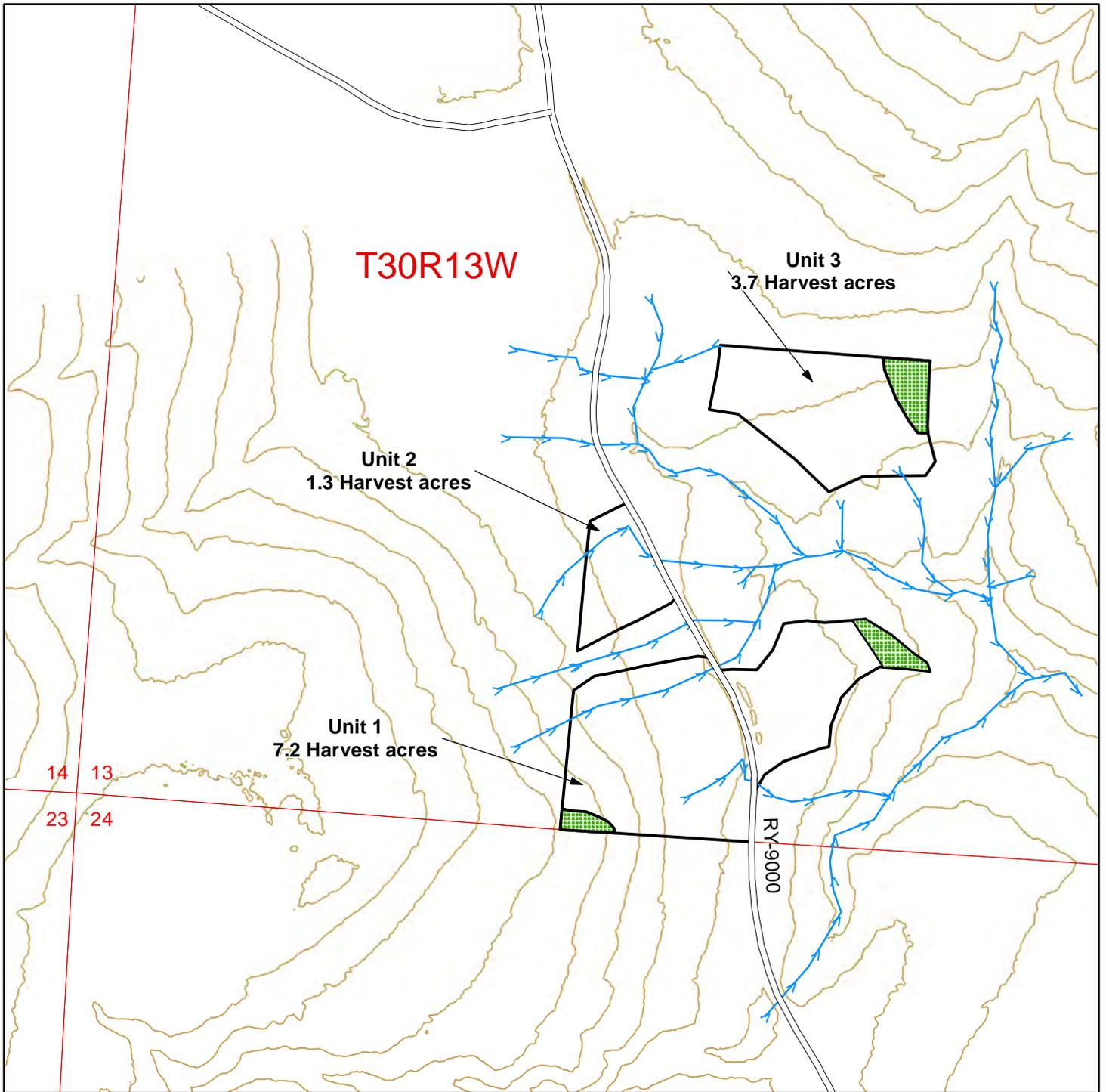
OTHER PRE-CRUISE INFORMATION:

Unit #	Primary, secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
All	PSME/TSHE/PISI	Gates on RY-9000, 47E and D-5000 closed regularly need Rayonier Key or combo is 5047 on the 9000. Red cedar and alder is located throughout.	Cruise Map
5		On RY-9500 need Rayonier key. Red alder comprises large portions of the unit.	Cruise Map
6-7		Walk in from RY-9502. 9502 undrivable about 1 mile from units.	Cruise Map
8		Walk in from spur off RY-9000 at mp 13.5	Cruise Map
10		Spur just before unit 8 will take you to unit edge	Cruise Map
12		Road is drivable to pit but will require 4x4	Cruise Map
13		Walk in from 47E road. Will need Rayonier key.	Cruise Map
14-15		Use road just west of the RY-5901 off the D-5000. It will take around to southern end of units and cross the RY-5901-3241.	Cruise Map
16-17		Off RY-5230 will need Rayonier Key	Cruise Map
18		Walk in through Unit 17 or of adjacent private clear-cuts	Cruise Map

REMARKS:

Prepared By: Elliot Mann Date: 03/22/2016	Title: Natural Resource Specialist 1	CC:

Dickey Mountain VRH

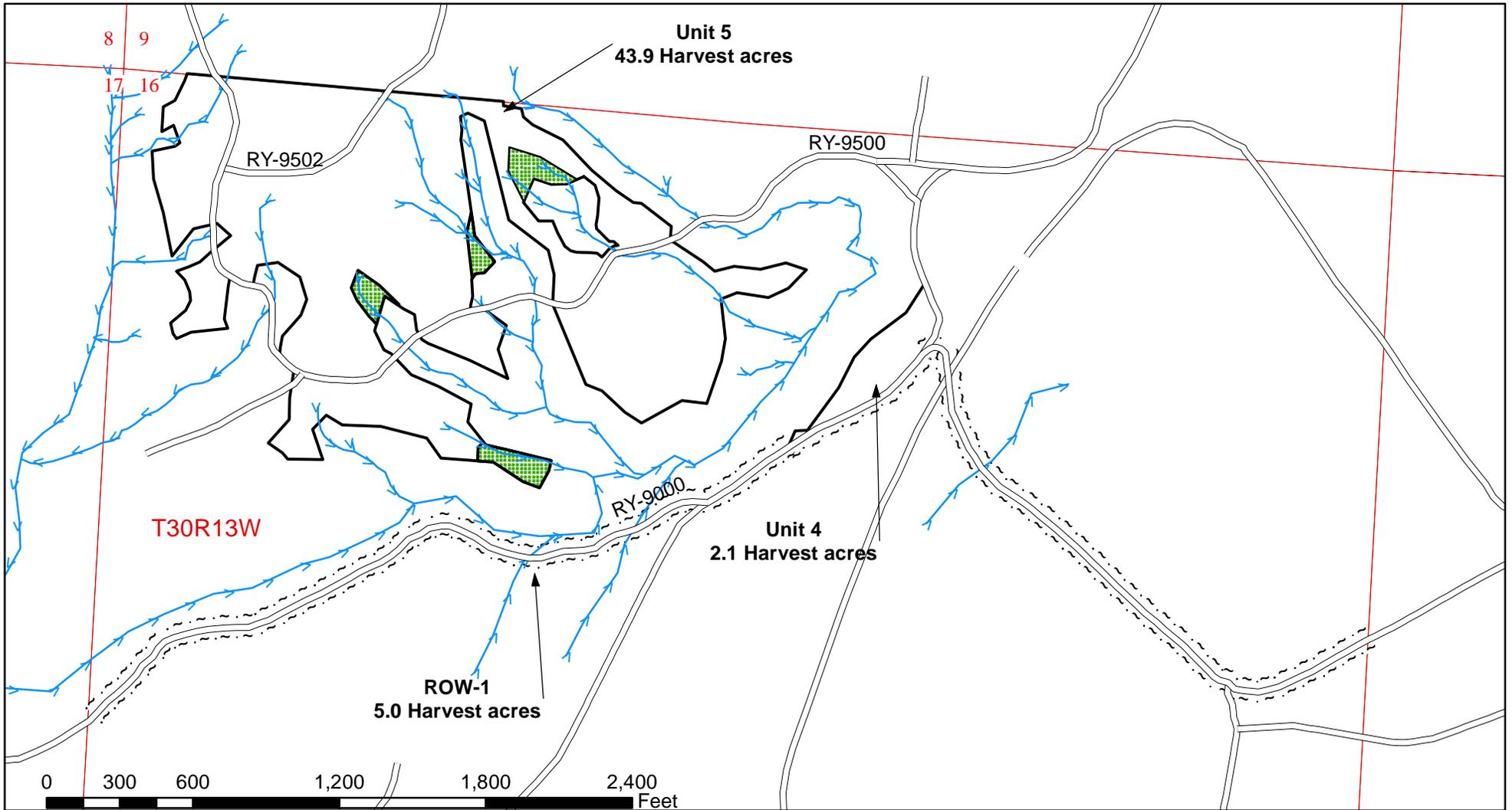


Legend

- | | | |
|-----------------|------------------------------|-----------------------------|
| Unit Boundary | ROW | Streams |
| Leave Tree Area | Public Land Survey Townships | Public Land Survey Sections |
| Routes | | |



Dickey Mountain VRH

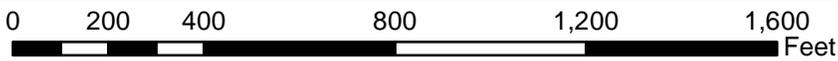
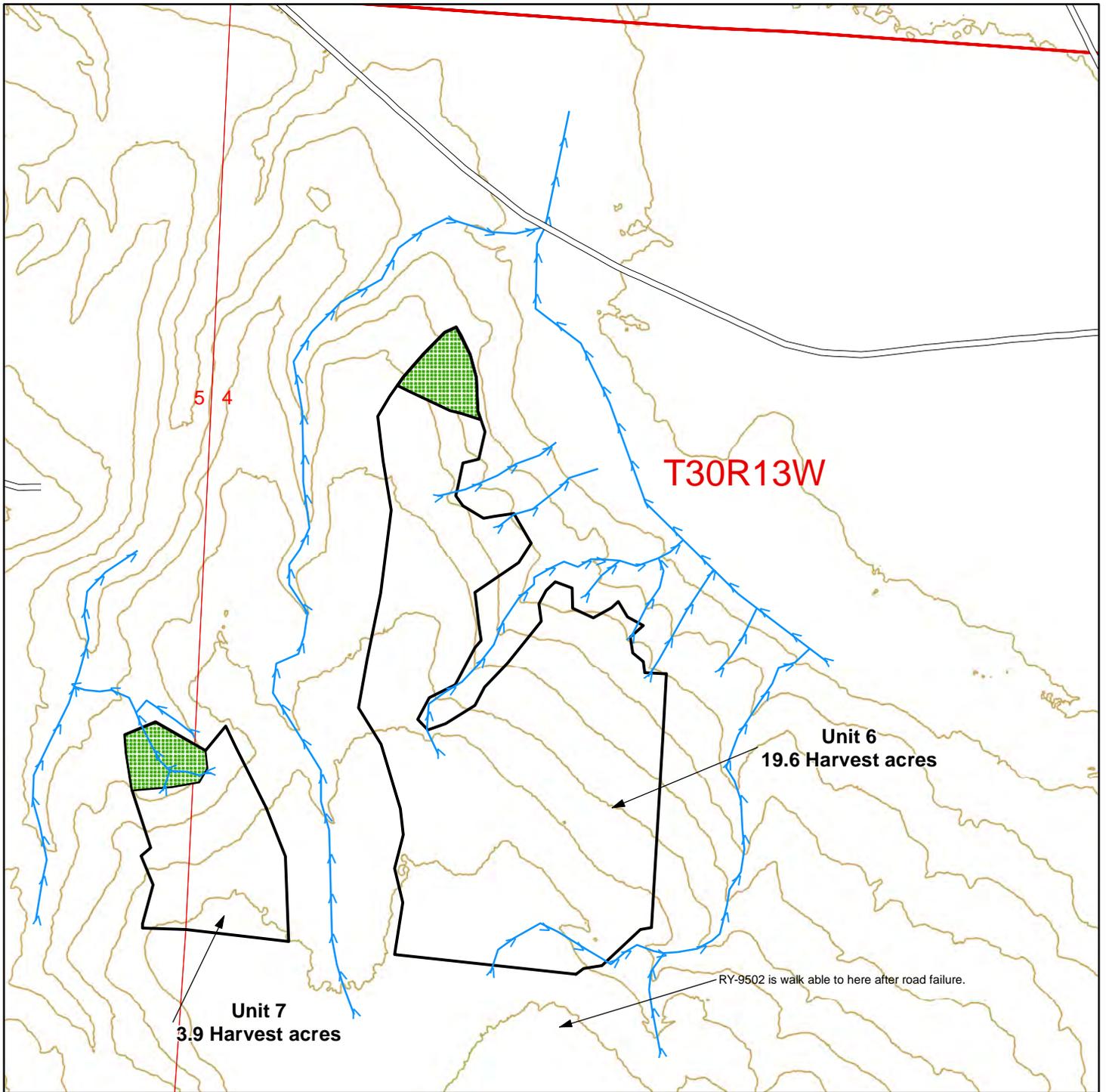


Legend

-  Unit Boundary
-  Leave Tree Area
-  Routes
-  ROW
-  Streams
-  Public Land Survey Townships
-  Public Land Survey Sections



Dickey Mountain VRH

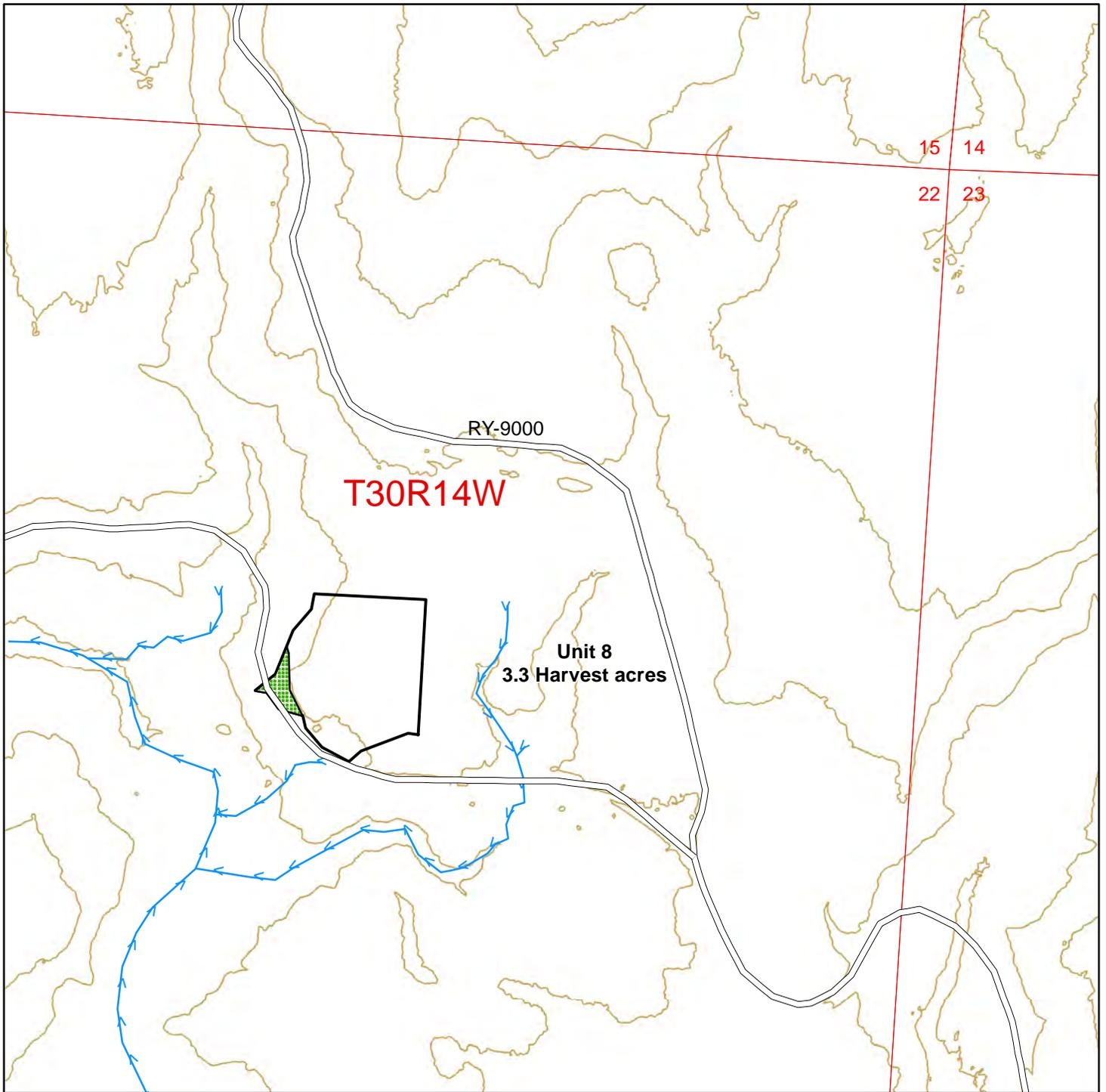


Legend

- | | | |
|-----------------|------------------------------|-----------------------------|
| Unit Boundary | ROW | Streams |
| Leave Tree Area | Public Land Survey Townships | Public Land Survey Sections |
| Routes | | |



Dickey Mountain VRH



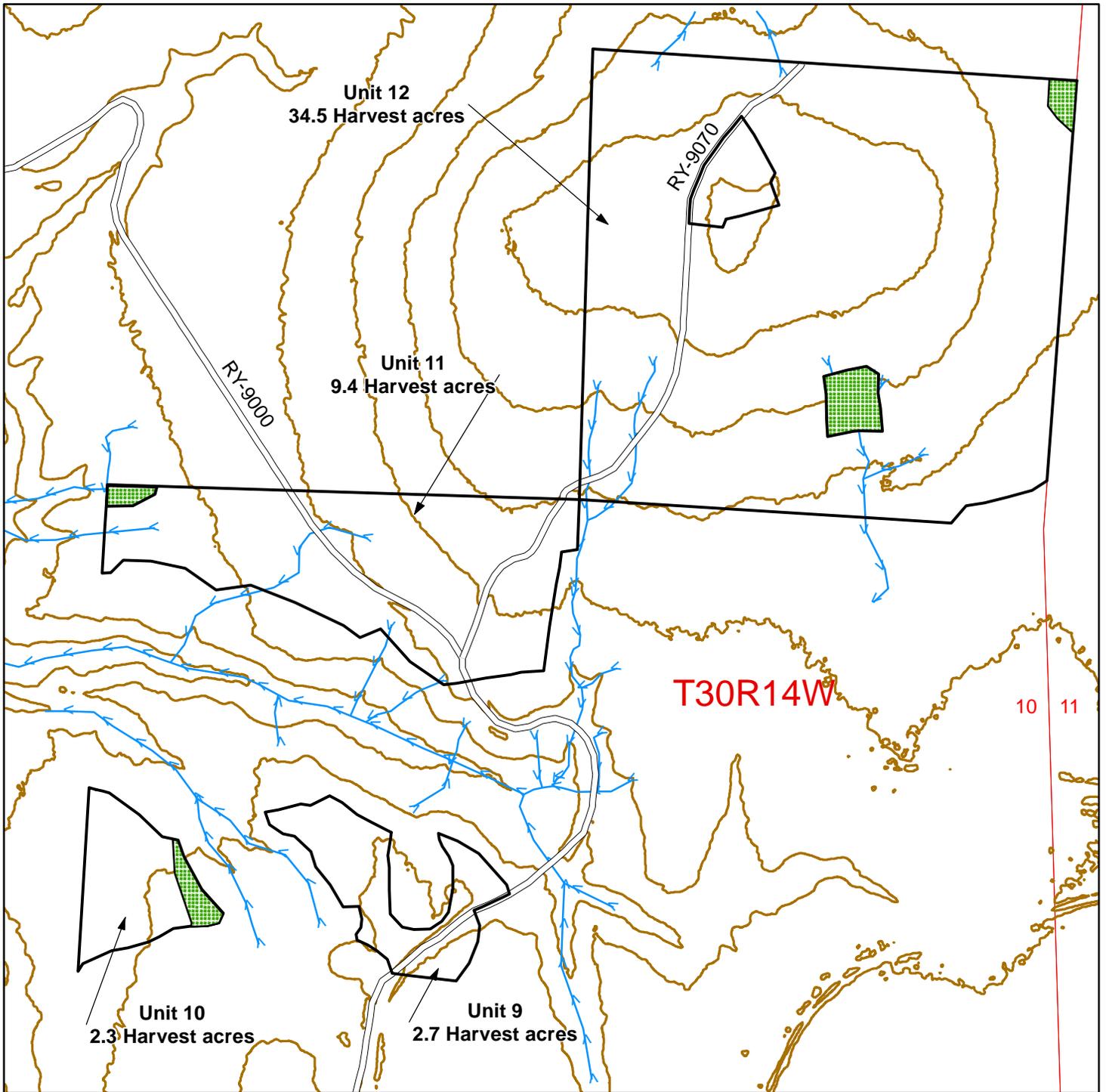
0 200 400 800 1,200 1,600 Feet

Legend

- | | | |
|-----------------|------------------------------|-----------------------------|
| Unit Boundary | ROW | Streams |
| Leave Tree Area | Public Land Survey Townships | Public Land Survey Sections |
| Routes | | |



Dickey Mountain VRH



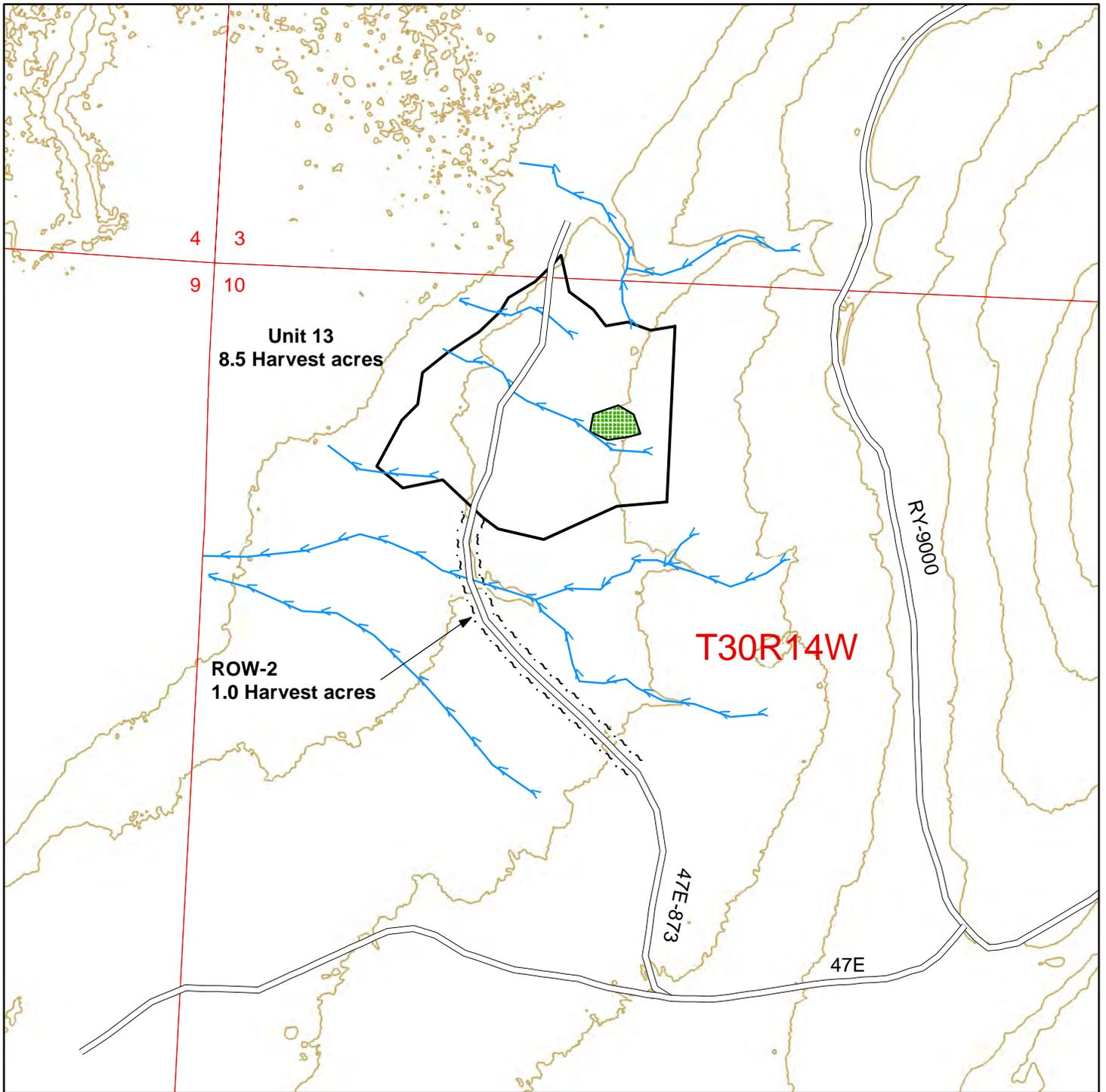
0 200 400 800 1,200 1,600 Feet

Legend

- | | | |
|-----------------|---------------|------------------------------|
| Unit Boundary | ROW | Public Land Survey Townships |
| Leave Tree Area | Contours 40ft | Public Land Survey Sections |
| Routes | | |
| Streams | | |



Dickey Mountain VRH



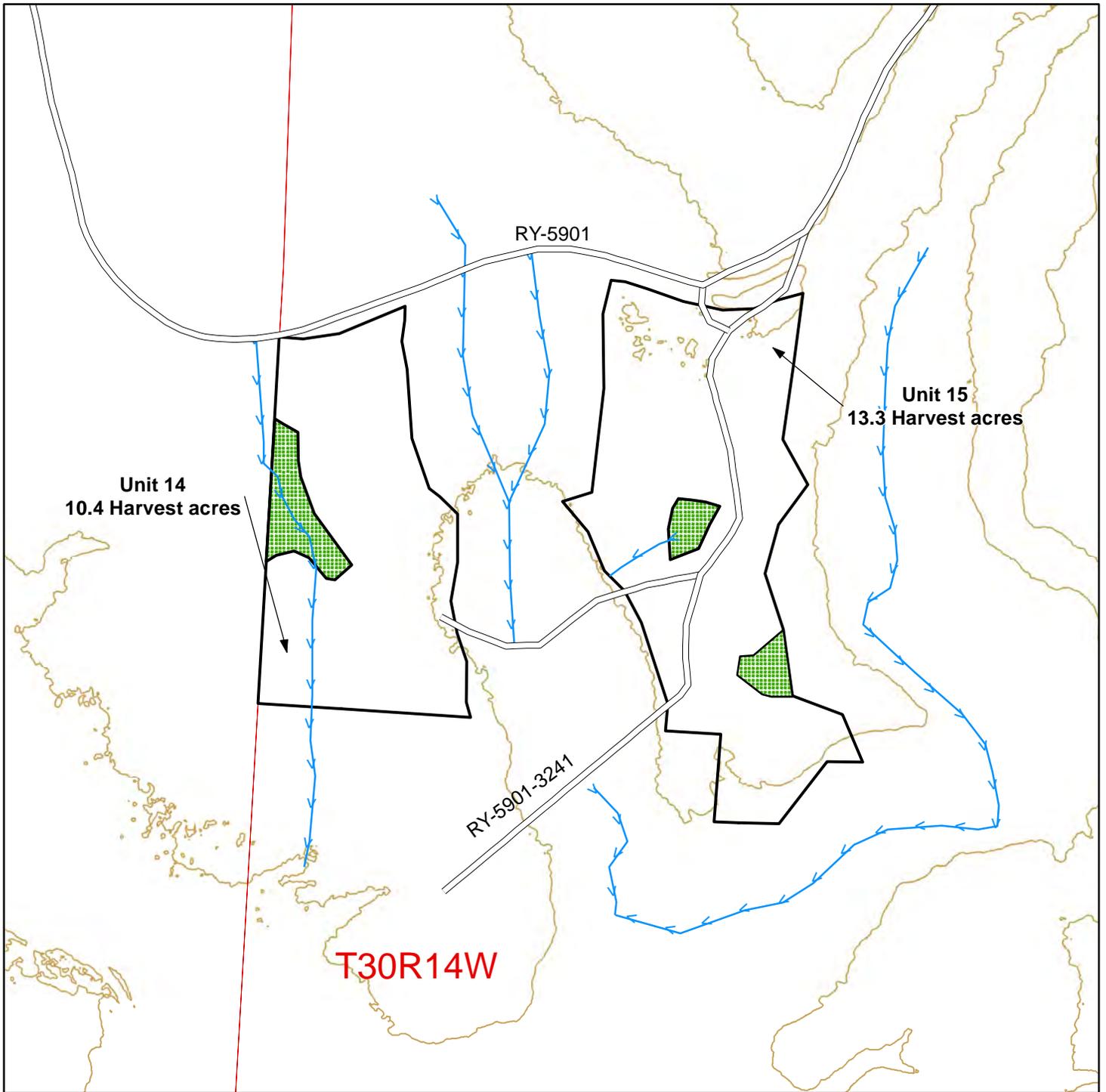
0 200 400 800 1,200 1,600 Feet

Legend

- | | | |
|--|---|--|
|  Unit Boundary |  ROW |  Streams |
|  Leave Tree Area |  |  Public Land Survey Townships |
|  Routes |  |  Public Land Survey Sections |



Dickey Mountain VRH

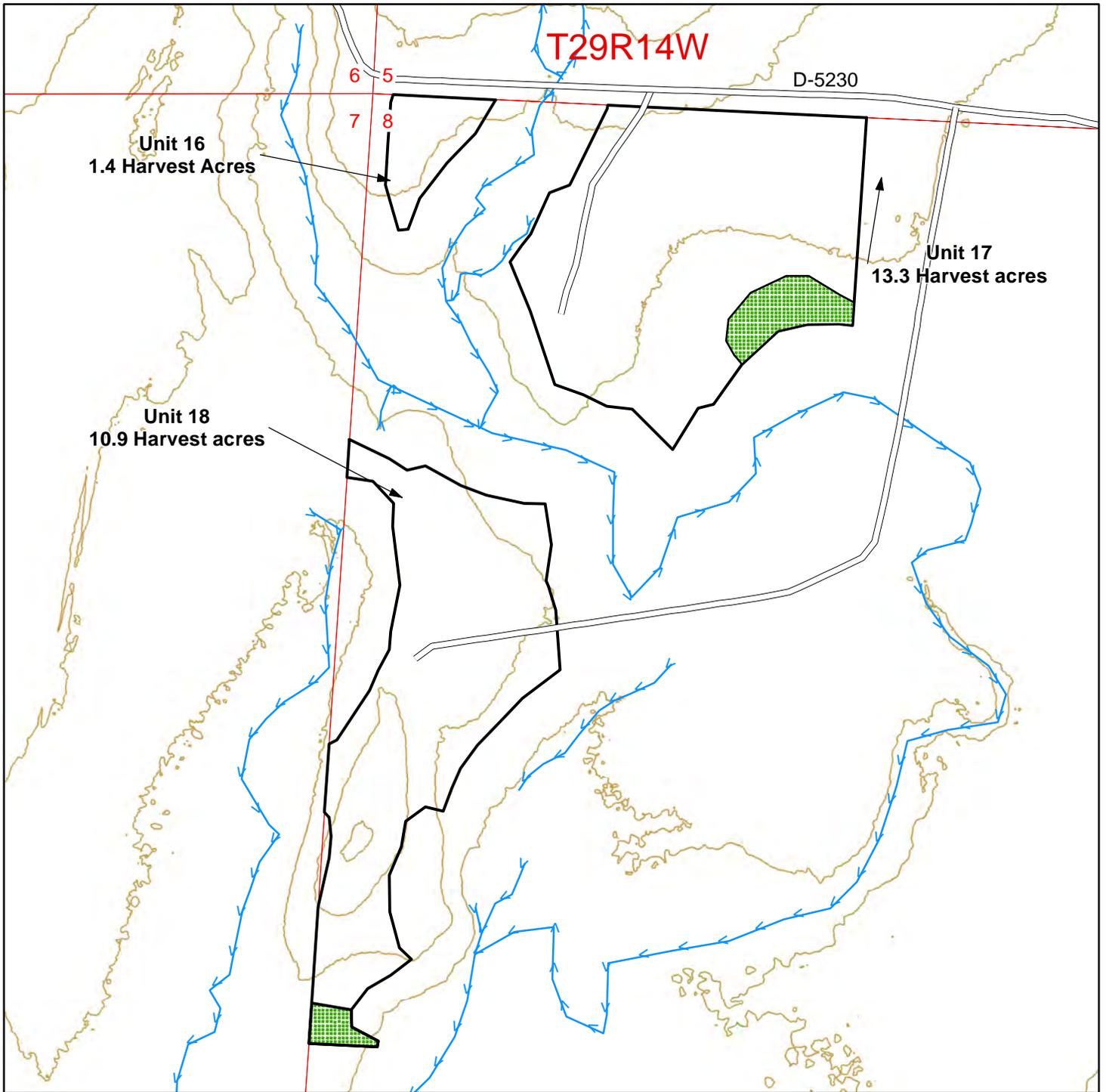


Legend

- | | | |
|--|--|---|
|  Unit Boundary |  ROW |  Streams |
|  Leave Tree Area |  Public Land Survey Townships |  Public Land Survey Sections |
|  Routes | | |



Dickey Mountain VRH



0 200 400 800 1,200 1,600 Feet

Legend

- Unit Boundary
- Leave Tree Area
- Routes
- ROW
- Streams
- Public Land Survey Townships
- Public Land Survey Sections



Cruise Narrative

Sale Name: Dickey Mountain	Region: Olympic
Agreement #: 30-	District: Coast
Lead Cruiser: Kevin Peterson	Completion Date: 4/19/2016
Other Cruisers: Jason Michaud and Devin Shclquabacher	

Unit acreage specifications:

Unit #	Cruised Acres	Cruised acres agree with sale acres? Y/N	If acres do not agree explain why.
1	7.1	Y	
2	1.3	Y	
3	3.2	Y	
RW3	0.5	Y	
4	2.1	Y	
RW4	5.0	Y	
5	43.9	Y	
6	19.6	Y	
7	3.9	Y	
RW7	0.4	Y	
8	3.3	Y	
9	2.7	Y	
10	2.3	Y	
11	9.4	Y	
12	34.5	Y	
13	8.5	Y	
RW13	0.8	Y	
14	10.4	Y	
RW14	0.3	Y	
15	13.3	Y	
RW15	1.3	Y	
16	1.4	Y	
17	13.3	Y	
18	10.9	Y	
Total	199.4	Y	

Unit cruise specifications:

Unit #	Sample Type (VP,FP,ITS,100%)	Expansion Factor (baf,full/half)	Sighting Height (4.5', 16')	Grid Size (plot spacing)	Plot Ratio (cruise/count)	Number of plots
1	VP	54.44/40	4.5'	290 X 290	All Cruise	5
2	VP	54.44/40	4.5'	290 X 290	All Cruise	2
3	VP	54.44/40	4.5'	290 X 290	All Cruise	3
RW3	ITS	1/5	4.5'	N/A	N/A	N/A
4	VP	54.44/40	4.5'	290 X 290	All Cruise	2
RW4	VP	40	4.5'	Every 800'	All Cruise	5
5	VP	54.44/40	4.5'	290 X 290	1:1	22
6	VP	54.44/40	4.5'	290 X 290	7:3	10
7	VP	54.44/40	4.5'	290 X 290	All Cruise	3
RW7	ITS	1/5 1/1	4.5'	N/A	N/A	N/A
8	VP	54.44/40	4.5'	290 X 290	All Cruise	3
9	VP	54.44/40	4.5'	290 X 290	2:1	3
10	VP	54.44/40	4.5'	290 X 290	All Cruise	2
11	VP	54.44/40	4.5'	290 X 290	5:1	6
12	VP	54.44/40	4.5'	290 X 290	2:1	17
13	VP	54.44/40	4.5'	290 X 290	4:1	5
RW13	VP	40	4.5'	Random	All Cruise	1
14	VP	62.5/40	4.5'	290 X 290	1:1	6
RW14	ITS	1/10	4.5'	N/A	N/A	N/A
15	VP	62.5/40	4.5'	290 X 290	4:3	7
RW15	ITS	1/10	4.5'	N/A	N/A	N/A
16	VP	54.44/40	4.5'	290 X 290	1:1	2
17	VP	54.44/40	4.5'	290 X 290	5:3	8
18	VP	54.44/40	4.5'	290 X 290	4:1	5

Sale/Cruise Description:

Minor species cruise intensity	Minor species sampled using same cruise plots. Red Alder, Red Cedar and Bigleaf Maple cruised at 40 BAF.					
Minimum cruise spec:	40% of Form Factor at 16 ft. D.O.B or 5 inch top.					
Average ring count:	DF =	5	WH =	5	SS =	3
Leave/take tree description:	Leave tree clumps are bounded out with yellow tags, pink flashers and blue paint. Individual leave trees are marked with blue bands and two blue butt marks.					
Other conditions:	Exterior boundaries are marked with white tags and pink flashers					

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

This timber sale is located along the RY-9000 and D-5000, a Rayonier key is needed to access most units. This sale is made up of 18 units and 6 Right of ways for a total of 199.4 acres.

The total sale net harvest volume is 7,052 MBF and is comprised of 51% Western Hemlock, 25% Sitka Spruce, 15% Douglas-fir and 8% Red Alder with traces of Red Cedar, Silver-fir and Bigleaf Maple. The average WH has a DBH of 14.5” and a bole height of 67’, the SS has an average DBH of 19.2” and bole height of 71’, the DF has an average DBH of 16.1” and bole height of 71. Common defects in the WH are sweep and forks, sweep and spike knots and in the DF and crooks in the SS. The RA in the sale is fairly clean having forks and crooks as a common defect.

Grants: 01, 03, 04 and 07

Prepared By: Kevin Peterson – Olympic Region Cruiser

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																		
T029 R014 S08 Ty0U16 THRU T030 R014 S22 TyRW15				Project: DICKEY										Page 1								
				Acres 199.40										Date 4/19/2016								
														Time 6:05:20PM								
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
DF	D	2S		37	8.9	2,200	2,003	399				91	9			6	94	37	13	222	1.75	9.0
DF	D	3S		48	7.7	2,858	2,639	526	0	100					5	11	85	36	8	83	0.71	31.7
DF	D	4S		12	5.8	655	617	123	65	35				37	43	11	8	22	5	23	0.30	26.7
DF	D	UT		3	3.9	147	141	28	95	5				70	17	13		14	5	13	0.23	10.9
DF Totals				15	7.8	5,860	5,400	1,077	10	53	34	3		6	8	9	77	28	7	69	0.73	78.4
WH	D	2S		27	8.6	5,518	5,041	1,005				78	22	1		27	72	36	14	236	1.75	21.4
WH	D	3S		54	3.5	10,071	9,714	1,937		100					4	18	78	36	8	92	0.70	105.5
WH	D	4S		16	.8	2,975	2,950	588	74	26				18	54	14	13	25	5	27	0.30	109.2
WH	D	UT		3	4.3	388	371	74	92	8				88	12			12	5	12	0.20	32.1
WH Totals				51	4.6	18,952	18,077	3,605	14	58	22	6		5	11	20	64	28	7	67	0.64	268.2
SS	D	2S		68	5.1	6,519	6,183	1,233				33	67			18	82	36	16	389	2.62	15.9
SS	D	3S		23	3.2	2,115	2,048	408		100					16	11	73	34	9	97	0.86	21.2
SS	D	4S		7	12.5	770	674	134	41	59	0			30	31	24	15	24	6	28	0.38	24.3
SS	D	UT		2	7.4	100	93	19	86	14	0			100				10	5	10	0.22	9.7
SS Totals				25	5.3	9,505	8,998	1,794	4	27	23	46		3	6	17	74	28	9	127	1.20	71.1
RA	D	2S		11	5.6	339	321	64				100		52	48			23	13	128	1.32	2.5
RA	D	3S		25	5.3	751	712	142		100				83	17			21	10	72	0.81	9.9
RA	D	4S		45	7.2	1,359	1,261	251	22	78				45	45	4	6	25	7	35	0.43	35.8
RA	D	UT		19	5.9	557	524	105	97	3				47	26	8	19	20	5	20	0.25	26.1
RA Totals				8	6.3	3,007	2,817	562	28	61	11			56	35	3	6	23	7	38	0.45	74.3
RC	D	3S		40	15.2	17	14	3		18			82		9		91	32	12	187	3.34	.1
RC	D	4S		59	16.7	24	20	4	40	60				60	40			19	7	25	0.43	.8
RC	D	UT		1		0	0	0	100					100				11	5	10	0.18	.0
RC Totals				0	15.9	41	34	7	24	42		34		36	27		37	20	7	38	0.81	.9
SF	D	2S		63	9.4	8	7	1				100				100		36	15	290	1.81	.0
SF	D	3S		32	6.3	4	4	1		100						100		36	8	75	0.58	.1
SF	D	UT		5		1	1	0	50	50				100				11	6	10	0.26	.1
SF Totals				0	8.0	13	12	2	2	35	63			4		96		26	8	92	0.87	.1
BM	D	2S		57		16	16	3				100		100				12	14	90	1.32	.2
BM	D	4S		36		10	10	2		100				100				14	8	20	0.45	.5
BM	D	UT		7		2	2	0	100					100				14	5	10	0.60	.2
BM Totals				0		29	29	6	6	37	57			100				14	9	32	0.64	.9
Totals					5.4	37,405	35,367	7,052	12	50	23	15		9	11	16	64	27	7	72	0.71	493.9

TC PSTATS		PROJECT STATISTICS								PAGE	1
		PROJECT				DICKEY				DATE	4/19/2016
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
029	014	08	DICKEY	0U16	THR	199.40	121	718	S	W	
030	014	22	DICKEY	RW15							
				TREES		ESTIMATED		PERCENT			
		PLOTS	TREES	PER PLOT		TOTAL		SAMPLE			
						TREES		TREES			
TOTAL		121	718	5.9							
CRUISE		89	511	5.7		46,169		1.1			
DBH COUNT											
REFOREST											
COUNT		32	194	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		244	127.2	14.5	67	38.1	144.9	18,952	18,077	4,882	
DOUG FIR		98	34.2	16.1	71	12.1	48.6	5,860	5,400	1,600	
S SPRUCE		82	30.2	19.2	71	13.8	60.4	9,505	8,998	2,370	
R ALDER		80	38.7	11.9	53	8.7	30.1	3,007	2,817	759	
WR CEDAR		3	.5	15.3	47	0.1	.6	41	34	15	
PS FIR		2	.1	16.9	71	0.0	.1	13	12	3	
BL MAPLE		2	.7	12.2	24	0.2	.6	29	29	8	
TOTAL		<i>511</i>	<i>231.5</i>	<i>15.0</i>	<i>65</i>	<i>73.6</i>	<i>285.2</i>	<i>37,405</i>	<i>35,367</i>	<i>9,636</i>	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK		91.6	8.3	117	127	138					
DOUG FIR		190.9	17.3	28	34	40					
S SPRUCE		169.6	15.4	26	30	35					
R ALDER		214.3	19.5	31	39	46					
WR CEDAR		984.1	89.4	0	0	1					
PS FIR		1100.0	99.9	0	0	0					
BL MAPLE		1100.0	99.9	0	1	1					
TOTAL		<i>49.3</i>	<i>4.5</i>	<i>221</i>	<i>232</i>	<i>242</i>	<i>97</i>	<i>49</i>	<i>24</i>		
CL	68.1	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK		90.5	8.2	133	145	157					
DOUG FIR		162.8	14.8	41	49	56					
S SPRUCE		159.3	14.5	52	60	69					
R ALDER		199.2	18.1	25	30	36					
WR CEDAR		778.0	70.7	0	1	1					
PS FIR		1100.0	99.9	0	0	0					
BL MAPLE		1100.0	99.9	0	1	1					
TOTAL		<i>42.3</i>	<i>3.8</i>	<i>274</i>	<i>285</i>	<i>296</i>	<i>72</i>	<i>36</i>	<i>18</i>		
CL	68.1	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK		97.9	8.9	16,470	18,077	19,684					
DOUG FIR		162.9	14.8	4,601	5,400	6,200					
S SPRUCE		168.5	15.3	7,620	8,998	10,375					
R ALDER		198.6	18.0	2,309	2,817	3,326					
WR CEDAR		785.4	71.3	10	34	59					
PS FIR		1100.0	99.9	0	12	23					
BL MAPLE		1100.0	99.9	0	29	57					
TOTAL		<i>54.2</i>	<i>4.9</i>	<i>33,627</i>	<i>35,367</i>	<i>37,107</i>	<i>117</i>	<i>60</i>	<i>29</i>		

PROJECT STATISTICS

PROJECT DICKY

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
029	014	08	DICKEY	0U16	THR	199.40	121	718	S	W
030	014	22	DICKEY	RW15						
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		26.8	2.4	114	125	136				
DOUG FIR		126.4	11.5	95	111	128				
S SPRUCE		59.4	5.4	126	149	172				
R ALDER		157.5	14.3	77	94	110				
WR CEDAR		774.8	70.4	17	60	102				
PS FIR		1100.0	99.9	0	147	294				
BL MAPLE		1100.0	99.9	0	50	100				
TOTAL		<i>51.7</i>	<i>4.7</i>	<i>118</i>	<i>124</i>	<i>130</i>	<i>107</i>	<i>54</i>	<i>27</i>	

T	TSPCSTGR	Species, Sort Grade - Board Foot Volumes (Type)										Page	1								
												Date		4/19/2016							
												Time		5:26:29PM							
T030 R013 S13 T00U1										T030 R013 S13 T00U1											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt												
030	013	13	DICKEY	00U1	7.10	5	32	S	W												
S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf		
WH	DM	2S	11	8.1	2,353	2,162	15	100				52 48				36	14	237	1.70	9.1	
WH	DM	3S	62	1.8	11,702	11,496	82	100				35 65				37	8	85	0.62	135.8	
WH	DM	4S	24		4,310	4,310	31	80	20	20 45 10 26				26	5	28	0.27	152.3			
WH	DM	UT	3		495	495	4	100				100				29	5	30	0.24	16.5	
WH Totals			47	2.1	18,860	18,462	131	21	67	12	5 13 30 52				31	7	59	0.50	313.8		
DF	DM	2S	33	7.5	5,230	4,838	34	100				17 83				38	13	205	1.60	23.6	
DF	DM	3S	52	10.5	8,362	7,484	53	100				43 57				35	9	88	0.76	85.1	
DF	DM	4S	14		2,002	2,002	14	90	10	12 23 47 18				28	5	29	0.28	68.2			
DF	DM	UT	1		62	62	0	100				100				13	5	10	0.20	6.2	
DF Totals			37	8.1	15,656	14,386	102	13	53	34	2 3 35 60				32	8	79	0.72	183.0		
RA	DM	4S	68		1,701	1,701	12	27	73	100				20 6 24 0.33				70.4			
RA	DM	UT	32		768	768	5	100				100				15 5 16 0.19				47.4	
RA Totals			6	.0	2,468	2,468	18	50	50	100				18 6 21 0.28				117.8			
SS	DM	2S	84	15.9	3,208	2,698	19	60 40				56 44				36	16	293	2.28	9.2	
SS	DM	3S	11		371	371	3	100				100				32	9	90	0.76	4.1	
SS	DM	4S	3		102	102	1	100				100				24	8	40	0.71	2.5	
SS	DM	UT	2		41	41	0	100				100				9	6	10	0.32	4.1	
SS Totals			8	13.7	3,722	3,213	23	16	51	33	1 3 58 37				28	11	161	1.61	20.0		
BM	DM	2S	57		457	457	3	100				100				12 14 90 1.32				5.1	
BM	DM	4S	36		293	293	2	100				100				14 8 20 0.45				14.7	
BM	DM	UT	7		51	51	0	100				100				14 5 10 0.60				5.1	
BM Totals			2		801	801	6	6	37	57	100				14 9 32 0.64				24.8		
Type Totals					5.2	41,508	39,330	279	18	56	23	3	11 8 31 50				28	7	60	0.58	659.5

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				DICKEY				DATE	4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	013	13	DICKEY	00U1	7.10	5	32	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		5	32	6.4						
CRUISE		5	32	6.4	2,329	1.4				
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHEMLOCK	13	152.3	13.1	73	39.2	141.5	18,860	18,462	4,849	4,849
DOUG FIR	11	78.9	16.7	81	29.3	119.8	15,656	14,386	4,259	4,254
R ALDER	4	70.4	9.1	45	10.6	32.0	2,468	2,468	605	605
S SPRUCE	2	6.7	24.5	87	4.4	21.8	3,722	3,213	902	901
BL MAPLE	2	19.7	12.2	24	4.6	16.0	801	801	215	215
TOTAL	32	328.0	13.6	66	89.8	331.1	41,508	39,330	10,830	10,825
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	144.3	71.7		43	152	262				
DOUG FIR	202.5	100.6			79	158				
R ALDER	223.6	111.1			70	149				
S SPRUCE	143.2	71.1		2	7	11				
BL MAPLE	223.6	111.1			20	42				
TOTAL	42.7	21.2		258	328	398	90	46	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	137.6	68.4		45	142	238				
DOUG FIR	199.2	99.0		1	120	238				
R ALDER	223.6	111.1			32	68				
S SPRUCE	136.9	68.0		7	22	37				
BL MAPLE	223.6	111.1			16	34				
TOTAL	63.6	31.6		226	331	436	200	102	50	
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	137.5	68.3		5,852	18,462	31,073				
DOUG FIR	196.1	97.5		364	14,386	28,407				
R ALDER	223.6	111.1			2,468	5,211				
S SPRUCE	136.9	68.0		1,027	3,213	5,399				
BL MAPLE	223.6	111.1			801	1,691				
TOTAL	75.7	37.6		24,536	39,330	54,125	283	144	71	
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	137.5	68.3		41	130	220				
DOUG FIR	196.1	97.5		3	120	237				
R ALDER	223.6	111.1			77	163				
S SPRUCE	136.9	68.0		47	148	248				
BL MAPLE	223.6	111.1			50	106				
TOTAL	70.0	34.8		74	119	163	242	124	61	

T030	R013	S13	T00U2		T030	R013	S13	T00U2	
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
030	013	13	DICKEY	00U2	1.30	2	10	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/		
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf		
DF		DM	2S	10	8.3	2,716	2,490	3	100				100				40	13	220	1.66	11.3	
DF		DM	3S	68	9.4	18,061	16,370	21	100				26 74				37	9	106	0.88	155.1	
DF		DM	4S	18		4,340	4,340	6	76	24					60	40	30	5	36	0.32	121.6	
DF		DM	UT	4		838	838	1	100					21	79			18	5	21	0.27	39.4
DF	Totals			79	7.4	25,955	24,038	31	17	72	10			1	14	25	61	32	7	73	0.68	327.5
WH		DM	3S	77		2,887	2,887	4	100				100				40	7	70	0.46	41.2	
WH		DM	4S	23		825	825	1	100					100				21	5	20	0.20	41.2
WH	Totals			12		3,712	3,712	5	22	78			22		78		31	6	45	0.37	82.5	
SS		DM	2S	86	18.9	2,939	2,384	3	100				100				40	18	430	3.68	5.5	
SS		DM	3S	14		388	388	1	100				100				30	9	70	1.10	5.5	
SS	Totals			9	16.7	3,327	2,773	4	14		86		14		86		35	14	250	2.57	11.1	
Type	Totals				7.5	32,994	30,522	40	16	68	8	8	1	15	20	65	32	7	72	0.68	421.1	

STATISTICS
PROJECT **DICKEY**

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
030	013	13	DICKEY	00U2	1.30	2	10	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	2	10	5.0		
CRUISE	2	10	5.0	262	3.8
DBH COUNT					
REFOREST COUNT					
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	8	155.1	16.0	72	54.4	217.8	25,955	24,038	7,248	7,248
WHEMLOCK	1	41.2	11.0	74	8.2	27.2	3,712	3,712	940	940
S SPRUCE	1	5.5	30.0	72	5.0	27.2	3,327	2,773	999	999
TOTAL	10	201.9	15.7	73	68.6	272.2	32,994	30,522	9,187	9,187

CONFIDENCE LIMITS OF THE SAMPLE
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR		23.1	21.6	122	155	189			
WHEMLOCK		141.4	132.4		41	96			
S SPRUCE		141.4	132.4		6	13			
TOTAL		42.7	40.0	121	202	283	128	65	32

CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR		35.4	33.1	146	218	290			
WHEMLOCK		141.4	132.4		27	63			
S SPRUCE		141.4	132.4		27	63			
TOTAL		28.3	26.5	200	272	344	56	29	14

CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR		41.6	39.0	14,666	24,038	33,410			
WHEMLOCK		141.4	132.4		3,712	8,628			
S SPRUCE		141.4	132.4		2,773	6,444			
TOTAL		37.1	34.8	19,906	30,522	41,138	97	49	24

CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR		41.6	39.0	67	110	153			
WHEMLOCK		141.4	132.4		136	317			
S SPRUCE		141.4	132.4		102	237			
TOTAL		37.1	34.8	73	112	151	97	49	24

T030 R013 S13 T00U3	T030 R013 S13 T00U3
Twp 030 Rge 013 Sec 13 Tract DICKEY Type 00U3 Acres 3.20 Plots 3 Sample Trees 14 CuFt S BdFt W	

Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre					
								Net BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
													4-5	6-11	12-16	17+	12-20	21-30	31-35						36-99
DF	DM	2S	73	13.1	13,882	12,067	39			65	35			10	90	38	15	304	2.24	39.6					
DF	DM	3S	22	4.0	3,777	3,626	12			100				48	52	35	9	106	0.92	34.3					
DF	DM	4S	4		757	757	2	41	59				59	41		19	6	27	0.39	28.2					
DF	DM	UT	1		65	65	0			100					100	10	9	20	0.61	3.2					
DF	Totals		52	10.6	18,481	16,515	53	2	25	47	26		3	2	18	77	31	11	157	1.44	105.3				
WH	DM	2S	22	19.5	4,126	3,320	11			100					100	40	14	243	1.94	13.6					
WH	DM	3S	53	5.3	8,528	8,077	26			100					15	85	39	8	92	0.68	88.2				
WH	DM	4S	18	11.1	3,010	2,677	9	50	50				15	17	69	28	5	32	0.32	84.7					
WH	DM	UT	7		984	984	3	81	19				100			13	5	14	0.21	70.0					
WH	Totals		48	9.5	16,648	15,059	48	14	64	22			9	3	20	68	29	7	59	0.60	256.6				
Type Totals				10.1	35,129	31,574	101	8	44	35	13		6	2	19	72	29	8	87	0.86	361.9				

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	DICKEY			DATE	4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	013	13	DICKEY	00U3	3.20	3	14	S	W	
			TREES	ESTIMATED	PERCENT					
			PER PLOT	TOTAL	SAMPLE					
			TREES	TREES	TREES					
TOTAL	3	14	4.7							
CRUISE	3	14	4.7	523			2.7			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
DOUG FIR	7	42.1	23.5	82	26.2	127.0	18,481	16,515	4,747	4,748
WHEMLOCK	7	121.5	13.8	69	34.1	127.0	16,648	15,059	4,362	4,363
TOTAL	14	163.6	16.9	72	61.8	254.1	35,129	31,574	9,108	9,112
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	25.8	17.9		35	42	50				
WHEMLOCK	87.8	60.7		48	121	195				
TOTAL	59.7	41.3		96	164	231	205	104	51	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	24.7	17.1		105	127	149				
WHEMLOCK	89.2	61.7		49	127	205				
TOTAL	32.7	22.6		197	254	312	62	31	15	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	45.1	31.2		11,367	16,515	21,662				
WHEMLOCK	88.2	61.0		5,872	15,059	24,247				
TOTAL	20.7	14.3		27,047	31,574	36,101	25	13	6	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	45.1	31.2		89	130	171				
WHEMLOCK	88.2	61.0		46	119	191				
TOTAL	20.7	14.3		106	124	142	25	13	6	

TC TSTATS		STATISTICS							PAGE	1
		PROJECT		DICKEY			DATE		4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	013	13	DICKEY	ORW3	0.50	1	18	S	W	
				TREES	ESTIMATED	PERCENT				
		PLOTS	TREES	PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		1	18	18.0						
CRUISE		1	18	18.0	78	23.1				
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	12	120.0	16.1	66	42.3	169.7	22,400	19,500	5,775	5,771
S SPRUCE	3	6.0	33.7	91	6.4	37.2	7,120	6,860	1,671	1,671
R ALDER	3	30.0	14.2	62	8.7	32.9	4,000	3,800	927	921
TOTAL	<i>18</i>	<i>156.0</i>	<i>16.8</i>	<i>66</i>	<i>58.5</i>	<i>239.9</i>	<i>33,520</i>	<i>30,160</i>	<i>8,372</i>	<i>8,362</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										

T030 R013 S16 T00U4	T030 R013 S16 T00U4
Twp 030 Rge 013 Sec 16 Tract DICKEY Type 00U4 Acres 2.10 Plots 2 Sample Trees 10 CuFt S BdFt W	

Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre					
								Net BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/Lf	
													4-5	6-11	12-16	17+	12-20	21-30	31-35						36-99
WH	DM	2S	54	8.5	19,040	17,415	37	100				100				40	14	247	1.69	70.5					
WH	DM	3S	32	6.4	10,925	10,221	21	100				43 57				36	8	89	0.74	115.5					
WH	DM	4S	11	.0	3,488	3,488	7	37	63					35	43	22		25	6	27	0.34	130.0			
WH	DM	UT	3		653	653	1	100				100				11	5	10	0.17	65.3					
WH	Totals		87	6.8	34,106	31,778	67	6	39	55					6	5	14	76	29	8	83	0.83	381.2		
SS	DM	2S	96	10.0	4,991	4,492	9	22 78				100				40	16	405	2.68	11.1					
SS	DM	4S	4		166	166	0	100				100				12	9	30	0.61	5.5					
SS	Totals		13	9.7	5,157	4,658	10	4	21	75					4	96			31	14	280	2.41	16.6		
Type Totals				7.2	39,264	36,436	77	5	35	51	10	6	4	12	78	29	8	92	0.90	397.9					

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	DICKEY			DATE	4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	013	16	DICKEY	00U4	2.10	2	10	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				TREES	TREES	TREES				
TOTAL		2	10	5.0						
CRUISE		2	10	5.0	359		2.8			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
WHEMLOCK	9	165.4	16.5	72	60.3	245.0	34,106	31,778	9,094	9,096
S SPRUCE	1	5.5	30.0	95	5.0	27.2	5,157	4,658	1,231	1,231
TOTAL	10	170.9	17.1	73	65.8	272.2	39,264	36,436	10,325	10,327
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	18.8	17.6		136	165	194				
S SPRUCE	141.4	132.4			6	13				
TOTAL	22.8	21.3		134	171	207	36	19	9	
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				
S SPRUCE	141.4	132.4			27	63				
TOTAL	28.3	26.5		200	272	344	56	29	14	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	18.9	17.7		26,157	31,778	37,399				
S SPRUCE	141.4	132.4			4,658	10,826				
TOTAL	34.6	32.4		24,646	36,436	48,225	84	43	21	
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	18.9	17.7		107	130	153				
S SPRUCE	141.4	132.4			171	398				
TOTAL	34.6	32.4		91	134	177	84	43	21	

T030 R014 S10 TRW4 **T030 R014 S10 TRW4**
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
 030 014 10 DICKEY RW4 5.00 5 25 S W

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln 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	53	11.0	11,523	10,257	51			77	23				100	40	14	278	1.94	36.9
WH		DM	3S	35	6.8	7,214	6,726	34			100				30	70	37	8	92	0.78	72.9
WH		DM	4S	10		1,878	1,878	9	53	47			38	32	13	17	24	5	27	0.33	70.0
WH		DM	UT	2		261	261	1	100				100				11	5	10	0.17	26.1
WH	Totals			55	8.4	20,876	19,123	96	7	40	42	12	5	3	12	80	30	8	93	0.91	205.9
SS		DM	2S	76	4.1	7,114	6,826	34			36	64			11	89	38	16	413	2.68	16.5
SS		DM	3S	17	4.8	1,623	1,545	8			100				29	71	37	10	133	1.01	11.6
SS		DM	4S	5		378	378	2	82	18			18		82		30	6	38	0.37	10.0
SS		DM	UT	2		178	178	1		100			100				10	8	22	0.53	7.9
SS	Totals			26	3.9	9,294	8,927	45	3	20	28	49	3		17	81	31	11	194	1.58	46.1
DF		DM	2S	81	8.0	3,694	3,398	17			64	36			13	87	37	13	236	1.85	14.4
DF		DM	3S	14		592	592	3	37	63					63	37	37	7	61	0.54	9.7
DF		DM	4S	2		82	82	0		100			100				16	6	20	0.32	4.1
DF		DM	UT	3		95	95	0		100			100				20	8	40	0.64	2.4
DF	Totals			12	6.6	4,464	4,168	21	5	13	52	29	4		20	76	33	10	136	1.23	30.6
RA		DM	3S	72		1,678	1,678	8			100		62	38			23	10	81	0.87	20.7
RA		DM	4S	24	11.7	638	564	3		100			100				20	7	27	0.41	20.7
RA		DM	UT	4		75	75	0	100				100				13	5	10	0.20	7.5
RA	Totals			7	3.1	2,391	2,316	12	3	97			73	27			20	8	47	0.61	48.9
Type Totals					6.7	37,026	34,535	173	5	35	37	23	9	4	13	74	29	9	104	1.01	331.4

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				DICKEY				DATE	4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	014	10	DICKEY	RW4	5.00	5	25	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				TREES	TREES	TREES				
TOTAL		5	25	5.0						
CRUISE		5	25	5.0	718		3.5			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
WHEMLOCK	14	92.8	17.3	72	36.6	152.4	20,876	19,123	5,591	5,591
S SPRUCE	5	18.0	23.6	83	11.2	54.4	9,294	8,927	2,273	2,273
DOUG FIR	3	12.0	22.3	86	6.9	32.7	4,464	4,168	1,230	1,230
R ALDER	3	20.7	14.6	59	6.3	24.0	2,391	2,316	598	598
TOTAL	25	143.5	18.3	73	61.5	263.5	37,026	34,535	9,693	9,693
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		83.5	41.5	54	93	131				
S SPRUCE		126.9	63.0	7	18	29				
DOUG FIR		223.6	111.1		12	25				
R ALDER		223.6	111.1		21	44				
TOTAL		24.3	12.1	126	144	161	29	15	7	
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		77.4	38.5	94	152	211				
S SPRUCE		70.7	35.1	35	54	74				
DOUG FIR		223.6	111.1		33	69				
R ALDER		223.6	111.1		24	51				
TOTAL		25.5	12.7	230	264	297	32	16	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		80.5	40.0	11,471	19,123	26,774				
S SPRUCE		65.6	32.6	6,019	8,927	11,836				
DOUG FIR		223.6	111.1		4,168	8,800				
R ALDER		223.6	111.1		2,316	4,890				
TOTAL		29.9	14.9	29,398	34,535	39,671	44	23	11	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		80.5	40.0	75	125	176				
S SPRUCE		65.6	32.6	111	164	217				
DOUG FIR		223.6	111.1		128	269				
R ALDER		223.6	111.1		97	204				
TOTAL		25.6	12.7	112	131	151	32	16	8	

T030 R013 S16 T00U5 **T030 R013 S16 T00U5**
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
 030 013 16 DICKEY 00U5 43.90 22 58 S W

S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
SS	DM	2S	79	4.2	17,637	16,888	741			11	89			28	72	36	18	541	3.33	31.2
SS	DM	3S	14		3,070	3,070	135			100				23	18	34	9	112	0.97	27.4
SS	DM	4S	6	15.7	1,432	1,207	53	41	59				25	22	40	26	6	31	0.42	38.6
SS	DM	UT	1		112	112	5	100					100			8	5	10	0.17	11.2
SS	Totals		47	4.4	22,251	21,277	934	3	18	9	71	2	5	27	66	29	10	196	1.62	108.5
WH	DM	2S	56	9.3	10,819	9,813	431			59	41			16	84	38	15	291	1.96	33.7
WH	DM	3S	34	3.1	6,174	5,984	263			100				1	17	38	9	111	0.80	54.1
WH	DM	4S	9		1,621	1,621	71	62	38			45	5	41	10	23	6	29	0.36	55.3
WH	DM	UT	1		63	63	3	55	45			100				9	5	10	0.24	6.3
WH	Totals		38	6.4	18,677	17,480	767	6	38	33	23	5	1	18	76	31	9	117	0.99	149.4
RA	DM	2S	4	13.3	273	236	10			100				100		30	16	260	2.40	.9
RA	DM	3S	25	7.7	1,611	1,487	65			100			81	19		21	10	73	0.86	20.3
RA	DM	4S	41	9.6	2,675	2,417	106			100			57	40	2	24	8	39	0.48	62.6
RA	DM	UT	30	7.0	1,887	1,755	77	96	4			41	22	11	25	22	5	23	0.25	76.8
RA	Totals		13	8.5	6,445	5,896	259	29	67	4		56	32	3	8	23	7	37	0.44	160.7
DF	DM	2S	52	7.8	483	446	20			30	70			30	70	36	19	535	3.28	.8
DF	DM	3S	44	11.4	414	367	16			100				10	26	35	9	103	0.84	3.6
DF	DM	4S	4		31	31	1	100				100				16	5	20	0.20	1.6
DF	Totals		2	9.1	929	844	37	4	43	16	37	4	4	27	65	30	9	142	1.16	6.0
Type Totals				5.8	48,302	45,498	1,997	7	32	18	42	10	7	21	63	27	8	107	0.99	424.5

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				DICKEY				DATE	4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	013	16	DICKEY	00U5	43.90	22	130	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		22	130	5.9						
CRUISE		11	58	5.3	8,212	.7				
DBH COUNT REFOREST COUNT		11	72	6.5						
BLANKS 100 %										
STAND SUMMARY										
SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC	
S SPRUCE	16	46.0	21.8	74	25.5	118.8	22,251	21,277	5,105	5,105
WHEMLOCK	19	61.3	18.7	81	26.9	116.3	18,677	17,480	4,624	4,625
R ALDER	21	77.8	11.9	56	17.4	60.0	6,445	5,896	1,578	1,578
DOUG FIR	2	2.0	21.4	93	1.1	4.9	929	844	207	207
TOTAL	58	187.1	17.1	69	72.5	300.0	48,302	45,498	11,515	11,515
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
S SPRUCE	94.1	20.5		37	46	55				
WHEMLOCK	132.8	29.0		44	61	79				
R ALDER	136.0	29.6		55	78	101				
DOUG FIR	378.9	82.6		0	2	4				
TOTAL	47.2	10.3		168	187	206	93	48	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	
S SPRUCE	91.3	19.9		95	119	142				
WHEMLOCK	123.7	27.0		85	116	148				
R ALDER	124.7	27.2		44	60	76				
DOUG FIR	323.7	70.6		1	5	8				
TOTAL	39.3	8.6		274	300	326	65	33	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	
S SPRUCE	90.7	19.8		17,071	21,277	25,483				
WHEMLOCK	123.1	26.8		12,791	17,480	22,169				
R ALDER	124.0	27.0		4,302	5,896	7,490				
DOUG FIR	327.4	71.4		242	844	1,447				
TOTAL	46.6	10.2		40,878	45,498	50,118	91	46	23	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
S SPRUCE				144	179	215				
WHEMLOCK				110	150	191				
R ALDER	72.3	15.8		72	98	125				
DOUG FIR	327.4	71.4		49	171	292				
TOTAL	240.0	52.3		136	152	167	2,409	1,229	602	

TC TSTATS		STATISTICS							PAGE	1
		PROJECT		DICKEY			DATE		4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	013	04	DICKEY	00U6	19.60	10	50	S	W	
				TREES	ESTIMATED	PERCENT				
		PLOTS	TREES	PER PLOT	TREES	SAMPLE				
						TREES				
TOTAL		10	50	5.0						
CRUISE		7	34	4.9	4,140	.8				
DBH COUNT										
REFOREST										
COUNT		3	16	5.3						
BLANKS										
100 %										
STAND SUMMARY										
SAMPLE		TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
TREES		/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK		21	149.0	15.5	74	49.7	196.0	28,730	26,882	7,078
R ALDER		12	61.0	12.5	49	14.7	52.0	4,253	3,987	1,235
S SPRUCE		1	1.3	28.0	89	1.0	5.4	1,044	1,044	238
TOTAL		34	211.2	14.8	67	65.8	253.4	34,027	31,912	8,551
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		59.4	19.8	120	149	178				
R ALDER		169.0	56.2	27	61	95				
S SPRUCE		316.2	105.2		1	3				
TOTAL		36.2	12.1	186	211	237	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		60.3	20.1	157	196	235				
R ALDER		149.7	49.8	26	52	78				
S SPRUCE		316.2	105.2		5	11				
TOTAL		22.0	7.3	235	253	272	21	11	5	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		65.1	21.7	21,060	26,882	32,703				
R ALDER		147.8	49.2	2,026	3,987	5,947				
S SPRUCE		316.2	105.2		1,044	2,143				
TOTAL		41.1	13.7	27,542	31,912	36,282	75	38	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				107	137	167				
R ALDER		145.6	48.4	39	77	114				
S SPRUCE		316.2	105.2		192	394				
TOTAL		133.6	44.4	109	126	143	790	403	198	

T030 R014 S04 T00U7 **T030 R014 S04 T00U7**
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
 030 014 04 DICKY 00U7 3.90 3 18 S W

Spp	So	Gr	%	Bd. Ft. per Acre			Total	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	24	2.5	7,780	7,586	30			69	31					100	40	13	265	1.62	28.6
WH	DM	3S	58	.8	17,991	17,843	70			100					46	54	35	8	83	0.59	214.5
WH	DM	4S	14		4,256	4,256	17	91	9			15	85				21	5	23	0.25	181.5
WH	DM	UT	4		1,007	1,007	4	100				100					12	5	12	0.17	86.0
WH	Totals		78	1.1	31,034	30,693	120	16	59	17	8	5	12	27	56		27	7	60	0.55	510.6
RA	DM	2S	11		955	955	4			100		100					20	12	100	1.09	9.5
RA	DM	3S	27		2,390	2,390	9			100			100				30	10	110	0.89	21.7
RA	DM	4S	47	6.2	4,300	4,034	16			100		16	54		29		29	8	51	0.54	79.7
RA	DM	UT	15	10.7	1,352	1,207	5	100				76	24				17	5	15	0.23	79.7
RA	Totals		22	4.6	8,996	8,587	33	14	75	11		29	57		14		24	7	45	0.52	190.7
Type Totals				1.9	40,031	39,279	153	16	63	16	6	11	22	21	47		26	7	56	0.54	701.2

TC TSTATS		STATISTICS							PAGE	1
		PROJECT		DICKEY			DATE		4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	014	04	DICKEY	00U7	3.90	3	18	S	W	
				TREES	ESTIMATED	PERCENT				
		PLOTS	TREES	PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		3	18	6.0						
CRUISE		3	18	6.0	1,354	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	12	267.5	12.2	61	62.3	217.8	31,034	30,693	7,441	7,441
R ALDER	6	79.7	13.6	63	21.7	80.0	8,996	8,587	2,359	2,359
TOTAL	18	347.2	12.5	61	84.1	297.8	40,031	39,279	9,800	9,800
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		51.7	35.8	172	267	363				
R ALDER		55.6	38.5	49	80	110				
TOTAL		27.3	18.9	282	347	413	43	22	11	
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		66.1	45.8	118	218	317				
R ALDER		50.0	34.6	52	80	108				
TOTAL		35.9	24.9	224	298	372	74	38	19	
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		77.8	53.8	14,165	30,693	47,220				
R ALDER		49.7	34.4	5,633	8,587	11,540				
TOTAL		50.8	35.1	25,477	39,279	53,081	148	76	37	
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		77.8	53.8	65	141	217				
R ALDER		49.7	34.4	70	107	144				
TOTAL		43.8	30.3	86	132	178	110	56	28	

T	TSPCSTGR	Species, Sort Grade - Board Foot Volumes (Type)										Page	1								
Project: DICKEY												Date	4/19/2016								
												Time	5:26:29PM								
T030 R013 S04 TRW7										T030 R013 S04 TRW7											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt												
030	013	04	DICKEY	RW7	.40	1	26	S	W												
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf	
WH	DM	2S		43	8.1	13,875	12,750	5			44	56				100	36	16	340	2.42	37.5
WH	DM	3S		43	3.7	13,375	12,875	5		100					16	84	34	9	86	0.68	150.0
WH	DM	4S		12	10.0	3,750	3,375	1	81	19			11	89			24	5	25	0.28	137.5
WH	DM	UT		2		500	500	0	75	25			100				10	5	10	0.22	50.0
WH	Totals			43	6.3	31,500	29,500	12	11	46	19	24	3	17	80		27	8	79	0.76	375.0
RC	DM	3S		98	15.2	8,250	7,000	3		18		82		9	91		32	12	187	3.34	37.5
RC	DM	UT		2		125	125	0	100				100				11	5	10	0.18	12.5
RC	Totals			10	14.9	8,375	7,125	3	2	18		81	2	9	89		27	10	143	3.02	50.0
DF	DM	2S		71	7.1	12,250	11,375	5			44	56			100		36	15	303	2.21	37.5
DF	DM	3S		19	11.1	3,375	3,000	1		100				21	50	29	32	9	80	0.72	37.5
DF	DM	4S		8	9.1	1,375	1,250	1	10	90			10	90			22	7	33	0.51	37.5
DF	DM	UT		2	33.3	375	250	0	100				100				14	5	10	0.23	25.0
DF	Totals			23	8.6	17,375	15,875	6	2	26	31	40	2	11	9	77	27	9	115	1.17	137.5
SS	DM	2S		75	7.1	5,300	4,925	2			100				100		36	26	985	6.09	5.0
SS	DM	3S		18	10.0	1,250	1,125	0		100					100		36	9	90	0.83	12.5
SS	DM	4S		7		450	450	0			100			100			30	13	180	1.78	2.5
SS	Totals			10	7.1	7,000	6,500	3		17	7	76		7	93		35	14	325	2.28	20.0
SF	DM	2S		63	9.4	4,000	3,625	1			100				100		36	15	290	1.81	12.5
SF	DM	3S		32	6.3	2,000	1,875	1		100					100		36	8	75	0.58	25.0
SF	DM	UT		5		250	250	0	50	50			100				11	6	10	0.26	25.0
SF	Totals			8	8.0	6,250	5,750	2	2	35	63		4		96		26	8	92	0.87	62.5
RA	DM	2S		39	8.3	1,500	1,375	1			100		100				20	13	110	1.07	12.5
RA	DM	3S		39	8.3	1,500	1,375	1		100			100				20	10	55	0.82	25.0
RA	DM	4S		11		375	375	0	100					100			28	5	30	0.29	12.5
RA	DM	UT		11		375	375	0	100					100			24	5	30	0.34	12.5
RA	Totals			5	6.7	3,750	3,500	1	21	39	39		79	21			22	8	56	0.63	62.5
Type Totals					8.1	74,250	68,250	27	7	34	24	35	6	13	2	79	27	8	96	1.05	707.5

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT		DICKEY		DATE	4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	013	04	DICKEY	RW7	0.40	1	26	S	W	
			TREES	ESTIMATED	PERCENT					
			PER PLOT	TOTAL	SAMPLE					
			TREES	TREES	TREES					
TOTAL		1	26	26.0						
CRUISE		1	26	26.0	126		20.6			
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	14	175.0	15.5	66	58.1	228.3	31,500	29,500	7,768	7,773
WR CEDAR	2	25.0	30.9	57	23.4	129.9	8,375	7,125	4,034	4,038
DOUG FIR	4	50.0	20.7	78	25.7	117.1	17,375	15,875	4,339	4,339
S SPRUCE	2	15.0	22.5	68	8.7	41.3	7,000	6,500	1,606	1,605
PS FIR	2	25.0	16.9	71	9.5	39.0	6,250	5,750	1,404	1,398
R ALDER	2	25.0	15.4	61	8.2	32.4	3,750	3,500	885	880
TOTAL	26	315.0	18.5	67	136.7	588.1	74,250	68,250	20,036	20,033
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										

TC TSTATS		STATISTICS							PAGE	1
		PROJECT			DICKEY		DATE		4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	014	22	DICKEY	00U8	3.30	3	17	S	W	
				TREES	ESTIMATED	PERCENT				
		PLOTS	TREES	PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		3	17	5.7						
CRUISE		3	17	5.7	574	3.0				
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	9	87.8	18.5	76	38.0	163.3	19,696	17,536	5,583	5,583
WHEMLOCK	7	77.1	17.4	79	30.5	127.0	18,021	16,478	4,839	4,838
S SPRUCE	1	9.2	19.0	81	4.2	18.1	2,396	2,396	723	723
TOTAL	<i>17</i>	<i>174.0</i>	<i>18.0</i>	<i>78</i>	<i>72.7</i>	<i>308.5</i>	<i>40,114</i>	<i>36,410</i>	<i>11,145</i>	<i>11,145</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		88.1	61.0	34	88	141				
WHEMLOCK		120.6	83.4	13	77	141				
S SPRUCE		173.2	119.8		9	20				
TOTAL		<i>28.4</i>	<i>19.7</i>	<i>140</i>	<i>174</i>	<i>208</i>	<i>46</i>	<i>24</i>	<i>12</i>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		88.2	61.0	64	163	263				
WHEMLOCK		137.8	95.3	6	127	248				
S SPRUCE		173.2	119.8		18	40				
TOTAL		<i>27.0</i>	<i>18.6</i>	<i>251</i>	<i>308</i>	<i>366</i>	<i>42</i>	<i>21</i>	<i>10</i>	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		91.1	63.0	6,486	17,536	28,586				
WHEMLOCK		135.1	93.4	1,080	16,478	31,876				
S SPRUCE		173.2	119.8		2,396	5,268				
TOTAL		<i>38.4</i>	<i>26.6</i>	<i>26,740</i>	<i>36,410</i>	<i>46,081</i>	<i>85</i>	<i>43</i>	<i>21</i>	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		91.1	63.0	40	107	175				
WHEMLOCK		135.1	93.4	9	130	251				
S SPRUCE		173.2	119.8		132	290				
TOTAL		<i>38.4</i>	<i>26.6</i>	<i>87</i>	<i>118</i>	<i>149</i>	<i>85</i>	<i>43</i>	<i>21</i>	

T030 R014 S10 T00U9	T030 R014 S10 T00U9
Twp 030 Rge 014 Sec 10 Tract DICKEY Type 00U9 Acres 2.70 Plots 3 Sample Trees 9 CuFt S BdFt W	

Spp	S	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs						
									Net	BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/	
															4-5	6-11	12-16	17+	12-20	21-30		31-35					36-99
WH	DM	2S		14	10.0	2,765	2,488	7	100				100				40	12	180	1.38	13.8						
WH	DM	3S		64	10.8	12,284	10,960	30	100				100				40	8	94	0.78	116.2						
WH	DM	4S		22		3,743	3,743	10	85	15			16	69	15		25	5	29	0.30	130.0						
WH	Totals			61	8.5	18,792	17,191	46	19	67	14		3	15	3	78	32	7	66	0.64	260.0						
DF	DM	2S		54	5.4	6,340	5,997	16	100				100				40	13	250	1.75	24.0						
DF	DM	3S		39		4,320	4,320	12	100				100				40	8	100	0.80	43.2						
DF	DM	4S		7		768	768	2	100				100				35	5	40	0.34	19.2						
DF	Totals			39	3.0	11,428	11,084	30	7	39	54				7	93	39	9	128	0.98	86.4						
Type	Totals				6.4	30,220	28,276	76	14	56	30		2	9	5	84	34	7	82	0.74	346.4						

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT	DICKEY			DATE	4/19/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
030	014	10	DICKEY	00U9	2.70	3	14	S	W		
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			3	14	4.7						
CRUISE			2	9	4.5	468	1.9				
DBH COUNT											
REFOREST											
COUNT			1	5	5.0						
BLANKS											
100 %											
STAND SUMMARY											
SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC		
WHEMLOCK	6	130.0	15.2	69	41.9	163.3	18,792	17,191	5,373	5,373	
DOUG FIR	3	43.2	19.6	80	20.5	90.7	11,428	11,084	3,301	3,301	
TOTAL	9	173.2	16.4	72	62.7	254.1	30,220	28,276	8,674	8,674	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK		39.6	27.4	94	130	166					
DOUG FIR		41.4	28.7	31	43	56					
TOTAL		20.7	14.4	148	173	198	25	13	6		
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		33.3	23.1	126	163	201					
DOUG FIR		34.6	24.0	69	91	112					
TOTAL		12.4	8.6	232	254	276	9	4	2		
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		29.1	20.1	13,734	17,191	20,649					
DOUG FIR		33.6	23.2	8,511	11,084	13,657					
TOTAL		9.3	6.5	26,449	28,276	30,102	5	3	1		
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				84	105	126					
DOUG FIR				94	122	151					
TOTAL		147.6	102.1	104	111	118	1,251	638	313		

T030 R014 S10 T0U10	T030 R014 S10 T0U10
Twp 030 Rge 014 Sec 10 Tract DICKEY Type 0U10 Acres 2.30 Plots 2 Sample Trees 9 CuFt S BdFt W	

Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre					
								Net BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/Lf	
													4-5	6-11	12-16	17+	12-20	21-30	31-35						36-99
WH	DM	2S	12	5.0	2,765	2,627	6	100				100				40	12	190	1.38	13.8					
WH	DM	3S	58	2.1	12,032	11,777	27	100				21 79				37	7	79	0.63	148.5					
WH	DM	4S	27		5,699	5,699	13	90	10					9	27	10	55	26	5	26	0.23	218.1			
WH	DM	UT	3		444	444	1	100				100				20	5	20	0.29	22.2					
WH	Totals		79	1.9	20,940	20,547	47	27	60	13					5	7	15	73	30	6	51	0.47	402.6		
DF	DM	2S	80	14.8	5,229	4,456	10	100				100				40	13	223	1.86	20.0					
DF	DM	3S	20		1,112	1,112	3	100				39 61				35	6	56	0.60	20.0					
DF	Totals		21	12.2	6,341	5,568	13	20	80					8	92		37	10	139	1.27	40.0				
Type	Totals			4.3	27,280	26,115	60	21	51	27	4	8	12	77	31	7	59	0.56	442.5						

TC TSTATS		STATISTICS							PAGE	1
		PROJECT		DICKEY			DATE		4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	014	10	DICKEY	0U10	2.30	2	9	S	W	
				TREES	ESTIMATED	PERCENT				
		PLOTS	TREES	PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		2	9	4.5						
CRUISE		2	9	4.5	599	1.5				
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
WHEMLOCK	7	240.3	12.1	61	54.9	190.5	20,940	20,547	5,684	5,684
DOUG FIR	2	20.0	22.4	77	11.5	54.4	6,341	5,568	1,897	1,897
TOTAL	9	260.3	13.1	63	67.6	245.0	27,280	26,115	7,581	7,581
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		39.1	36.6	152	240	328				
DOUG FIR		18.8	17.6	16	20	23				
TOTAL		34.6	32.4	176	260	345	84	43	21	
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		20.2	18.9	154	191	227				
DOUG FIR				54	54	54				
TOTAL		15.7	14.7	209	245	281	17	9	4	
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		22.2	20.8	16,273	20,547	24,820				
DOUG FIR		13.8	12.9	4,849	5,568	6,287				
TOTAL		20.4	19.1	21,123	26,115	31,107	29	15	7	
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		22.2	20.8	85	108	130				
DOUG FIR		13.8	12.9	89	102	115				
TOTAL		20.4	19.1	86	107	127	29	15	7	

T030 R014 S10 T0U11										T030 R014 S10 T0U11				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
030	014	10	DICKEY	0U11	9.40	6	20	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	Dia	Bd	CF/ Lf			
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf			
DF	DM	2S	36	6.5	5,185	4,847	46	100				100				36	13	212	1.78	22.8		
DF	DM	3S	51	7.0	7,086	6,593	62	100				8				92	35	8	73	0.65	90.3	
DF	DM	4S	12	14.0	1,847	1,588	15	91	9	34				66	21	5	20	0.25	79.6			
DF	DM	UT	1	107			107	1	100				100				9	5	10	0.20	10.7	
DF	Totals		49	7.7	14,224	13,135	123	12	51	37	5				12	83	28	7	65	0.69	203.4	
WH	DM	3S	81	5,562			5,562	52	100				100				36	8	89	0.69	62.4	
WH	DM	4S	19	1,248			1,248	12	100				100				22	5	20	0.26	62.4	
WH	Totals		25	6,810			6,810	64	18	82	18				82	29	7	55	0.53	124.8		
RA	DM	2S	29	5.2	1,052	998	9	100				100				20	12	95	0.98	10.5		
RA	DM	3S	21	739			739	7	100				100				20	10	66	0.74	11.1	
RA	DM	4S	33	12.0	1,292	1,137	11	30	70	70				30	24	7	34	0.42	33.8			
RA	DM	UT	17	548			548	5	100				19				81	21	5	20	0.25	27.4
RA	Totals		13	5.8	3,632	3,422	32	26	45	29	77				13	10	22	7	41	0.47	82.9	
SS	DM	2S	79	11.5	2,681	2,372	22	100				100				36	14	230	1.97	10.3		
SS	DM	3S	21	14.3	722	619	6	100				100				28	9	60	0.76	10.3		
SS	DM	UT		100.0	103											8	6		0.32	10.3		
SS	Totals		11	14.7	3,506	2,990	28	21	79	21				79	24	10	97	1.32	30.9			
RC	DM	4S	100	16.7	509	424	4	40	60	60				40	19	7	25	0.43	17.0			
RC	Totals		2	16.7	509	424	4	40	60	60				40	19	7	25	0.43	17.0			
Type Totals				6.6	28,680	26,781	252	14	55	31	13				15	1	70	27	7	58	0.64	459.0

TC TSTATS		STATISTICS							PAGE	1	
		PROJECT			DICKEY		DATE		4/19/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
030	014	10	DICKEY	0U11	9.40	6	30	S	W		
				TREES	ESTIMATED	PERCENT					
		PLOTS	TREES	PER PLOT	TREES	SAMPLE					
TOTAL		6	30	5.0							
CRUISE		5	20	4.0	1,978	1.0					
DBH COUNT											
REFOREST											
COUNT		1	5	5.0							
BLANKS											
100 %											
STAND SUMMARY											
SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET		
TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC		
DOUG FIR	11	90.3	16.1	69	31.7	127.0	14,224	13,135	3,947	3,961	
WHEMLOCK	2	62.4	13.7	64	17.2	63.5	6,810	6,810	1,913	1,913	
R ALDER	5	38.9	12.5	53	9.4	33.3	3,632	3,422	861	862	
S SPRUCE	1	10.3	22.0	75	5.8	27.2	3,506	2,990	978	977	
WR CEDAR	1	8.5	12.0	46	1.9	6.7	509	424	137	137	
TOTAL	20	210.4	15.0	64	66.6	257.8	28,680	26,781	7,836	7,849	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	77.4	34.5		59	90	121					
WHEMLOCK	113.9	50.7		31	62	94					
R ALDER	157.4	70.1		12	39	66					
S SPRUCE	167.3	74.5		3	10	18					
WR CEDAR	244.9	109.1			8	18					
TOTAL				210	210	210					
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	75.1	33.4		85	127	169					
WHEMLOCK	113.9	50.7		31	64	96					
R ALDER	159.5	71.0		10	33	57					
S SPRUCE	167.3	74.5		7	27	48					
WR CEDAR	244.9	109.1			7	14					
TOTAL				258	258	258					
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	74.0	33.0		8,807	13,135	17,463					
WHEMLOCK	113.9	50.7		3,355	6,810	10,264					
R ALDER	163.5	72.8		930	3,422	5,914					
S SPRUCE	167.3	74.5		762	2,990	5,218					
WR CEDAR	244.9	109.1			424	887					
TOTAL				26,781	26,781	26,781					
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	60.3	26.9		69	103	137					
WHEMLOCK				53	107	162					
R ALDER	163.5	72.8		28	103	177					
S SPRUCE				28	110	192					
WR CEDAR	244.9	109.1			64	133					
TOTAL	115.7	51.5		104	104	104	637	325	159		

T030 R014 S10 T0U12										T030 R014 S10 T0U12				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
030	014	10	DICKEY	0U12	34.50	17	52	S	W					

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln 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	24	5.9	3,044	2,865	99	100				39 61				34	12	176	1.51	16.3
WH		DM	3S	56	1.3	6,656	6,567	227	100				11 10 79				34	9	89	0.71	73.4
WH		DM	4S	17		2,049	2,049	71	79	21	13 66 16 6				26	5	28	0.31	74.5		
WH		DM	UT	3	7.3	309	287	10	93	7	100				10	5	9	0.20	30.9		
WH	Totals			49	2.4	12,058	11,767	406	16	60	24	5 18 18 60				27	7	60	0.62	195.1	
DF		DM	2S	33	9.7	3,262	2,947	102	100				100				36	13	211	1.81	14.0
DF		DM	3S	46	5.7	4,207	3,967	137	100				9 91				35	8	75	0.66	53.0
DF		DM	4S	18	5.1	1,642	1,559	54	43	57	46 54				20	5	22	0.30	72.5		
DF		DM	UT	3		245	245	8	100				100				11	5	10	0.17	24.5
DF	Totals			36	6.8	9,356	8,718	301	10	56	34	11 14 75				25	7	53	0.64	164.0	
SS		DM	2S	58	7.6	1,317	1,216	42	100				100				36	14	235	1.90	5.2
SS		DM	3S	32	5.0	712	676	23	100				11 31 58				34	8	70	0.76	9.6
SS		DM	4S	8	25.1	203	152	5	57	43	57 43				20	5	20	0.31	7.7		
SS		DM	UT	2	28.4	52	37	1	44	56	100				9	6	7	0.29	5.2		
SS	Totals			9	8.8	2,283	2,081	72	5	37	58	6 7 10 77				25	8	75	0.93	27.7	
RA		DM	2S	23	3.8	374	360	12	100				100				20	13	113	1.14	3.2
RA		DM	3S	30	3.0	468	454	16	100				100				20	11	73	0.78	6.2
RA		DM	4S	43		639	639	22	77	23	75 25				30	5	35	0.37	18.4		
RA		DM	UT	4		58	58	2	100				52 48				16	5	13	0.29	4.4
RA	Totals			6	1.8	1,540	1,512	52	36	40	24	56 34 10				25	7	47	0.49	32.2	
Type Totals					4.6	25,237	24,079	831	14	55	31	10 16 10 63				26	7	57	0.64	418.9	

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				DICKEY				DATE	4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	014	10	DICKEY	0U12	34.50	17	73	S	W	
			TREES	ESTIMATED	PERCENT					
			PER PLOT	TOTAL	SAMPLE					
			TREES	TREES	TREES					
TOTAL		17	73	4.3						
CRUISE		13	52	4.0	6,873		.8			
DBH COUNT										
REFOREST										
COUNT		4	18	4.5						
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	22	93.6	14.4	62	27.9	105.7	12,058	11,767	3,263	3,263
DOUG FIR	17	74.5	14.6	64	22.6	86.5	9,356	8,718	2,615	2,618
S SPRUCE	6	11.3	17.7	67	4.6	19.2	2,283	2,081	660	659
R ALDER	7	19.8	12.3	46	4.7	16.5	1,540	1,512	395	395
TOTAL	52	199.2	14.5	61	59.9	227.8	25,237	24,079	6,933	6,936
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		76.0	19.0	76	94	111				
DOUG FIR		121.9	30.5	52	74	97				
S SPRUCE		228.3	57.0	5	11	18				
R ALDER		206.6	51.6	10	20	30				
TOTAL		39.9	10.0	179	199	219	68	35	17	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		82.4	20.6	84	106	127				
DOUG FIR		94.6	23.6	66	86	107				
S SPRUCE		171.8	42.9	11	19	27				
R ALDER		193.1	48.2	9	16	24				
TOTAL		21.4	5.3	216	228	240	19	10	5	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		86.5	21.6	9,225	11,767	14,310				
DOUG FIR		92.0	23.0	6,714	8,718	10,722				
S SPRUCE		161.3	40.3	1,243	2,081	2,920				
R ALDER		200.9	50.2	753	1,512	2,270				
TOTAL		30.1	7.5	22,269	24,079	25,888	38	20	10	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		41.0	10.2	87	111	135				
DOUG FIR				78	101	124				
S SPRUCE		161.3	40.3	65	108	152				
R ALDER		200.9	50.2	46	92	138				
TOTAL		109.8	27.4	98	106	114	511	261	128	

T030 R014 S10 T0U13										T030 R014 S10 T0U13				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
030	014	10	DICKEY	0U13	8.50	5	21	S	W					

Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre						
								Net	BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/Lf	
														4-5	6-11	12-16	17+	12-20	21-30		31-35					36-99
WH	DM	2S	5		1,361	1,361	12	100				100				32	12	160	1.38	8.5						
WH	DM	3S	70	7.6	18,685	17,268	147	100				3 97				39	9	105	0.80	164.4						
WH	DM	4S	22	2.7	5,708	5,551	47	74	26	9 71 13 7				25	5	28	0.30	199.6								
WH	DM	UT	3		586	586	5	100				100				12	5	10	0.17	58.6						
WH	Totals		70	6.0	26,340	24,766	211	19	76	5	4	16	11	69	29	7	57	0.57	431.1							
DF	DM	2S	29	5.0	2,455	2,332	20	100				100				40	12	190	1.43	12.3						
DF	DM	3S	55	6.3	4,544	4,257	36	100				7 93				39	8	85	0.73	50.2						
DF	DM	4S	16	5.7	1,265	1,193	10	100				14	65	22		23	5	23	0.30	50.8						
DF	Totals		22	5.8	8,264	7,782	66	15	55	30	2	10	4	84	32	7	69	0.68	113.2							
SS	DM	3S	37	16.7	1,243	1,036	9	100				100				40	9	100	1.01	10.4						
SS	DM	4S	52		1,405	1,405	12	15	85	15 85				22	6	35	0.38	40.3								
SS	DM	UT	11		299	299	3	100				100				12	5	10	0.20	29.9						
SS	Totals		8	7.0	2,948	2,741	23	18	82	18		44	38		21	6	34	0.50	80.6							
Type Totals				6.0	37,551	35,288	300	18	71	10	5	17	8	70	29	7	56	0.59	624.9							

TC TSTATS		STATISTICS							PAGE	1
		PROJECT		DICKEY			DATE		4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	014	10	DICKEY	0U13	8.50	5	30	S	W	
				TREES	ESTIMATED	PERCENT				
		PLOTS	TREES	PER PLOT	TREES	SAMPLE				
TOTAL		5	30	6.0						
CRUISE		4	21	5.3	2,611	.8				
DBH COUNT										
REFOREST										
COUNT		1	9	9.0						
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		13	210.2	13.8	69	58.7	217.8	26,340	24,766	7,167
DOUG FIR		6	56.6	15.7	71	19.2	76.2	8,264	7,782	2,483
S SPRUCE		2	40.3	12.2	50	9.4	32.7	2,948	2,741	837
TOTAL		21	307.2	14.0	67	87.4	326.6	37,551	35,288	10,487
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		65.9	32.8	141	210	279				
DOUG FIR		68.2	33.9	37	57	76				
S SPRUCE		149.1	74.1	10	40	70				
TOTAL		41.1	20.4	244	307	370	84	43	21	
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		50.0	24.8	164	218	272				
DOUG FIR		81.4	40.5	45	76	107				
S SPRUCE		149.1	74.1	8	33	57				
TOTAL		31.2	15.5	276	327	377	48	24	12	
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		52.2	25.9	18,342	24,766	31,190				
DOUG FIR		78.5	39.0	4,747	7,782	10,816				
S SPRUCE		149.1	74.1	710	2,741	4,771				
TOTAL		34.7	17.2	29,207	35,288	41,369	59	30	15	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK				84	114	143				
DOUG FIR		69.9	34.7	62	102	142				
S SPRUCE		123.6	61.4	22	84	146				
TOTAL		125.3	62.3	89	108	127	776	396	194	

T030 R013 S16 TRW13	T030 R013 S16 TRW13
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt 030 013 16 DICKEY RW13 .80 1 6 S	BdFt W

Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre					
								Net	Def%	Gross	Net	Net MBF	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
WH	DM	3S	83	1.8	14,453	14,199	11	100				100				40	9	107	0.81	132.8					
WH	DM	4S	17		2,910	2,910	2	100				100				22	5	22	0.28	132.8					
WH	Totals		68	1.5	17,363	17,109	14	17	83					17	83	31	7	64	0.62	265.6					
DF	DM	2S	81	10.8	7,329	6,541	5	100				100				40	13	235	1.93	27.9					
DF	DM	3S	19		1,522	1,522	1	100				100				33	6	55	0.61	27.9					
DF	Totals		32	8.9	8,851	8,062	6	19	81					19	81	37	10	145	1.33	55.8					
Type	Totals			4.0	26,214	25,172	20	12	62	26					12	6	82	32	7	78	0.76	321.4			

TC TSTATS		STATISTICS						PAGE	1	
		PROJECT		DICKEY				DATE	4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	013	16	DICKEY	RW13	0.80	1	6	S	W	
				TREES	ESTIMATED			PERCENT		
		PLOTS	TREES	PER PLOT	TOTAL			SAMPLE		
					TREES			TREES		
TOTAL		1	6	6.0						
CRUISE		1	6	6.0	129			4.7		
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	4	132.8	14.9	66	41.5	160.0	17,363	17,109	5,102	5,102
DOUG FIR	2	27.9	22.9	75	16.7	80.0	8,851	8,062	2,720	2,720
TOTAL	6	160.7	16.5	68	59.0	240.0	26,214	25,172	7,822	7,822
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	DICKEY			DATE	4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	014	22	DICKEY	0U14	10.40	6	33	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		6	33	5.5						
CRUISE		3	15	5.0	2,885		.5			
DBH COUNT										
REFOREST										
COUNT		3	18	6.0						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	9	182.4	13.7	56	50.6	187.5	22,011	21,456	5,712	5,717
S SPRUCE	6	95.0	17.4	71	37.5	156.3	20,407	18,966	5,659	5,653
TOTAL	15	277.4	15.1	61	88.5	343.8	42,418	40,421	11,371	11,370
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		58.6	26.1	135	182	230				
S SPRUCE		114.8	51.1	46	95	144				
TOTAL		36.0	16.0	233	277	322	62	31	15	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		59.6	26.6	138	188	237				
S SPRUCE		103.5	46.1	84	156	228				
TOTAL		19.1	8.5	315	344	373	17	9	4	
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		63.0	28.1	15,432	21,456	27,479				
S SPRUCE		100.9	44.9	10,443	18,966	27,488				
TOTAL		19.9	8.9	36,835	40,421	44,007	19	10	5	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK				82	114	147				
S SPRUCE				67	121	176				
TOTAL		220.0	97.9	107	118	128	2,303	1,175	576	

T030 R014 S22 TRW14										T030 R014 S22 TRW14				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
030	014	22	DICKEY	RW14	.30	1	10	S	W					

Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre						
								Net	BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/Lf	
														4-5	6-11	12-16	17+	12-20	21-30		31-35					36-99
SS	DM	2S	77	1.3	25,000	24,667	7				39	61			100	40	16	370	2.38	66.7						
SS	DM	3S	19		6,000	6,000	2			100					100	39	8	90	0.83	66.7						
SS	DM	4S	4		1,000	1,000	0	100						100	32	5	30	0.40	33.3							
SS	Totals		61	1.0	32,000	31,667	9	3	19	31	47			3	97	38	10	190	1.41	166.7						
DF	DM	2S	72	10.0	6,667	6,000	2			100				100	40	12	180	1.48	33.3							
DF	DM	3S		100.0	3,000										22	11		0.00	33.3							
DF	DM	4S	12		1,000	1,000	0	100					100	32	5	30	0.46	33.3								
DF	DM	UT	16		1,333	1,333	0	100					100	34	5	40	0.40	33.3								
DF	Totals		16	30.6	12,000	8,333	3	28		72			28	72	32	8	63	0.68	133.3							
WH	DM	3S	65	10.5	6,333	5,667	2			100				35	65	36	9	85	0.70	66.7						
WH	DM	4S	31	11.1	3,000	2,667	1	50	50				13	38	50	25	5	27	0.32	100.0						
WH	DM	UT	4		333	333	0	100					100			13	5	10	0.17	33.3						
WH	Totals		17	10.3	9,667	8,667	3	19	81				8	12	38	42	27	6	43	0.48	200.0					
RA	DM	4S	60	45.5	3,667	2,000	1			100			100		30	10	60	0.97	33.3							
RA	DM	UT	40	33.3	2,000	1,333	0	100					100		25	5	20	0.32	66.7							
RA	Totals		6	41.2	5,667	3,333	1	40	60				100		26	7	33	0.56	100.0							
Type Totals				12.4	59,333	52,000	16	12	29	30	29		1	8	13	78	31	8	87	0.86	600.0					

STATISTICS
PROJECT DICKEY

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
030	014	22	DICKEY	RW14	0.30	1	10	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	1	10	10.0		
CRUISE	1	10	10.0	100	10.0
DBH COUNT					
REFOREST					
COUNT					
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
S SPRUCE	3	100.0	20.7	68	51.3	233.3	32,000	31,667	8,909	8,909
DOUG FIR	2	66.7	17.8	67	27.3	115.0	12,000	8,333	3,613	2,921
WHEMLOCK	3	100.0	12.4	61	23.9	84.2	9,667	8,667	2,537	2,537
R ALDER	2	66.7	12.9	45	16.8	60.4	5,667	3,333	1,486	1,482
TOTAL	<i>10</i>	<i>333.3</i>	<i>16.5</i>	<i>61</i>	<i>121.5</i>	<i>492.9</i>	<i>59,333</i>	<i>52,000</i>	<i>16,545</i>	<i>15,849</i>

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

T030 R014 S22 T0U15										T030 R014 S22 T0U15				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
030	014	22	DICKEY	0U15	13.30	7	19	S	W					

Spp	So	Gr	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln 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	13		2,701	2,701	36	100				100				36	13	220	1.66	12.3	
WH	DM	3S	60	1.0	12,183	12,060	160	100				100				36	9	89	0.74	135.1	
WH	DM	4S	23		4,617	4,617	61	68	32			11	89			24	5	27	0.29	171.9	
WH	DM	UT	4		614	614	8	80	20			100			9	5	10	0.19	61.4		
WH	Totals		48	.6	20,114	19,992	266	18	68	14		6	21		74	26	7	53	0.56	380.7	
SS	DM	2S	48	7.8	11,276	10,392	138			70	30					36	15	286	2.25	36.3	
SS	DM	3S	43	2.8	9,496	9,227	123			100				10		35	9	108	0.89	85.5	
SS	DM	4S	7	4.0	1,627	1,562	21	47	53			45	38	17		21	6	24	0.38	63.9	
SS	DM	UT	2		297	297	4	82	18			100			10	5	10	0.22	29.7		
SS	Totals		52	5.4	22,695	21,478	286	5	47	34	14	5	7	1	87	28	9	100	1.04	215.4	
Type Totals					3.1	42,810	41,469	552	11	57	24	7	5	14	1	81	27	7	70	0.74	596.1

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	DICKEY			DATE	4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	014	22	DICKEY	0U15	13.30	7	40	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		7	40	5.7						
CRUISE		4	19	4.8	3,635		.5			
DBH COUNT										
REFOREST										
COUNT		3	21	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	7	184.2	13.7	61	50.7	187.5	20,114	19,992	5,626	5,631
S SPRUCE	12	89.1	18.7	71	39.2	169.6	22,695	21,478	6,187	6,179
TOTAL	19	273.3	15.5	64	90.8	357.1	42,810	41,469	11,813	11,810
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		63.1	25.7	137	184	232				
S SPRUCE		48.2	19.6	72	89	107				
TOTAL		40.5	16.5	228	273	318	76	39	19	
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		63.8	26.0	139	188	236				
S SPRUCE		27.9	11.3	150	170	189				
TOTAL		29.8	12.1	314	357	400	41	21	10	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		65.4	26.6	14,672	19,992	25,311				
S SPRUCE		29.9	12.2	18,864	21,478	24,091				
TOTAL		29.1	11.8	36,558	41,469	46,381	39	20	10	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK				78	107	135				
S SPRUCE				111	127	142				
TOTAL		202.3	82.3	102	116	130	1,897	968	474	

T030 R014 S22 TRW15 **T030 R014 S22 TRW15**
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
 030 014 22 DICKEY RW15 1.30 1 38 S W

Spp	So	Gr	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre				
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf					
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99									
WH	DM	3S	36	6.5	2,385	2,231	3	100				55 45				30	9	73	0.77	30.8				
WH	DM	4S	56	4.3	3,538	3,385	4	64	36					9	84	7	26	5	28	0.32	123.1			
WH	DM	UT	8	462 462			1	100				100				11	5	12	0.19	38.5				
WH	Totals		43	4.8	6,385	6,077	8	43	57					13	67	4	16	23	6	32	0.40	192.3		
SS	DM	2S	28	9.1	1,692	1,538	2	100				100				36	13	200	2.03	7.7				
SS	DM	3S	18	7.7	1,000	923	1	100				50 50				32	8	60	0.67	15.4				
SS	DM	4S	46	2,462 2,462			3	78	22					25	53	22	25	5	29	0.35	84.6			
SS	DM	UT	8	385 385			1	100				100				14	5	17	0.25	23.1				
SS	Totals		38	4.2	5,538	5,308	7	43	28	29					19	33	10	38	24	6	41	0.54	130.8	
RA	DM	3S	27	615 615			1	100				100				20	11	80	0.86	7.7				
RA	DM	4S	62	5.3	1,462	1,385	2	44	56					78	22					20	6	26	0.32	53.8
RA	DM	UT	11	231 231			0	100				100				14	5	15	0.23	15.4				
RA	Totals		16	3.3	2,308	2,231	3	38	62					86	14					19	6	29	0.36	76.9
DF	DM	3S	83	385 385			0	100				100				28	7	50	0.41	7.7				
DF	DM	4S	17	77 77			0	100				100				12	5	10	0.20	7.7				
DF	Totals		3	.0	462	462	1	17	83					17	83					20	6	30	0.34	15.4
Type Totals				4.2	14,692	14,077	18	42	48	11					27	46	5	21	23	6	34	0.44	415.4	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT		DICKEY		DATE	4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	014	22	DICKEY	RW15	1.30	1	38	S	W	
			TREES	ESTIMATED	PERCENT					
			PER PLOT	TOTAL	SAMPLE					
			TREES	TREES	TREES					
TOTAL		1	38	38.0						
CRUISE		1	38	38.0	380		10.0			
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	17	130.8	11.0	43	25.9	85.6	6,385	6,077	1,801	1,802
S SPRUCE	13	100.0	11.6	40	21.4	72.9	5,538	5,308	1,703	1,703
R ALDER	7	53.8	9.6	41	8.7	26.8	2,308	2,231	535	534
DOUG FIR	1	7.7	11.0	50	1.5	5.1	462	462	106	106
TOTAL	38	292.3	10.9	42	57.6	190.4	14,692	14,077	4,146	4,146
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										

T029 R014 S08 T0U16										T029 R014 S08 T0U16				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
029	014	08	DICKEY	0U16	1.40	2	5	S	W					

Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre						
								Net	BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/Lf	
														4-5	6-11	12-16	17+	12-20	21-30		31-35					36-99
WH	DM	3S	43	.0	9,977	9,977	14	100				100				36	8	80	0.53	124.7						
WH	DM	4S	42	.0	9,737	9,737	14	32	68	100				26	6	28	0.28	346.6								
WH	DM	UT	15		3,228	3,228	5	100				100				12	5	15	0.17	221.9						
WH	Totals		72		22,943	22,943	32	28	72	14	42	43	23	6	33	0.33	693.2									
DF	DM	3S	95	4.8	9,088	8,655	12	100				25				75	32	9	100	0.94	86.6					
DF	DM	UT	5		433	433	1	100				100				9	5	10	0.20	43.3						
DF	Totals		28	4.5	9,521	9,088	13	5	95	5	24	71	24	8	70	0.85	129.8									
Type Totals				1.3	32,464	32,031	45	21	79	11	37	51	23	6	39	0.42	823.0									

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				DICKEY				DATE	4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
029	014	08	DICKEY	0U16	1.40	2	11	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		2	11	5.5						
CRUISE		1	5	5.0	546	.9				
DBH COUNT										
REFOREST										
COUNT		1	6	6.0						
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	4	346.6	10.0	59	60.1	190.5	22,943	22,943	5,350	5,350
DOUG FIR	1	43.3	18.6	76	18.9	81.7	9,521	9,088	2,688	2,689
TOTAL	5	389.9	11.3	61	80.9	272.2	32,464	32,031	8,038	8,039
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		20.2	18.9	281	347	412				
DOUG FIR		47.1	44.1	24	43	62				
TOTAL		12.7	11.9	343	390	436	11	6	3	
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		20.2	18.9	154	191	227				
DOUG FIR		47.1	44.1	46	82	118				
TOTAL				272	272	272				
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		20.2	18.9	18,603	22,943	27,283				
DOUG FIR		47.1	44.1	5,076	9,088	13,100				
TOTAL		1.1	1.0	31,702	32,031	32,360	0	0	0	
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				98	120	143				
DOUG FIR				62	111	160				
TOTAL		242.4	227.0	116	118	119	4,123	2,104	1,031	

T029 R014 S08 T0U17 T029 R014 S08 T0U17
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
 029 014 08 DICKEY 0U17 13.30 8 29 S W

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre		
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln 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	13		2,514	2,514	33	100				100				36	12	180	1.28	14.0		
WH		DM	3S	70	7.3	14,466	13,411	178	100					11	6	83	34	8	70	0.58	190.8		
WH		DM	4S	12		2,295	2,295	31	100				34	66			21	5	22	0.25	105.3		
WH		DM	UT	5	17.0	1,122	932	12	100				61	39			15	5	14	0.20	69.0		
WH	Totals			54	6.1	20,397	19,152	255	17	70	13				7	18	4	71	27	7	51	0.51	379.1
DF		DM	2S	20		1,320	1,320	18	100				100				36	12	180	1.18	7.3		
DF		DM	3S	64	13.6	4,758	4,110	55	100				100				36	8	78	0.69	52.6		
DF		DM	4S	4	19.8	354	284	4	100				26			74	24	5	20	0.30	14.3		
DF		DM	UT	12	10.0	821	739	10	100				28	39	33		21	5	19	0.27	38.2		
DF	Totals			18	11.0	7,253	6,453	86	16	64	20			4	4	4	87	29	7	57	0.59	112.4	
SS		DM	2S	59		3,858	3,858	51	100				100				36	13	220	1.70	17.5		
SS		DM	3S	19	6.7	1,317	1,229	16	100					35		65	32	9	70	0.67	17.5		
SS		DM	4S	18	17.2	1,431	1,185	16	100				15			85	25	6	31	0.31	37.7		
SS		DM	UT	4		202	202	3	100				100				12	5	10	0.17	20.2		
SS	Totals			18	4.9	6,808	6,474	86	3	37	60			6	7		87	26	8	70	0.75	92.9	
RA		DM	2S	15	10.0	555	500	7	100				100				20	12	90	1.01	5.6		
RA		DM	3S	15	.0	524	524	7	100				100				20	11	80	0.79	6.5		
RA		DM	4S	63	2.6	2,142	2,087	28	58	42				55	37		8	24	6	30	0.33	70.6	
RA		DM	UT	7		220	220	3	100					100				23	5	20	0.24	11.0	
RA	Totals			9	3.2	3,442	3,331	44	43	42	15			65	30		5	24	6	36	0.38	93.7	
Type Totals					6.6	37,900	35,409	471	17	60	23			12	14	3	71	27	7	52	0.54	678.2	

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				DICKEY				DATE	4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
029	014	08	DICKEY	0U17	13.30	8	47	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		8	47	5.9						
CRUISE		5	29	5.8	4,269	.7				
DBH COUNT										
REFOREST										
COUNT		3	18	6.0						
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	14	174.3	13.1	67	45.1	163.3	20,397	19,152	5,223	5,215
DOUG FIR	5	52.6	14.6	70	16.0	61.2	7,253	6,453	1,938	1,935
S SPRUCE	5	37.7	15.2	71	12.2	47.6	6,808	6,474	1,786	1,785
R ALDER	5	56.4	10.7	48	10.7	35.0	3,442	3,331	833	836
TOTAL	29	321.0	13.2	65	84.4	307.2	37,900	35,409	9,780	9,771
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	76.8	29.0		124	174	225				
DOUG FIR	123.6	46.6		28	53	77				
S SPRUCE	114.8	43.3		21	38	54				
R ALDER	147.6	55.7		25	56	88				
TOTAL	29.8	11.2		285	321	357	40	21	10	
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	87.3	32.9		110	163	217				
DOUG FIR	110.8	41.8		36	61	87				
S SPRUCE	95.4	36.0		31	48	65				
R ALDER	166.6	62.8		13	35	57				
TOTAL	37.6	14.2		264	307	351	64	33	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	92.6	34.9		12,467	19,152	25,837				
DOUG FIR	122.2	46.1		3,480	6,453	9,426				
S SPRUCE	90.1	34.0		4,273	6,474	8,674				
R ALDER	171.5	64.6		1,178	3,331	5,484				
TOTAL	42.0	15.8		29,806	35,409	41,011	80	41	20	
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	43.6	16.5		76	117	158				
DOUG FIR	60.4	22.8		57	105	154				
S SPRUCE	25.7	9.7		90	136	182				
R ALDER	148.1	55.8		34	95	157				
TOTAL	150.9	56.9		97	115	133	1,035	528	259	

T029 R014 S08 T0U18										T029 R014 S08 T0U18				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
029	014	08	DICKEY	0U18	10.90	5	16	S	W					

S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
WH	DM	3S	76	1.3	13,739	13,562	148	100				7	17	76	34	8	84	0.57	162.4	
WH	DM	4S	20		3,645	3,645	40	66	34			31	69		21	5	22	0.28	168.5	
WH	DM	UT	4		593	593	6	100				100			10	5	10	0.18	59.3	
WH	Totals		51	1.0	17,977	17,800	194	17	83			10	19	13	58	25	6	46	0.44	390.2
DF	DM	2S	35	7.4	4,494	4,160	45	100							36	13	212	1.57	19.6	
DF	DM	3S	55	6.1	6,849	6,434	70	100							36	8	91	0.69	70.8	
DF	DM	4S	7	8.5	804	736	8	17	83			100			16	6	20	0.32	37.6	
DF	DM	UT	3	.0	346	346	4	100				100			11	5	10	0.19	34.6	
DF	Totals		33	6.5	12,493	11,676	127	4	60	36		9		91	26	8	72	0.74	162.7	
RA	DM	3S	67	5.4	1,724	1,630	18	100				100			20	10	62	0.70	26.4	
RA	DM	4S	33		792	792	9	100				100			27	5	30	0.34	26.4	
RA	Totals		7	3.7	2,516	2,422	26	33	67			67	33		24	7	46	0.49	52.8	
SS	DM	2S	68		2,286	2,286	25	100							36	13	220	1.55	10.4	
SS	DM	3S	25	11.1	935	831	9	100						100	32	9	80	0.69	10.4	
SS	DM	4S	7		208	208	2	100				100			15	6	20	0.32	10.4	
SS	Totals		9	3.0	3,430	3,326	36	31	69			6	25	69	28	9	107	1.00	31.2	
Type Totals				3.3	36,416	35,224	384	12	70	18		13	12	9	66	25	7	55	0.56	636.9

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	DICKEY			DATE	4/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
029	014	08	DICKEY	0U18	10.90	5	27	S	W	
			TREES	ESTIMATED	PERCENT					
			PER PLOT	TOTAL	SAMPLE					
			TREES	TREES	TREES					
TOTAL	5	27	5.4							
CRUISE	4	16	4.0	3,022	.5					
DBH COUNT										
REFOREST										
COUNT	1	6	6.0							
BLANKS										
100 %										
STAND SUMMARY										
SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
WHEMLOCK	7	186.2	12.3	59	43.6	152.4	17,977	17,800	4,276	4,276
DOUG FIR	4	54.2	17.2	82	21.0	87.1	12,493	11,676	3,134	3,130
R ALDER	3	26.4	12.9	52	6.7	24.0	2,516	2,422	613	614
S SPRUCE	2	10.4	19.6	86	4.9	21.8	3,430	3,326	857	859
TOTAL	16	277.2	13.7	64	77.0	285.3	36,416	35,224	8,880	8,880
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	74.8	37.2		117	186	255				
DOUG FIR	71.6	35.6		35	54	74				
R ALDER	159.0	79.0		6	26	47				
S SPRUCE	223.6	111.1			10	22				
TOTAL				277	277	277				
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	77.4	38.5		94	152	211				
DOUG FIR	71.3	35.4		56	87	118				
R ALDER	149.1	74.1		6	24	42				
S SPRUCE	223.6	111.1			22	46				
TOTAL				285	285	285				
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	77.7	38.6		10,929	17,800	24,670				
DOUG FIR	71.7	35.6		7,514	11,676	15,838				
R ALDER	150.2	74.6		615	2,422	4,230				
S SPRUCE	223.6	111.1			3,326	7,021				
TOTAL				35,224	35,224	35,224				
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				72	117	162				
DOUG FIR				86	134	182				
R ALDER	150.2	74.6		26	101	176				
S SPRUCE	223.6	111.1			153	322				
TOTAL	137.4	68.3		123	123	123	932	476	233	

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

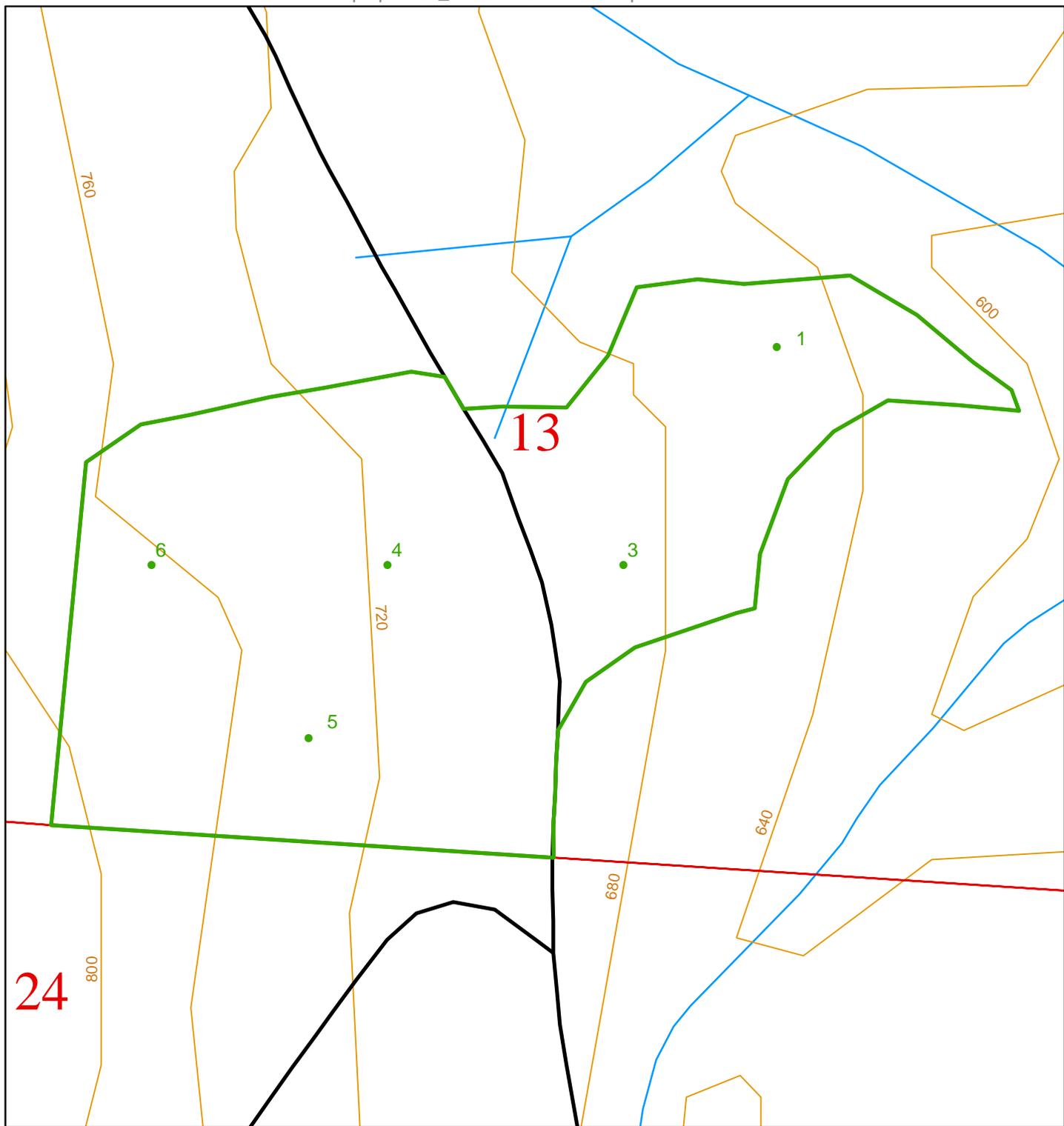
T029 R014 S08 Ty0U16	1.4
T029 R014 S08 Ty0U17	13.3
T030 R014 S22 TyRW1	1.3

Project **DICKEY**
Acres **199.40**

Page No **1**
Date: **4/19/2016**
Time **6:05:21PM**

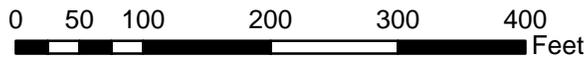
Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
WHEMLOCK	25,369	53,476	31,150	38.37	18.20	0.64	9,734	9,735	3,779	3,605
S SPRUCE	6,016	14,173	12,285	78.50	33.32	1.21	4,725	4,723	1,895	1,794
DOUG FIR	6,819	15,630	9,092	46.77	20.41	0.73	3,190	3,189	1,169	1,077
R ALDER	7,726	14,815	4,164	19.61	10.23	0.45	1,514	1,515	600	562
WR CEDAR	90	180	68	32.36	16.18	0.81	29	29	8	7
BL MAPLE	140	176	40	10.90	8.67	0.62	15	15	6	6
PS FIR	10	25	16	55.93	22.37	0.86	6	6	3	2
Totals	46,169	98,474	56,816	41.61	19.51	0.71	19,214	19,212	7,459	7,052

Wood Type Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
C	38,304	83,483	52,611	46.16	21.18	0.75	17,684	17,681	6,853	6,485
H	7,866	14,991	4,205	19.45	10.21	0.45	1,530	1,530	605	567
Totals	46,169	98,474	56,816	41.61	19.51	0.71	19,214	19,212	7,459	7,052



Cruiser Sample Point Locations

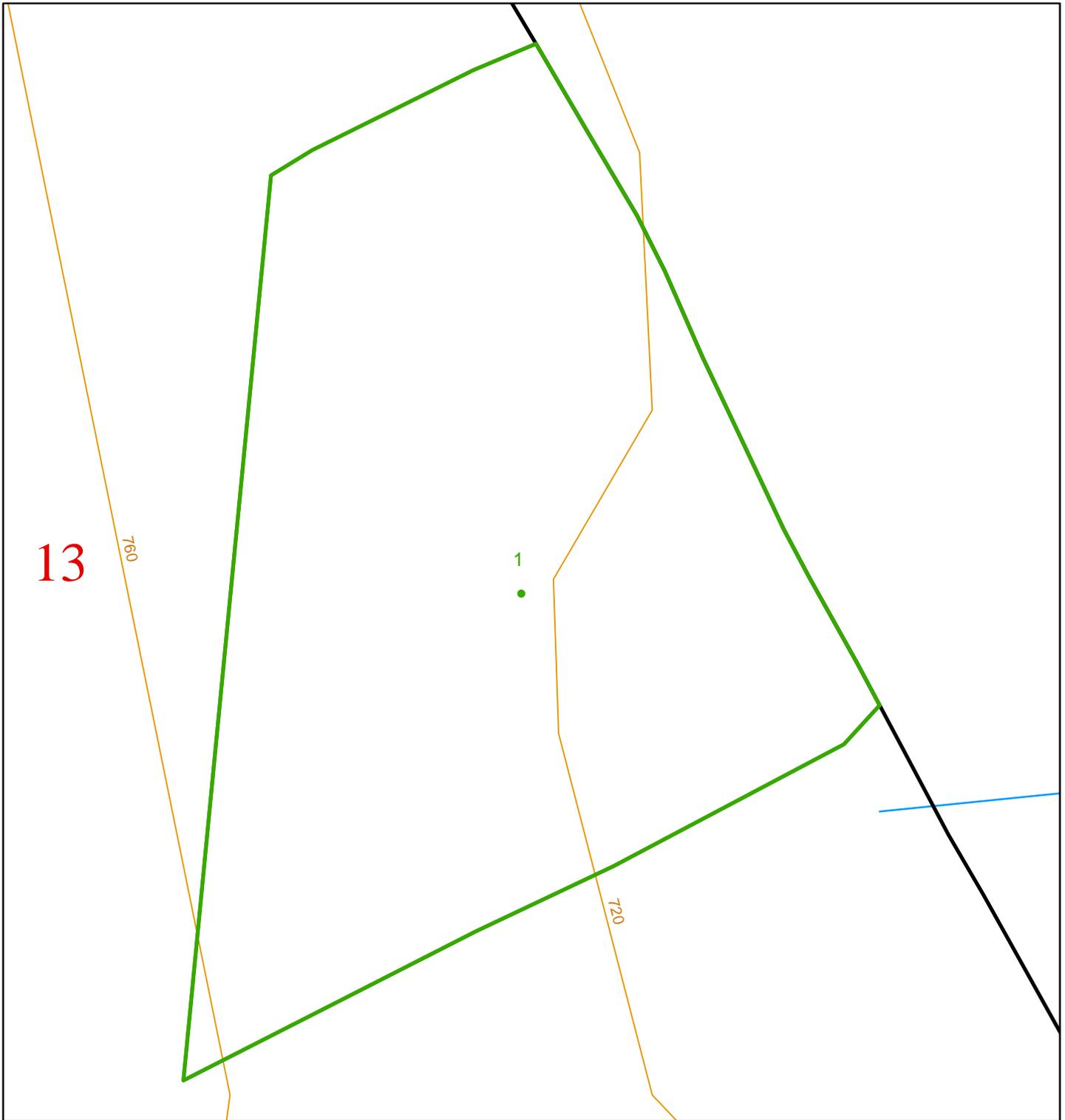
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POLY ID:	1	Total Sample Points:	7
Acres:	8	Spacing Between Points:	Width: 250 Height: 250
		Point Rotation Degrees:	0



Scale 1:1,800

Legend

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



13

760

1

720

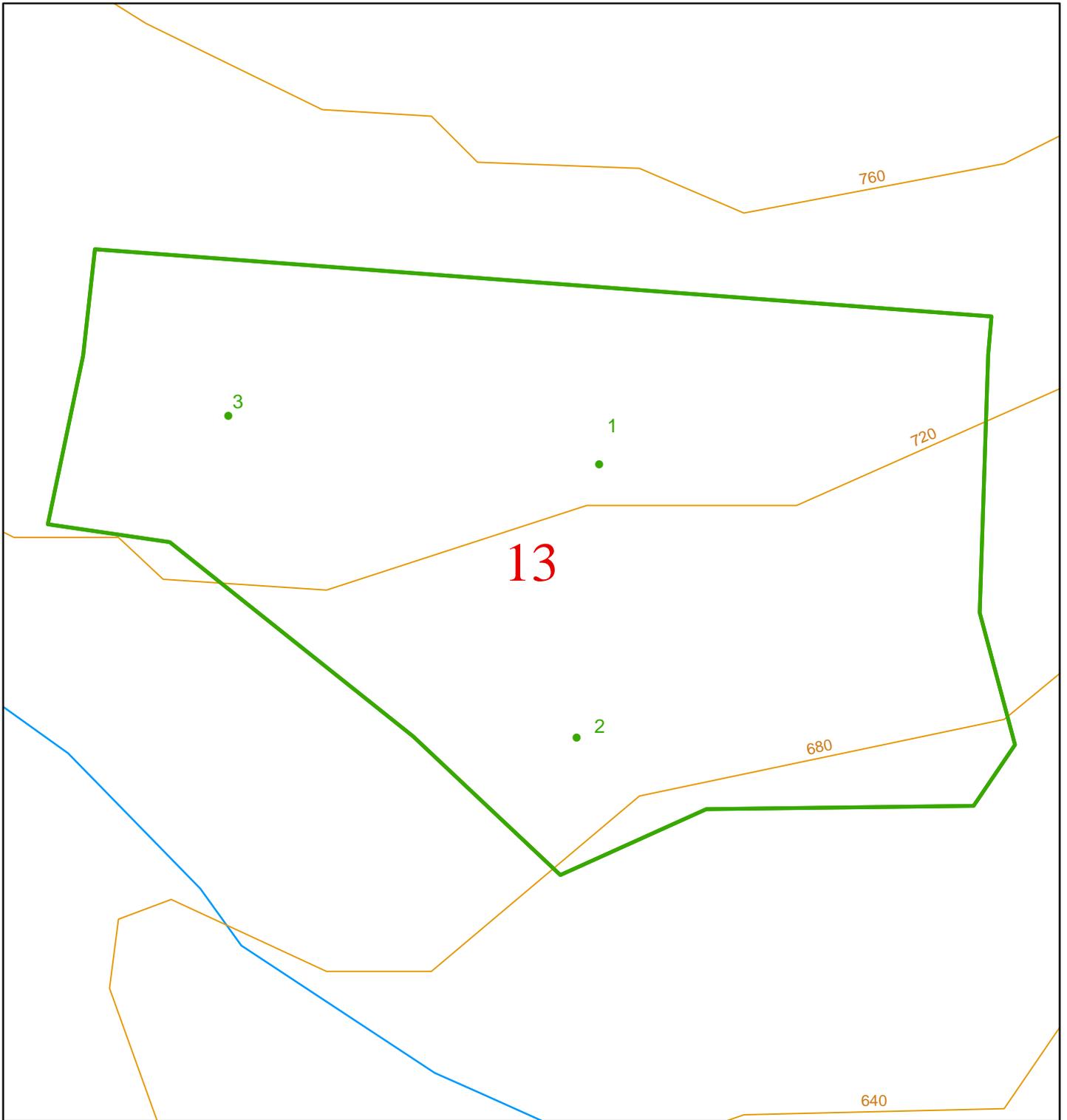
Cruiser Sample Point Locations

LAYER NAME:	planned harvest	Township:	T30R13W
POLY ID:	1	Total Sample Points:	1
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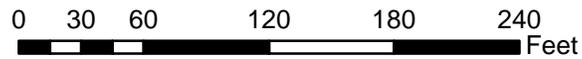
Legend

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



Cruiser Sample Point Locations

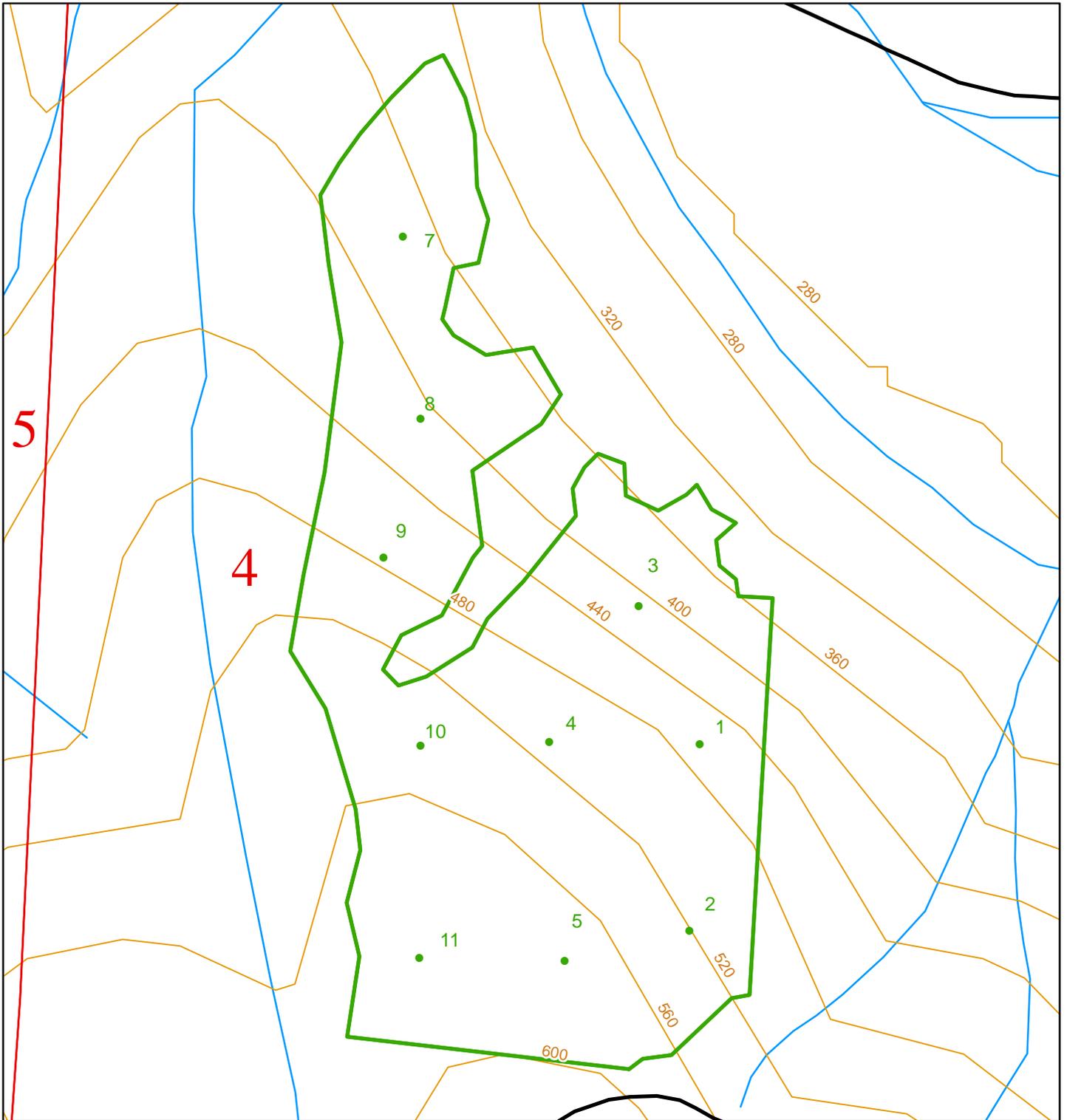
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		Point Rotation Degrees:	0



Scale 1:1,100

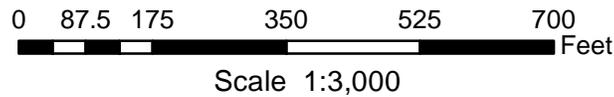
Legend

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



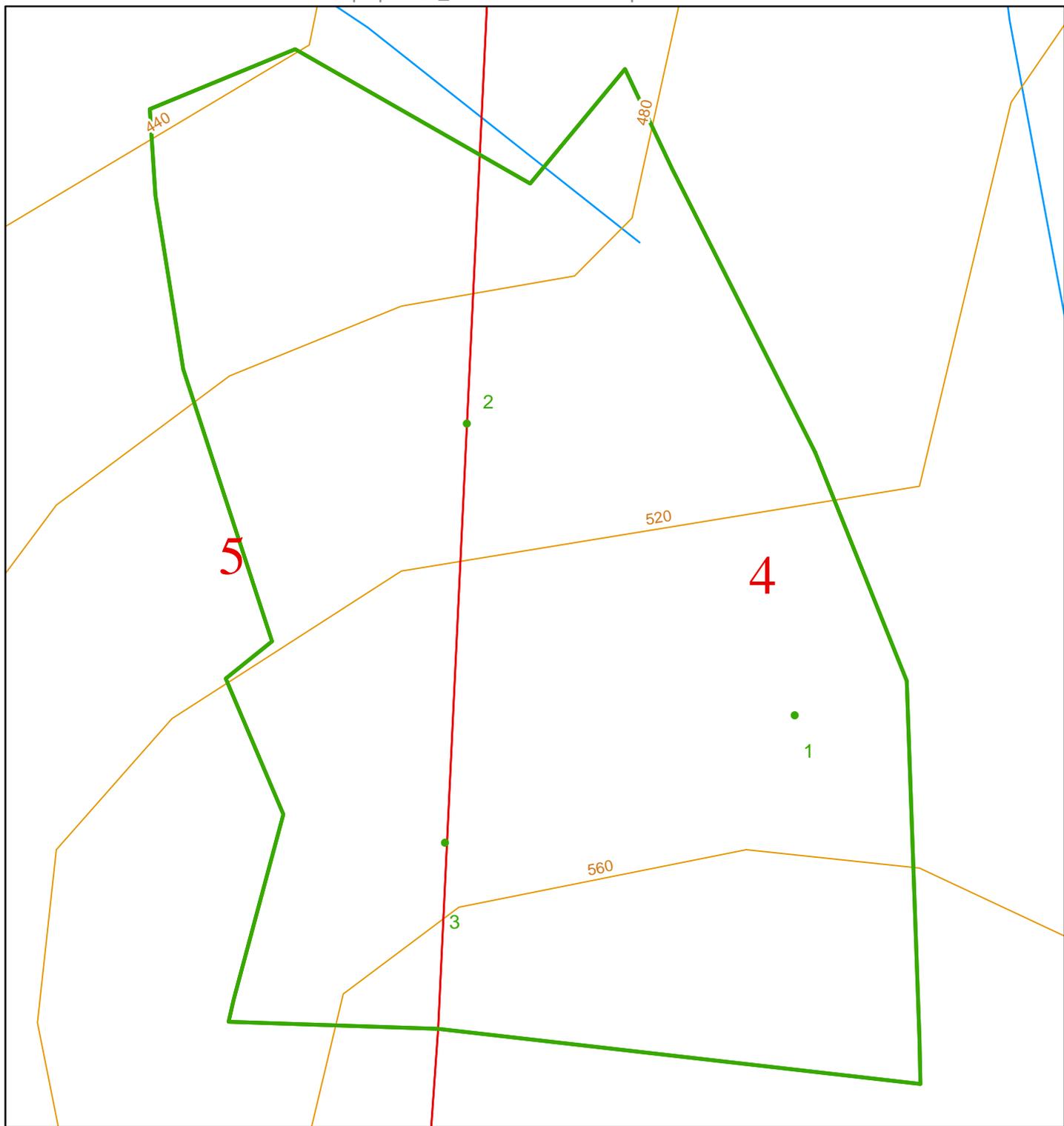
Cruiser Sample Point Locations

LAYER NAME:	planned harvest	Township:	T30R13W
POLY ID:	1	Total Sample Points:	11
Acres:	20	Spacing Between Points:	Width: 290 Height: 290
		Point Rotation Degrees:	0



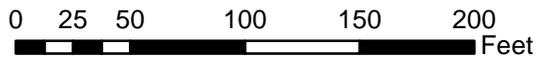
Legend

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



Cruiser Sample Point Locations

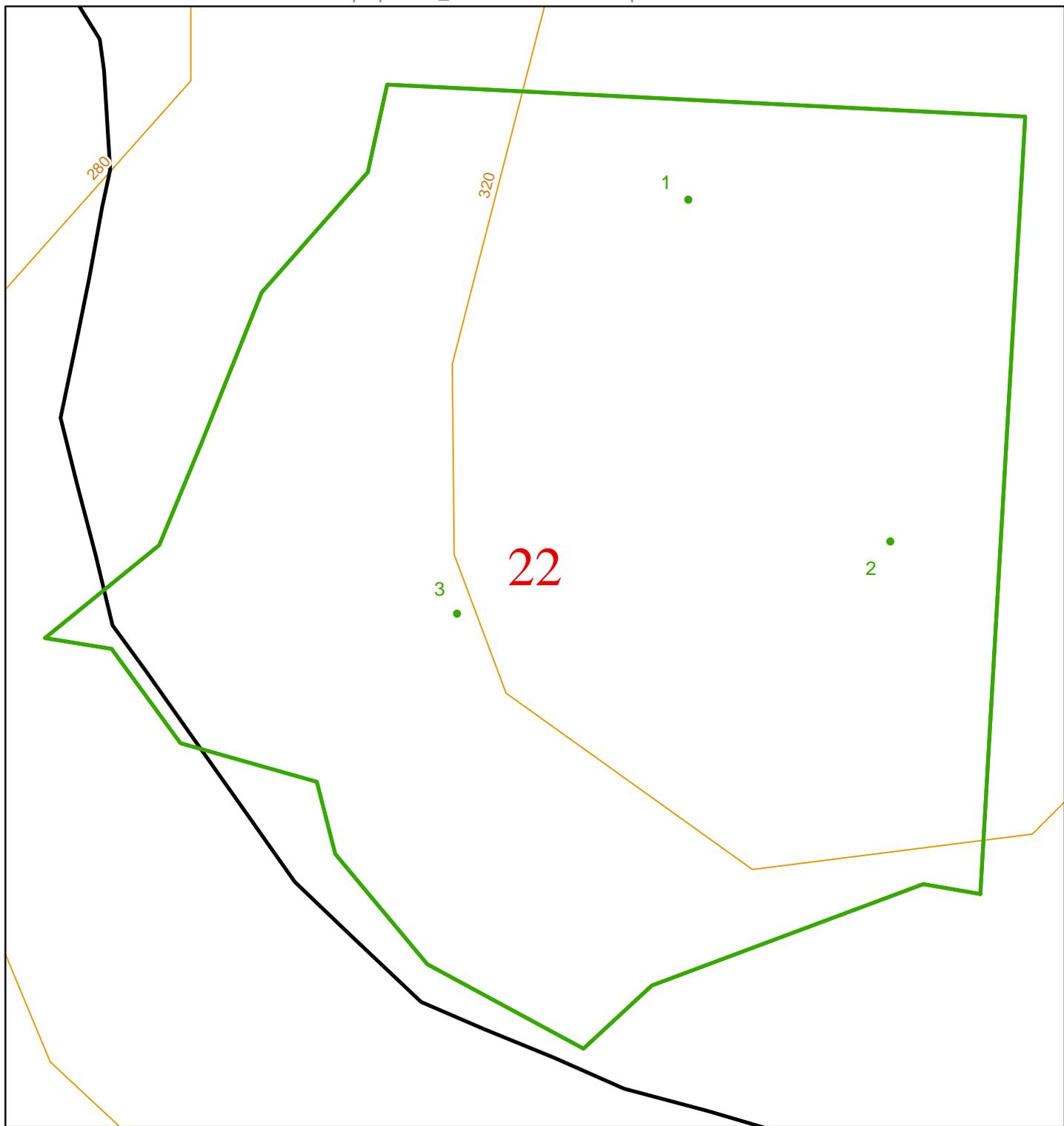
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Acres:	5	Spacing Between Points: Width: 250 Height: 250	
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Scale 1:1,000

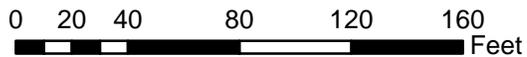
Legend

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



Cruiser Sample Point Locations

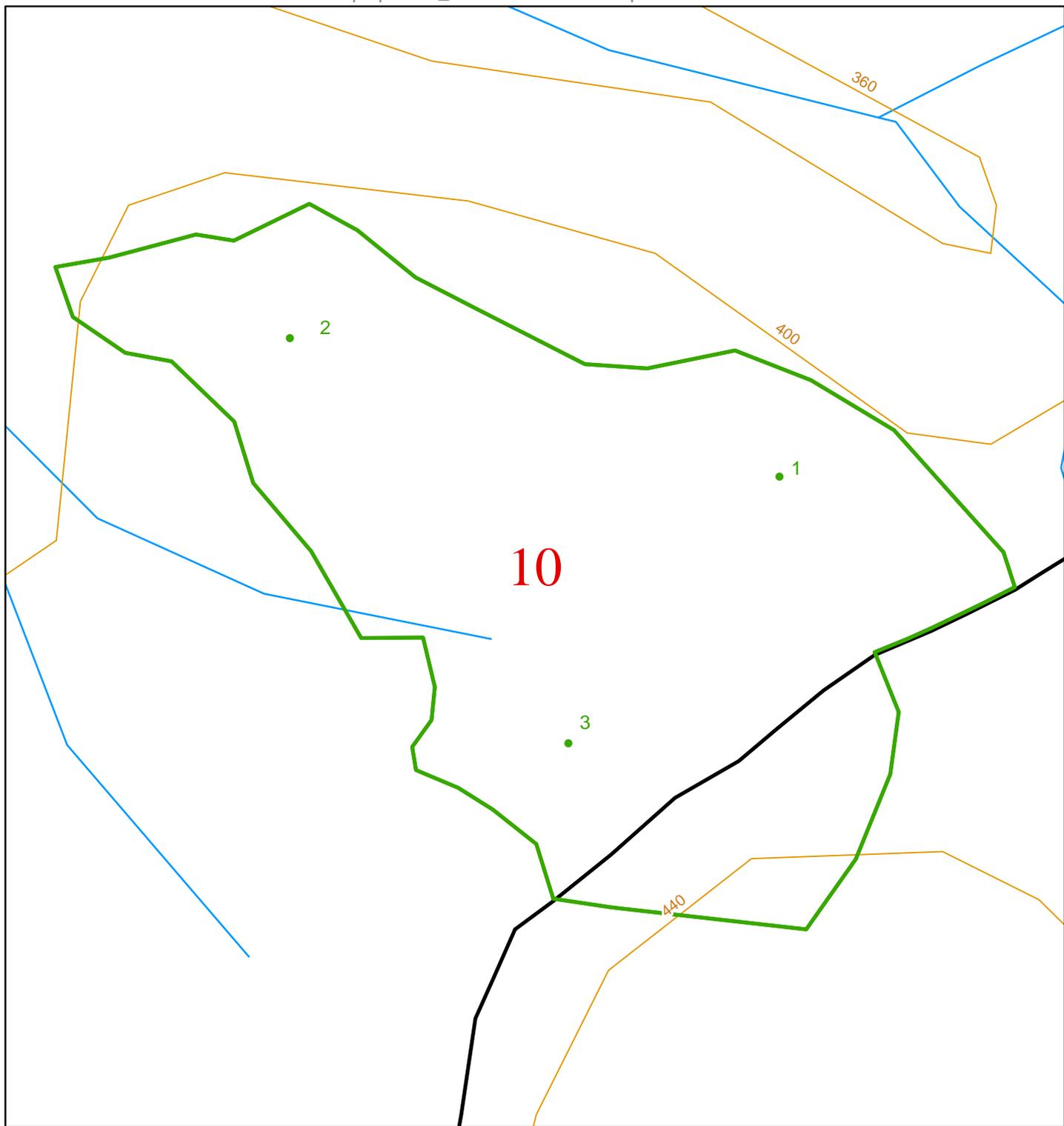
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POLY ID:	1	Total Sample Points:	3
Acres:	acres	Spacing Between Points:	Width: 250 Height: 250
		Point Rotation Degrees:	0



Scale 1:820

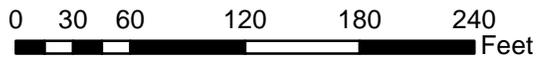
Legend

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



Cruiser Sample Point Locations

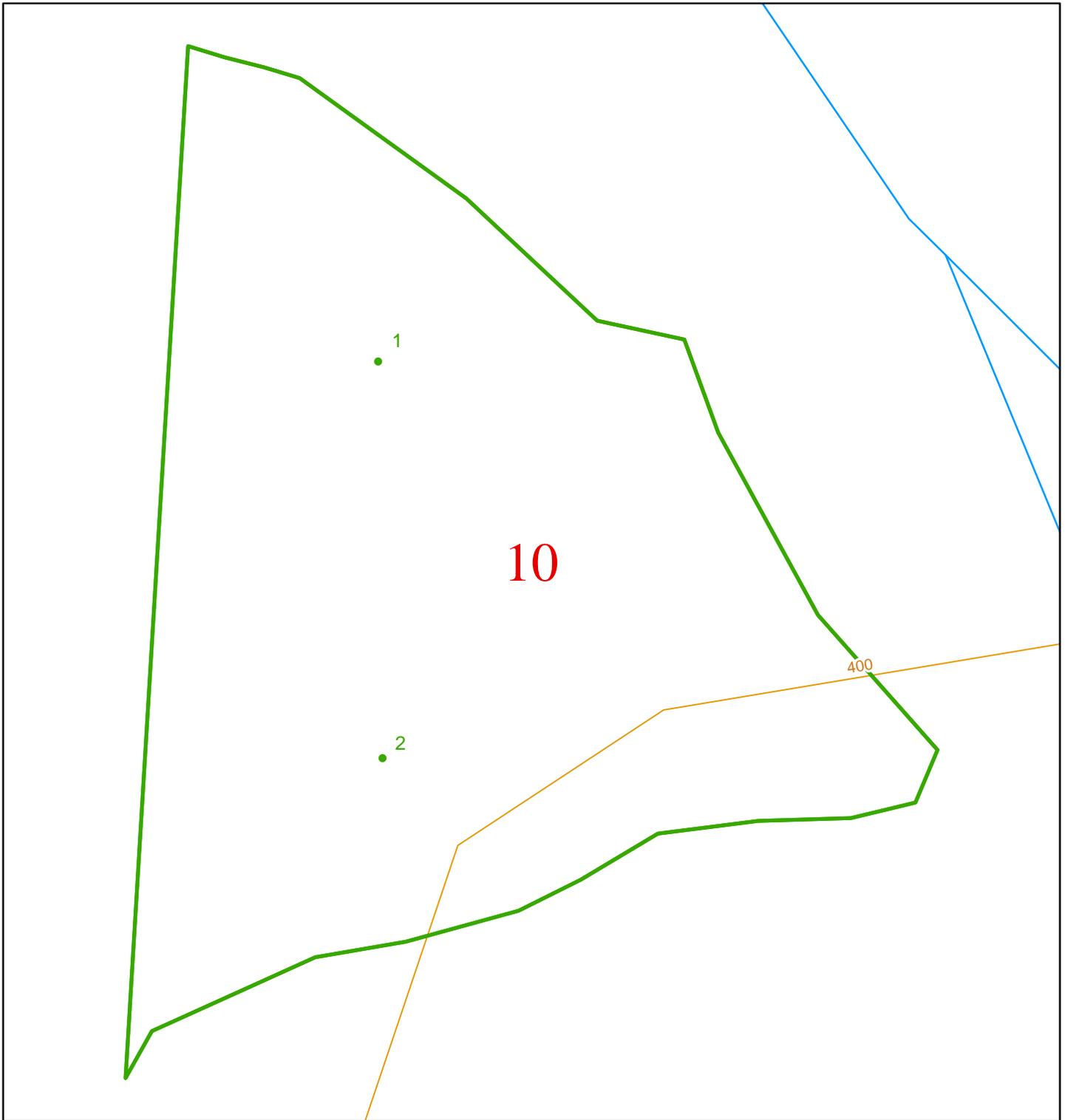
LAYER NAME:	planned harvest	Township:	T30R14W
POLY ID:	1	Total Sample Points:	3
Acres:	4	Spacing Between Points:	Width: 250 Height: 250
		Point Rotation Degrees:	0



Scale 1:1,200

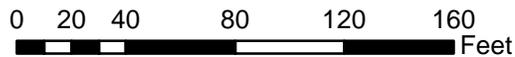
Legend

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



Cruiser Sample Point Locations

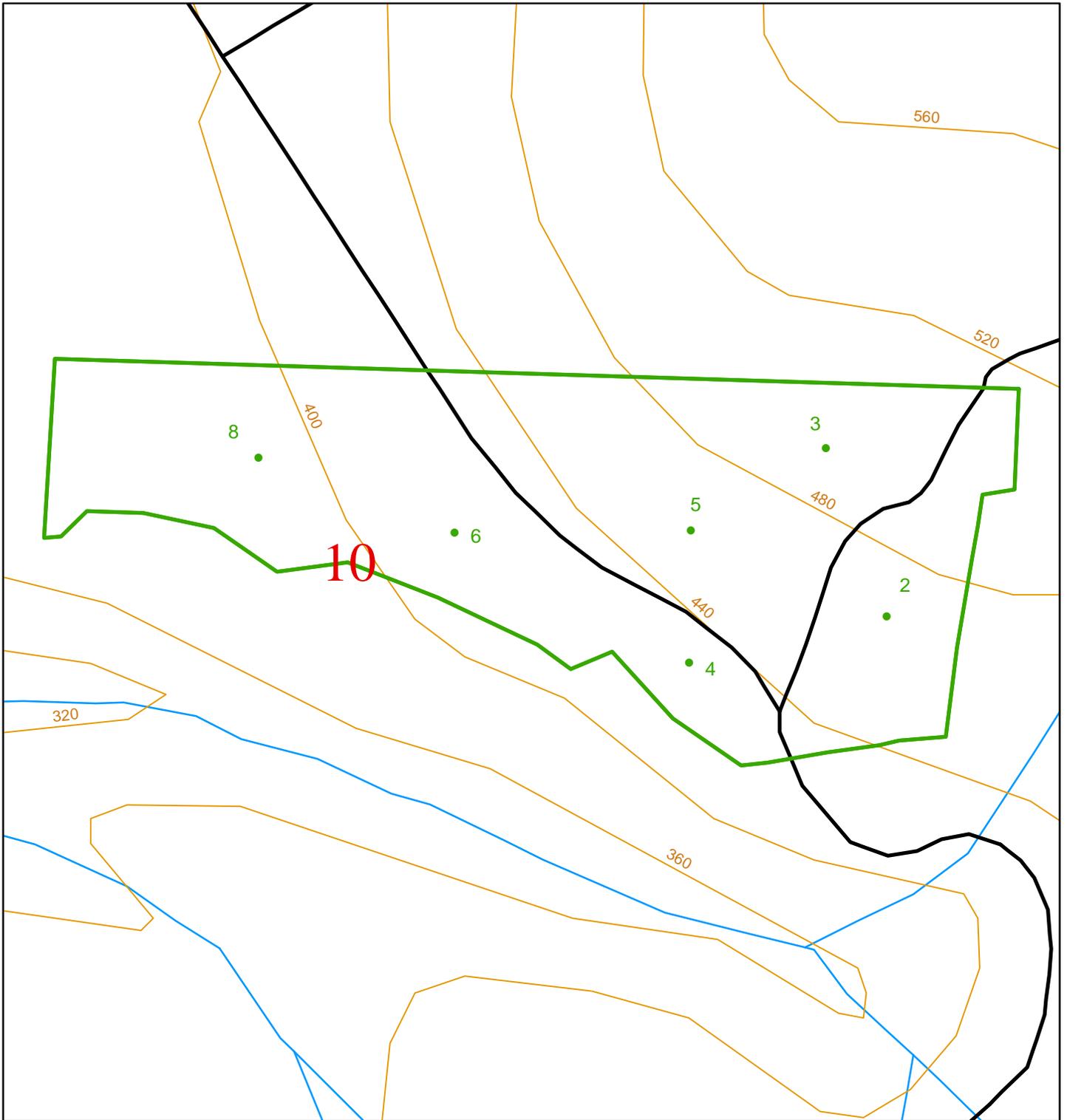
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POLY ID:	1	Total Sample Points:	2
Acres:	3	Spacing Between Points: Width: 250	Height: 250
		Point Rotation Degrees:	0



Scale 1:840

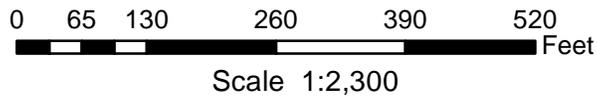
Legend

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



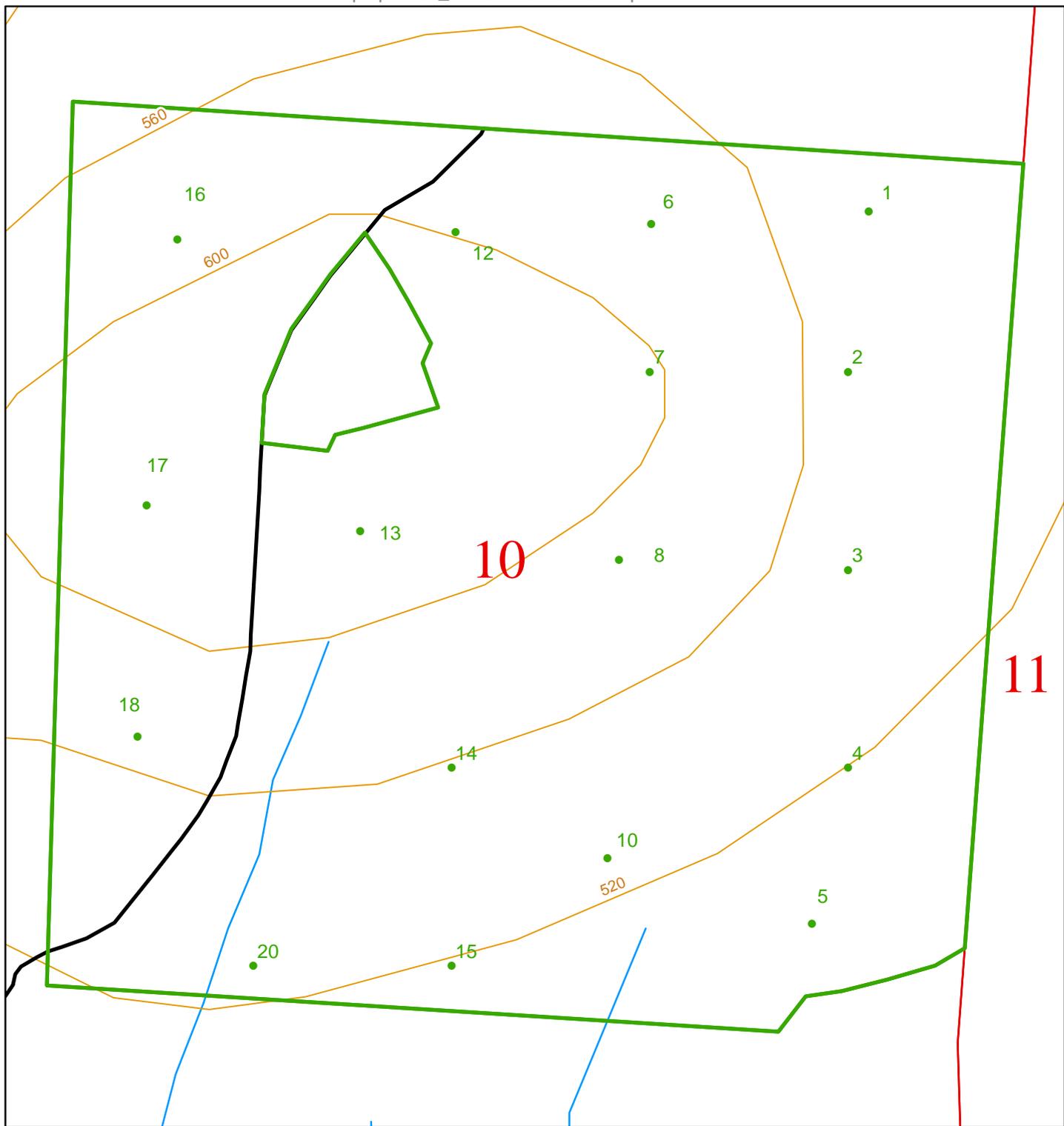
Cruiser Sample Point Locations

LAYER NAME:	planned harvest	Township:	T30R14W
POLY ID:	1	Total Sample Points:	8
Acres:	10	Spacing Between Points:	Width: 250 Height: 250
		Point Rotation Degrees:	0



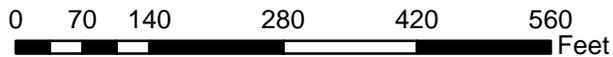
Legend

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



Cruiser Sample Point Locations

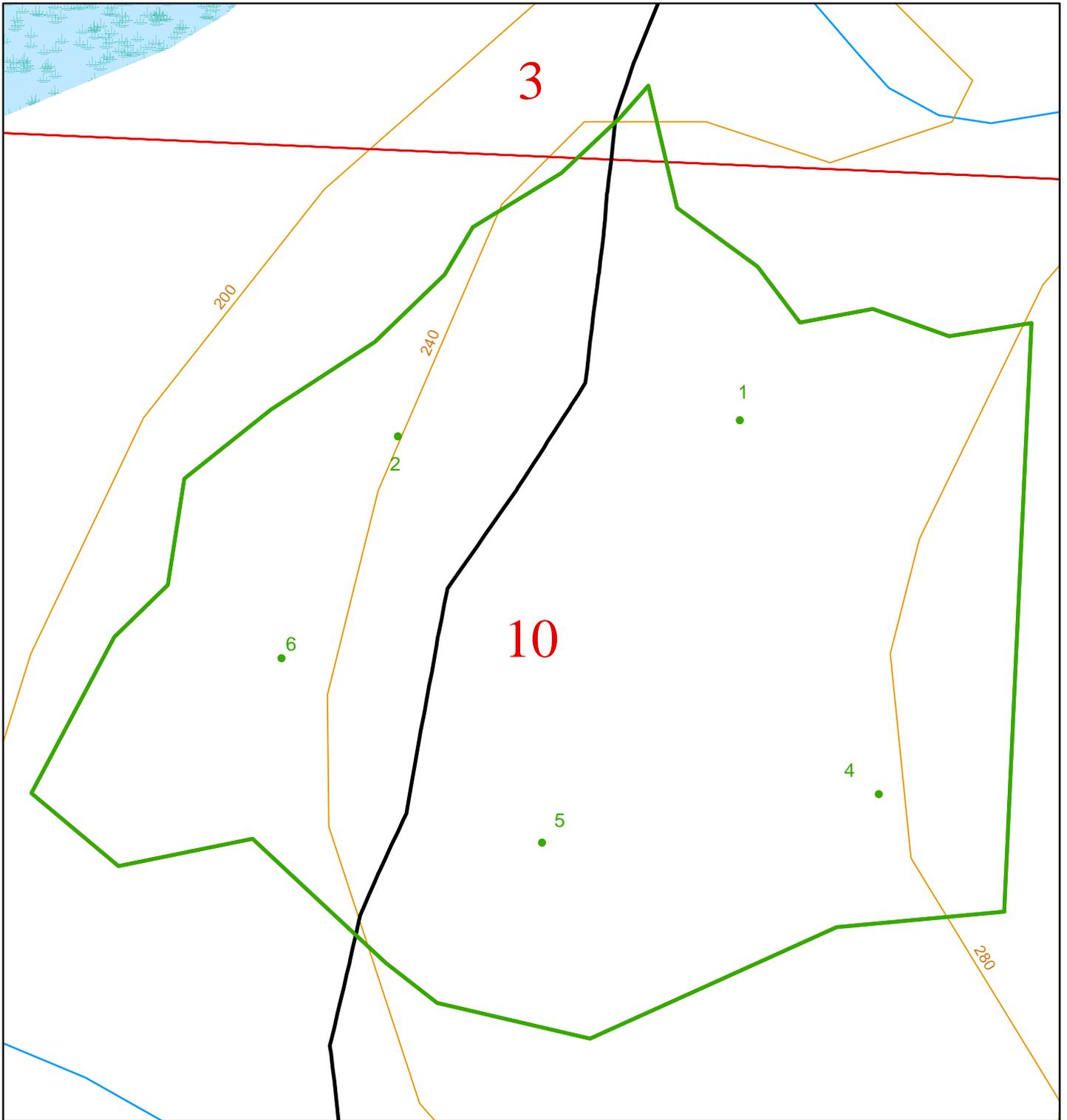
LAYER NAME:	planned harvest	Township:	T30R14W
POLY ID:	1	Total Sample Points:	22
Acres:	36	Spacing Between Points:	Width: 280 Height: 280
		Point Rotation Degrees:	0



Scale 1:2,400

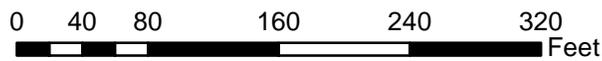
Legend

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



Cruiser Sample Point Locations

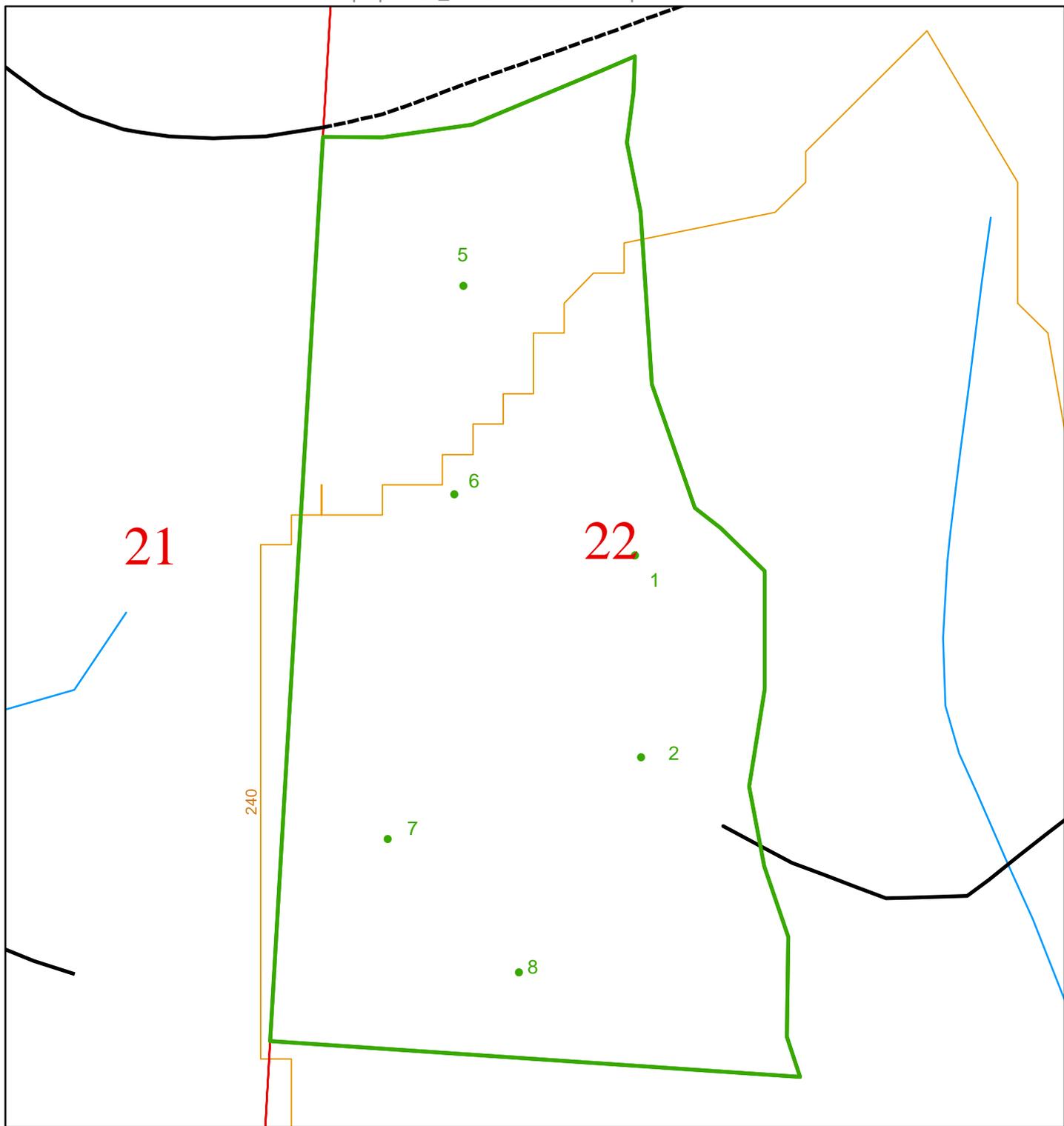
LAYER NAME:	planned harvest	Township:	T30R14W
POLY ID:	1	Total Sample Points:	6
Acres:	9	Spacing Between Points:	Width: 250 Height: 250
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Scale 1:1,400

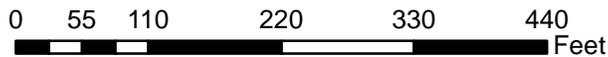
Legend

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



Cruiser Sample Point Locations

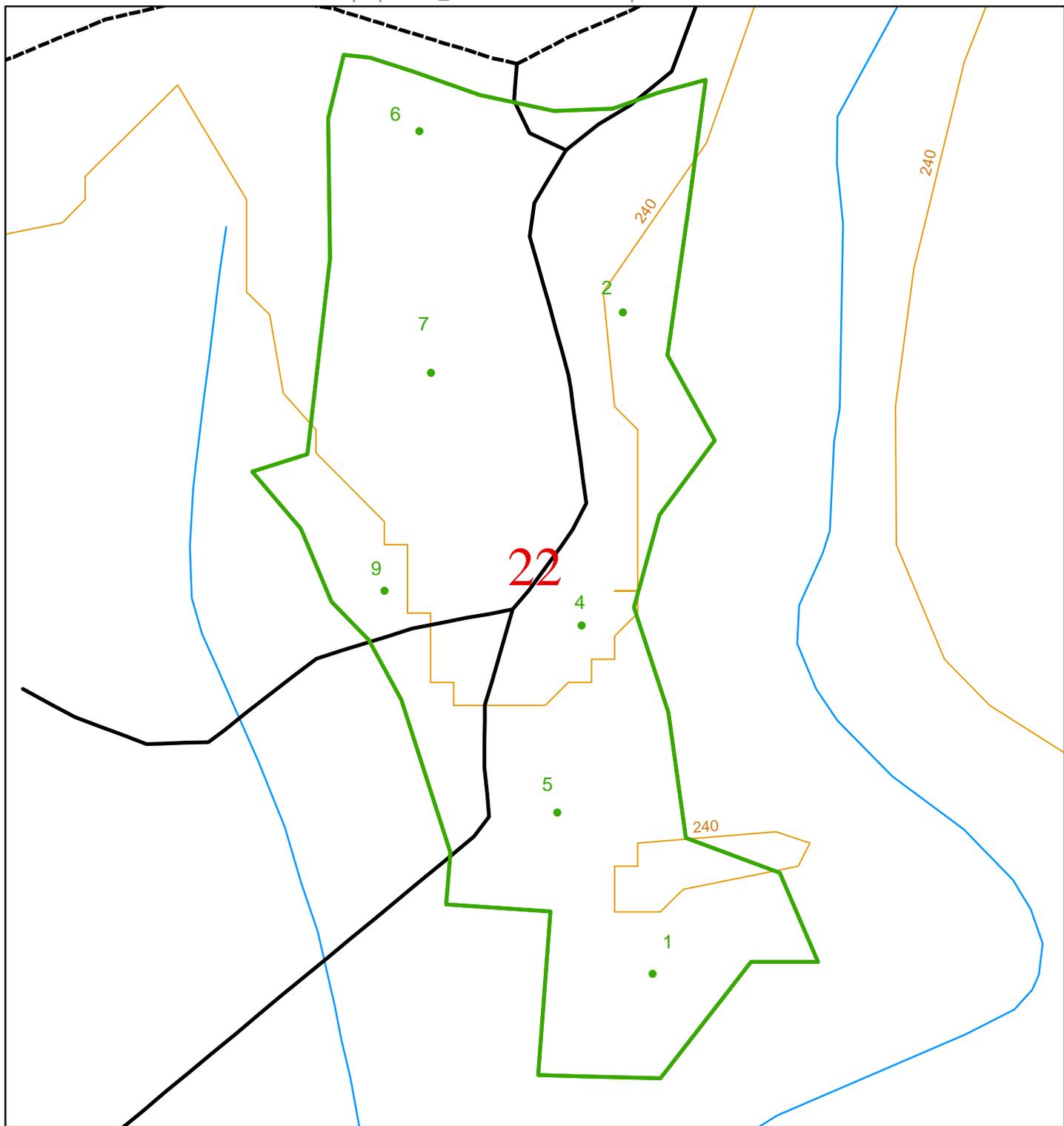
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POLY ID:	1	Total Sample Points:	8
Acres:	11	Spacing Between Points:	Width: 260 Height: 260
		Point Rotation Degrees:	0



Scale 1:1,900

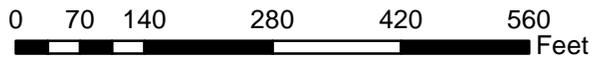
Legend

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



Cruiser Sample Point Locations

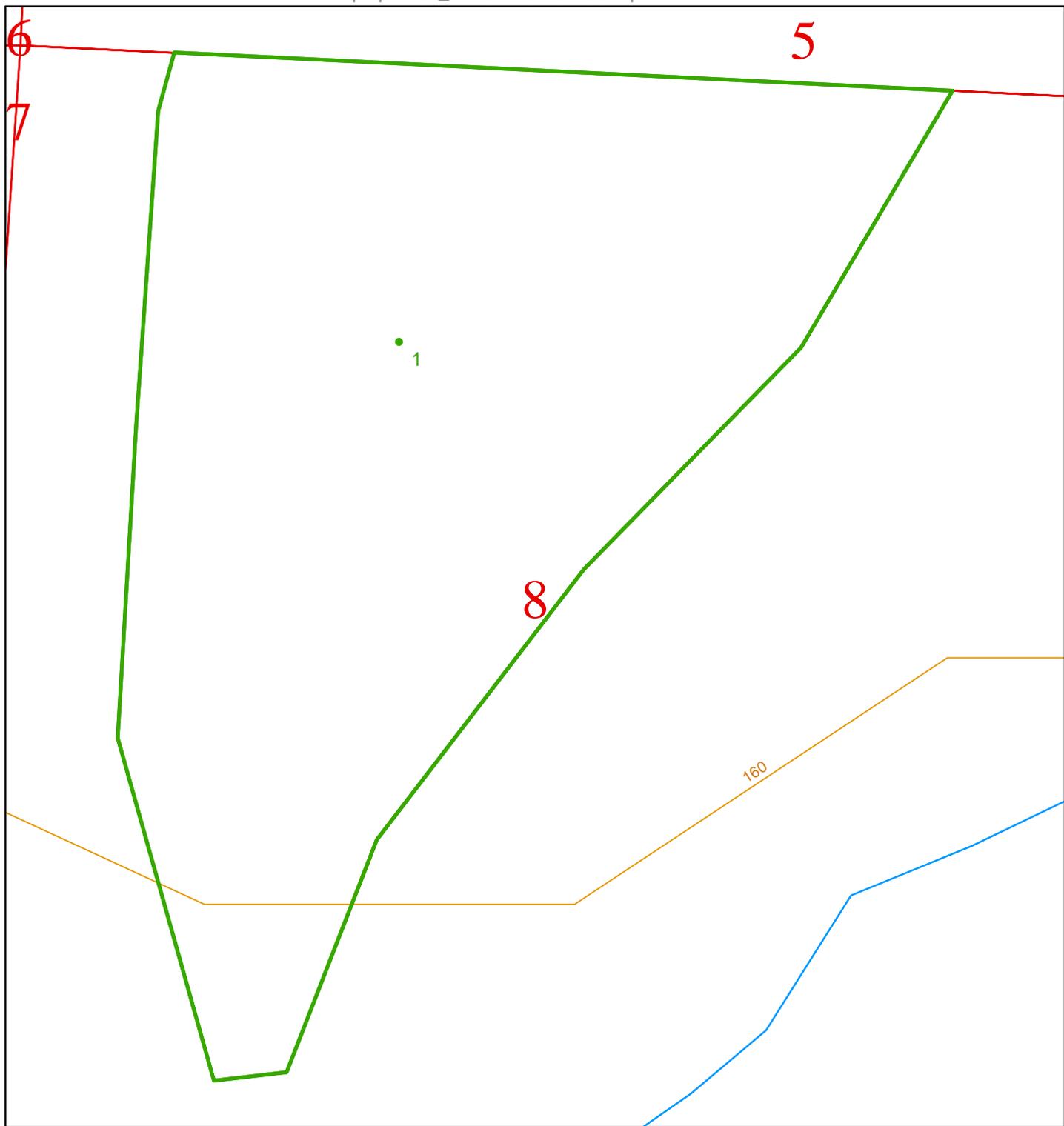
LAYER NAME:	planned harvest	Township:	T30R14W
POLY ID:	1	Total Sample Points:	9
Acres:	15	Spacing Between Points:	Width: 260 Height: 260
		Point Rotation Degrees:	0



Scale 1:2,500

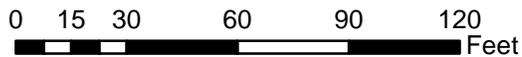
Legend

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



Cruiser Sample Point Locations

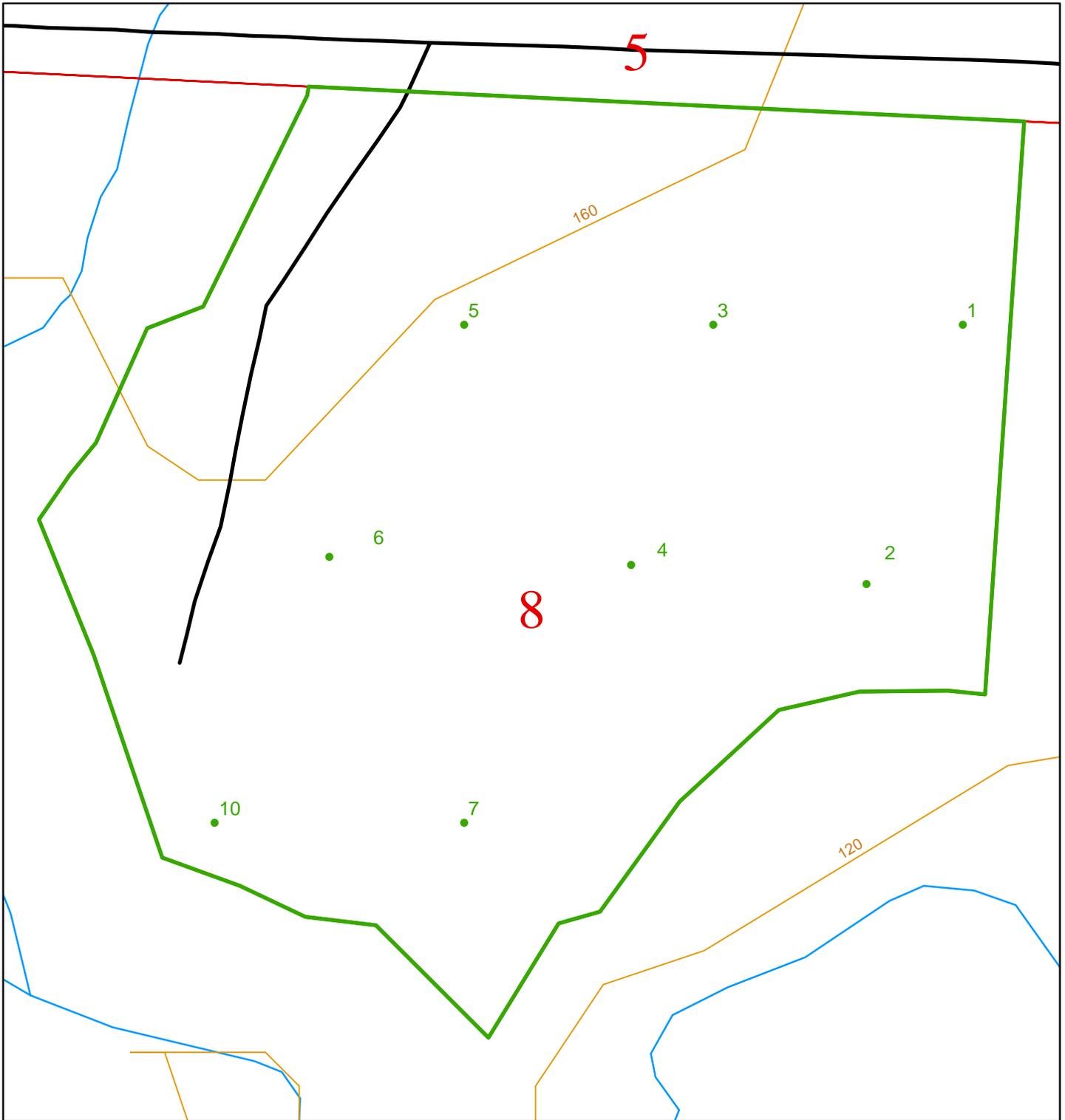
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POLY ID:	1	Total Sample Points:	1
Acres:	acres	Spacing Between Points:	Width: 250 Height: 250
		Point Rotation Degrees:	0



Scale 1:620

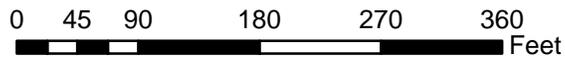
Legend

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



Cruiser Sample Point Locations

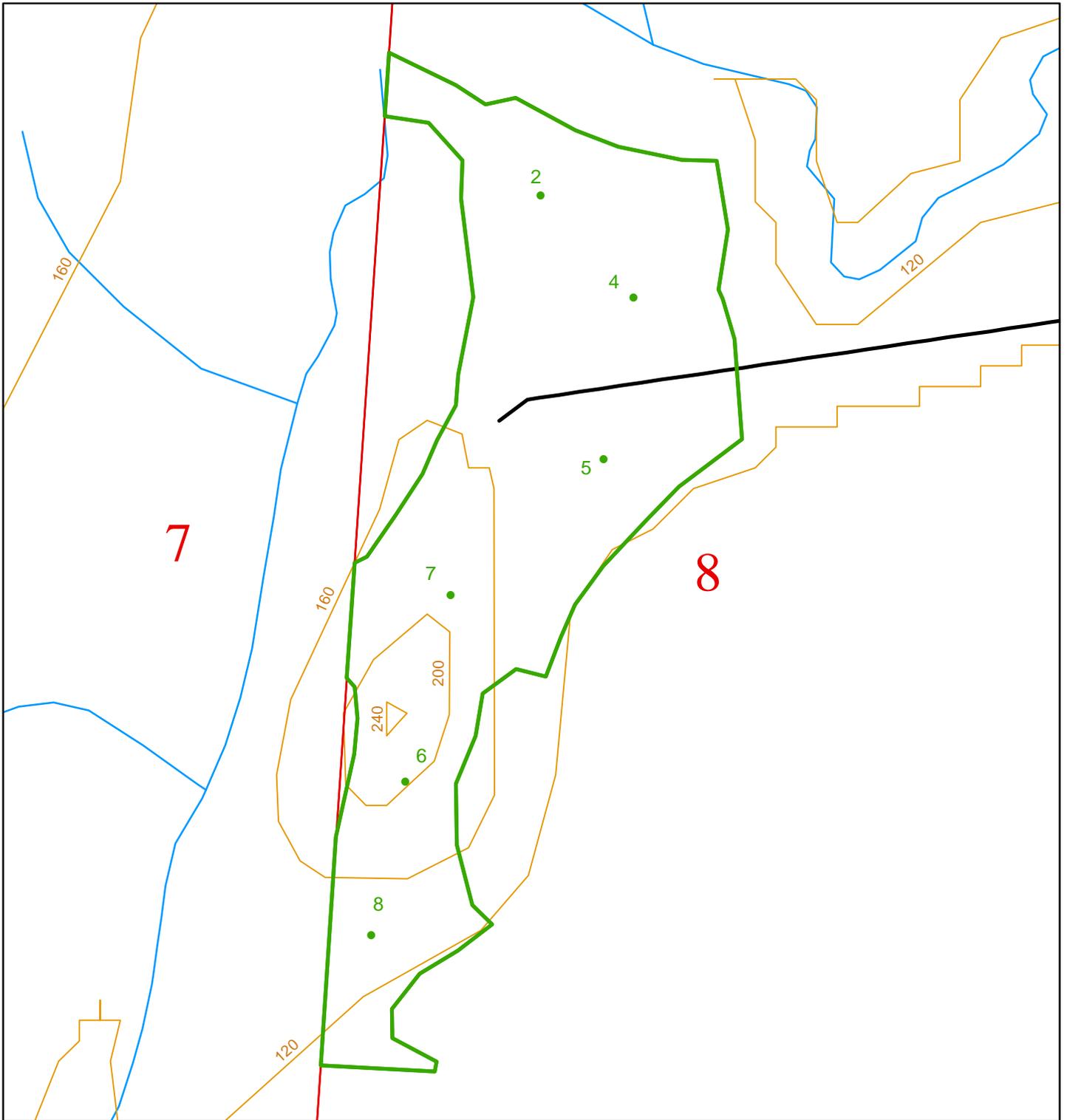
LAYER NAME:	planned harvest	Township:	T29R14W
POLY ID:	1	Total Sample Points:	10
Acres:	15	Spacing Between Points:	Width: 250 Height: 250
		Point Rotation Degrees:	0



Scale 1:1,700

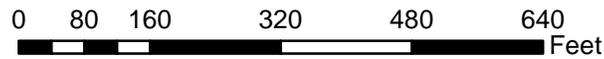
Legend

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



Cruiser Sample Point Locations

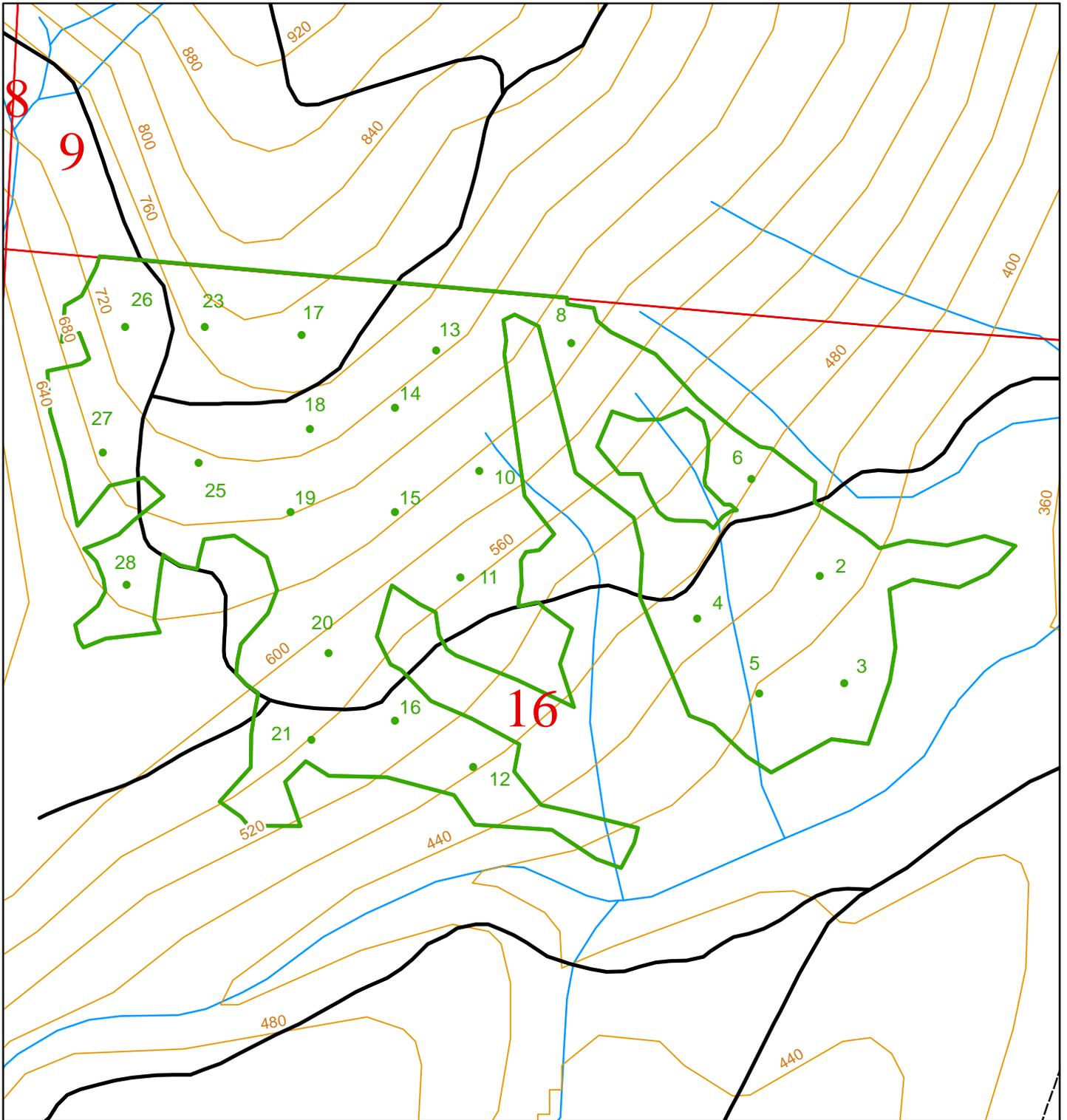
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POLY ID:	1	Total Sample Points:	9
Acres:	12	Spacing Between Points:	Width: 250 Height: 250
		Point Rotation Degrees:	0



Scale 1:2,800

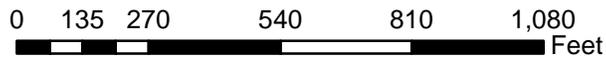
Legend

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



Cruiser Sample Point Locations

LAYER NAME:	unitboundary	Township:	T30R13W
POLY ID:	1	Total Sample Points:	28
Acres:	48	Spacing Between Points:	Width: 290 Height: 290
		Point Rotation Degrees:	0



Scale 1:4,700

Legend

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



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

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

FPA/N No: 2614332
 Effective Date: 7/24/2016
 Expiration Date: 7/24/2019
 Shut Down Zone: 650
 EARR Tax Credit: Eligible Non-eligible
 Reference: DNR, Dickey Mountain
 Mike Potter

Decision

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

FPA/N Classification

Class II Class III Class IVG Class IVS

Number of Years Granted on Multi-Year Request

4 years 5 years

Conditions on Approval / Reasons for Disapproval

Issued By: _____ Levi Puksta _____

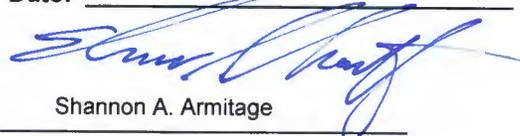
Region: _____ Olympic _____

Title: _____ Forest Practice Forester _____

Date: _____ 7/24/2016 _____

Copies to: Landowner, Timber Owner and Operator.

Issued in person: Landowner Timber Owner Operator By: _____


 Shannon A. Armitage

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.eho.wa.gov/>

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

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

And

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

Other Applicable Laws

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

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

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

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

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

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

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

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

DNR affidavit of mailing:

On this day _____, I placed in the United States mail at _____, WA,
(date) (post office location)
postage paid, a true and accurate copy of this document. Notice of Decision FPA # <u>2614332</u>

(Printed name) (Signature)

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

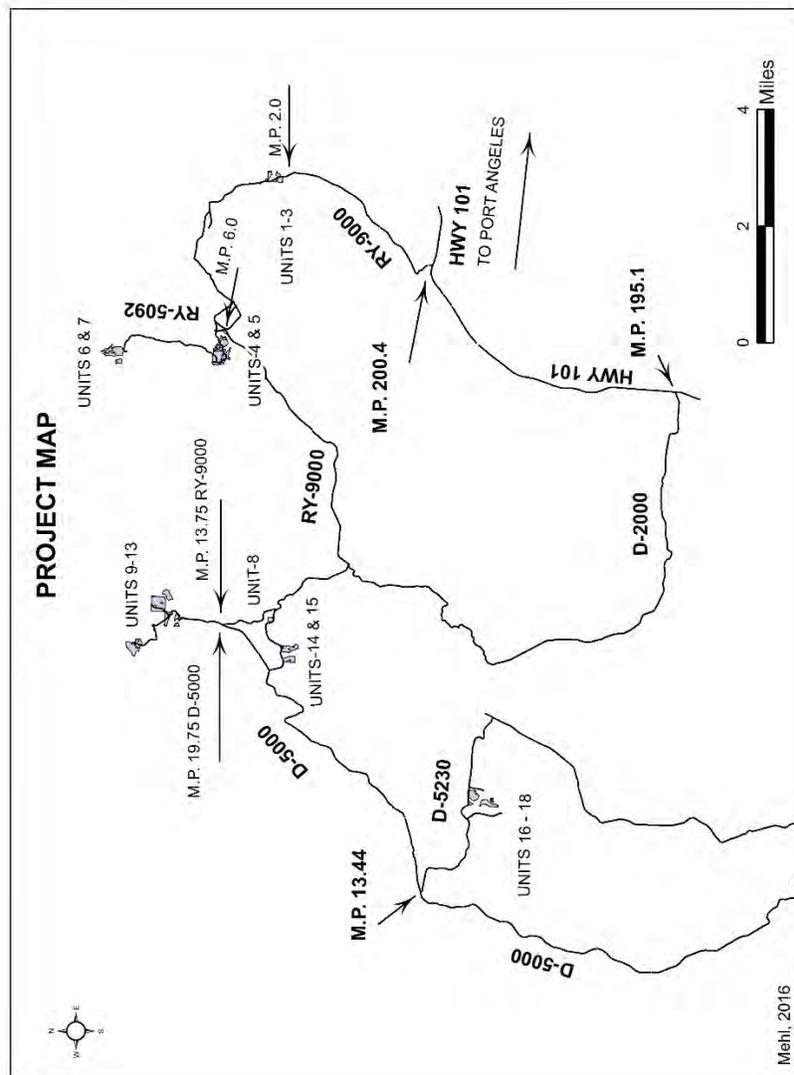
DICKEY MOUNTAIN TIMBER SALE ROAD PLAN
CLALLAM COUNTY
COAST DISTRICT

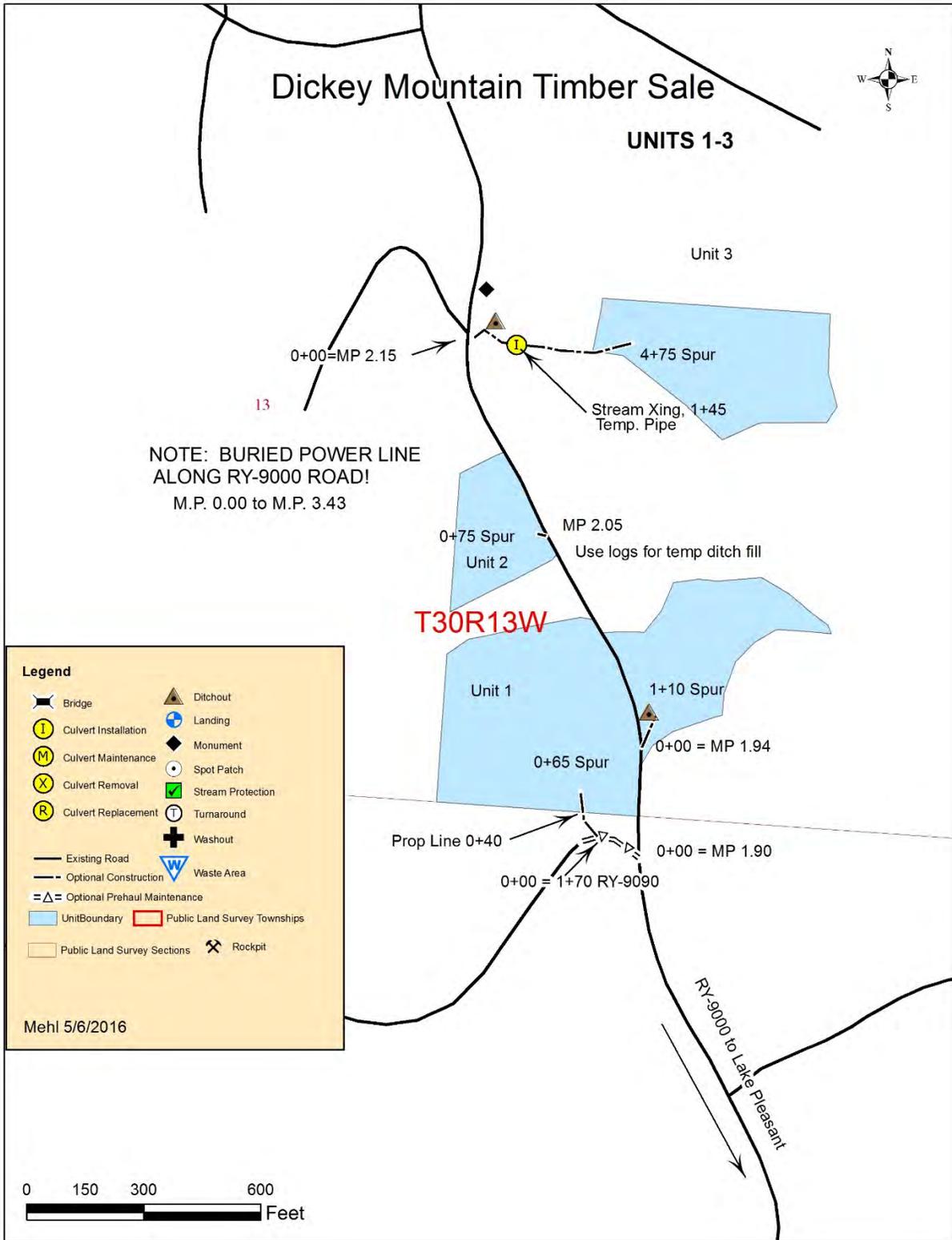
AGREEMENT NO.: 30-093926

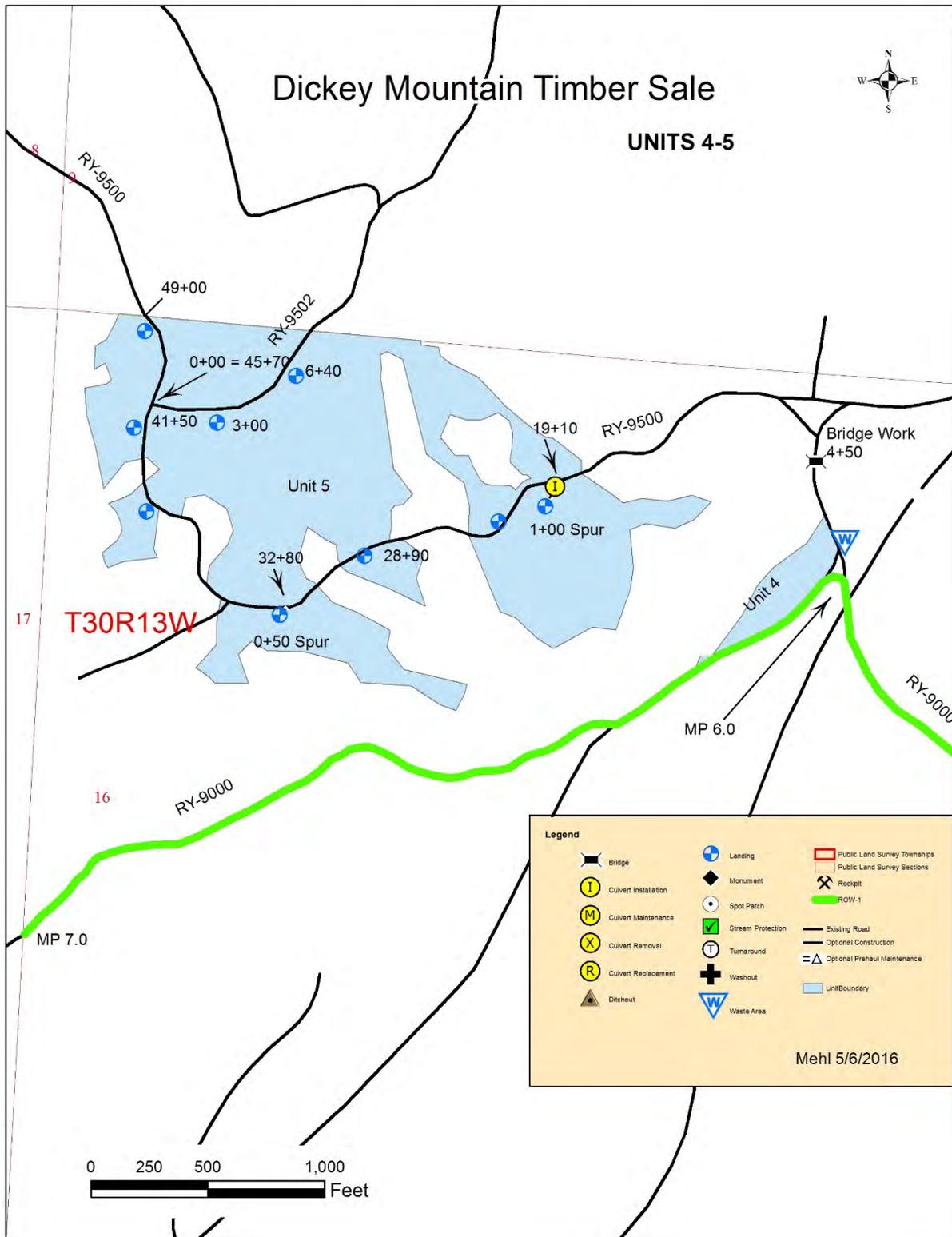
STAFF ENGINEER: BILL MEHL

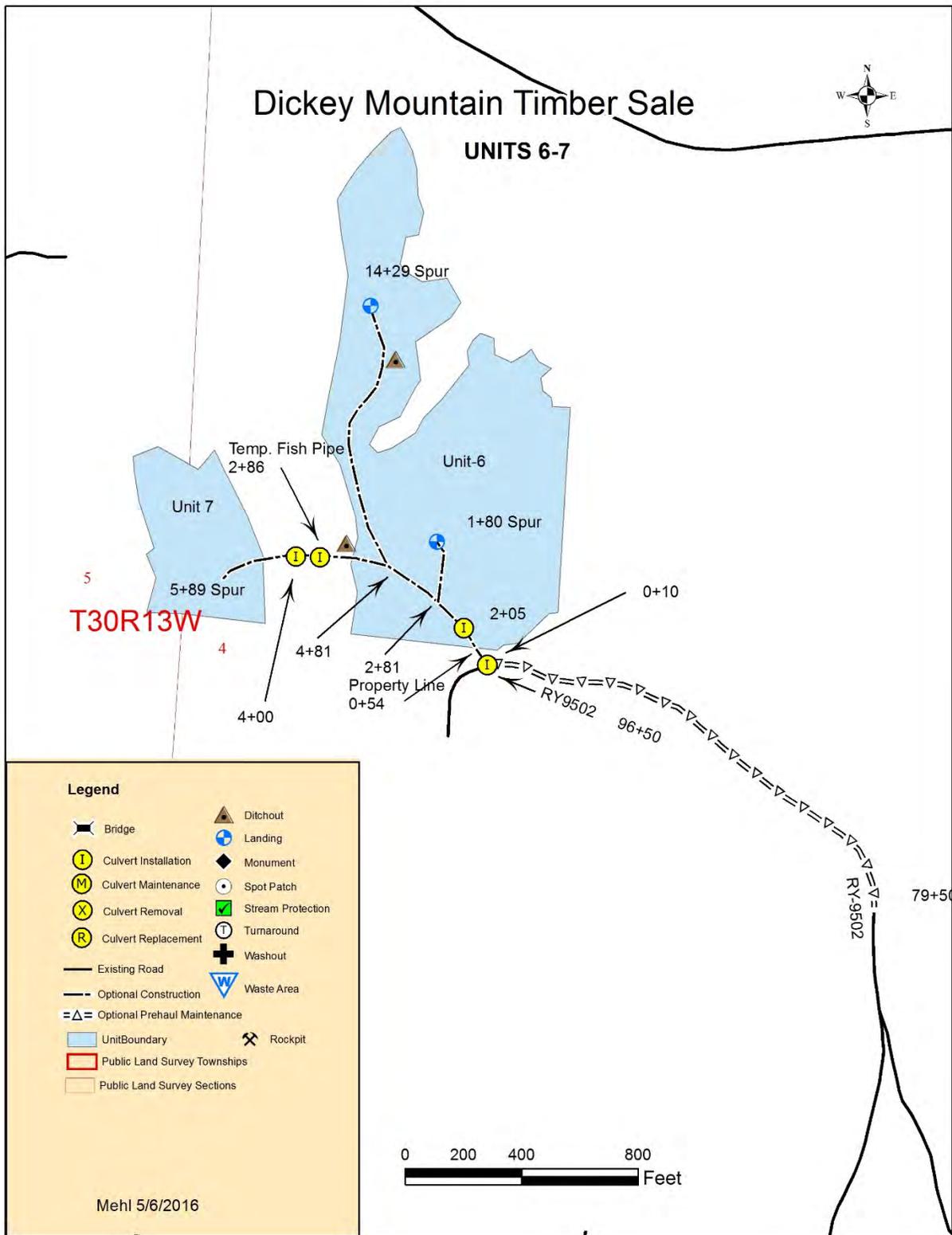
DATE: AUGUST 23, 2016

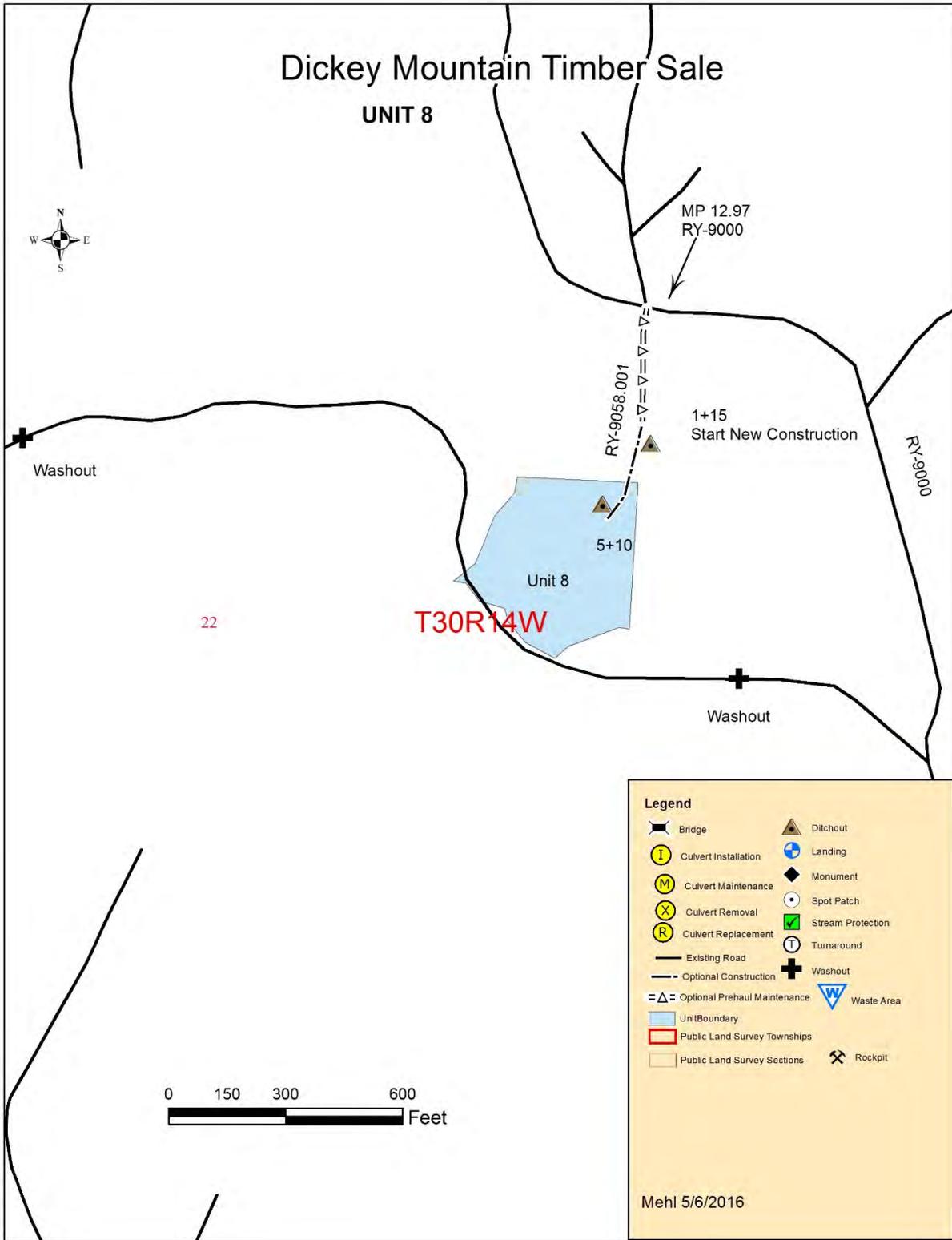
DRAWN & COMPILED BY: BILL MEHL

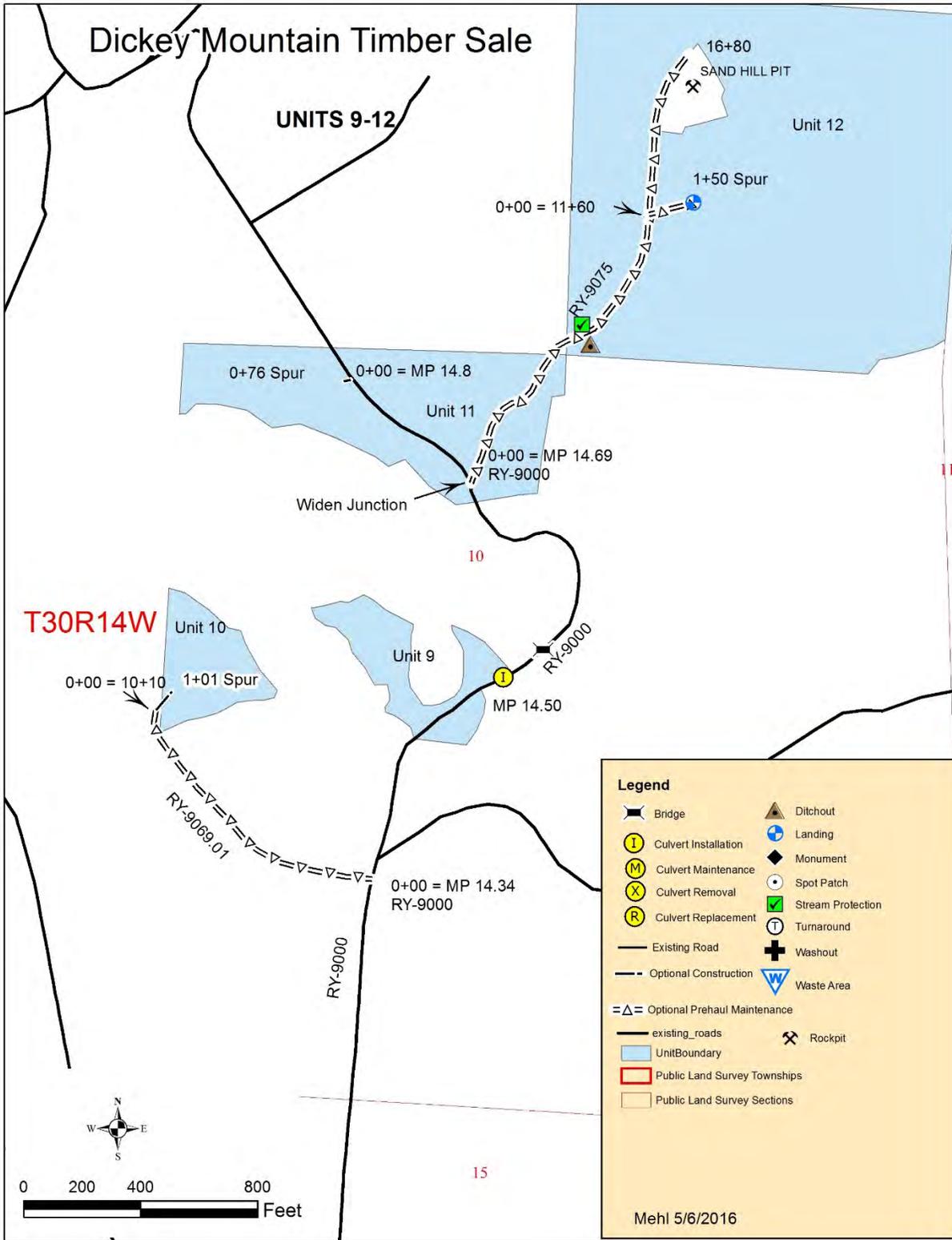












Dickey Mountain Timber Sale

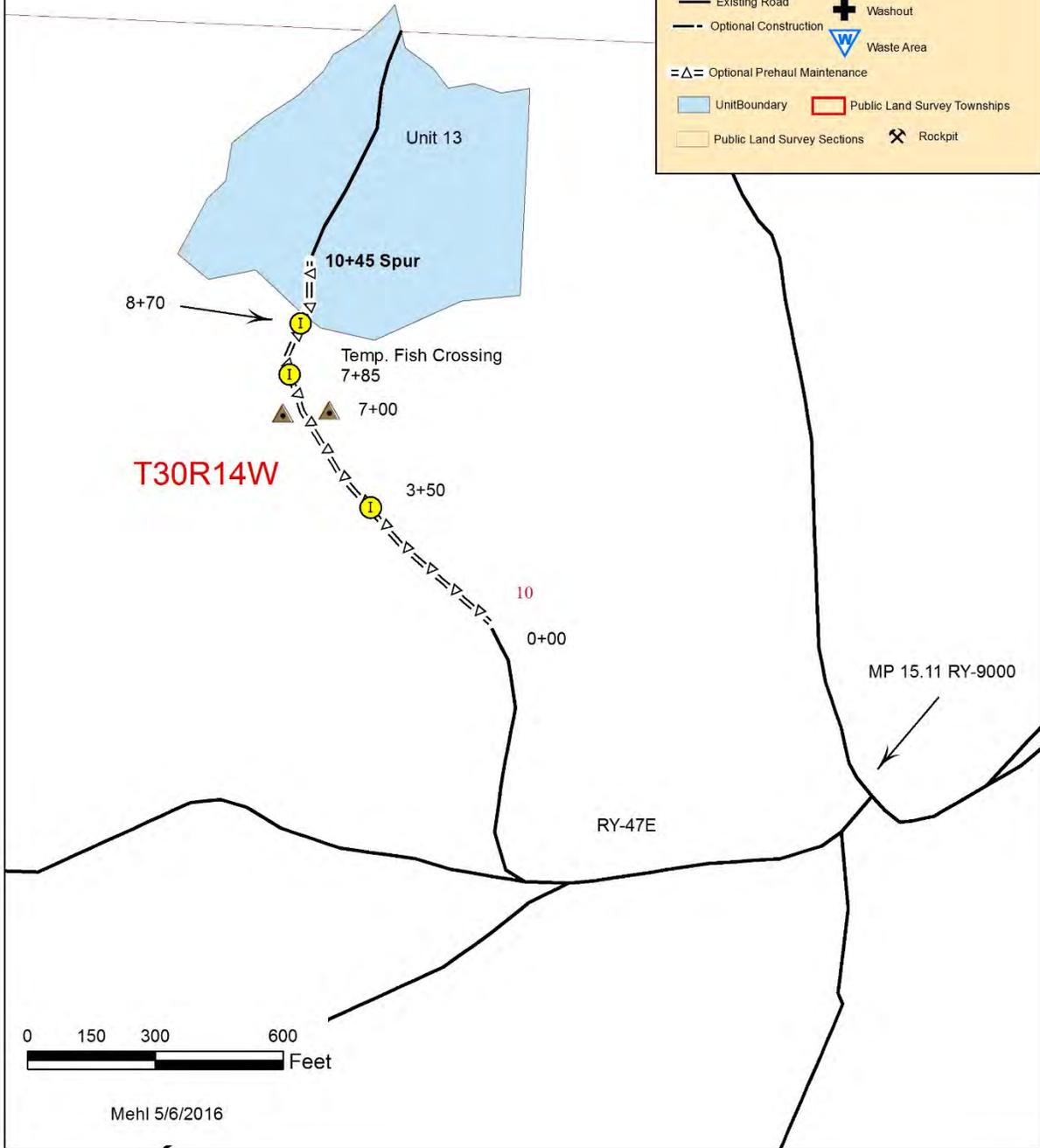
UNIT 13

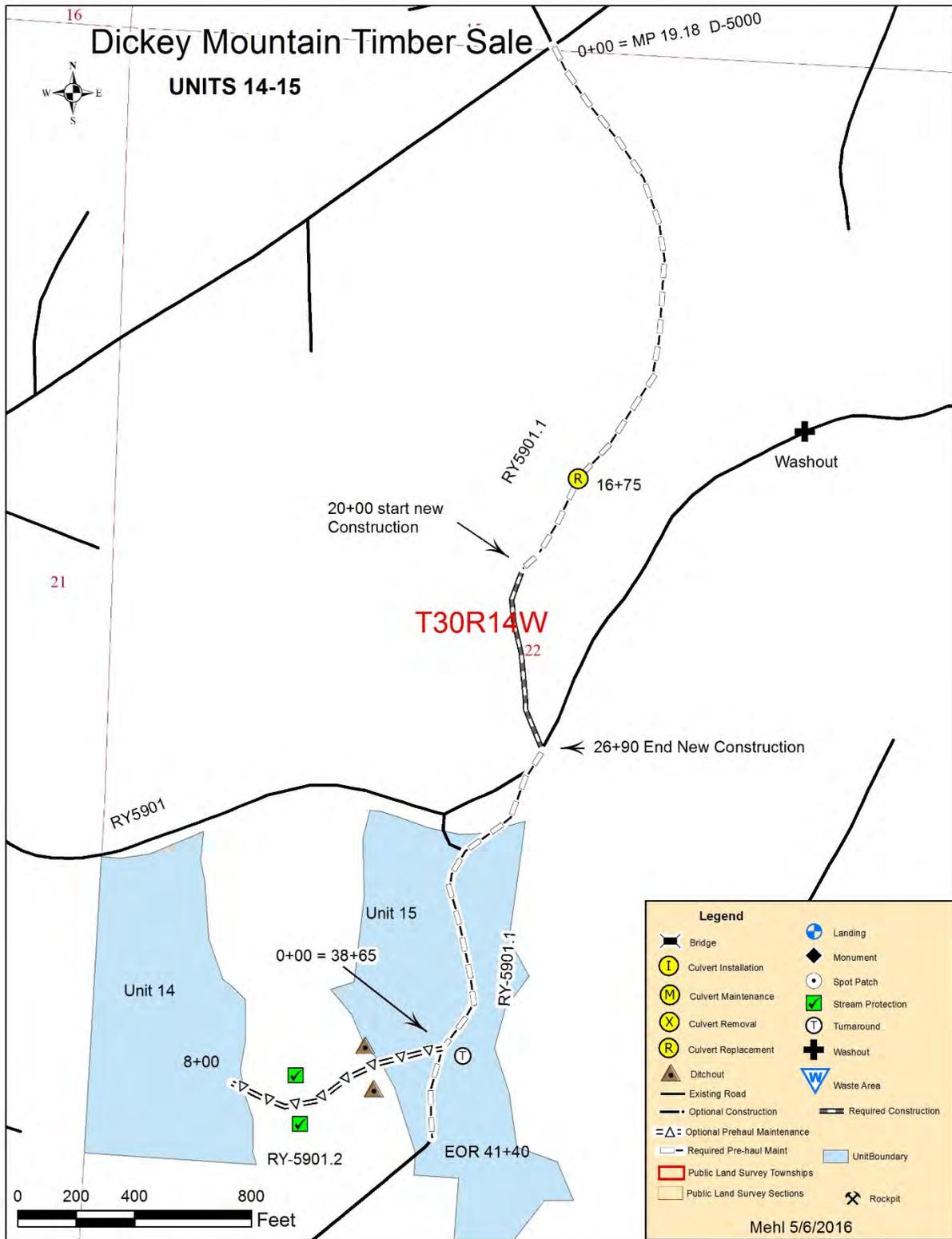


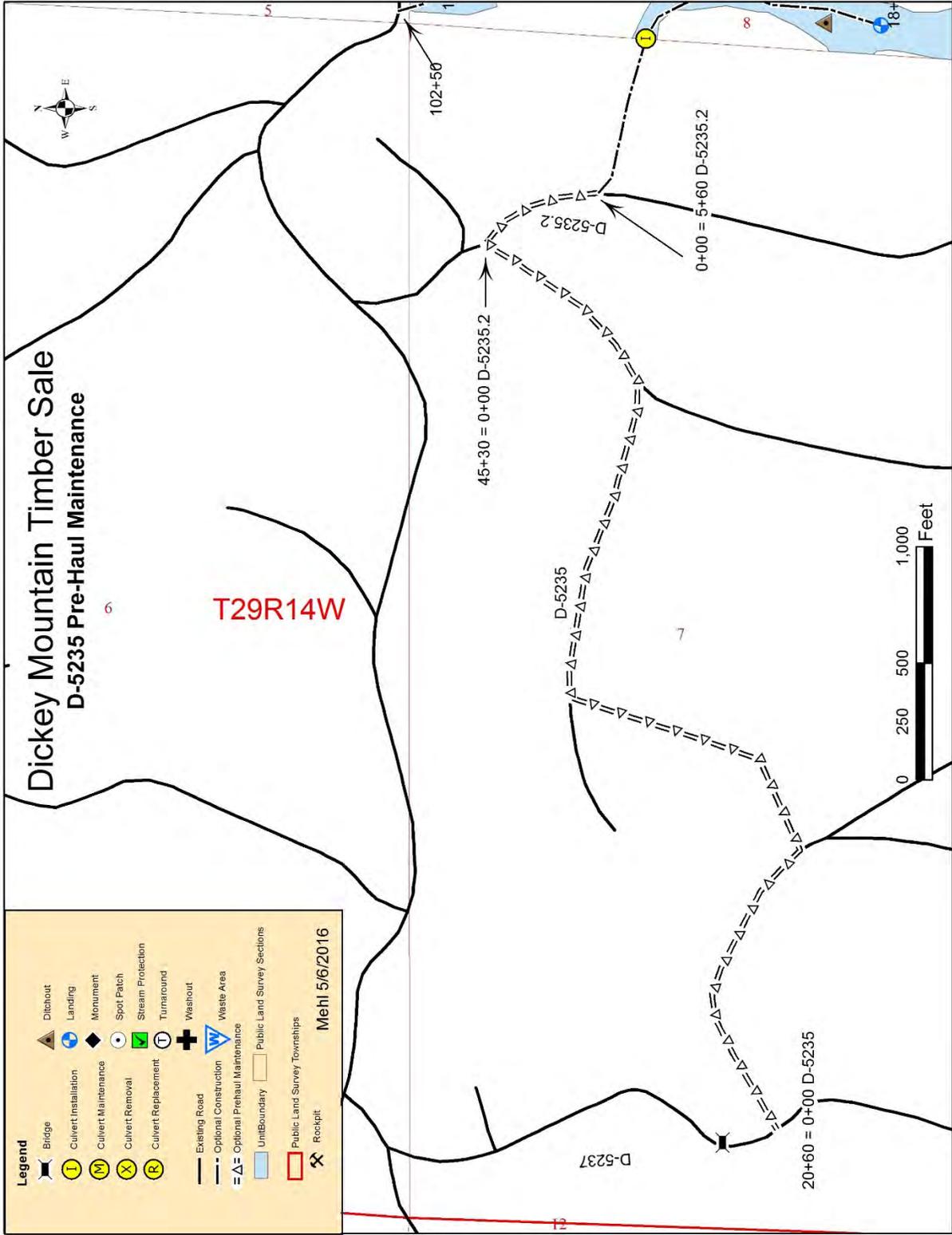
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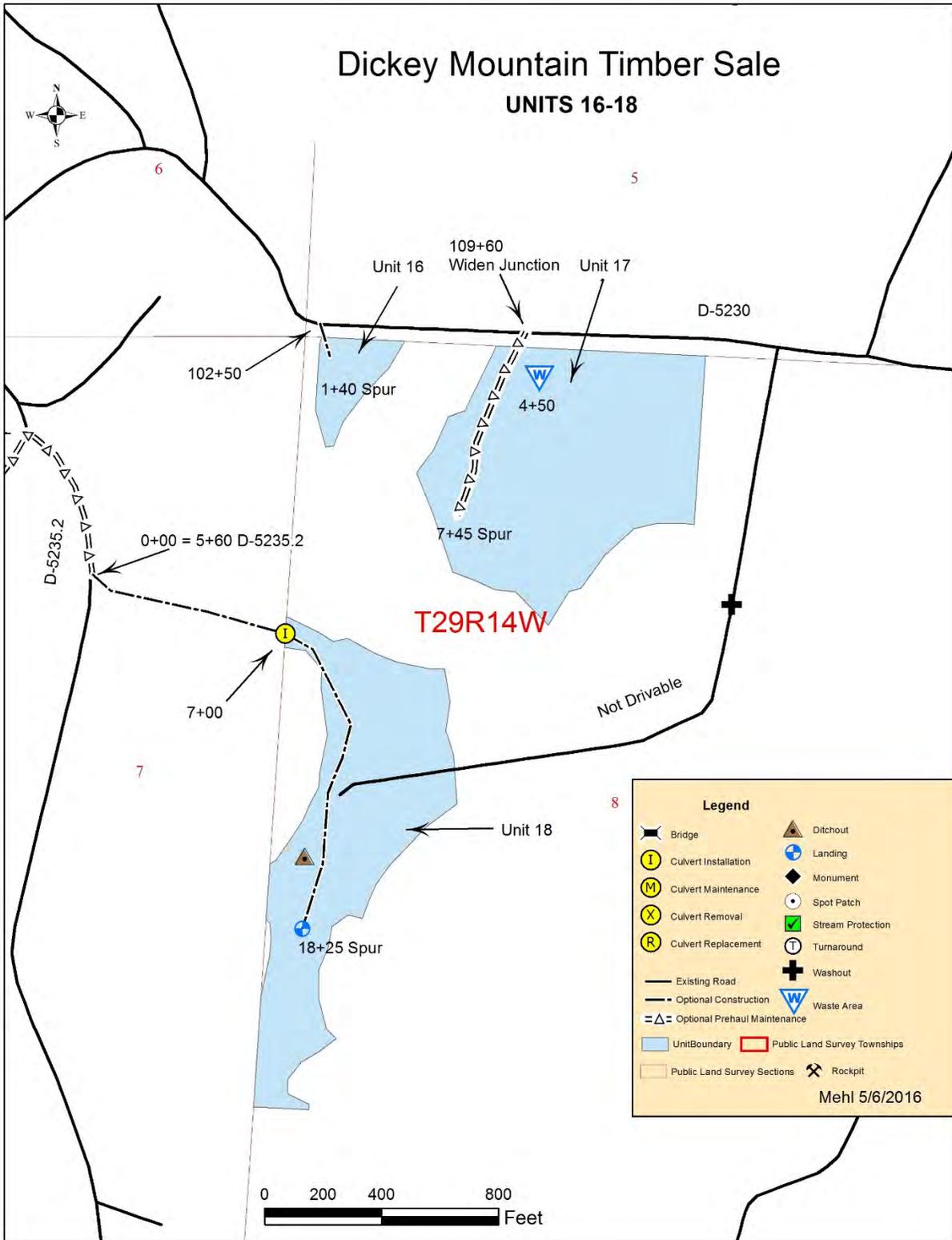
Legend

- | | |
|------------------------------|------------------------------|
| Bridge | Ditchout |
| Culvert Installation | Landing |
| Culvert Maintenance | Monument |
| Culvert Removal | Spot Patch |
| Culvert Replacement | Stream Protection |
| Optional Construction | Turnaround |
| Existing Road | Washout |
| Optional Prehaul Maintenance | Waste Area |
| Unit Boundary | Public Land Survey Townships |
| Public Land Survey Sections | Rockpit |









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>
RY-5901.1	34.5	Prehaul Maintenance
RY-5901.1	6.90	Construction

0-3 OPTIONAL ROADS

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
0+50 Spur	0.5	Construction
0+65 Spur	0.65	Construction
0+75 Spur	0.75	Construction
0+76 Spur	0.76	Construction
1+00 Spur	1.00	Construction
1+01 Spur	1.01	Construction
1+10 Spur	1.10	Construction
1+40 Spur	1.40	Construction
1+50 Spur	1.50	Prehaul Maintenance
1+80 Spur	1.80	Construction
4+75 Spur	4.75	Construction
5+89 Spur	5.89	Construction
7+45 Spur	7.45	Prehaul Maintenance
10+45 Spur	10.45	Prehaul Maintenance
14+29 Spur	14.29	Construction
18+25 Spur	18.25	Construction
RY-5901.2	8.00	Prehaul Maintenance
RY-9058.001	1.15	Prehaul Maintenance
RY-9058.001	3.95	Construction
RY-9069.01	10.10	Prehaul Maintenance
RY-9075	16.80	Prehaul Maintenance
RY-9090	1.70	Prehaul Maintenance
D-5235	45.30	Prehaul Maintenance
D-5235.2	5.60	Prehaul Maintenance
RY-9500	1.00	Prehaul Maintenance
RY-9502	17.00	Prehaul Maintenance

0-4 CONSTRUCTION

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
0+65 Spur	0+00 – 0+65	See Below
1+10 Spur	0+00 – 1+10	See Below
0+75 Spur	0+00 -0+75	See Below
4+75 Spur	0+00 – 4+75	See Below, plus install temporary culvert and log fill in fish stream in accordance with HPA #GH-E9764-03
1+00 Spur	0+00 – 1+00	See Below
0+50 Spur	0+00 -0+50	See Below
14+29 Spur	0+00 – 14+29	See Below
1+80 Spur	0+00 – 1+80	See Below
5+89 Spur	0+00 – 5+89	See Below, plus install temporary culvert and log fill in fish stream in accordance with HPA #GH-E9764-03
RY-9058.001	1+15 – 5+10	See Below
1+01 Spur	0+00 – 1+01	See Below
0+76 Spur	0+00 – 0+76	See Below
RY-5901.1	20+00 – 26+90	See Below
1+40 Spur	0+00 – 1+40	See Below
18+25 Spur	0+00 – 18+25	See Below

Construction includes, but is not limited to:

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

0-6 PRE-HAUL MAINTENANCE

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
RY-9090	0+00 – 1+70	Open road, fill in tank trap, add rock in accordance with rock list, Compact road surface in accordance with compaction list. Brush road in accordance with Clause 3-1.
RY-9500	4+50, 28+90	Add landing rock at sta 28+90 in accordance with rock list, Perform bridge maintenance in accordance with Clauses 7-30 thru 7-34.
RY-9502	79+50 – 96+50	Brush Road in accordance with Clause 3-1.
RY-9058.001	0+00 – 1+15	Grade/shape/compact in accordance with Clause 2-5. Or as directed by contract administrator.

RX-9069.01	0+00 – 10+10	Brush road in accordance with Clause 3-1.
RX-9075	0+00 – 16+80	Remove all vegetative material with a minimum loss of rock and dispose of in accordance with Clause 3-23. Brush road in accordance with Clause 3-1. Widen Junction in accordance with typical junction sheet. Apply rock in accordance with rock list. Grade and shape road. Compact road in accordance with Compaction list. Install sediment control in accordance with Clause 8-1. Construct ditch out in accordance with Clause 4-29. Construct ditches in accordance with Clause 2-7 & 4-5.
1+50 Spur	0+00 – 1+50	Remove all vegetative material with a minimum loss of rock and dispose of in accordance with Clause 3-23. Apply rock in accordance with rock list. Shape road and compact in accordance with Compaction List.
10+45 Spur	0+00 – 10+45	Remove all vegetative material with a minimum loss of rock and dispose of in accordance with Clause 3-23. Apply rock in accordance with rock list. Shape road and compact in accordance with Compaction List. Install culverts in accordance with Culvert List. Install ditchouts in accordance with Clause 4-29. Install temporary fish pipe in accordance with blanket HPA. Construct ditches in accordance with Clause 2-7 & 4-5.
RX-5901.1	0+00 – 20+00	Brush road in accordance with Clause 3-1, install culvert in accordance with culvert list.
RX-5901.1	26+90 – 41+40	Remove all vegetative material with a minimum loss of rock and dispose of in accordance with Clause 3-23. Apply rock in accordance with Rock list. Shape and compact in accordance with Compaction List.
RX-5901.2	0+00 – 8+00	Remove all vegetative material with a minimum loss of rock and dispose of in accordance with Clause 3-23. Apply rock in accordance with Rock list. Shape and compact in accordance with Compaction List. Install sediment control in accordance with Clause 8-1. Construct ditch outs in accordance with Clause 4-29.
7+45 Spur	0+00 – 7+45	Widen junction in accordance with the intersection detail sheet. Remove all vegetative material with a minimum loss of rock and dispose of in accordance with

		Clause 3-23. Apply rock in accordance with Rock list. Shape and compact in accordance with Compaction List.
D-5235	0+00 – 45+30	Brush road in accordance with Clause 3-1, grade/shape/compact as directed by contract administrator.
D-5235.2	0+00 – 5+60	Brush road in accordance to Clause 3-1, grade/shape/compact as directed by Contract Administrator

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

0-7 POST-HAUL MAINTENANCE

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

0-9 DEACTIVATION

This project includes, but is not limited to deactivation listed in Clause 9-20 Road Deactivation.

0-13 STRUCTURES

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

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

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

1-2 UNFORESEEN CONDITIONS

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

1-3 ROAD DIMENSIONS

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

1-6 ORDER OF PRECEDENCE

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

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

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

1-7 TEMPORARY ROAD CLOSURE (DOES NOT INCLUDE LOGGING CLOSURES)

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

<u>Road</u>	<u>Number of Allowable Closed Days</u>
RY-9500	3 (bridge work)

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

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

1-9 DAMAGED METALLIC COATING

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

1-10 WSDOT STANDARD SPECIFICATION REFERENCE

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

1-11 FPHP REQUIREMENTS

The following work is subject to requirements under a Forest Practice Hydraulics Project Approval issued by the State of Washington.

<u>Road</u>	<u>Stations</u>	<u>Work Type</u>
RY-9500	4+30 -4+67	Bridge Maintenance
4+75 Spur	1+45	Temporary Fish Stream Xings
5+89 Spur	2+86	Temporary Fish Stream Xings
10+45 Spur	7+85	Temporary Fish Stream Xings

1-12 SURVEY MONUMENTS

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

1-14 NON-SALE ASSOCIATED CLOSURE

Culvert and fill replacement work is currently scheduled to take place on the D-5000 and D-2000 sometime during the hydraulic seasons of 2016 through 2018, which will result in the road being closed for up to 2 weeks at a time. State shall give at least 2 weeks notice to Purchaser before closure begins.

SUBSECTION ROAD MARKING

1-15 ROAD MARKING

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

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

1-18 REFERENCE POINT DAMAGE

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

SUBSECTION TIMING

1-20 COMPLETE BY DATE

Purchaser shall complete pre-haul maintenance and construction work on the RY-9501.1 by 12-31-2017. All construction and abandonment work on the 4+75 Spur, 5+89 Spur, and 10+45 Spur to be completed before 10-15-2018. All other roads before the start of timber haul.

<u>Road</u>	<u>Stations</u>	<u>Comments Date</u>
RY-9501.1	0+00 -41+40	12-31-2017
4+75 Spur	0+00-4+75	10-15-2018 (HPA expires)
5+89 Spur	0+00-5+89	10-15-2018 (HPA expires)
10+45 Spur	7+00-10+45	10-15-2018 (HPA expires)
All Others	All	Before hauling on road

1-21 HAUL APPROVAL

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

1-22 WORK NOTIFICATIONS

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

1-23 ROAD WORK PHASE APPROVAL

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

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

SUBSECTION RESTRICTIONS

1-25 ACTIVITY TIMING RESTRICTION

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

<u>Road</u>	<u>Stations</u>	<u>Activity</u>	<u>Closure Period</u>
4+75 Spur	0+00 -4+75	Construction	October 15 th –June 15 th
5+89 Spur	0+00-5+89	Construction	October 15 th –June 15 th
10+45 Spur	7+00 – 10+45	Pre haul Maint.	October 15 th –June 15 th
0+65 Spur	0+00-0+65	All	October 15 th – April 15 th

1+10 Spur	0+00-1+10	All	October 15 th – April 15 th
0+75 Spur	0+00-0-75	All	October 15 th – April 15 th

1-26 OPERATING DURING CLOSURE PERIOD

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

1-29 SEDIMENT RESTRICTION

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

1-30 CLOSURE TO PREVENT DAMAGE

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

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

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

1-32 ASPHALT SURFACE RESTRICTION

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

1-33 SNOW PLOWING RESTRICTION

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

SUBSECTION OTHER INFRASTRUCTURE

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

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

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

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

<u>Road Name</u>
Hwy 101/D-2000
Mina Smith Road/D-5000

1-43 ROAD WORK AROUND UTILITIES

Road work is in close proximity to a utility. Known utilities are listed, but it is the Purchaser's responsibility to identify any utilities not listed. The Purchaser shall work in accordance with all applicable laws and rules concerning utilities. The Purchaser is responsible for all notification, including "call before you dig", and liabilities associated with the utilities and their rights-of-way.

<u>Road</u>	<u>Stations</u>	<u>Utility</u>	<u>Utility Contact</u>
RY-9000	MP 0.00 – 3.43	Power	811

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

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

2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE

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

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

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

2-5 MAINTENANCE GRADING – EXISTING ROAD

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
D-5235	45.3	Grade/shape/compact
D-5235.2	5.60	Grade/shape/compact
RY-9058.001	0+00 – 1+15	Grade/shape/compact

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

On the following road(s), Purchaser shall clean and/or construct the ditches, headwalls, and catch basins. Work shall be completed before the start of timber haul and shall be done in accordance with the Typical Section Sheet. Pulling ditch material across the road or mixing in with the road surface will not be allowed. Ditchlines, headwalls, and catch basins shall not encroach into the existing road.

<u>Road</u>	<u>Stations</u>	<u>Left or Right</u>	<u>Comments</u>
RY-9075	0+00 – 13+70	L & R	Ditching
10+45 Spur	0+00 – 7+00	L & R	Ditching

2-9 REMOVING VEGETATIVE MATERIAL

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

<u>Road</u>	<u>Stations</u>
RY-9075	0+00 - 16+80
10+45 Spur	0+00 – 10+45
RY-5901.1	26+90 – 41+40
RY-5901.2	0+00 – 8+00
7+45 Spur	0+00 – 7+45

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

SUBSECTION BRUSHING

3-1 BRUSHING

On the following road(s), vegetative material up to 5 inches in diameter, including limbs, shall be cut as shown on the Brushing Detail. Brushing shall be achieved by mechanical cutting of brush, trees, and branches. Root systems and stumps of cut vegetation shall not be disturbed unless directed by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
RY-9090	0+00 – 1+70
RY-9075	0+00 – 16+80
RY-9069.01	0+00 – 10+10
RY-9502	79+50 – 96+50
D-5235	0+00 – 45+30

D-5235.2	0+00 – 5+60
RY-5901.1	0+00 -20+00

3-2 BRUSHING RESTRICTION

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

3-3 BRUSH REMOVAL

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

SUBSECTION CLEARING

3-5 CLEARING

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

3-7 RIGHT-OF-WAY DECKING

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

3-8 PROHIBITED DECKING AREAS

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

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

SUBSECTION GRUBBING

3-10 GRUBBING

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

3-12 STUMP PLACEMENT

Grubbed stumps shall be placed outside of the clearing limits, as directed by the Contract Administrator and in compliance with all other clauses in this road plan. Stumps

shall be positioned upright with root wads in contact with the forest floor and on stable locations.

3-13 STUMPS FOR PUNCHEON MATERIAL

On the following road(s), stumps from within the grubbing limits may be overturned and driven flush with the ground surface for use as subgrade puncheon material.

<u>Road</u>	<u>Stations</u>
All new construction except RY-5901.1	All

SUBSECTION ORGANIC DEBRIS

3-20 ORGANIC DEBRIS DEFINITION

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

3-21 DISPOSAL COMPLETION

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

3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS

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

<u>Road</u>	<u>Stations</u>	<u>Waste Area Location</u>
7+45 Spur	0+00 – 0+50	1+50
RY-9000	MP 5.5 to MP 7.0	RY-9500 Jct.

3-23 PROHIBITED DISPOSAL AREAS

Organic debris shall not be deposited in the following areas:

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

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-25 SCATTERING ORGANIC DEBRIS

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

SECTION 4 – EXCAVATION

4-1 EXCAVATOR CONSTRUCTION

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

4-2 PIONEERING

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

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

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

The following road grade and alignment standards shall be followed:

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

4-4 SWITCHBACK STANDARDS

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

The following standards for switchbacks shall be followed:

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

4-5 CUT SLOPE RATIO

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

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

4-6 EMBANKMENT SLOPE RATIO

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

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

4-7 SHAPING CUT AND FILL SLOPE

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

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

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

SUBSECTION INTERSECTIONS, TURNOUTS AND TURNAROUNDS

4-20 SUBGRADE DIMENSIONS FOR INTERSECTIONS

On the following road(s), the Purchaser shall construct the subgrade to the dimensions shown on the Intersection Detail.

<u>Road</u>	<u>Stations</u>
7+45 Spur	0+00 – 0+40

4-21 TURNOUTS

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

4-22 TURNAROUNDS

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

4-23 SUBGRADE FLARE FOR INTERSECTIONS

The RY-9075/RY-9000 intersections shall be constructed/reconstructed to include additional intersection flare.

SUBSECTION DITCH CONSTRUCTION

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

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

4-27 DITCH WORK – MATERIAL USE PROHIBITED

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

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

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

<u>Road</u>	<u>Stations</u>
1+10 Spur	1+10 L
4+75 Spur	1+00 L
5+89 Spur	2+41 R
10+45 Spur	7+00 L & R
14+29 Spur	11+00 R
18+25 Spur	13+65 R
RY-5901.2	2+25 L & R
RY-9058.001	3+40 L
RY-9058.001	5+10 R
RY-9075	6+50 R

SUBSECTION WASTE MATERIAL (DIRT)

4-35 WASTE MATERIAL DEFINITION

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

4-36 DISPOSAL OF WASTE MATERIAL

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

4-37 WASTE AREA LOCATION

Waste material shall be deposited in the listed designated areas. The amount of material to be contained in a waste area shall be at the discretion of the Contract Administrator.

Note: All amount values are estimated bank yards.

<u>Waste Area Location</u>	<u>Waste Generated From Road</u>	<u>Waste Generated at Stations</u>	<u>Estimated Volume</u>
7+45 Spur	7+45 spur	0+00 – 0+40	100 cy

4-38 PROHIBITED WASTE DISPOSAL AREAS

Waste material shall not be deposited in the following areas:

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

4-39 WASTE AREA COMPACTION

Excavated material may be deposited adjacent to the road prism on side slopes up to 45% if the waste material is compacted and free of debris. On side slopes of 45% or more, all excavation shall be end hauled or pushed to designated waste areas. All waste material shall be compacted. The minimum acceptable compaction is achieved by placing embankments in 2 foot or shallower lifts and routing excavation equipment over the entire width of the lifts, with the exception of side hill embankments too narrow to accommodate excavation equipment which may be placed by end-dumping or sidecasting until sufficiently wide to support the equipment.

SUBSECTION BORROW

4-45 SELECT BORROW

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

4-46 COMMON BORROW

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

4-47 NATIVE MATERIAL

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

4-48 BORROW MATERIAL

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

SUBSECTION SHAPING

4-55 ROAD SHAPING

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

4-56 DRY WEATHER SHAPING

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

SUBSECTION COMPACTION

4-60 FILL COMPACTION

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

4-61 SUBGRADE COMPACTION

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

4-62 DRY WEATHER COMPACTION

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

4-63 EXISTING SURFACE COMPACTION

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

4-64 WASTE MATERIAL COMPACTION

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

4-65 CULVERT BACKFILL COMPACTION

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

4-66 COMPACTION BY METHOD

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

SECTION 5 – DRAINAGE

5-4 PUNCHEON RESTRICTED

At no time shall puncheon be used in the subgrade construction of the RY-5901.1.

5-5 CULVERTS

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

5-6 USED CULVERT MATERIAL

The Purchaser may install used culverts on the following roads. All other roads shall have new culverts installed. Used culverts must be in good functioning condition.

<u>Road</u>	<u>Stations</u>
10+45 Spur	7+85
5+89 Spur	2+86
4+75 Spur	1+45

5-7 TEMPORARY STREAM CULVERT INSTALLATION

On the following roads, temporary stream culverts shall be located in the natural channel of the stream. Temporary culverts shall be installed as shown in the Temporary Log Fill Stream Crossing Detail. Temporary culverts shall be removed as directed by the Contract Administrator and/or Hydraulic Permit Stipulations. Geotextile fabric shall meet the specifications in Clause 10-2 Geotextile For Separation.

<u>Road</u>	<u>Stations</u>
10+45 Spur	7+85
5+89 Spur	2+86
4+75 Spur	1+45

5-11 UNUSED MATERIALS STATE PROPERTY

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

SUBSECTION CULVERT INSTALLATION

5-15 CULVERT INSTALLATION

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

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

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

5-17 CROSS DRAIN SKEW AND SLOPE

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

5-18 CULVERT DEPTH OF COVER

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

SUBSECTION ENERGY DISSIPATERS

5-20 ENERGY DISSIPATERS

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

5-22 ABOVE GROUND CULVERT ENERGY DISSIPATORS

At the end of the culvert, approximately 1 yd³ of oversize material shall be placed. The extents of placement shall be in accordance with Culvert Installation Typical Details Page.

SUBSECTION CATCH BASINS, HEADWALLS, AND ARMORING

5-25 CATCH BASINS

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

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

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

5-27 ARMORING FOR STREAM CROSSING CULVERTS

At the following culvert(s), rip rap shall be set in place immediately following construction of the embankment. Rock shall be placed on shoulders, slopes, and around culvert inlets and outlets as designated on the Typical Type Ns Np Culvert Installation Detail as directed by the Contract Administrator. Rock shall not restrict the flow of water into culvert inlets or catch basins. Rock shall be set in place by machine. Placement shall be by zero-drop-height method only. No placement by end dumping or dropping of rock shall be allowed.

<u>Road</u>	<u>Stations</u>	<u>Rock Type</u>
1+00 Spur	0+20	Oversize
RY-5901.1	16+75	Oversize

SECTION 6 – ROCK AND SURFACING

SUBSECTION ROCK SOURCE

6-2 ROCK SOURCE ON STATE LAND

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

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Elk Valley	T28N R13W Sec 2	Pitrun, jaw run crushed
Mora	T28N R15W Sec 23 & 24	Pitrun
Mary Clark	T30N R12W Sec 32	Pitrun, 1-1/4" minus crushed
Thunder	T29N R14W Sec 2	Ballast
Sand Hill	T30N R14W Sec 10	Ballast
Old Siwash	T30N R15W Sec 36	Ballast

6-3 ROCK SOURCE STATE LAND, EXISTING STOCKPILE

Rock used in accordance with the quantities on the Rock List may be obtained from the following existing stockpile(s) on state land at no charge to the Purchaser. Purchaser shall remove no more than 600 cubic yards of 1 1/4" minus crushed rock.

<u>Source</u>	<u>Location</u>	<u>Quantity (yd³)</u>
Mary Clark	T30N R12W Sec 32	600 yd ³

6-5 ROCK FROM COMMERCIAL SOURCE

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

SUBSECTION ROCK SOURCE DEVELOPMENT

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

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

6-12 ROCK SOURCE SPECIFICATIONS

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

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

Material	Maximum Slope Ratio (Horiz.:Vert.)	Maximum Slope Percent

Sand	2:1	50
Gravel	1.5:1	67
Common Earth	1:1	100
Fractured Rock	0.5:1	200
Solid Rock	0:1	vertical

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

SUBSECTION ROCK MANUFACTURE

SUBSECTION ROCK GRADATIONS

6-28 1 ¼-INCH MINUS CRUSHED ROCK

% Passing 1 ¼" square sieve	100%
% Passing 5/8" square sieve	50 - 80%
% Passing U.S. #4 sieve	30 - 50%
% Passing U.S. #40 sieve	3 - 18%
% Passing U.S. #200 sieve	5%

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

6-39 6-INCH JAW RUN ROCK

% Passing 6" in one dimension	100%
% Passing 3" square sieve	45 - 65%

Rock shall not contain more than 5% organic debris and trash. All percentages are by weight.

6-50 LIGHT LOOSE RIP RAP

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

<u>At Least/Not More Than</u>	<u>Weight Range</u>	<u>Size Range</u>
20% / 90%	300 lbs. to 1 ton	12" - 36"

6-51 HEAVY LOOSE RIP RAP

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

<u>At Least/Not More Than</u> 70% / 100%	<u>Weight Range</u> 1 ton to 3 ton	<u>Size Range</u> 36"- 54"
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6-52 OVERSIZE

% Passing 8" square sieve	100%
% Passing 4" square sieve	0%

Rock shall not contain more than 5 percent vegetative debris or trash. All percentages are by weight.

SUBSECTION ROCK MEASUREMENT

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

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

SUBSECTION ROCK APPLICATION

6-70 APPROVAL BEFORE ROCK APPLICATION

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

6-71 ROCK APPLICATION

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

6-72 ROCK APPLICATION AFTER HAULING

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

<u>Road</u>	<u>Stations</u>	<u>Amount</u>
RY-9000	MP 5.5 to MP 7.0 as directed	400 yd ³
RY-9500	0+00 – 49+00 as directed	150 yd ³
RY-9502	0+00 -8+10 as directed	50 yd ³

6-73 ROCK FOR WIDENED PORTIONS

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

6-78 ROCK FOR SPOT PATCHING

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

SECTION 7 – STRUCTURES

SUBSECTION SIGNS

SUBSECTION STREAM CROSSING STRUCTURES GENERAL

7-5 STRUCTURE DEBRIS

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

7-6 STREAM CROSSING INSTALLATION

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

7-7 BANK PROTECTION FOR STREAM CROSSING STRUCTURES

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

SUBSECTION BRIDGE MAINTENANCE

7-30 BRIDGE MAINTENANCE

On the following road(s), bridge maintenance, as listed below, is required as part of this contract. All old bridge material shall be removed from state land by the Purchaser before the termination of the contract.

<u>Road</u>	<u>Station</u>	<u>Requirements</u>	<u>Detail Sheet</u>
RY-9500	4+50	Replace rotten x-ties, replace running surface, repair bull rails	Sheets 1 & 2 Pages 60 & 61

7-31 BRIDGE DECK AND CROSS TIE REPAIR

The new deck shall consist of 4"x10" treated planks covering the entire area. All deck and Cross Tie material shall be No. 2 or better treated Douglas fir consisting of at least 0.60 ACQ. No materials containing creosote or pentachlorophenol may be used. The deck planks shall be installed with a minimum of a 4 foot stagger. The deck planks exposed edge at each end of the bridge deck shall have the top 1/3 beveled at a 45 degree angle.

7-32 BRIDGE DECK FASTENING (WOOD BRIDGE)

The running planks shall be fastened to every second cross tie with 8-inch ring shank or spiral threaded spikes, or 8-inch long lag bolts. The 6"x 8" cross ties shall be lag bolted to the stringers with 12" long lag bolts. Lag bolts shall be screwed into pre-drilled holes. The heads of the lag bolts shall be countersunk flush with the surface. The existing holes in the cross ties and stringers shall be treated and plugged with treated dowels or filled with roofing tar

7-34 WOOD SHEAR RAIL REPAIR

The downstream (right side) shear rails shall be re-secured with new hardware and new treated spacer blocks constructed of 8" x 12" No. 2 or better Douglas fir.

SUBSECTION GATE CLOSURE

7-70 GATE CLOSURE

On all roads under Rayonier Road Use Permit, Purchaser will adhere to Rayonier Gate policies.

SECTION 8 – EROSION CONTROL

8-1 SEDIMENT CONTROL STRUCTURES

On the following road(s), Purchaser shall install the following sediment control structures.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
RY-9075	6+50	Catch Basin Left
RY-5901.2	5+25	100' Silt fence L & R

8-2 PROTECTION FOR EXPOSED SOIL

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

SUBSECTION REVEGETATION

8-15 REVEGETATION

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

8-16 REVEGETATION SUPPLY

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

8-17 REVEGETATION TIMING

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

8-18 PROTECTION FOR SEED

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

8-19 ASSURANCE FOR SEEDED AREA

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

SUBSECTION SEED, FERTILIZER, AND MULCH

8-25 GRASS SEED

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

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

Grass seed shall meet the following specifications:

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

SECTION 9 – POST-HAUL ROAD WORK

SUBSECTION POST-HAUL MAINTENANCE

9-5 POST-HAUL MAINTENANCE

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

<u>Road</u>	<u>Stations</u>	<u>Additional Requirements</u>
All	All	Clean culverts, clean ditches, grade road shape and compact as directed by the Contract Administrator
RY-9500	19+00 -49+00	Apply post haul rock as per Clause 6-72.
RY-9502	0+00 – 8+10	Apply post haul rock as per Clause 6-72.
RY-9000	MP 5.5 to MP 7.0	Apply post haul rock as per Clause 6-72

SUBSECTION POST-HAUL LANDING MAINTENANCE

9-10 LANDING DRAINAGE

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

9-11 LANDING EMBANKMENT

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

SUBSECTION DEACTIVATION AND ABANDONMENT

9-20 ROAD DEACTIVATION

The following road(s) shall be deactivated by the Purchaser before the termination of this contract.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
0+65 Spur	0+00 – 0+65	Light
0+75 Spur	0+00 – 0+75	Light

4+75 Spur	1+00 – 4+75	Light
1+00 Spur	0+00 – 1+00	Light
5+89 Spur	2+50 – 5+89	Light
1+01 Spur	0+00 -1+01	Light
10+45 spur	7+00 – 10+45	Light
RY-5901.2	0+00 – 8+00	Light
Total:	22.0 sta	

9-22 LIGHT DEACTIVATION

Deactivation shall consist of:

1. Removing all culverts. Resulting back slopes shall be 1:1 or shallower. Material removed shall be placed on the roadbed and compacted, with slopes of 2:1 or shallower. Culverts removed shall become the property of the Purchaser and removed from State land.
2. Construct non-drivable water bars as directed by the Contract Administrator. On grades in excess of 3%, non-drivable water bars shall be skewed 30 degrees from the perpendicular of the road centerline.
3. Restore all ditchouts to drain water.
4. Repair or construct ditchlines.
5. Remove any berms, except as directed.
6. Restoration of natural stream channels across road prism, as directed by the Contract Administrator.
7. Removing all fill material as approved by the Contract Administrator.
8. All material from fill removals, culvert removals, and bridge removals shall be placed on roadbed and compacted, except that material listed in Clause 4-37.
9. Purchaser shall furnish and apply grass seed to all areas of exposed soil, including but not limited to: water bars, waste piles, and culvert removal sites. Grass seed shall be applied at a rate of 60 pounds per acre.
10. Block road to vehicular traffic using logs, slash, and stumps, as directed by the Contract Administrator.

SECTION 10 MATERIALS

SUBSECTION GEOTEXTILES

10-1 GEOTEXTILE FOR SUBSURFACE DRAINAGE

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

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Non-woven
Apparent opening size	D 4751	No. 80 max
Water permittivity	D 4491	0.3 sec ⁻¹
Grab tensile strength	D 4632	160 lb
Grab tensile elongation	D 4632	= 50%
Puncture strength	D 6241	310 lb
Tear strength	D 4533	50 lb
Ultraviolet stability	D 4355	50% retained after 500 hours of exposure

10-2 GEOTEXTILE FOR SEPARATION

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

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Non-woven
Apparent opening size	D 4751	No. 30 max
Water permittivity	D 4491	0.02 sec ⁻¹
Grab tensile strength	D 4632	160 lb
Grab tensile elongation	D 4632	= 50%
Puncture strength	D 6241	10 lb
Tear strength	D 4533	50 lb
Ultraviolet stability	D 4355	50% retained after 500 hours of exposure

10-6 GEOTEXTILE FOR TEMPORARY SILT FENCE

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

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

SUBSECTION EROSION CONTROL AND REVEGETATION

10-10 JUTE EROSION CONTROL MATTING

Jute mesh shall have a uniform open plain weave made from jute yarn that does not vary by more than half its nominal diameter. Erosion control matting shall conform to the specifications listed below, and shall be recommended by the manufacturer for use on embankments with a slope of 1½:1 (H:V) or steeper.

- Mesh size: 1 inch max.
- Mesh mass: 0.9 lb/yd² ±5%

10-11 COCONUT EROSION CONTROL MATTING

Coconut mat shall have a uniform open plain weave made from jute, coconut coir, synthetic polypropylene fibers, or other approved yarn. Erosion control matting shall conform to the specifications listed below, and shall be recommended by the manufacturer for use on embankments with a slope of 1½:1 (H:V) or steeper.

- Mesh size: 0.5 to 1 inch.
- Mesh mass: 0.4 lb/yd² min.
- Netting shall be photodegradable on one side.
- Moisture content shall not exceed 20%.

10-12 WOOD EXCELSIOR EROSION CONTROL MATTING

Excelsior blanket shall have a uniform thickness made of curled wood excelsior secured on the top side to a biodegradable, photodegradable extruded plastic mesh. Matting shall be smolder resistant without the use of additional chemical additives. Erosion control matting shall conform to the specifications listed below, and shall be recommended by the manufacturer for use on embankments with a slope of 1½:1 (H:V) or steeper.

- Mesh size: 1 to 2 inch.
- Blanket mass: 1 lb/yd² ±10%
- Excelsior fibers: 7.8 inch (200-mm) length 80% min.

SUBSECTION CULVERTS

10-15 CORRUGATED STEEL CULVERT

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

10-16 CORRUGATED ALUMINUM CULVERT

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

10-17 CORRUGATED PLASTIC CULVERT

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

10-18 CORRUGATED STEEL STRUCTURAL PLATE

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

10-19 CORRUGATED ALUMINUM STRUCTURAL PLATE

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

10-20 FLUME AND DOWNSPOUT

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

10-21 METAL BAND

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

10-22 PLASTIC BAND

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

10-23 RUBBER CULVERT GASKETS

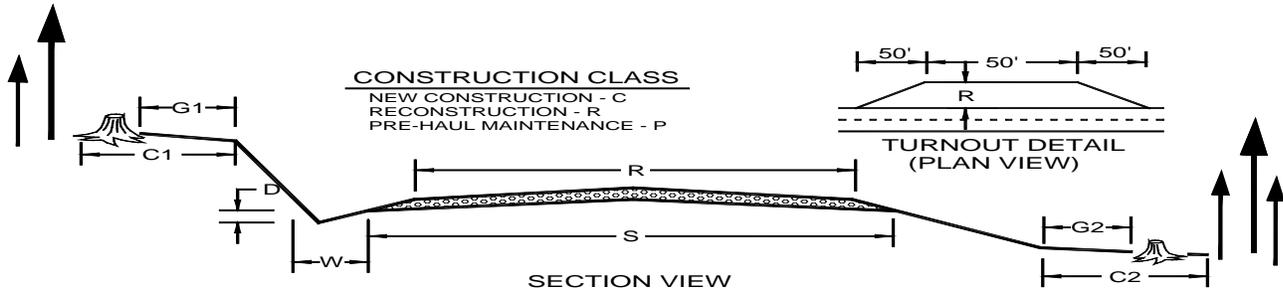
Rubber gaskets must be continuous closed cell, synthetic expanded rubber gaskets conforming to the requirements of ASTM D 1056. Rubber gaskets must be used with all corrugated metal pipe coupling bands.

10-24 GAGE AND CORRUGATION

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

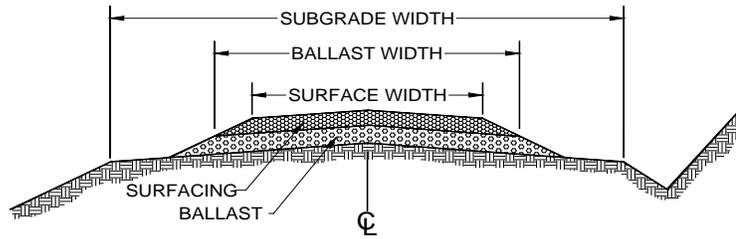
<u>Diameter</u>	<u>Gage</u>	<u>Corrugation</u>
18"	16 (0.064")	2 2/3" X 1/2"
24" to 42"	14 (0.079")	2 2/3" X 1/2"
48" to 54"	12	3" X 1"
60" +	10	5" X 1"

TYPICAL SECTION SHEET



ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS	SUBGRADE WIDTH (S)	ROAD WIDTH (R)	CROWN AT CL (in)	DITCH WIDTH (W)	DITCH DEPTH (D)	GRUBBING CUT BANK (G1)	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (C1)	ROAD FILL CLEARING (C2)
0+50 Spur	0+00	0+50	C	17'	12'	3"	3'	1'	3	5	10	5
0+65 Spur	0+00	0+65	C	17'	12'	3"	3'	1'	3	5	10	5
0+75 Spur	0+00	0+75	C	17'	12'	3"	3'	1'	3	5	10	5
0+76 Spur	0+00	0+76	C	17'	12'	3"	3'	1'	3	5	10	5
1+00 Spur	0+00	1+00	C	17'	12'	3"	3'	1'	3	5	10	5
1+01 Spur	0+00	1+01	C	17'	12'	3"	3'	1'	3	5	10	5
1+10 Spur	0+00	1+10	C	17'	12'	3"	3'	1'	3	5	10	5
1+40 Spur	0+00	1+40	C	17'	12'	3"	3'	1'	3	5	10	5
1+50 Spur	0+00	1+50	P	17'	12'	3"	3'	1'	3	5	10	5
1+80 Spur	0+00	1+80	C	17'	12'	3"	3'	1'	3	5	10	5
4+75 Spur	0+00	4+75	C	17'	12'	3"	3'	1'	3	5	10	5
5+89 Spur	0+00	5+89	C	17'	12'	3"	3'	1'	3	5	10	5
7+45 Spur	0+00	7+45	P		12'	3"	3'	1'				
10+45 Spur	0+00	10+45	P		12'	3"	3'	1'				
14+29 Spur	0+00	14+29	C	17'	12'	3"	3'	1'	3	5	10	5
18+25 Spur	0+00	18+25	C	17'	12'	3"	3'	1'	3	5	10	5
RY-5901.1	0+00	20+00	P		12'	3"	3'	1'				
RY-5901.1	20+00	26+90	C	17'	12'	3"	3'	1'	3	5	10	5
RY-5901.1	26+90	41+40	P		12'	3"	3'	1'				
RY-5901.2	0+00	8+00	P		12'	3"	3'	1'				
RY-9058.001	0+00	1+15	P		12'	3"	3'	1'				
RY-9058.001	1+15	5+10	C	17'	12'	3"	3'	1'	3	5	10	5
RY-9069.01	0+00	10+10	P		12'	3"	3'	1'				
RY-9075	0+00	16+80	P		12'	3"	3'	1'				

ROCK LIST SHEET

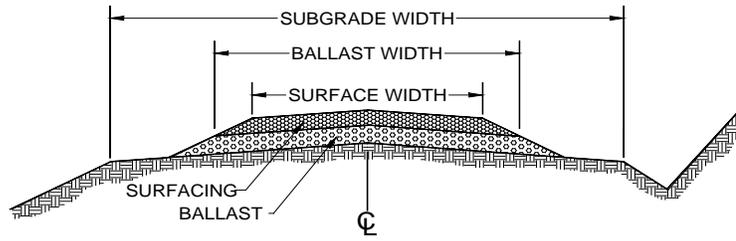


SECTION VIEW

1. Rock quantities, subtotals and totals are "truck measure" estimates. Rock shall be applied to at least the depths listed.
2. All depths are compacted depths.
3. Rock slopes shall be 1½ (H) : 1 (V).
4. All rock sources are subject to approval by the Contract Administrator.
5. Pitrun is defined as pitrun or ballast per Line 6. Crushed is defined as any crushed rock from ¼" minus to 4" minus per Line 6. Oversize is defined as oversize, quarry spalls, light loose rip rap, or heavy loose rip rap per Line 6.
6. Rock sources= 1: Mary Clark Pitrun, 2: Mary Clark 1 ¼" minus, 3: Elk Valley Pitrun, 4: Mora pitrun, 5: Thunder Pit, Ballast, 6: Sand Hill Pit, Ballast, 7: Siwash Pit, Ballast

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd ³ /sta)	Pitrun SUBTOTAL(yd ³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd ³ /sta)	Crushed Subtotal(yd ³)	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd ³)
0+65 Spur	0+00	0+65	17'	1	12	18	110	70							
1+10 Spur	0+00	1+10	17'	1	12	12	70	80							
RY-9090	0+20			1				50							
0+75 Spur	0+00	0+75	17'	1	12	20	130	100							
4+75 Spur	0+00	4+75	17	1	12	15	90	400							
RY-9000															
Culvert	M.P. 14.5								2				20		
Post-haul	MP 5.5	MP 7.0							2				400		
0+50 Spur	0+00	0+50	17	5	12	12	70	40							
lift	0+00	0+50		3	12	6	35	20							
landing				5				50							
1+00 Spur	0+00	1+00	17	5	12	12	70	70							
lift	0+00	1+00		3	12	6	35	40							
culvert	0+20			3				20							
landing				5				50							
RY-9500															
landing	28+50			3				50							
Post-haul	0+00	49+00							2				150		
RY-9502															
Post-haul	0+00	8+10							2				50		
Totals:								1040					620		

ROCK LIST SHEET CONTINUED

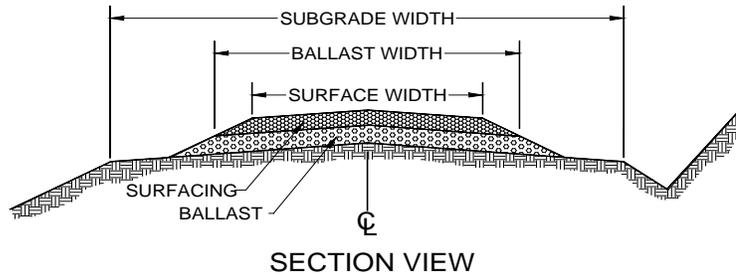


SECTION VIEW

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ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd ³ /sta)	Pitrun SUBTOTAL(yd ³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd ³ /sta)	Crushed Subtotal(yd ³)	Oversize/ Rip Rap Source	Oversize/Rip Rap Quantity(yd ³)
RY5901.1															
culvert	16+75			3				20						3	5
Ballast lift	20+00	26+90	17	6	12	12	70	500							
lift	20+00	26+90		3	12	6	35	260							
lift	26+90	41+40		3	12	10	60	870							
RY5901.2	0+00	8+00		3	12	12	70	560							
1+40 Spur	0+00	1+40	17	7	12	18	110	150							
7+45 Spur	0+00	7+45		4	12	12	70	520							
Jct. widening	0+00	0+40		4				40							
18+25 Spur	0+00	13+65	17	7	12	12	70	960							
lift	0+00	13+65		4	12	6	35	480							
lift	13+65	18+25	17	4	12	12	70	320							
culvert	7+00			4				20							
landing	18+25			7				50							
RY-9075	0+00	16+80		3	12	12	70	1180							
Jct. widening				3				20							
10+45 Spur	0+00	10+45		3	12	12	70	730							
Culvert	3+50			3				20							
Culvert	7+85			3				20							
Culvert	8+70			3				20							
Totals:								6740							5

ROCK LIST SHEET CONTINUED



1. Rock quantities, subtotals and totals are "truck measure" estimates. Rock shall be applied to at least the depths listed.
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ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd ³ /sta)	Pitrun SUBTOTAL(yd ³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd ³ /sta)	Crushed Subtotal(yd ³)	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd ³)
1+80 Spur	0+00	1+80	17	5	12	12	70	130							
lift	0+00	1+80		3	12	6	35	70							
landing				5				50							
14+29 Spur	0+00	14+29	17	5	12	12	70	1000							
lift	0+00	14+29		3	12	6	35	570							
landing	14+29			5				50							
Culvert	0+10			3				20							
culvert	2+05			3				20							
5+89 Spur	0+00	5+89	17	5	12	12	70	410							
lift	0+00	5+89		3	12	6	35	210							
culvert	4+00			3				20							
RY-9058.001	1+15	5+10	17	6	12	12	70	290							
Lift				3	12	6	35	140							
1+01 Spur	0+00	1+01	17	6	12	24	155	160							
0+76 Spur	0+00	0+76	17	6	12	24	155	100							
1+50 Spur	0+00	1+50		3	12	12	70	100							
landing				3				50							
Totals:								3390							
Total Total								11,170				620			5

FISH STREAM WORK PROVISIONS For TEMPORARY CROSSINGS

1. **TIMING LIMITATIONS:** The fish culvert project may begin June 15th and shall be completed by October 15th.
2. Work shall conform to plans and specifications in the road plan.
3. Prior to the commencement of in-stream work, the Purchaser shall isolate the work area in a manner that fish cannot enter the work area, capture and safely move fish and other fish life from the work area. The Purchaser shall have fish capture and transportation equipment ready and on the job site. Captured fish shall be immediately and safely transferred to free-flowing water downstream of the work area.

TEMPORARY STREAM FLOW BYPASS

4. All in-stream work shall be conducted in the dry or in isolation from the stream flow by the installation of a bypass flume/pipe or by pumping the flow around the work area, back into the stream below the work area. Waste water pumped from within the work area shall terminate on the forest floor, sufficient distance from the stream to filter sediment prior to entering the stream.
5. The temporary bypass to divert flow around the work area shall be in place prior to initiation of other work in the wetted perimeter.
6. A sandbag revetment or similar device shall be installed at the bypass inlet to divert the entire flow through the bypass.
7. The bypass shall be of sufficient size to pass all flows and debris for the duration of the project.
8. If a pump is used for diverting water from the stream where fish are present, as per RCW 77.57.010 and 77.57.070, the pump intake shall be equipped with a fish guard to prevent passage of fish into the diversion pump. The pump intake shall be screened with 1/8 inch mesh to prevent fish from entering the pump. Velocity through the screened intake shall be less than 0.4 feet per second. Screens shall be maintained to prevent injury or entrapment of juvenile fish.

WATER QUALITY

9. Extreme care shall be taken to ensure that no petroleum products, hydraulic fluid, chemicals, or any other toxic or deleterious materials are allowed to enter or leach into the stream.

COMPACTION LIST

Road	Stations	Type	Max Depth per Lift (In)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
Construction	All	Subgrade, except puncheon	6	Vibratory Smooth Drum Roller	6,000	3	3
Construction	All	Rock Lifts	6				
			6				
D-5235	0+00 – 45+30	Pre-haul surface	6				
D-5235.2	0+00 – 5+60	Pre-haul surface	6				
RY-9058.001	0+00 -1+15	Pre-haul surface	6				
Pre-haul Maintenance, Reconstruction	All	Rock Lifts	6	Jumping Jack	N/A	3	N/A
Pre-haul Maintenance, Reconstruction	All	Culvert Backfills	6				

Typical Type Ns, Np Culvert Installation Detail Sheet.

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

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

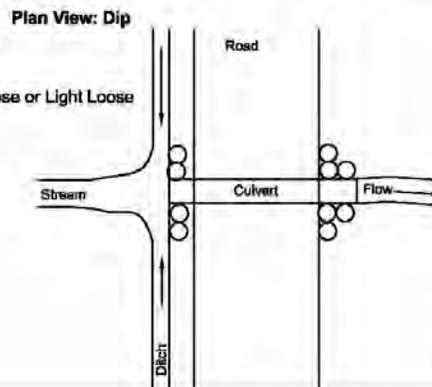
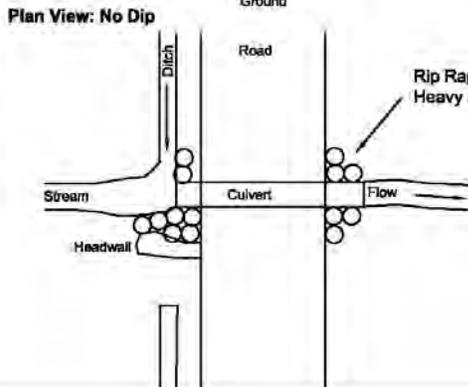
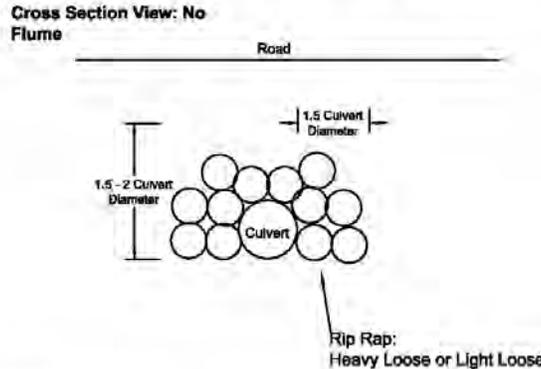
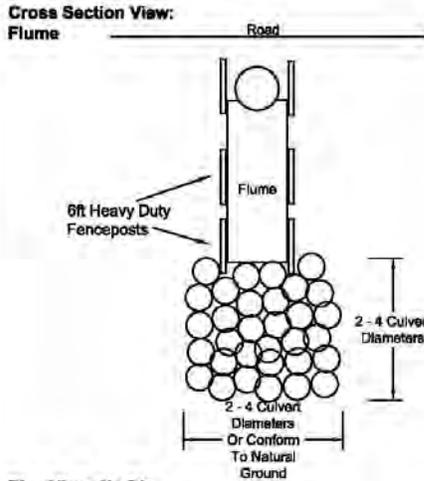
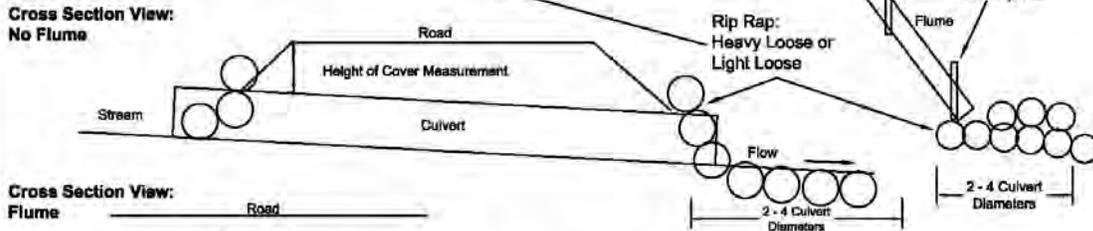
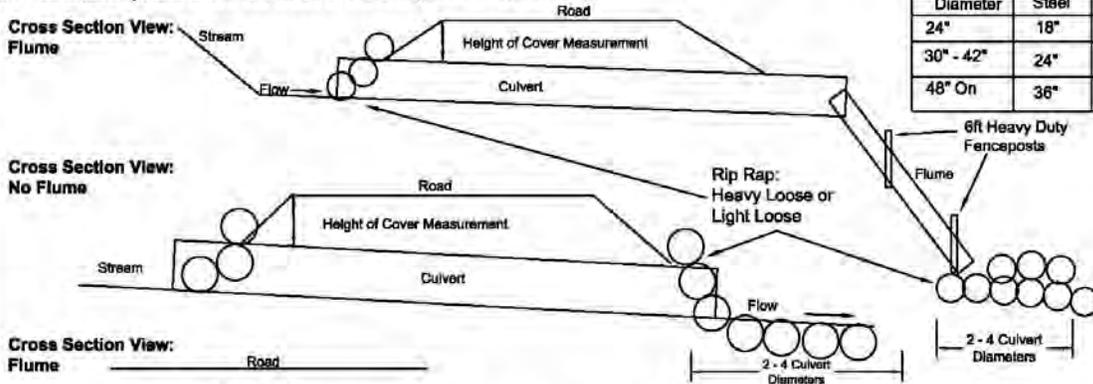
-Flumes longer than 10ft shall be staked on both sides at maximum intervals of 10ft with 6ft heavy duty steel fence posts, and fastened securely to the posts with No. 10 galvanized smooth wire or bolted to the fence posts.

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

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

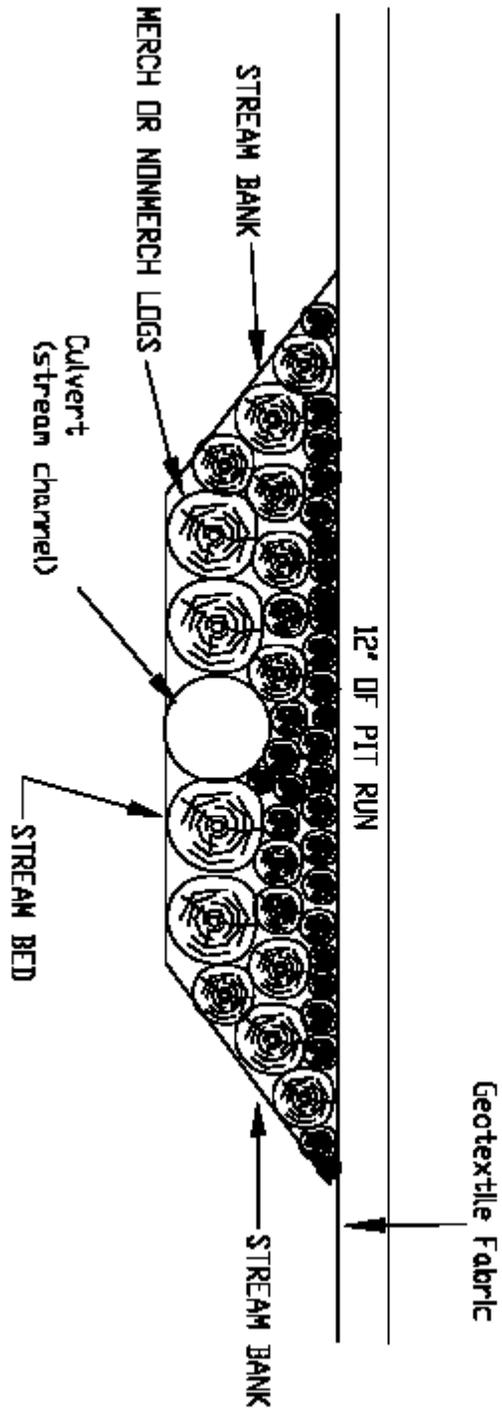
-Backfill compaction shall be achieved using a jumping jack, walk behind vibratory roller, or plate compactor on lifts not to exceed 8in. 3 complete passes per lift is required for compaction. Backfill shall be placed and compacted evenly on both sides of the culvert. Care shall be taken to ensure adequate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

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

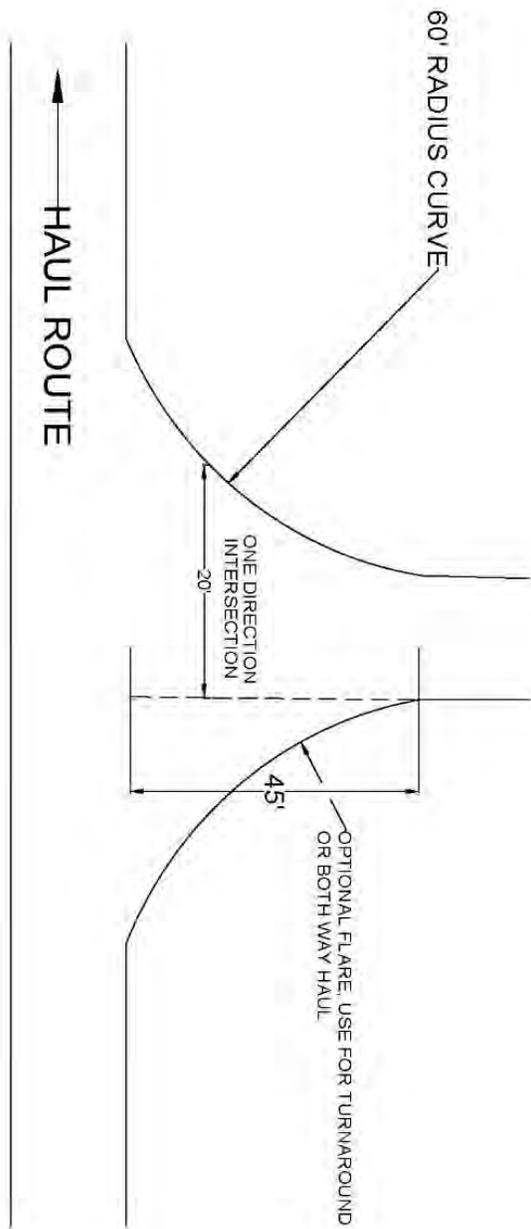


Not To Scale

TEMPORARY LOG FILL STREAM CROSSING

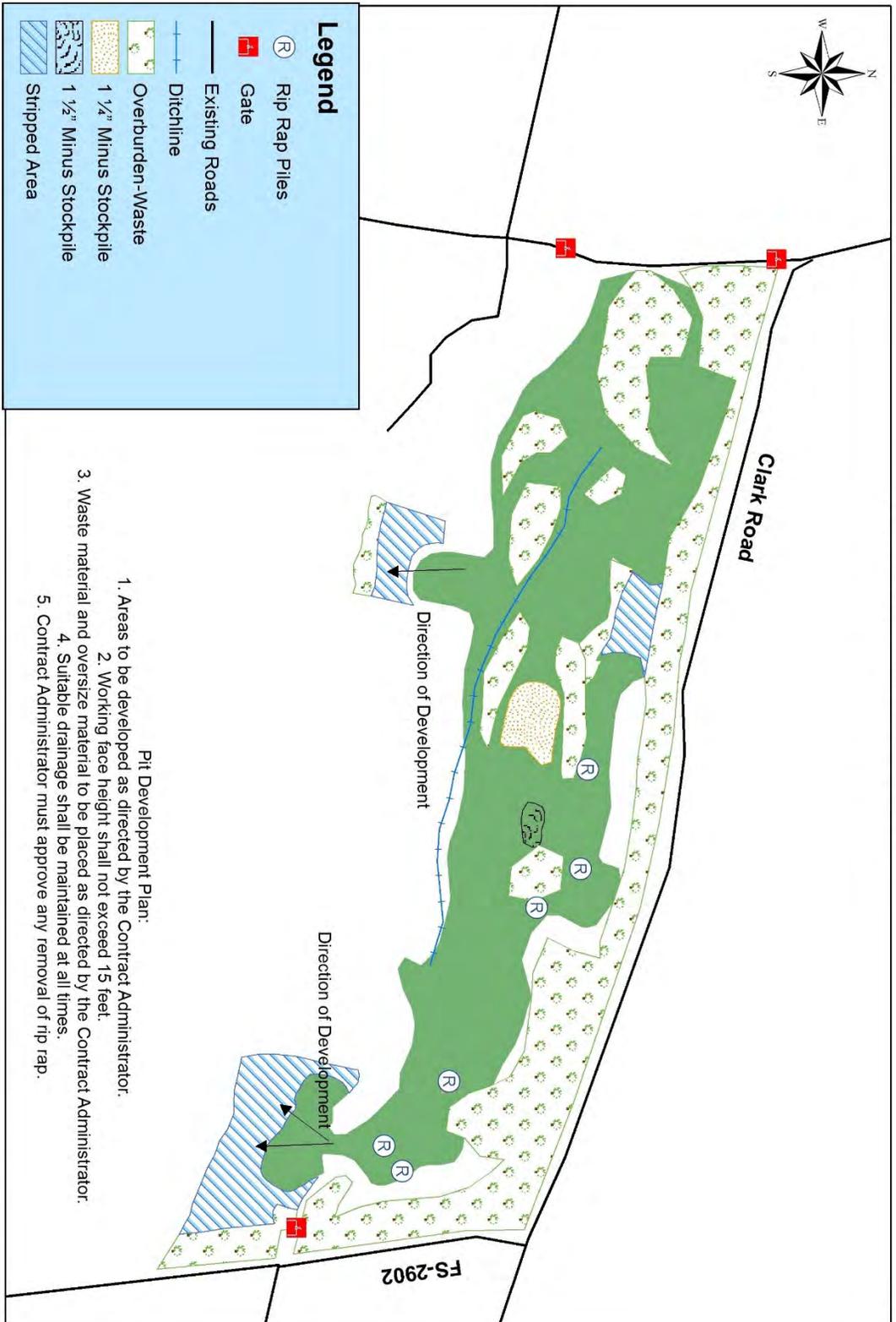


TYPICAL INTERSECTION



NOT TO SCALE

Mary Clark Pit Plan T30N R12W Sec32

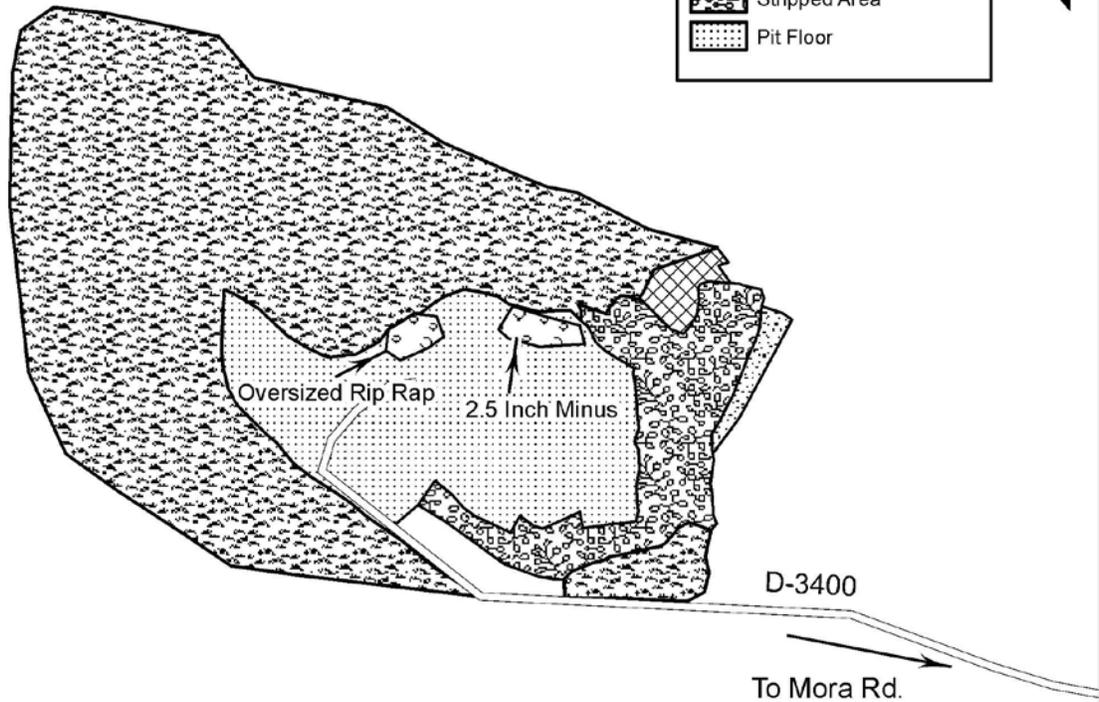


Mora Pit Plan

Sec. 23 & 24, T28N, R15W

Not To Scale

Legend	
	Approach Road
	Overburden
	Reclaimed
	Stockpiles
	Cleared but not Stripped
	Stripped Area
	Pit Floor

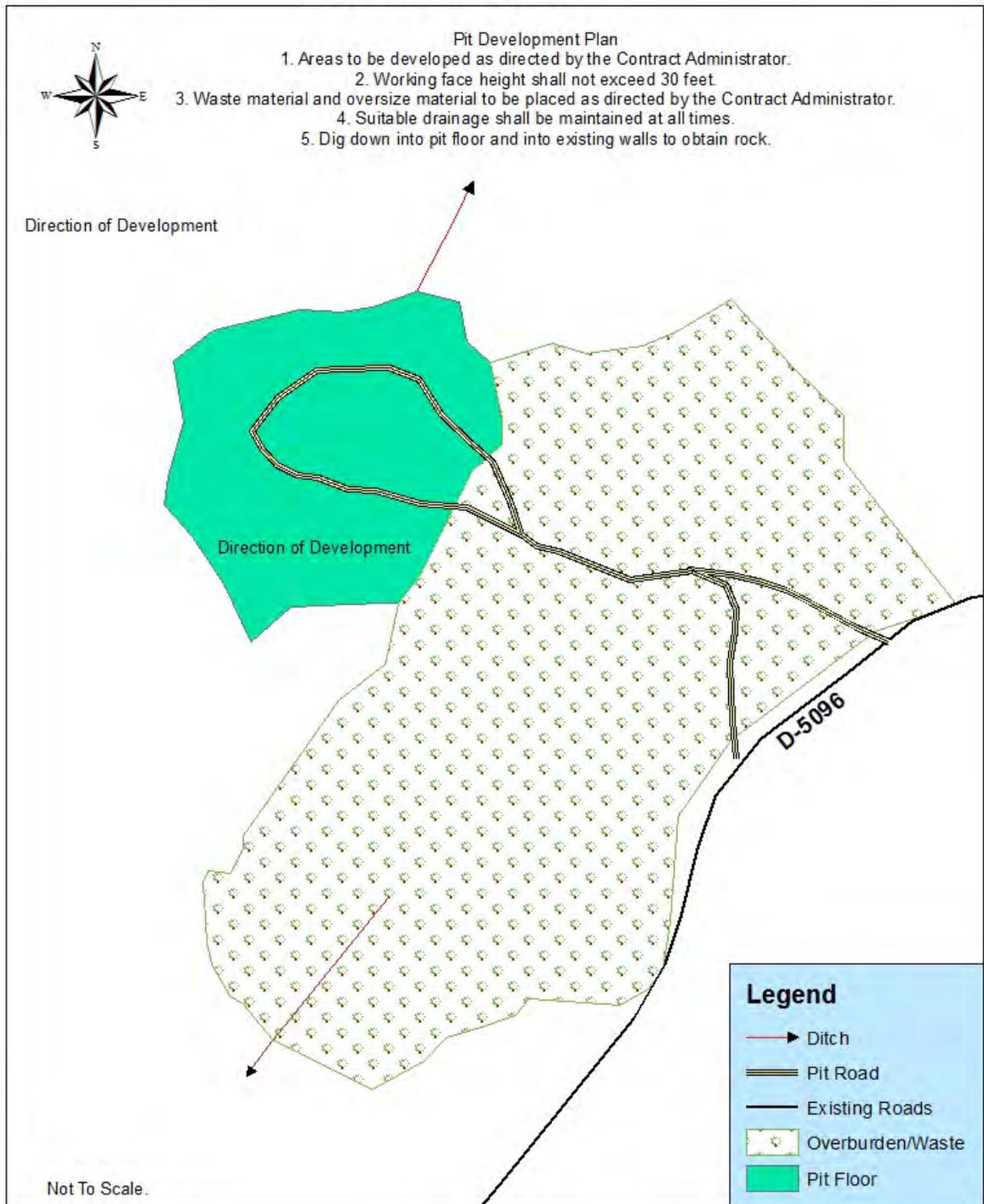


Pit Development Plan

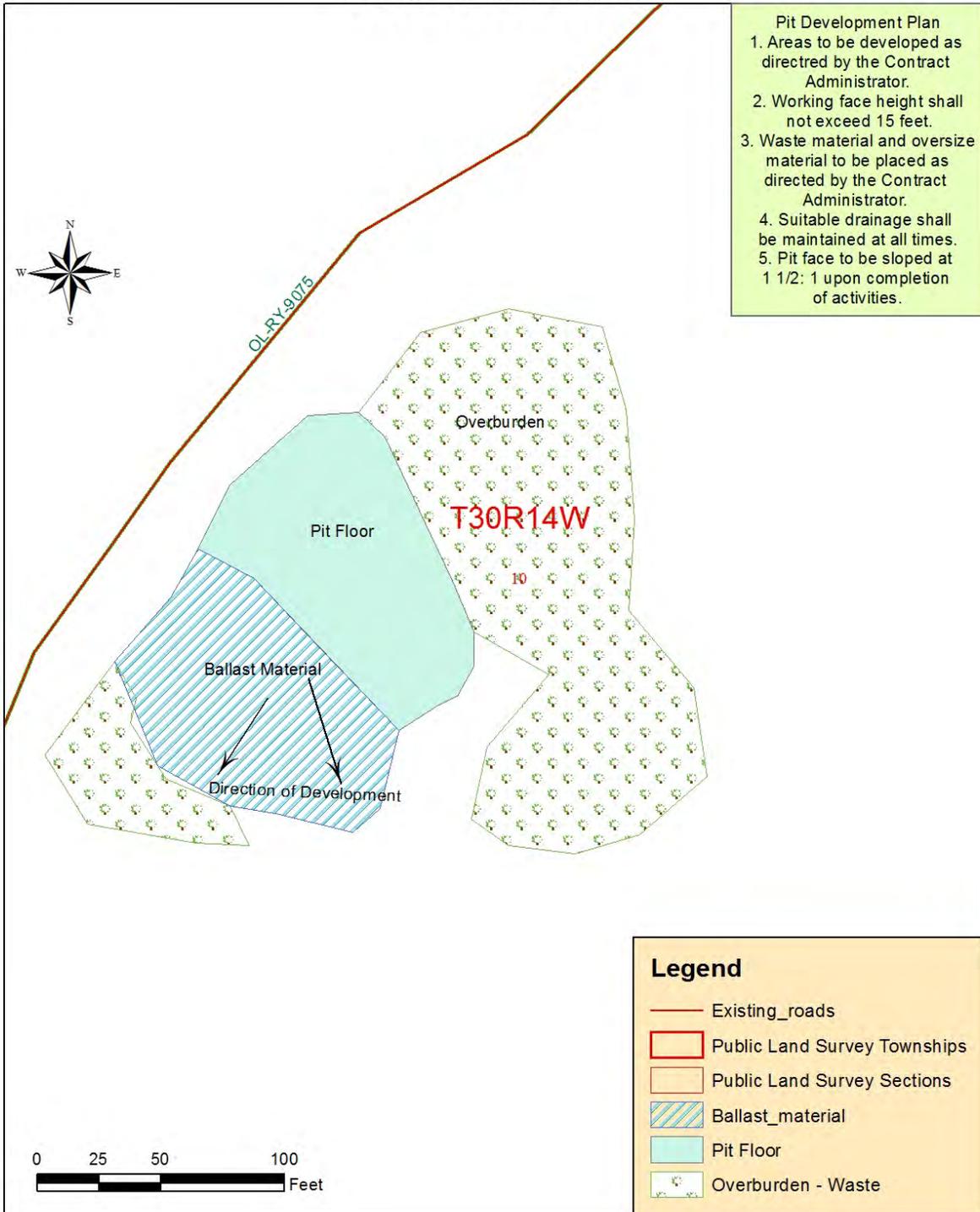
1. Areas to be developed as directed by the Contract Administrator.
2. Working face height shall not exceed 15 feet.
3. Waste material and oversize material shall be placed as directed by the Contract Administrator. Segregate soil & wood.
4. Pit face shall not be mined to within 15' of any unstripped area.

Ellis, 1/2016

Old Siwash Pit T 30N R15W Sec25



Sand Hill Pit Plan T30N R14W Sec10

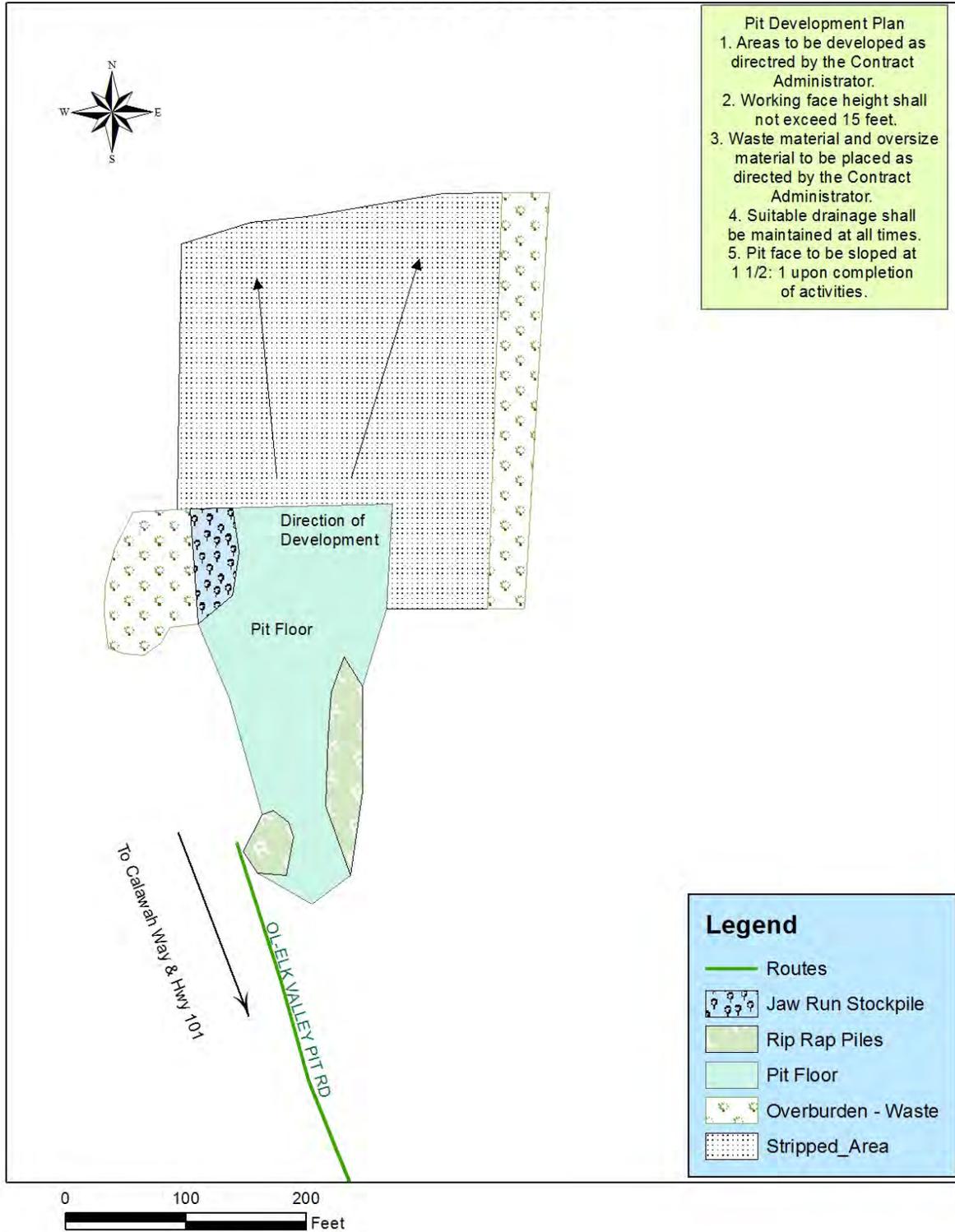


- Pit Development Plan**
1. Areas to be developed as directed by the Contract Administrator.
 2. Working face height shall not exceed 15 feet.
 3. Waste material and oversize material to be placed as directed by the Contract Administrator.
 4. Suitable drainage shall be maintained at all times.
 5. Pit face to be sloped at 1 1/2: 1 upon completion of activities.

Legend

- Existing_roads
- Public Land Survey Townships
- Public Land Survey Sections
- Ballast_material
- Pit Floor
- Overburden - Waste

Elk Valley Pit Plan T28N R13W Sec2



- Pit Development Plan**
1. Areas to be developed as directed by the Contract Administrator.
 2. Working face height shall not exceed 15 feet.
 3. Waste material and oversize material to be placed as directed by the Contract Administrator.
 4. Suitable drainage shall be maintained at all times.
 5. Pit face to be sloped at 1 1/2: 1 upon completion of activities.

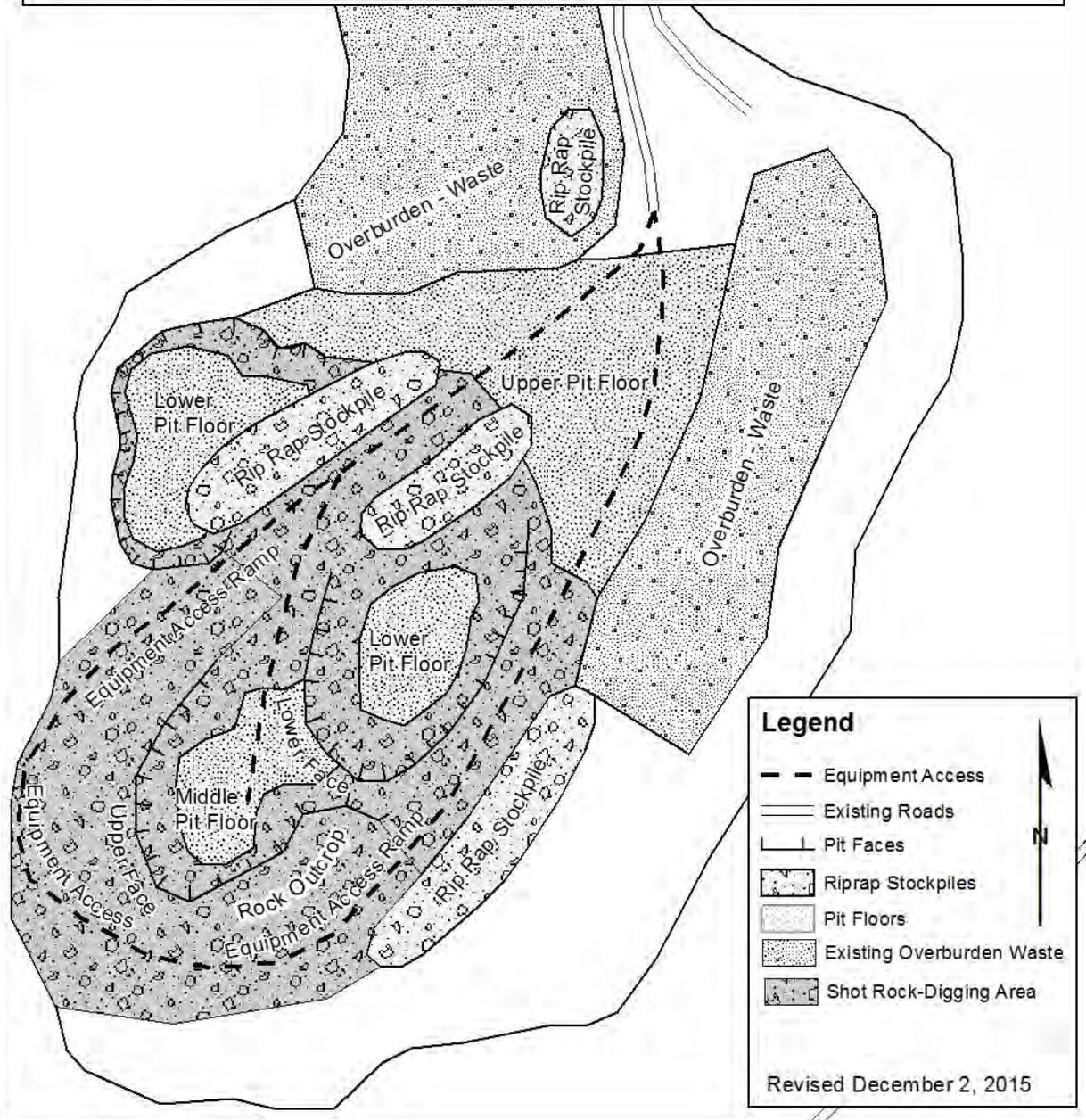
Legend

- Routes
- Jaw Run Stockpile
- Rip Rap Piles
- Pit Floor
- Overburden - Waste
- Stripped_Area

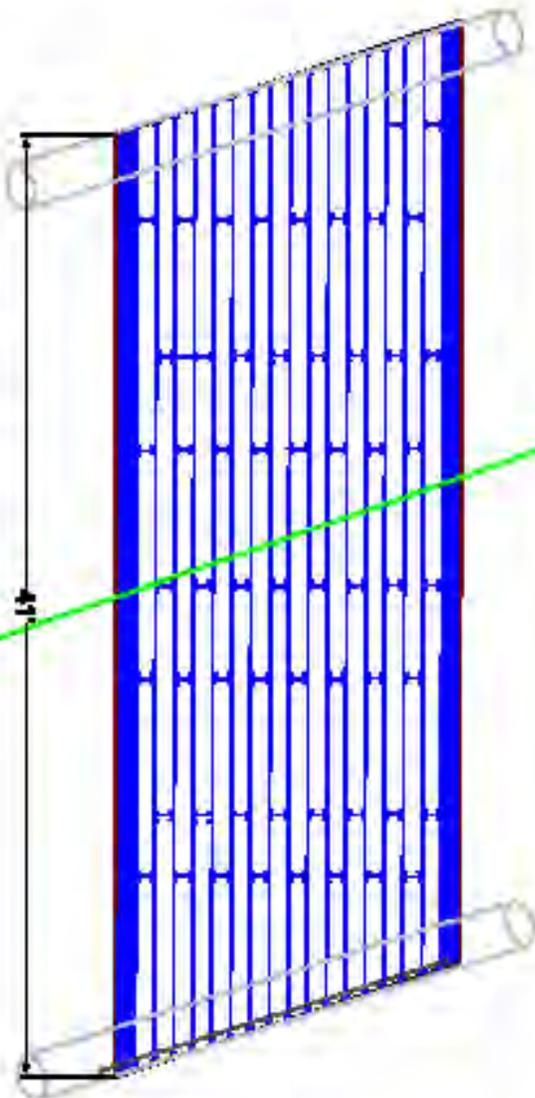
**Thunder Pit
T29N, R14W, Sec. 2
(Not to Scale)**

Pit Development and Reclamation Plan

1. Areas to be developed as directed by the Contract Administrator.
2. Waste, Oversize and Riprap shall be placed as directed by the Contract Administrator.
3. Working face height shall not exceed 15 feet.



Planking Detail



Note:
Plank Spacing may need adjusting to match
groove size.

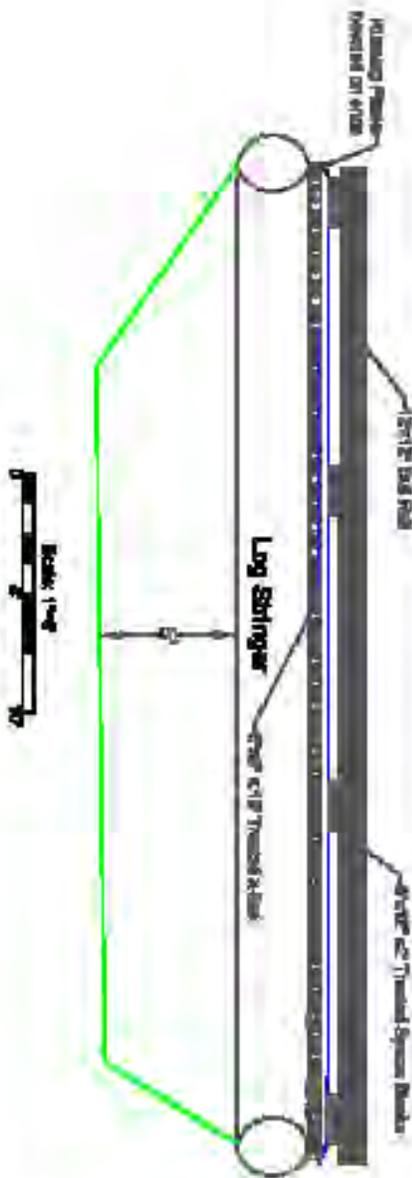


Seco 1/8 T, 30N R, 18W
N 48.10775 degrees
W 124.8784 degrees

RY-8800 Bridge

Plan View
Designed By: Bill Mork
Drawn By: Bill Mork
Date: 8-17-2016
Sheet 1 of 2

Bull Rail and x-tie Detail



- Notes:**
1. Rotten spikes then marked with blue paint, 4- 1/8 then to replace.
 2. Upproven Bull Rail spikes to be replaced bull rail re-sharpened and secured.

S200 16 T 30M R 13W
 N 48 T0775 diagonals
 W 12A 375d diagonals



RY-2000 Bridge
 Mike Viner
 Designer of System
 Drawn By: Bill Maird
 Date: 8-17-09 14
 Sheet 2 of 2

DEPARTMENT OF NATURAL RESOURCES

FORM 6-878rev 01-081

SUMMARY - Road Development Costs

SALE NAME: Dickey Mountain CONTRACT#: 30-093926 REGION: Olympic DISTRICT: Coast TOTAL SHEET #2-4

ROAD NAME:	0-65 Spur	1-10 Spur	0-75 Spur	4+75 Spur	1-10 Spur	0-50 Spur	14-29 Spur	1-80 Spur	5+89 Spur	RY9058.001	1+01 Spur	TOTAL
ROAD TYPE:	Construction	TOTAL										
NUMBER OF STATIONS:	0	0	0	0	0	0	0	0	0	0	0	35.69
SIDE-SLOPE:	1	1	1	5	1	1	14	2	6	4	1	36.06
CLEARING AND GRUBBING:	0	0	0	0	0	0	0	0	0	0	0	\$5,308
ROAD BRUSHING:	65	125	176	661	190	95	2,167	273	893	549	115	\$3,257
EXCAVATION AND FILL:	0	0	0	0	0	0	0	0	0	0	0	\$0
ROAD GRADING:	147	186	212	803	480	141	3,230	407	1,498	893	228	\$8,227
DITCH CLEANING/CONSTRUCTION:	0	0	0	0	0	0	0	0	0	0	0	\$0
ROCK TOTALS (CL Yds./ROCK COSTS:	0	0	0	0	0	0	0	0	0	0	0	\$0
Ballast (or pitrun)	9577	80	100	400	120	90	1,050	180	410	290	160	2,948
Surface (or pitrun)	2140	\$788	\$986	\$3,962	\$1,441	\$1,201	\$15,576	\$2,669	\$5,572	\$3,216	\$1,200	\$1,080
Over-size	5	0	0	0	0	0	0	0	0	0	0	\$0
CUTBERTS AND FLUMES:	0	0	0	0	0	0	0	0	0	0	0	\$0
STRUCTURES:	0	0	0	0	0	0	0	0	0	0	0	\$0
MISC. EXPENSES:	0	0	0	0	0	0	0	0	0	0	0	\$0
OVERHEAD:	72	90	110	563	367	153	3,060	431	1,367	611	123	\$6,947
TOTAL COSTS:	968	1,209	1,484	7,601	4,954	2,066	41,311	5,817	18,460	8,251	1,667	\$93,788
COST PER STATION:	1,489	1,099	1,978	1,600	4,954	4,133	2,891	3,232	3,134	2,089	1,650	\$2,628

MOBILIZATION: \$18,500
ROAD DEACTIVATION AND ABANDONMENT COSTS: \$6,197

Pit Work: \$1,000
RY-9500 Bridge Repair: \$7,668

NOTE: This appraisal has no allowance for profit and risk.
Sheet 1 of 3
Plans to be furnished by:

TOTAL (All Roads) = \$308,569
SALE VOLUME MBF = 7,052
TOTAL COST PER MBF = \$43.76
TOTAL COST PER STATION = \$902.91
Compiled by: Bill Mehl Date: 5-27-2016

Dickey Min Road Cost.xlsx

SALE NAME: Dickey Mountain
 LEGAL DESCRIPTION: 0

CONTRACT#: 30-093926
 REGION: Olympe

DISTRICT: Coast

SUMMARY - Road Development Costs

ROAD NAME:	0+76 Spur	RY-5901.1	1+40 Spur	18+25 Spur	RY-5090	RY-9200	RY-9502	RY-9058	00R-9069	01 RY-9075	1+50 Spur	0+45 Spur	RY-5901.1	RY-5901.2	7+45 Spur	D-5235	D-5235.2	
ROAD TYPE:	Construction	Construction	Construction	Construction	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	
NUMBER OF STATIONS:	1	7	1	18	2	2	17	1	10	17	2	10	10	35	8	7	45	6
SIDESLOPE:	35%	10%	10%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
CLEARING AND GRUBBING:	\$178	\$787	\$212	\$2,081	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ROAD BRUSHING:	\$0	\$0	\$0	\$0	\$31	\$0	\$306	\$0	\$182	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$815	\$101
EXCAVATION AND FILL:	\$258	\$1,170	\$227	\$4,125	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ROAD GRADING:	\$0	\$0	\$0	\$0	\$0	\$0	\$111	\$7	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$294	\$36
DITCH CLEANING/CONSTRUCTION:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,069	\$0	\$546	\$0	\$0	\$0	\$0	\$0	\$0
ROCK TOTALS (Cu. Yds./ROCK COS:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ballast: Yardage	120	500	150	1,010	50	50	0	0	0	1,200	150	790	890	560	560	0	0	
Costs	\$822	\$4,135	\$1,232	\$9,237	\$493	\$1,197	\$0	\$0	\$0	\$27,204	\$3,401	\$21,617	\$20,141	\$12,762	\$10,054	\$0	\$0	
Surface Yardage	0	260	0	820	0	0	0	0	0	0	0	0	0	0	0	0	0	
Costs	\$0	\$5,872	\$0	\$14,276	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Over-size Yardage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
CULVERTS AND FLUMES:	\$0	\$0	\$0	\$572	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,945	\$780	\$0	\$0	\$0	\$0	
STRUCTURES:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
MISC. EXPENSES:	\$0	\$40	\$0	\$20	\$0	\$0	\$250	\$7	\$0	\$504	\$45	\$650	\$640	\$765	\$2,016	\$365	\$33	
OVERHEAD:	\$101	\$960	\$134	\$2,425	\$42	\$96	\$53	\$1	\$15	\$2,302	\$276	\$2,061	\$1,763	\$1,082	\$966	\$110	\$14	
TOTAL COSTS:	\$1,358	\$12,964	\$1,816	\$32,735	\$565	\$1,292	\$720	\$15	\$196	\$31,079	\$3,721	\$27,817	\$23,798	\$14,610	\$13,036	\$1,485	\$184	
COST PER STATION:	\$1,787	\$1,879	\$1,297	\$1,794	\$332	\$646	\$42	\$13	\$19	\$1,850	\$2,481	\$2,662	\$690	\$1,826	\$1,750	\$33	\$33	

Total
 Costs \$167,390
 Stations 18,886
 Cost/station \$886.32

SALE NAME: Dickey Mountain CONTRACT#: 30-093926 REGION: Olympic
 LEGAL DESCRIPTION: 0

SUMMARY - Road Development

DISTRICT: Coast

ROAD NAME:	RY-9000	RY-9500	RY9802	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ROAD TYPE:	Posthaul																		
NUMBER OF STATIONS:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SIDE SLOPE:	79	30	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLEARING AND GRUBBING:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ROAD BRUSHING:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXCAVATION AND FILL:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ROAD GRADING:	515	195	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DITCHING:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ROCK TOTALS (Cu. Yds.) / ROCK COS:	400	150	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ballast:	5,308	4,166	1,413	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Surface:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oversize:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CULVERTS AND FLUMES:	880	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STRUCTURES:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MISC. EXPENSES:	0	176	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OVERHEAD:	670	454	151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL COSTS:	0	4,990	1,663	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COST PER STATION:	93	166	208	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total
 Costs \$14,026
 Stations 117.20
 Cost/station \$119.67

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Cuts and Fills

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

Surface

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

Drainage

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

Preventative Maintenance

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

Termination of Use or End of Season

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

Debris

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

