



TIMBER NOTICE OF SALE

SALE NAME: ODE TO JOYCE

AGREEMENT NO: 30-100666

AUCTION: November 15, 2023 starting at 10:00 a.m., COUNTY: Clallam Forks, WA

SALE LOCATION: Sale located approximately 1 mile west of Joyce, 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 and all downed red cedar or any timber that has been on the ground for 5 years or more (5 years is defined by more than 1.5 inches of sap rot), bounded by timber sale boundary tags, the PA-J-1000, PA-J-1100, Private Land, BPA Power Lines in Unit 1; Timber Sale Boundary tags, Private land in Unit 2; Timber Sale Boundary tags, Private land and the PA-J-1000 in Unit 3; Timber Sale Boundary tags, PA-J-1200 in Unit 4.

All timber bounded by right of way boundary tags in Unit 5.

All forest products above located on part(s) of Sections 5, 6, 7 and 8 all in Township 30 North, Range 8 West, Sections 31 all in Township 31 North, Range 8 West, W.M., containing 127 acres, more or less.

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: BVC-SFIFM-018227)

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 Douglas fir, Redcedar, Hemlock, Red alder, Maple, and Sale Total.

MINIMUM BID: \$1,854,000.00 BID METHOD: Sealed Bids

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

EXPIRATION DATE: October 31, 2025 ALLOCATION: Export Restricted

BID DEPOSIT: \$185,400.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: 62% Ground Based 38% Uphill cable 30' Equipment limitation zones on all typed water unless approved by the Contract Administrator. Forest products sold under this contract shall be harvested and removed using cable, cable-tethered, and ground based equipment. Cable-tethered equipment is limited to sustained slopes of 75% and less. Non-tethered self-leveling tracked equipment is limited to sustained slopes that are 45% and less. Rubber tired skidders are restricted unless approved by the Contact Administrator. Authority to use other equipment or to operate outside the equipment specifications



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detailed above must be approved in writing by the State. Designated crossings must be approved by the Contract Administrator.

Falling, yarding and timber hauling will not be permitted from November 1 to April 30, on weekends, State recognized holidays or from 8:00 p.m. to 6:00 a.m., unless authorized in writing by the Contract Administrator.

ROADS:

6.85 stations of required construction. 44.00 stations of required reconstruction. 46.25 stations of optional construction. 2.45 stations of optional reconstruction. 290.85 stations of required pre-haul maintenance. 36.55 stations of optional pre-haul maintenance. All road activities including timber haul and rock pit development will not be permitted from November 1 to April 30, on weekends, State recognized holidays or from 8:00 p.m.- 6:00 a.m., unless authorized in writing by the Contract Administrator.

Bridge installation on the PA-J-1025, Stations 29+94 - 30+39 will not be permitted from October 1 - June 30.

ACREAGE DETERMINATION

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

FEES: \$106,080.00 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 PA-J-1200, PA-I-3000, PA-I-2600 and the BPA-3845. Contact the Olympic Region Dispatch Center at 360-374-2800 to obtain an AA-1-key.

Purchaser shall provide and construct Log Stringer Bridge on the PA-J-1025, Stations 29+94-30+39. Refer to Road plan for details.

Two week notice shall be given prior to any activities with Unit 1 for temporary re-routing or closure of the Olympic Discovery Trail.

All trees 60 inches in Diameter at Breast Height (DBH) and greater shall not be felled unless for safety reasons, which must be approved by the Contract Administrator. If trees 60 inches DBH or greater need to be felled for safety reasons, trees will be left where felled.

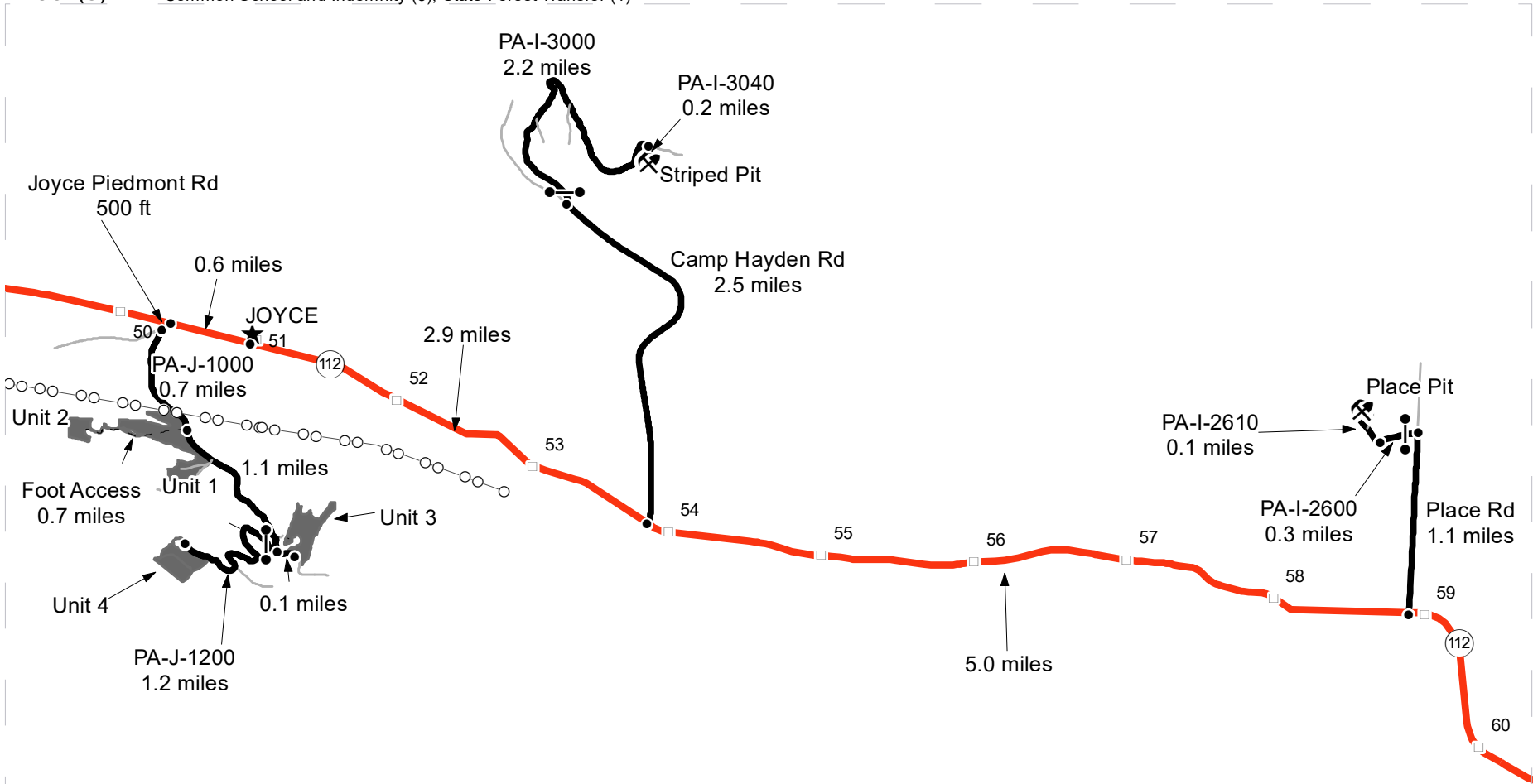
The BPA Checklist (Schedule C) shall be done prior to harvest or road building activities within or adjacent to BPA power lines.

Rock identified to be used out of a State lands rock pit shall meet specifications as identified within the Road Plan, which will be determined by the Contract Administrator. If the rock does not meet the specifications, a commercial source shall be used that does at the Purchaser's expense.

DRIVING MAP

SALE NAME: ODE TO JOYCE
AGREEMENT#: 30-100666
TOWNSHIP(S): T30R8W, T31R8W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 560-2080



Map may not be to scale

- Timber Sale Unit
- Haul Route
- Other Road
- Foot Access
- Power Lines
- Milepost Markers
- Town
- Gate (AA-1)
- Rock Pit

DRIVING DIRECTIONS:

Unit 1: From the town of Joyce, head west on State Highway 112 for 0.6 miles. Turn left onto Joyce-Piedmont and continue for 500ft. Turn left onto Joyce-Access Rd (PA-J-1000) and continue for 0.7 miles and Unit 1 will be on your right.

Unit 2: Continue on foot from Unit 1 along the existing grade and right-of-way to Unit 2

Unit 3: From Unit 1 continue 1.2 miles along the Joyce Access Rd and Unit 3 will be on your left

Unit 4: From Unit 1, continue 1.1 miles along Joyce Access Rd before taking a sharp right onto PA-J-1200. Proceed through the locked gate (AA-1) and continue for 1.2 miles before arriving at Unit 4.

Striped Pit: From the town of Joyce, head east on Hwy 112 for 2.9 miles. Turn left on Camp Hayden Rd and proceed for 2.5 miles before turning right onto PA-I-3000. Proceed through locked gate (AA-1), then continue for 2.2 miles before turning right onto PA-I-3040. Arrive at the pit in 0.2 miles.

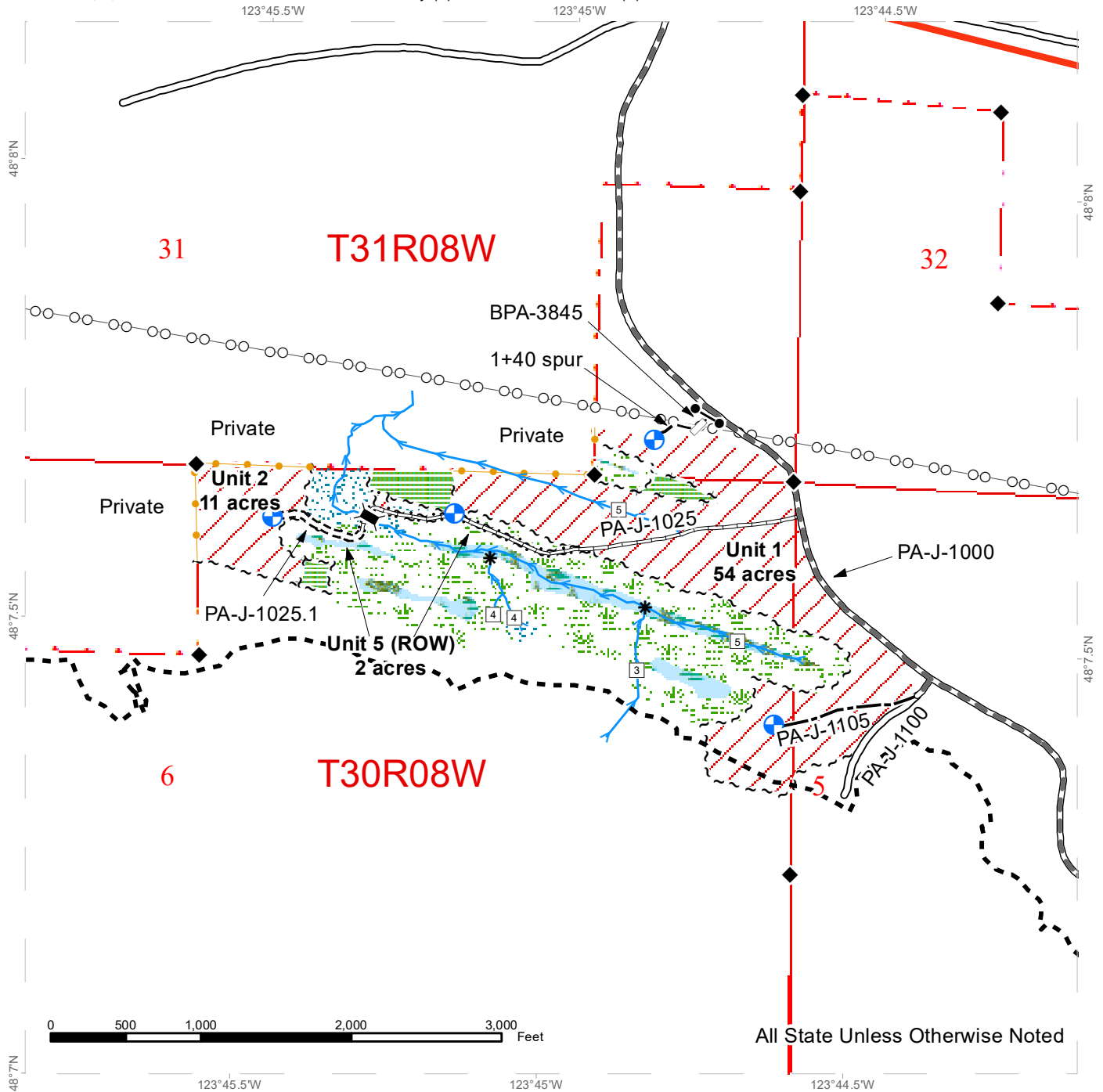
Place Pit: From the town of Joyce, head east on Hwy for 7.9 miles. Turn left on Place Rd and proceed for 1.1 miles. Then turn left on PA-I-2600, proceed through locked gate (AA-1) and continue for 0.3 miles. Turn right on PA-I-2610 and continue for 0.1 miles before arriving at Place Pit.



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All State Unless Otherwise Noted

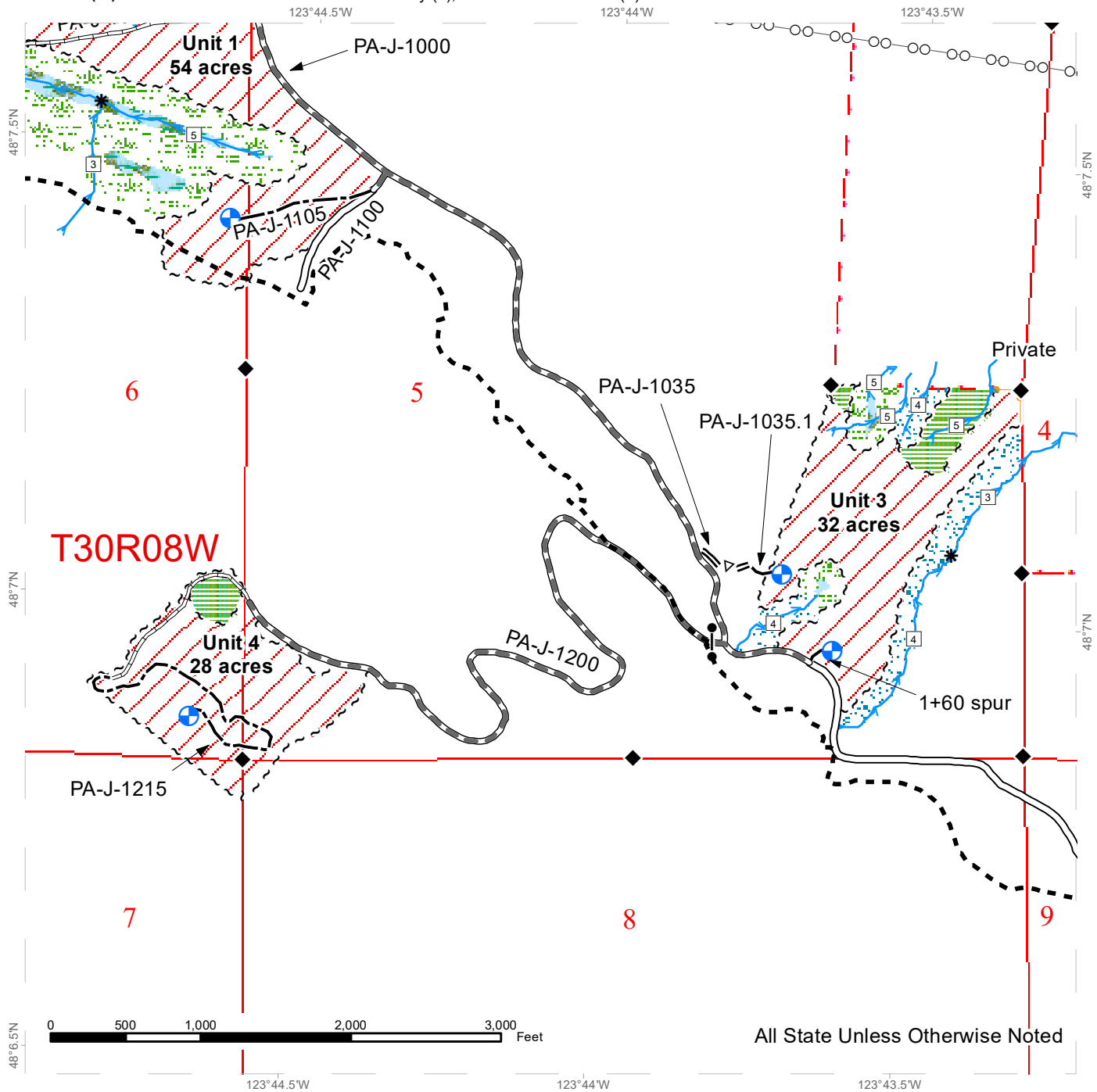
Variable Retention Harvest	Existing Roads	Sale Boundary Tags	Survey Monument
Leave Tree Area	Required Pre-Haul Maintenance	Leave Tree Tags	Gate
Riparian Management Zone	Required Reconstruction	Right of Way Tags	Bridge
Type-B Wetland	Required Construction	Take / Removal Trees	Proposed Landing
Wetland Management Zone	Optional Pre-Haul Maintenance	BPA Power Lines	Rock Pit
DNR Managed Lands	Optional Reconstruction	Streams	Stream Type
Public Land Survey Townships	Optional Construction	Stream Type Break	
Public Land Survey Sections	Discovery Trail		



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All State Unless Otherwise Noted

Variable Retention Harvest	Existing Roads	Sale Boundary Tags	Survey Monument
Leave Tree Area	Required Pre-Haul Maintenance	Leave Tree Tags	Gate
Riparian Management Zone	Required Reconstruction	Right of Way Tags	Bridge
Type-B Wetland	Required Construction	Take / Removal Trees	Proposed Landing
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DNR Managed Lands	Optional Reconstruction	Streams	Stream Type
Public Land Survey Townships	Optional Construction	Stream Type Break	
Public Land Survey Sections	Discovery Trail		

**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Lump Sum AGREEMENT NO. 30-0100666

SALE NAME: ODE TO JOYCE

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

G-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on June 14, 2023 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 and all downed red cedar or any timber that has been on the ground for 5 years or more (5 years is defined by more than 1.5 inches of sap rot), bounded by timber sale boundary tags, the PA-J-1000, PA-J-1100, Private Land, BPA Power Lines in Unit 1; Timber Sale Boundary tags, Private land in Unit 2; Timber Sale Boundary tags, Private land and the PA-J-1000 in Unit 3; Timber Sale Boundary tags, PA-J-1200 in Unit 4; all timber bounded by right- of-way boundary tags in Unit 5;

All forest products above located on approximately 127 acres on part(s) of Sections 5, 6, 7, and 8 all in Township 30 North, Range 8 West, Section 31 in Township 31 North, Range 8 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 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	Specifications for Landing Slash Piling
B	Green Tree Retention Plan
C	BPA Guideline

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2025.

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 \$1,226.00 per acre per annum for the acres on which an operating release has not been issued.
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

G-053 Surveys - Sensitive, Threatened, Endangered Species

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

G-060 Exclusion of Warranties

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

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

descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.

- e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.
- f. THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any threatened or endangered species, or the presence of their habitat, within the sale area.
- g. THAT THE FORESTRY OPERATIONS to be performed under this contract WILL BE FREE FROM REGULATORY ACTIONS by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.
- h. Items contained in any other documents prepared for or by the State.

G-062 Habitat Conservation Plan

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

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

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

G-063 Incidental Take Permit Notification Requirements

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

G-064 Permits

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

G-065 Regulatory Disclaimer

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

G-066 Governmental Regulatory Actions

a. Risk

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

b. Sale Area

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

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

c. Adjustment of Price

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

G-070 Limitation on Damage

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

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

G-080 Scope of State Advice

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

G-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: PwC-SFIFM-513.

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.

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.

Road is defined as the road bed, including but not limited to its component parts, such as cut and fill slopes, 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.

For each event, Purchaser shall be solely responsible for the initial \$5,000 in repairs. For repairs in excess of \$5,000, the parties shall share equally the portion of costs between \$5,000 and \$15,000. The State shall be solely responsible for the portion of the cost of repairs that exceed \$15,000.

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

G-140 Indemnity

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

G-150 Insurance

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

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

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

1. Insurers subject to Chapter 48.18 RCW (admitted and regulated by the Insurance Commissioner): The insurer shall give the State 45 days advance notice of cancellation or non-renewal. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.
2. Insurers subject to Chapter 48.15 RCW (surplus lines): The State shall be given 20 days advance notice of cancellation. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.

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

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

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

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

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

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

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

that include, but are not limited to, fire suppression expenses, accidental timber trespasses, and wildfire property damage with limits of not less than \$2,000,000.00 each occurrence.

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

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

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

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

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

G-160 Agents

The State's rights and duties will be exercised by the Region Manager at Forks, Washington. The Region Manager will notify Purchaser in writing who is responsible for administering the contract. The Region Manager has sole authority to waive,

modify, or amend the terms of this contract in the manner prescribed in clause G-180. No agent, employee, or representative of the State has any authority to bind the State to any affirmation, representation, or warranty concerning the forest products conveyed beyond the terms of this contract.

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

G-170 Assignment and Delegation

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

G-180 Modifications

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

G-190 Contract Complete

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

G-200 Notice

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

G-210 Violation of Contract

G-220 State Suspends Operations

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

G-210 Violation of Contract

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

State may terminate the rights of Purchaser under this contract and collect damages.

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

G-220 State Suspends Operations

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; PA-J-1000, PA-J-1025, PA-J-1025.1, PA-J-1100, PA-J-1105, PA-J-1035, PA-J-1035.1, PA-J-1200, PA-J-1215, 1+60 SPUR, PA-I-3000, PA-I-3040, PA-I-2600, PA-I-2610, PA-I-2620. 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 PA-J-1000 or BPA access roads, 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:

55-090881 Crescent School District
55-096589 Clallam County

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 \$162,240.00. The total contract price consists of a \$0.00 contract bid price plus \$162,240.00 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-001 Operations Outside the Sale Boundaries

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

H-010 Cutting and Yarding Schedule

Felling and Yarding will not be permitted from November 1 to April 30, weekends or State recognized holidays and from 8:00 p.m. to 6:00 p.m., 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 unit containing the damaged leave tree, as approved by the Contract Administrator. Purchaser may be required to pay liquidated damages for Excessive Reserve Tree Damage as detailed in clause D-041.

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

H-017 Preventing Excessive Soil Disturbance

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

H-035 Fall Trees Into Sale Area

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

H-050 Rub Trees

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

H-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 and removed using ground based and uphill cable. Rubber tired skidders are restricted unless approved by the Contract Administrator; tracked skidders, feller bunchers and shovels will not operate on sustained slopes over 40% unless approved by the Contract Administrator. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

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-130 Hauling Schedule

The hauling of forest products will not be permitted from November 1 - April 30, on weekends, State recognized holidays or from 8:00 p.m.- 6:00 a.m., unless authorized in writing by the Contract Administrator.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

1. Purchaser must have utility lines located before beginning road construction/reconstruction and digging next to the following roads; PA- J-1000, BPA-3845 and the 1+40 spur.
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. While felling timber, two Warning signs must be posted on the PA-J-1000 road, the PA-J-1200 road and the Olympic Discovery Trail.
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.
5. Purchaser shall perform abandonment of all skid trails in the sale area, at the discretion of the Contract Administrator. Abandonment shall consist of re-establishing

natural drainage and natural slopes, fluffing compacted soil to an 18 inch depth using shovel grapples, placing stumps and debris back into the trail, and installing water bars as directed by the Contract Administrator.

6. The BPA Checklist shall be done prior to harvest or road building activities within or adjacent to the BPA power lines.

7. Purchaser required Log Stringer Bridge is subject to a Forest Practice Hydraulic Permit on the PA-J-1025, stations 29+94 to 30 +39.

8. Tailhold locations shall be approved prior to use.

9. Yarding equipment shall not cross live streams without an FPHP.

10. All live stream work shall adhere to this contract, road plan and/or the FPHP.

11. All trees 60 inches in Diameter at Breast Height (DBH) and greater shall not be felled unless for safety reasons, which must be approved by the Contract Administrator. If trees 60 inches DBH or greater needs to be felled for safety reasons, trees will be left where felled.

12. Rock identified to be used out of a State lands rock pit shall meet specifications as identified within the Road Plan, which will be determined by the Contract Administrator. If the rock does not meet the specifications, a commercial source shall be used that does at the Purchaser's expense.

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 10/31/2020 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on all roads listed in the Road Plan authorized in Clause G-310, and are not listed in clause C-060. 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 PA-J-1000, PA-I-2600, P-I-2610, PA-I-2620, PA-I-3000 and the PA-I-3040 and all other roads not covered 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 equipment rate schedule on file at the Region office or Engineering Division in Olympia. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

C-140 Water Bars

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

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

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

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

S-010 Fire Hazardous Conditions

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

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

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

S-030 Landing Debris Clean Up

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

S-050 Cessation of Operations for Low Humidity

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

S-060 Pump Truck or Pump Trailer

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

S-070 Water Supply

Purchaser shall provide, during the "closed season", a water supply with a minimum capacity of 250 gallons for rapid filling of pump trucks or trailers at a location designated by the Contract Administrator.

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 30 feet of all typed waters unless authority is granted in writing by the Contract Administrator.

S-120 Stream Protection

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

S-130 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

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

Purchaser shall be responsible for restoring the site in the event of a spill or other releases of hazardous material/waste during operations conducted under this contract.

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

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

d. Hazardous Material Release Reporting

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

- Department of Emergency Management at 1-800-258-5990
- National Response Center at 1-800-424-8802
- Appropriate Department of Ecology (ECY) at 1-800-645-7911
- DNR Contract Administrator

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.

S-150 Recreation Trail Cleanout

At the completion of logging operations , Purchaser shall repair any damage to and clean out all logging debris from recreational trail(s).

Section D: Damages

D-013 Liquidated Damages or Failure to Perform

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

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

D-041 Reserve Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-013, Reserve Tree Damage Definition, and when the Contract Administrator determines that a suitable replacement for a damaged reserve tree is not possible, the damaged trees result in substantial injury to the State. The value of the damaged reserve trees at the time of the breach is not readily ascertainable. Therefore, the Purchaser agrees to pay the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged reserve trees that are not replaced in Units 1,2,3,4 and 5.

SIGNATURES

This agreement may be executed in any number of counterparts (including by electronic mail in portable document format (.pdf), or by facsimile) each of which shall be deemed an original but all of which, when taken together, shall constitute one and the same Agreement binding on all parties.

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Jill DeCianne

Print Name

Olympic Region Manager - Acting

Date: _____

Date: _____

Address: _____

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

STATE OF _____)

COUNTY OF _____)

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

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

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

Notary Public in and for the State of

My appointment expires _____

Schedule A
Specifications for Landing Slash Piling

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

A. Piles shall be a minimum of 12 feet tall by 8 feet wide to a maximum of 30 feet tall and 30 feet wide. Piles shall be cone shaped and stable.

B. Piles shall be free of topsoil, large rotten logs, and large stumps. Any unburnable material shall be well scattered.

C. Piles shall not be placed on large stumps, logs, or against standing snags.

D. Piles shall be stacked a minimum of 50 feet from all unit boundaries, Riparian Management Zones, leave trees, culverts, and any standing timber; a minimum of 100 feet from any public roads and highways; and a minimum of 200 feet from any structures.

E. Piling shall be completed using an approved hydraulic shovel and grapples.

F. Slash and displaced soil shall be removed from swales and natural drainage channels concurrent with yarding.

G. Purchaser may remove slash as biofuel.

H. Slash shall be placed in skid roads or ahead of machinery. Slash which accumulates on landings and/or roads shall be lopped and scattered within the harvest area or as designated by the Contract Administrator.

I. Slash generated during cable yarding shall be stacked in dirt free piles and shall not block roads or interfere with functioning of drainage structures, ditches, or stream channels.

Schedule B
Green Tree Retention Plan

Leave the following:

1. All trees marked with Blue 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	42	2	398	440
2	23	1	65	88
3	30	2	226	256
4	60	1	164	224

All leave trees are non-tradeable.

Schedule C
BPA Guideline

GUIDELINES FOR LOGGING ACTIVITIES
ON OR NEAR BPA RIGHTS-OF-WAY

The Bonneville Power Administration (BPA) wants to keep you and your logging operation safe. Before conducting logging activities adjacent to or under BPA transmission lines, **contact a BPA regional representative before planning logging activities.**

For assistance in your area, please contact:

The following are special concerns for operations on or near BPA transmission lines:

- Assume all **overhead** transmission lines **are always energized**. BPA transmission lines carry high voltage electricity that can injure or kill if conducted to ground through your equipment, fallen trees, or you.
- Do not leave strips of uncut trees between the cut unit boundary and the BPA right-of-way. Trees located near the edge of the right-of way should be felled away from transmission lines.
- BPA access roads used for timber sale roads shall be kept reasonably free of equipment, forest products, and debris. BPA may need to have road access for emergencies. In this case “reasonably free” means; roads could be cleared within an hour of notice; and roads would be left clear and passable when the timber sale purchaser or contractors leave the area for more than an hour at a time. After project completion, access roads should be in as good or better condition than that which existed prior to the project.
- Logging trucks and equipment should be parked on the right-of-way only during emergencies. When this occurs, the truck/equipment should be grounded with a flexible wire connecting the chassis to a approved ground rod driven into the ground, or by making the connection to ground with a drag chain attached to the truck/equipment chassis.
- Haul roads or skid trail location must be at least 50 feet from the point where the steel tower legs enter the earth. If this clearance cannot be met, use of the road may be permitted if adequate protection barriers for BPA structures are provided by the use of guard devices (guard rails, posts, Jersey-type barriers, etc.). If guard devices are used, their location and design must be approved by BPA to assure they will protect the structure from vehicle and logging activity incursions.
- Yarders used near the transmission lines should be grounded with approved copper wire attached to an approved copper rod pounded six to eight feet in the ground. Skyline cables should be grounded as described above at the tail hold. Chokers should be allowed to contact mineral earth prior to

contacting any personal and equipment. Track mounted equipment is recommended for use near transmission lines to promote "drain off" of induced voltage. If rubber tire machines are used, a chain should be used to drain off voltage. Maintain a minimum separation of 25 feet between transmission line conductors and equipment, personnel, and machinery.

- No high-lead or skyline yarding across/perpendicular to the power line right-of-way.
- Avoid loaded helicopter flights over transmission facilities. If necessary fly at right angles to the line and cross at a tower location (for better visibility), maintaining a minimum clearance of 100 feet.
- No slash or debris burning on or near the right-of-way. Concentrated columns of smoke from slash burning off right-of-way should be avoided in order to prevent electrical arc. Burning necessary or authorized by the Regional Forest Service District adjacent to the right-of-way will be discussed with BPA District Maintenance personnel prior to writing the burn plan.
- No log decking or storage of logs on the transmission line right-of-way. No storage of flammable materials on the right-of-way. No personal carrying of flammable material on the right-of-way.
- No loading of logging trucks on the right-of-way. Logging trucks shall not be loaded to a height greater than 14 feet above the roadbed when traveling underneath the line.
- No fueling of vehicles or equipment on the right-of-way.
- If a tree comes in contact with the transmission line, DO NOT ATTEMPT TO REMOVE IT. Quickly remove personnel from the immediate area. Immediately contact BPA Dittmer Dispatch Center, 24 hours per day, 7 days per week: **(800) 392-0816**.
- If a wildfire occurs on or near the right-of-way, contact BPA Dittmer Dispatch Center immediately, 24 hours per day, 7 days per week: (800) 392-0816
- For extreme safety hazard trees near the transmission line, and with advance notification, BPA may be able to provide personnel at the work site.



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 (optional and required) prior to haul

EXCISE TAX EXEMPT ACTIVITIES

Temporary Construction: **linear feet**
Roads to be constructed (optional and required) and then abandoned

Temporary Reconstruction: **linear feet**
Roads to be reconstructed (optional and required) and then abandoned

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 9/18)

PRE-CRUISE NARRATIVE

Sale Name: Ode to Joyce	Region: Olympic
Agreement #: 30-100666	District: Straits
Contact Forester: Ben Stein Phone / Location: 360-640-8794/ PAWC	County(s): Choose a county, Clallam
Alternate Contact: John Schmeltz Phone / Location: 360-640-3308/ PAWC	Other information: Click here to enter text.

Type of Sale: Lump Sum	
Harvest System: Ground based Click here to enter text.	62%
Harvest System: Uphill Cable Click here to enter text.	38%

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 Determinatio n (List method and error of closure if applicable)
				RMZ/ WMZ/wetla nd Acres	Leave Tree Acres	Existing Road Acres	Other Acres		
1	Sec 06 T30N R08W	01	98.3	38.7	4	1.3	-	54.3	GPS (Garmin)
2	Sec 06 T30N R08W	01	23.5	11.5	1	0	-	11.0	GPS (Garmin)
3	Sec 05 T30N R08W	01	53.4	16.2	5	0	-	32.2	GPS (Garmin)
4	Sec 06 T30N R08W	01/ 03	30.7	0	2	0.5	-	28.2	GPS (Garmin)
5 (ROW)	Sec 06 T30N R08W	01	2.1	-	-	-	-	2.1	GPS (Garmin)
TOTAL ACRES			208.0	66.4	12	1.8	-	127.8	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	VRH, bound by white timber sale tags, pink flashers, blue paint, existing road, and red "take" trees	N/A	Two LTAs with 398 trees, 42 individuals
2	VRH, bound by white timber sale tags, pink flashers, blue paint and red "take" trees	N/A	One LTA with 65 trees, 23 individuals
3	VRH, bound by white timber sale tags, pink flashers, blue paint, red "take" trees	N/A	Two LTAs with 226 trees, 30 individuals
4	VRH, bound by white timber sale tags, pink flashers, blue paint, and existing road	N/A	One LTA with 164 trees, 60 individuals
5	ROW bound with orange Right-of-way tags, orange flashers, orange paint, and orange flagging	N/A	N/A

OTHER PRE-CRUISE INFORMATION:

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	Doug-fir, cedar (1629mbf)	Town of Joyce to PA-J-1000 road system	Traverse map
2	Doug-fir, cedar (330mbf)	Walk existing road grade/ROW from unit 1	Traverse map
3	Doug-fir, cedar (966mbf)	Town of Joyce to PA-J-1000 road system	Traverse map
4	Doug-fir, cedar (846mbf)	PA-J-1000 to top of J-1200 which is gated (AA-1)	Traverse map
5	Doug-fir, cedar (63mbf)	ROW through WMZ between Units 1 & 2	Traverse map
TOTAL MBF	3,834mbf		

REMARKS:

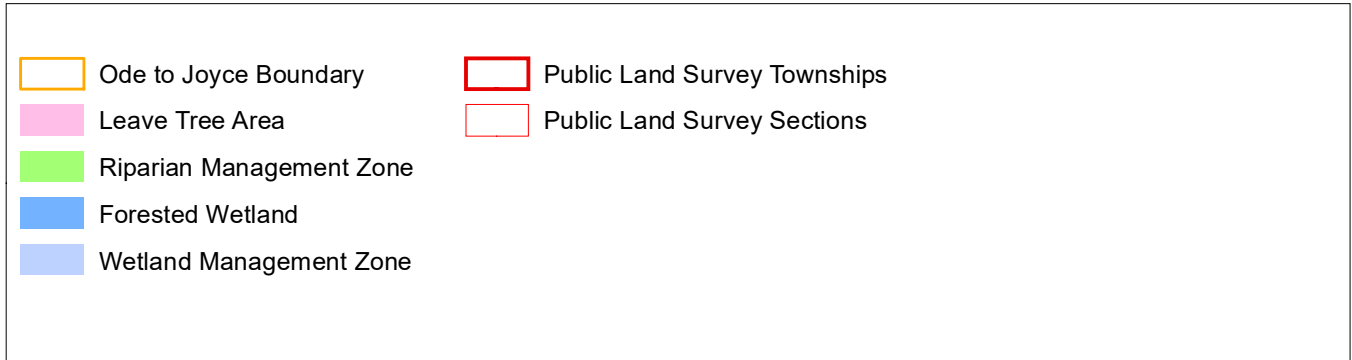
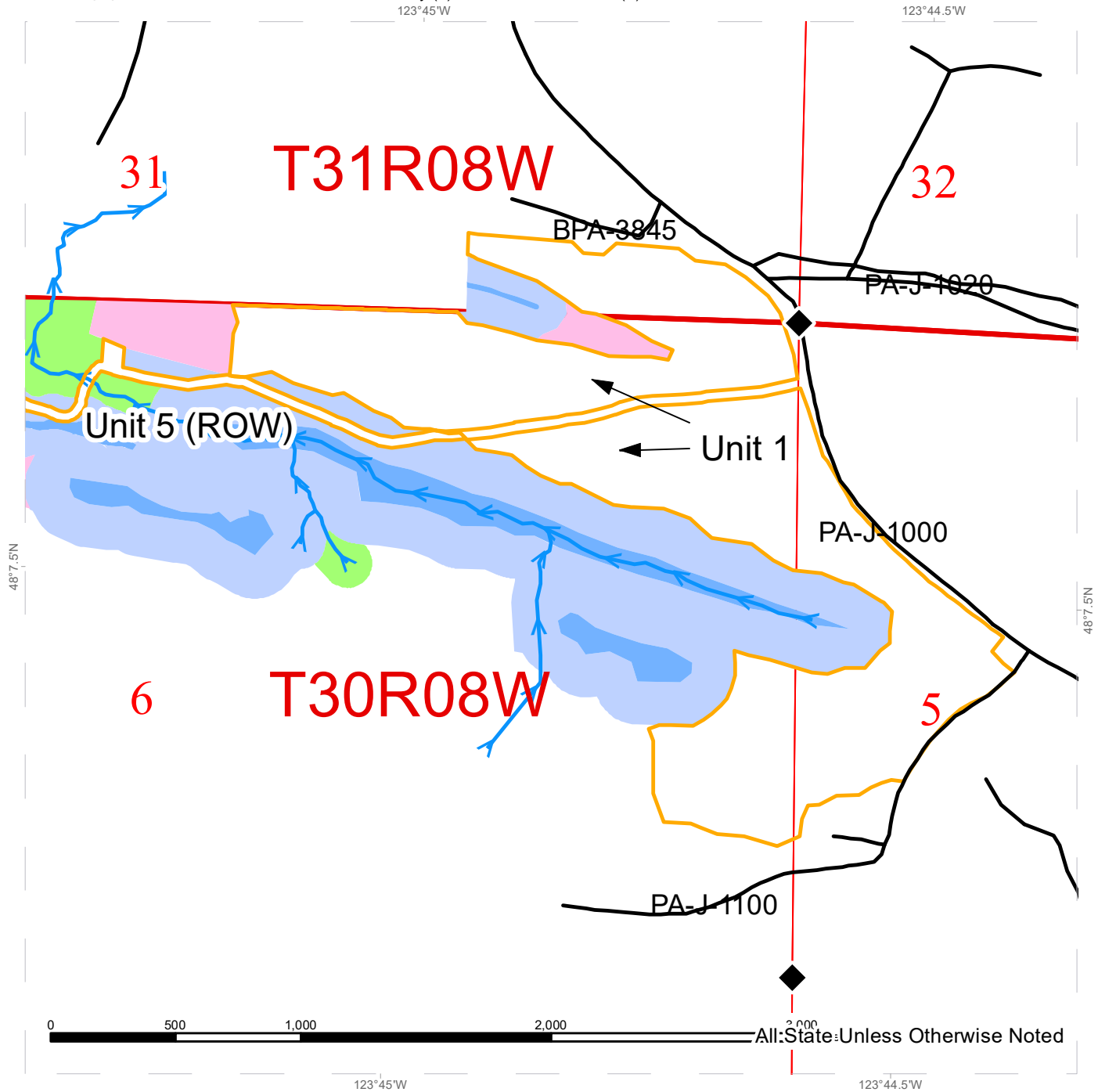
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Prepared By: Ben Stein Date: 10/29/2020	Title: State Lands Forester	CC:
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Pre-Cruise Map

SALE NAME: ODE TO JOYCE
AGREEMENT #: 30-100666
TOWNSHIP(S): T30R8W, T31R8W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 560-2080

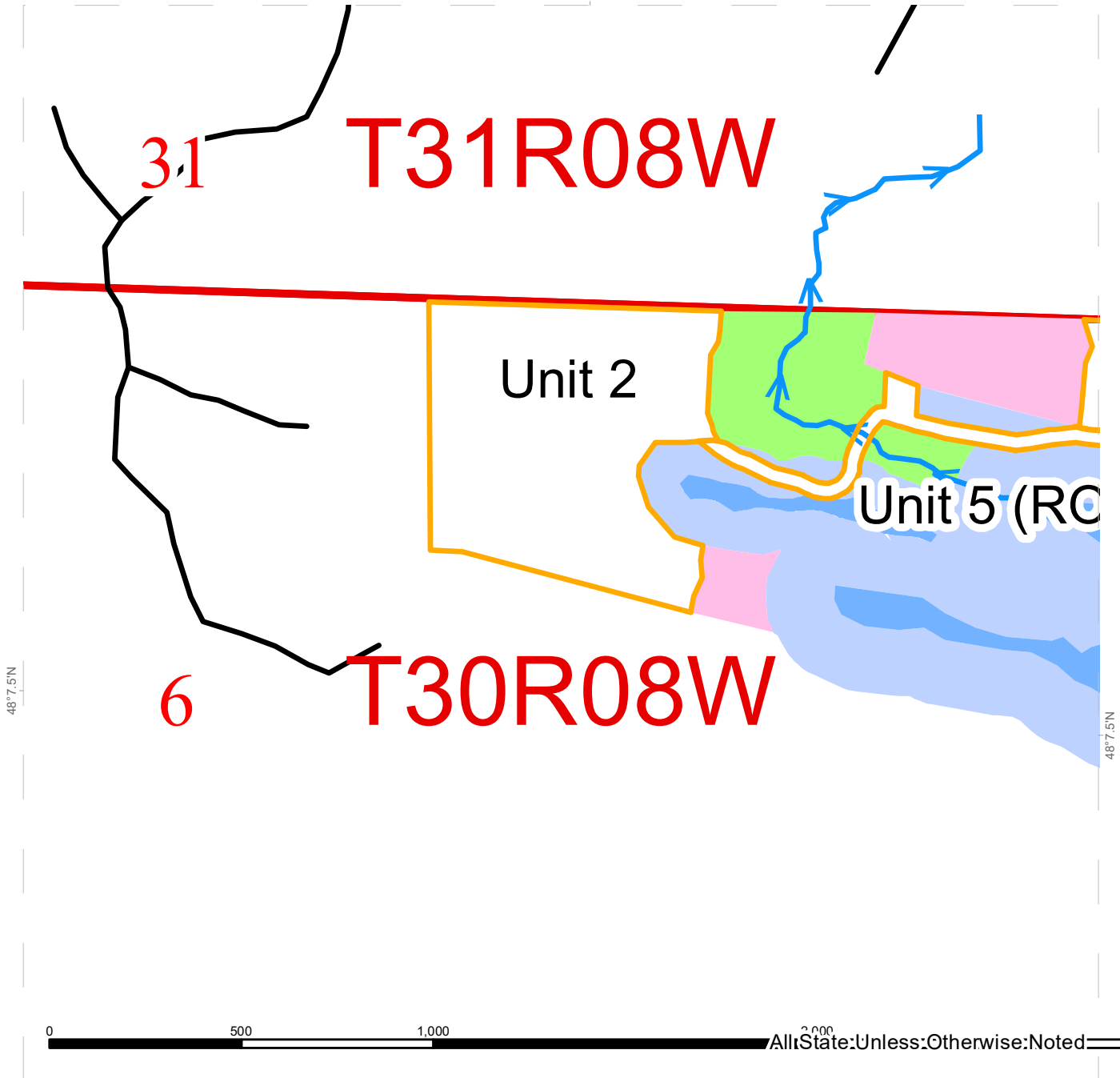









Pre-Cruise Map

SALE NAME: ODE TO JOYCE
AGREEMENT #: 30-100666
TOWNSHIP(S): T30R8W, T31R8W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 560-2080

123°45.5'W



 Ode to Joyce Boundary	 Public Land Survey Townships
 Leave Tree Area	 Public Land Survey Sections
 Riparian Management Zone	
 Forested Wetland	
 Wetland Management Zone	

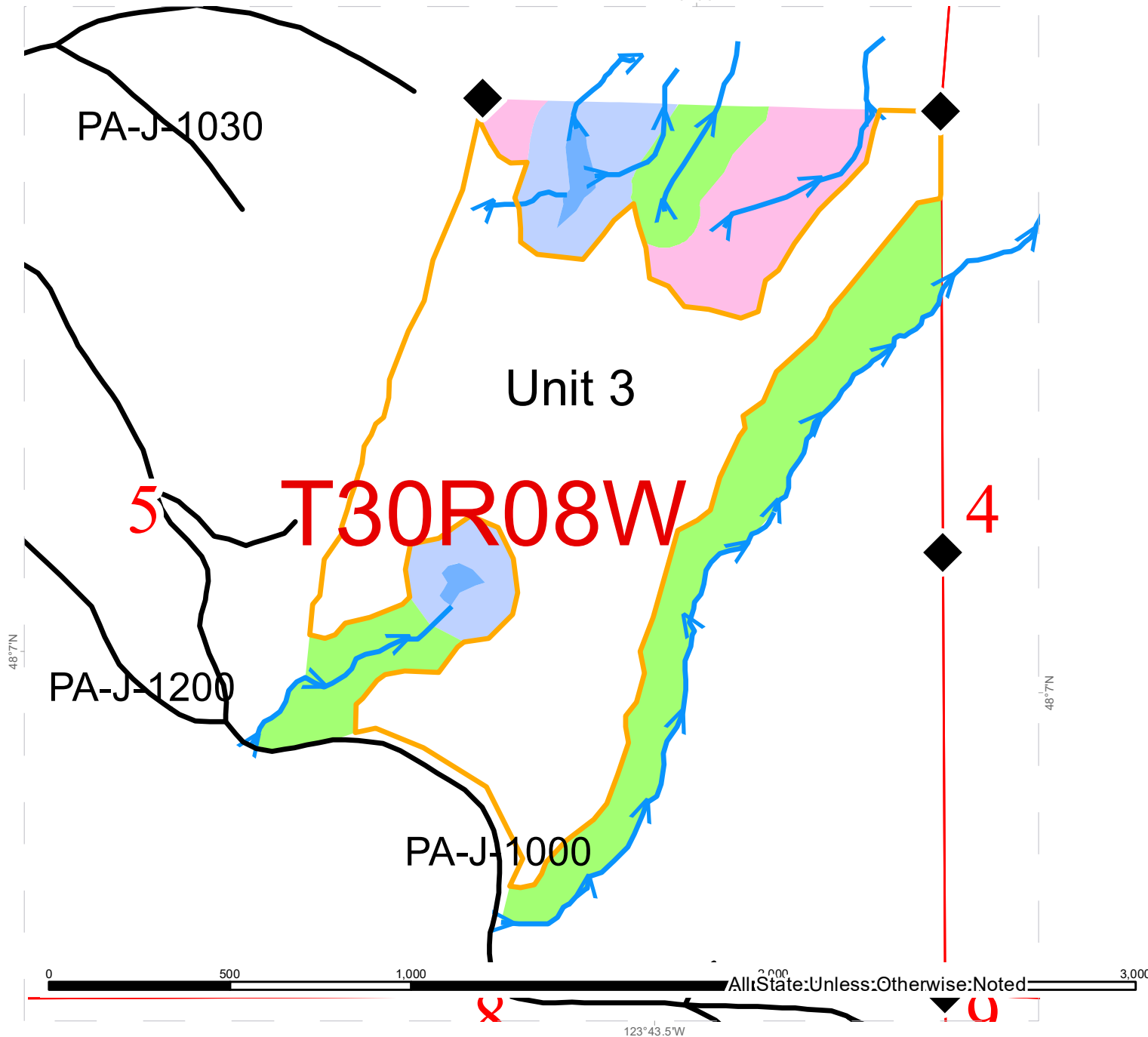









Pre-Cruise Map

SALE NAME: ODE TO JOYCE
AGREEMENT #: 30-100666
TOWNSHIP(S): T30R8W, T31R8W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 560-2080

123°43.5'W

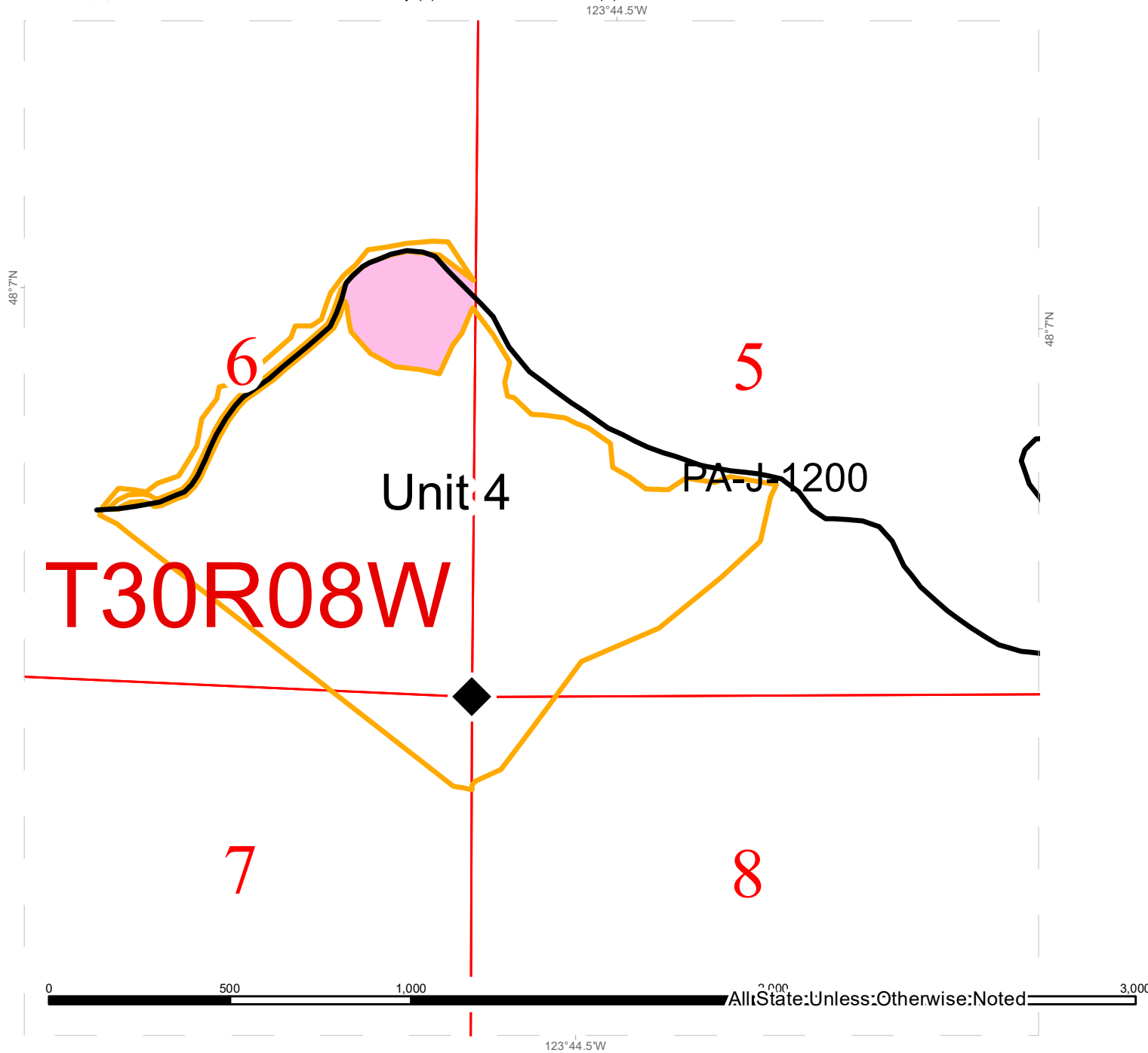









 Ode to Joyce Boundary	 Public Land Survey Townships
 Leave Tree Area	 Public Land Survey Sections
 Riparian Management Zone	
 Forested Wetland	
 Wetland Management Zone	

Pre-Cruise Map

SALE NAME: ODE TO JOYCE
AGREEMENT #: 30-100666
TOWNSHIP(S): T30R8W, T31R8W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 560-2080



	Ode to Joyce Boundary		Public Land Survey Townships
	Leave Tree Area		Public Land Survey Sections
	Riparian Management Zone		
	Forested Wetland		
	Wetland Management Zone		



Timber Sale Cruise Report Ode to Joyce

Sale Name: ODE TO JOYCE

Sale Type: LUMP SUM

Region: OLYMPIC

District: STRAITS

Lead Cruiser: Kevin Peterson

Other Cruisers:

Cruise Narrative:

Location:

This sale is located in Joyce off of the Pa-j-1000 road system. An AA1 key is needed to access unit 4

Cruise Design:

For units 1, 2 and 3 were cruised with a 71 BAF and unit 4 was cruised with a 54, minor species were cruised with a 40 BAF

All logs were cruised in 40' lengths; except Red Cedar @ 36' and HQ Douglas-fir @ 34'

Merchantable height was taken at 40% of the diameter @ 16'

Timber Quality:

Units 1, 2 and 3 contain large DF and RC. There is a large component of High Quality DF in these units.

Unit 4 is a mixture of some older mature DF with a younger class of trees growing in the understory.

Common defects on this sale were sweep and spike knots in the DF and butt rot in the RC

Logging and Stand Conditions:

This sale is 62% ground based and 38% uphill cable logging.

Units 1 and 2 are fairly easy walking.

Units 3 and 4 are pretty steep ground.

General Remarks:

Timber Sale Notice Volume (MBF)

Sp	QMD	Rings/In	Age	MBF Volume by Grade					
				All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	27.3	8.0		5,049.6	455.4	3,573.0	838.4	128.8	54.1
RC	17.6			557.3			504.1	53.1	
WH	15.3			482.0		228.6	129.4	116.0	8.1
RA	13.5			139.4		16.7	25.3	94.4	3.0
MA	10.0			12.4					12.4
ALL	21.0	8.0		6,240.5	455.4	3,818.0	1,497.3	392.4	77.4

Timber Sale Notice Weight (tons)

Sp	Tons by Grade					
	All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	36,923.8	2,996.1	24,418.2	6,837.1	1,241.8	1,430.9
WH	4,869.3		2,141.4	1,377.3	1,150.3	200.3
RC	4,494.3			4,098.3	396.0	
RA	1,389.8		169.7	225.9	937.5	56.7
MA	46.9					46.9
ALL	47,724.1	2,996.1	26,729.4	12,538.5	3,725.5	1,734.7

Timber Sale Overall Cruise Statistics (Cut + Leave Trees)

BA (sq ft/acre)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR SE (%)	Net Vol (bf/acre)	Vol SE (%)
300.4	3.6	163.2	2.7	49,519	4.7

Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
ODE TO JOYCE U1	B2C: VR, 2 BAF (71.11, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	54.3	54.4	27	13	0
ODE TO JOYCE U2	B2C: VR, 2 BAF (71.11, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	11.0	11.0	6	6	0
ODE TO JOYCE U3	B2C: VR, 2 BAF (71.11, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	32.2	32.2	16	7	0
ODE TO JOYCE U4	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	28.2	28.3	14	7	0
5ROW	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	2.1		1	1	0
All		127.8	125.8	64	34	0

Timber Sale Log Grade x Sort Summary

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	16.6	40.0	17,965	8.9	15,311.3	2,295.9
DF	LIVE	2 SAW	HQ-A	15.1	34.0	860	0.0	810.6	110.0
DF	LIVE	2 SAW	HQ-B	20.3	34.0	9,132	8.9	8,296.2	1,167.1

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	Domestic	9.5	39.0	6,238	3.4	6,510.3	797.3
DF	LIVE	3 SAW	HQ-B	12.4	34.0	322	3.0	326.7	41.2
DF	LIVE	4 SAW	Domestic	5.9	29.0	1,007	1.4	1,241.8	128.7
DF	LIVE	CULL	Cull	15.4	40.0	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	HQ-A	19.3	34.0	3,563	5.2	2,996.0	455.3
DF	LIVE	UTILITY	Pulp	2.7	26.0	423	0.0	1,430.8	54.1
MA	LIVE	UTILITY	Pulp	7.8	15.0	97	0.0	46.9	12.4
RA	LIVE	2 SAW	Domestic	13.8	40.0	130	15.3	169.8	16.7
RA	LIVE	3 SAW	Domestic	11.5	34.0	198	12.2	225.8	25.3
RA	LIVE	4 SAW	Domestic	6.0	34.0	739	7.5	937.5	94.4
RA	LIVE	UTILITY	Pulp	2.1	14.0	23	0.0	56.7	2.9
RC	LIVE	3 SAW	Domestic	11.4	35.0	3,945	15.2	4,098.3	504.2
RC	LIVE	4 SAW	Domestic	5.3	21.0	415	3.6	396.0	53.1
RC	LIVE	CULL	Cull	5.1	9.0	0	100.0	0.0	0.0
WH	LIVE	2 SAW	Domestic	15.1	40.0	1,788	9.6	2,141.4	228.5
WH	LIVE	3 SAW	Domestic	8.8	38.0	1,012	4.8	1,377.3	129.4
WH	LIVE	4 SAW	Domestic	5.3	32.0	908	0.0	1,150.3	116.1
WH	LIVE	UTILITY	Pulp	2.1	16.0	63	0.0	200.4	8.0

Timber Sale Log Grade x Diameter Bin Summary

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.6	25.0	393	0.0	1,364.4	50.2
DF	5 - 8	LIVE	UTILITY	5.2	40.0	30	0.0	66.4	3.9
DF	5 - 8	LIVE	4 SAW	5.8	30.0	996	1.4	1,229.6	127.2
DF	5 - 8	LIVE	3 SAW	7.6	38.0	1,877	1.9	2,250.2	239.9
DF	9 - 11	LIVE	4 SAW	9.0	12.0	12	0.0	12.2	1.5
DF	9 - 11	LIVE	CULL	10.1	40.0	0	100.0	0.0	0.0
DF	9 - 11	LIVE	3 SAW	10.5	39.0	2,969	5.1	2,930.4	379.5
DF	12 - 14	LIVE	3 SAW	12.5	38.0	1,715	1.7	1,656.4	219.1
DF	12 - 14	LIVE	2 SAW	13.5	39.0	4,884	6.4	4,764.7	624.2
DF	15 - 19	LIVE	CULL	16.0	40.0	0	100.0	0.0	0.0
DF	15 - 19	LIVE	2 SAW	17.3	38.0	11,383	7.0	9,646.0	1,454.7
DF	15 - 19	LIVE	SPECIAL MILL	17.7	34.0	2,120	6.5	1,932.4	270.9
DF	20+	LIVE	CULL	20.1	40.0	0	100.0	0.0	0.0
DF	20+	LIVE	2 SAW	22.7	37.0	11,691	11.1	10,007.4	1,494.0
DF	20+	LIVE	SPECIAL MILL	25.7	34.0	1,443	3.2	1,063.7	184.4
MA	5 - 8	LIVE	UTILITY	7.8	15.0	97	0.0	46.9	12.4

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	< 5	LIVE	UTILITY	2.1	14.0	23	0.0	56.7	2.9
RA	5 - 8	LIVE	4 SAW	6.0	34.0	739	7.5	937.5	94.4
RA	9 - 11	LIVE	3 SAW	10.0	40.0	88	10.5	95.1	11.3
RA	12 - 14	LIVE	3 SAW	12.7	30.0	110	13.6	130.8	14.0
RA	12 - 14	LIVE	2 SAW	13.8	40.0	130	15.3	169.8	16.7
RC	5 - 8	LIVE	CULL	5.1	9.0	0	100.0	0.0	0.0
RC	5 - 8	LIVE	4 SAW	5.3	21.0	415	3.6	396.0	53.1
RC	5 - 8	LIVE	3 SAW	7.5	35.0	690	7.2	826.7	88.2
RC	9 - 11	LIVE	3 SAW	10.6	32.0	321	6.5	298.2	41.1
RC	12 - 14	LIVE	3 SAW	12.7	36.0	875	13.9	957.1	111.8
RC	15 - 19	LIVE	3 SAW	16.8	36.0	1,420	17.3	1,393.1	181.4
RC	20+	LIVE	3 SAW	24.4	36.0	639	23.4	623.2	81.7
WH	< 5	LIVE	UTILITY	2.1	16.0	63	0.0	200.4	8.0
WH	5 - 8	LIVE	4 SAW	5.3	32.0	908	0.0	1,150.3	116.1
WH	5 - 8	LIVE	3 SAW	7.3	38.0	481	2.5	746.4	61.4
WH	9 - 11	LIVE	3 SAW	11.2	40.0	532	6.8	630.9	67.9
WH	12 - 14	LIVE	2 SAW	13.1	40.0	835	11.2	1,033.9	106.7
WH	15 - 19	LIVE	2 SAW	17.2	40.0	953	8.3	1,107.5	121.8

Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.6	25.0	393	0.0	1,364.4	50.2
DF	5 - 8	LIVE	Pulp	5.2	40.0	30	0.0	66.4	3.9
DF	5 - 8	LIVE	Domestic	6.7	34.0	2,872	1.7	3,479.8	367.1
DF	9 - 11	LIVE	Cull	10.1	40.0	0	100.0	0.0	0.0
DF	9 - 11	LIVE	Domestic	10.5	38.0	2,981	5.1	2,942.6	381.0
DF	12 - 14	LIVE	Domestic	13.1	40.0	5,524	6.0	5,363.4	705.9
DF	12 - 14	LIVE	HQ-B	13.3	34.0	575	1.7	577.3	73.4
DF	12 - 14	LIVE	HQ-A	14.7	34.0	501	0.0	480.5	64.0
DF	15 - 19	LIVE	Cull	16.0	40.0	0	100.0	0.0	0.0
DF	15 - 19	LIVE	Domestic	17.3	40.0	8,070	7.6	6,494.3	1,031.4
DF	15 - 19	LIVE	HQ-A	17.4	34.0	2,479	5.6	2,262.5	316.8
DF	15 - 19	LIVE	HQ-B	17.6	34.0	2,953	6.0	2,821.6	377.4
DF	20+	LIVE	Cull	20.1	40.0	0	100.0	0.0	0.0
DF	20+	LIVE	HQ-B	22.4	34.0	5,927	10.6	5,224.0	757.5
DF	20+	LIVE	Domestic	23.0	40.0	5,763	11.6	4,783.3	736.5
DF	20+	LIVE	HQ-A	25.7	34.0	1,443	3.2	1,063.7	184.4

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
MA	5 - 8	LIVE	Pulp	7.8	15.0	97	0.0	46.9	12.4
RA	< 5	LIVE	Pulp	2.1	14.0	23	0.0	56.7	2.9
RA	5 - 8	LIVE	Domestic	6.0	34.0	739	7.5	937.5	94.4
RA	9 - 11	LIVE	Domestic	10.0	40.0	88	10.5	95.1	11.3
RA	12 - 14	LIVE	Domestic	13.2	34.0	240	14.5	300.6	30.7
RC	5 - 8	LIVE	Cull	5.1	9.0	0	100.0	0.0	0.0
RC	5 - 8	LIVE	Domestic	6.1	26.0	1,106	5.9	1,222.7	141.3
RC	9 - 11	LIVE	Domestic	10.6	32.0	321	6.5	298.2	41.1
RC	12 - 14	LIVE	Domestic	12.7	36.0	875	13.9	957.1	111.8
RC	15 - 19	LIVE	Domestic	16.8	36.0	1,420	17.3	1,393.1	181.4
RC	20+	LIVE	Domestic	24.4	36.0	639	23.4	623.2	81.7
WH	< 5	LIVE	Pulp	2.1	16.0	63	0.0	200.4	8.0
WH	5 - 8	LIVE	Domestic	5.7	33.0	1,389	0.9	1,896.6	177.5
WH	9 - 11	LIVE	Domestic	11.2	40.0	532	6.8	630.9	67.9
WH	12 - 14	LIVE	Domestic	13.1	40.0	835	11.2	1,033.9	106.7
WH	15 - 19	LIVE	Domestic	17.2	40.0	953	8.3	1,107.5	121.8

Cruise Unit Report ODE TO JOYCE U1

Unit Sale Notice Volume (MBF): ODE TO JOYCE U1

Sp	QMD	Rings/In	Age	MBF Volume by Grade					
				All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	28.7			2,610.3	248.4	1,987.4	333.7	17.2	23.7
RC	17.8			288.9			261.1	27.8	
WH	16.5			134.5		96.8	14.4	22.0	1.3
RA	13.6			79.9		9.8	19.5	48.9	1.7
MA	10.0			9.3					9.3
ALL	22.0			3,122.9	248.4	2,093.9	628.8	115.9	35.9

Unit Sale Notice Weight (tons): ODE TO JOYCE U1

Sp	Tons by Grade					
	All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	18,734.1	1,648.9	13,521.3	2,704.9	163.0	696.1
RC	2,323.0			2,110.7	212.3	
WH	1,263.1		856.7	131.4	239.7	35.3
RA	795.0		99.8	172.0	492.1	31.1
MA	35.2					35.2
ALL	23,150.4	1,648.9	14,477.9	5,118.9	1,107.1	797.6

Unit Cruise Design: ODE TO JOYCE U1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (71.11, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	54.3	54.4	27	13	0

Unit Cruise Summary: ODE TO JOYCE U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	42	93	3.4	3
RC	18	33	1.2	0
WH	4	6	0.2	0
RA	7	10	0.4	0
MA	1	3	0.1	0
ALL	72	145	5.4	3

Unit Cruise Statistics (Cut + Leave Trees): ODE TO JOYCE U1

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	244.9	47.9	9.2	200.6	23.4	3.6	49,129	53.3	9.9
RC	48.9	102.3	19.7	108.8	30.0	7.1	5,321	106.6	20.9
WH	15.8	227.9	43.9	156.8	33.9	17.0	2,477	230.4	47.0
RA	14.8	271.5	52.3	99.3	14.5	5.5	1,471	271.9	52.5
MA	4.4	381.3	73.4	38.5	0.0	0.0	171	381.3	73.4
ALL	328.9	27.2	5.2	178.1	34.9	4.1	58,570	44.3	6.7

Unit Summary: ODE TO JOYCE U1

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	42	ALL	28.7	117	150	48,072	10.1	53.3	239.7	44.7	18,734.1	2,610.3
DF	LIVE	LEA	0	ALL	31.9			1,057	10.1	0.9	5.3	0.9	411.7	57.4
MA	LIVE	CUT	1	ALL	10.0	18	19	171	0.0	8.1	4.4	1.4	35.2	9.3
RA	LIVE	CUT	7	ALL	13.6	62	76	1,471	10.1	14.7	14.8	4.0	795.0	79.9
RC	LIVE	CUT	18	ALL	17.8	58	73	5,321	15.2	28.3	48.9	11.6	2,323.0	288.9
WH	LIVE	CUT	4	ALL	16.5	69	85	2,477	6.9	10.6	15.8	3.9	1,263.1	134.5
ALL	LIVE	CUT	72	ALL	22.7	84	106	57,512	10.4	115.0	323.6	65.6	23,150.4	3,122.9
ALL	LIVE	LEA	0	ALL	31.9			1,057	10.0	0.9	5.3	0.9	411.7	57.4
ALL	ALL	ALL	72	ALL	22.7	84	106	57,512	10.4	115.0	323.6	65.6	23,150.4	3,122.9
ALL	ALL	ALL	72	ALL	22.8	83	106	58,569	10.4	115.9	328.9	66.5	23,562.1	3,180.3

Unit Stand Table: ODE TO JOYCE U1

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	20	LIVE	CUT	1	20.0	100	127	819	11.6	2.6	5.7	1.3	404.9	44.5
DF	22	LIVE	CUT	3	21.0	95	120	2,374	6.4	7.1	17.1	3.7	1,156.4	128.9
DF	24	LIVE	CUT	1	24.0	115	147	1,175	1.5	1.8	5.7	1.2	455.5	63.8
DF	26	LIVE	CUT	10	25.4	116	149	10,489	7.1	16.2	57.1	11.3	4,416.6	569.6
DF	28	LIVE	CUT	3	28.0	125	161	3,619	7.1	4.0	17.1	3.2	1,408.5	196.5
DF	30	LIVE	CUT	5	29.6	126	162	5,163	24.6	6.0	28.5	5.2	1,879.2	280.3
DF	32	LIVE	CUT	3	31.3	127	163	3,708	8.4	3.2	17.1	3.1	1,415.6	201.4
DF	34	LIVE	CUT	3	33.7	128	166	3,730	8.6	2.8	17.1	3.0	1,447.4	202.5
DF	36	LIVE	CUT	8	35.7	125	161	10,257	8.2	6.6	45.7	7.6	3,759.6	556.9
DF	38	LIVE	CUT	2	38.0	125	161	2,749	6.3	1.4	11.4	1.9	926.3	149.2
DF	40	LIVE	CUT	1	40.0	125	161	1,175	16.5	0.7	5.7	0.9	478.7	63.8
DF	42	LIVE	CUT	1	42.0	130	168	1,360	10.4	0.6	5.7	0.9	479.1	73.8

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	48	LIVE	CUT	1	47.0	135	174	1,454	9.9	0.5	5.7	0.8	506.3	79.0
DF	30	LIVE	LEA	1	29.0			528	10.1	0.6	2.7	0.5	205.8	28.7
DF	36	LIVE	LEA	1	36.0			529	10.1	0.4	2.7	0.4	205.9	28.7
MA	10	LIVE	CUT	1	10.0	18	19	171	0.0	8.1	4.4	1.4	35.2	9.3
RA	10	LIVE	CUT	1	10.0	51	61	159	8.9	3.9	2.1	0.7	92.7	8.6
RA	12	LIVE	CUT	1	11.0	55	67	202	4.5	3.2	2.1	0.6	95.8	11.0
RA	14	LIVE	CUT	2	14.0	67	83	406	9.7	4.0	4.2	1.1	230.6	22.0
RA	16	LIVE	CUT	1	16.0	70	86	253	8.7	1.5	2.1	0.5	117.7	13.7
RA	18	LIVE	CUT	1	18.0	76	94	213	15.6	1.2	2.1	0.5	121.6	11.6
RA	22	LIVE	CUT	1	21.0	82	102	238	12.1	0.9	2.1	0.5	136.6	12.9
RC	10	LIVE	CUT	2	9.5	34	40	282	8.0	11.1	5.4	1.8	120.0	15.3
RC	14	LIVE	CUT	2	13.5	52	65	351	11.2	5.5	5.4	1.5	187.0	19.1
RC	18	LIVE	CUT	1	18.0	71	89	275	9.1	1.5	2.7	0.6	125.6	14.9
RC	20	LIVE	CUT	3	19.3	82	105	875	13.4	4.0	8.2	1.9	411.8	47.5
RC	22	LIVE	CUT	1	22.0	82	105	275	14.1	1.0	2.7	0.6	136.6	14.9
RC	24	LIVE	CUT	1	24.0	80	102	310	13.1	0.9	2.7	0.6	135.7	16.8
RC	26	LIVE	CUT	2	25.5	86	109	676	14.8	1.5	5.4	1.1	287.3	36.7
RC	28	LIVE	CUT	2	28.0	92	119	702	15.8	1.3	5.4	1.0	295.0	38.1
RC	30	LIVE	CUT	1	30.0	100	128	376	20.8	0.6	2.7	0.5	161.0	20.4
RC	34	LIVE	CUT	2	34.0	94	120	792	16.9	0.9	5.4	0.9	303.9	43.0
RC	56	LIVE	CUT	1	55.0	100	129	407	23.6	0.2	2.7	0.4	159.2	22.1
WH	10	LIVE	CUT	1	10.0	50	60	311	0.0	7.2	4.0	1.2	188.8	16.9
WH	24	LIVE	CUT	1	23.0	110	139	771	3.1	1.4	4.0	0.8	361.7	41.9
WH	26	LIVE	CUT	1	25.0	110	140	663	10.9	1.2	4.0	0.8	356.4	36.0
WH	30	LIVE	CUT	1	29.0	110	140	732	9.5	0.9	4.0	0.7	356.1	39.7

Unit Log Grade Summary: ODE TO JOYCE U1

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	17.5	38.0	36,600	8.8	13,521.3	1,987.4
DF	LIVE	3 SAW	9.8	38.0	6,146	2.8	2,704.9	333.7
DF	LIVE	4 SAW	7.3	23.0	317	3.1	163.0	17.2
DF	LIVE	CULL	15.4	40.0	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	19.0	34.0	4,574	5.0	1,648.9	248.4
DF	LIVE	UTILITY	2.7	28.0	436	0.0	696.1	23.7
MA	LIVE	UTILITY	7.8	15.0	171	0.0	35.2	9.3
RA	LIVE	2 SAW	13.8	40.0	180	15.3	99.8	9.8
RA	LIVE	3 SAW	11.2	36.0	360	11.8	172.0	19.5

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	4 SAW	6.2	35.0	900	8.6	492.1	48.9
RA	LIVE	UTILITY	2.1	14.0	31	0.0	31.1	1.7
RC	LIVE	3 SAW	11.5	35.0	4,809	15.4	2,110.7	261.1
RC	LIVE	4 SAW	5.3	21.0	512	4.6	212.3	27.8
RC	LIVE	CULL	5.1	9.0	0	100.0	0.0	0.0
WH	LIVE	2 SAW	15.7	40.0	1,782	8.1	856.7	96.8
WH	LIVE	3 SAW	10.5	35.0	265	8.5	131.4	14.4
WH	LIVE	4 SAW	5.6	35.0	406	0.0	239.7	22.0
WH	LIVE	UTILITY	2.0	17.0	25	0.0	35.3	1.3

Unit Log Sort Summary: ODE TO JOYCE U1

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Cull	15.4	40.0	0	100.0	0.0	0.0
DF	LIVE	Domestic	13.1	38.0	31,412	7.6	11,917.9	1,705.7
DF	LIVE	HQ-A	18.1	34.0	5,150	4.4	1,883.8	279.7
DF	LIVE	HQ-B	20.9	34.0	11,074	9.2	4,236.3	601.3
DF	LIVE	Pulp	2.7	28.0	436	0.0	696.1	23.7
MA	LIVE	Pulp	7.8	15.0	171	0.0	35.2	9.3
RA	LIVE	Domestic	7.1	35.0	1,440	10.3	763.9	78.2
RA	LIVE	Pulp	2.1	14.0	31	0.0	31.1	1.7
RC	LIVE	Cull	5.1	9.0	0	100.0	0.0	0.0
RC	LIVE	Domestic	8.8	29.0	5,321	14.5	2,323.0	288.9
WH	LIVE	Domestic	9.4	37.0	2,452	6.9	1,227.8	133.2
WH	LIVE	Pulp	2.0	17.0	25	0.0	35.3	1.3

Unit Log Grade x Sort Summary: ODE TO JOYCE U1

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	16.6	40.0	24,949	8.7	9,050.1	1,354.7
DF	LIVE	2 SAW	HQ-A	14.7	34.0	576	0.0	234.9	31.3
DF	LIVE	2 SAW	HQ-B	20.9	34.0	11,074	9.2	4,236.3	601.3
DF	LIVE	3 SAW	Domestic	9.8	38.0	6,146	2.8	2,704.9	333.7
DF	LIVE	4 SAW	Domestic	7.3	23.0	317	3.1	163.0	17.2
DF	LIVE	CULL	Cull	15.4	40.0	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	HQ-A	19.0	34.0	4,574	5.0	1,648.9	248.4
DF	LIVE	UTILITY	Pulp	2.7	28.0	436	0.0	696.1	23.7
MA	LIVE	UTILITY	Pulp	7.8	15.0	171	0.0	35.2	9.3
RA	LIVE	2 SAW	Domestic	13.8	40.0	180	15.3	99.8	9.8

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	3 SAW	Domestic	11.2	36.0	360	11.8	172.0	19.5
RA	LIVE	4 SAW	Domestic	6.2	35.0	900	8.6	492.1	48.9
RA	LIVE	UTILITY	Pulp	2.1	14.0	31	0.0	31.1	1.7
RC	LIVE	3 SAW	Domestic	11.5	35.0	4,809	15.4	2,110.7	261.1
RC	LIVE	4 SAW	Domestic	5.3	21.0	512	4.6	212.3	27.8
RC	LIVE	CULL	Cull	5.1	9.0	0	100.0	0.0	0.0
WH	LIVE	2 SAW	Domestic	15.7	40.0	1,782	8.1	856.7	96.8
WH	LIVE	3 SAW	Domestic	10.5	35.0	265	8.5	131.4	14.4
WH	LIVE	4 SAW	Domestic	5.6	35.0	406	0.0	239.7	22.0
WH	LIVE	UTILITY	Pulp	2.0	17.0	25	0.0	35.3	1.3

Unit Log Grade x Diameter Bin Summary: ODE TO JOYCE U1

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.7	28.0	401	0.0	663.6	21.8
DF	5 - 8	LIVE	UTILITY	5.2	40.0	35	0.0	32.5	1.9
DF	5 - 8	LIVE	4 SAW	7.3	23.0	317	3.1	163.0	17.2
DF	5 - 8	LIVE	3 SAW	7.9	37.0	1,653	1.7	842.6	89.7
DF	9 - 11	LIVE	CULL	10.1	40.0	0	100.0	0.0	0.0
DF	9 - 11	LIVE	3 SAW	10.7	38.0	2,828	4.4	1,181.1	153.5
DF	12 - 14	LIVE	3 SAW	12.6	39.0	1,666	1.0	681.1	90.5
DF	12 - 14	LIVE	2 SAW	13.5	40.0	6,302	7.4	2,637.5	342.2
DF	15 - 19	LIVE	CULL	16.0	40.0	0	100.0	0.0	0.0
DF	15 - 19	LIVE	2 SAW	17.5	39.0	14,352	7.0	5,090.5	779.3
DF	15 - 19	LIVE	SPECIAL MILL	17.7	34.0	3,062	6.0	1,177.2	166.3
DF	20+	LIVE	CULL	20.1	40.0	0	100.0	0.0	0.0
DF	20+	LIVE	2 SAW	23.0	37.0	15,945	10.8	5,793.4	865.8
DF	20+	LIVE	SPECIAL MILL	25.7	34.0	1,512	2.9	471.6	82.1
MA	5 - 8	LIVE	UTILITY	7.8	15.0	171	0.0	35.2	9.3
RA	< 5	LIVE	UTILITY	2.1	14.0	31	0.0	31.1	1.7
RA	5 - 8	LIVE	4 SAW	6.2	35.0	900	8.6	492.1	48.9
RA	9 - 11	LIVE	3 SAW	10.0	40.0	208	10.5	95.1	11.3
RA	12 - 14	LIVE	3 SAW	12.7	30.0	152	13.6	76.9	8.3
RA	12 - 14	LIVE	2 SAW	13.8	40.0	180	15.3	99.8	9.8
RC	5 - 8	LIVE	CULL	5.1	9.0	0	100.0	0.0	0.0
RC	5 - 8	LIVE	4 SAW	5.3	21.0	512	4.6	212.3	27.8
RC	5 - 8	LIVE	3 SAW	7.5	35.0	727	6.5	361.2	39.5
RC	9 - 11	LIVE	3 SAW	10.7	33.0	564	7.3	225.0	30.7

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RC	12 - 14	LIVE	3 SAW	12.8	36.0	1,014	14.3	480.5	55.0
RC	15 - 19	LIVE	3 SAW	16.8	36.0	1,656	17.5	697.3	89.9
RC	20+	LIVE	3 SAW	24.4	36.0	849	23.7	346.7	46.1
WH	< 5	LIVE	UTILITY	2.0	17.0	25	0.0	35.3	1.3
WH	5 - 8	LIVE	4 SAW	5.6	35.0	406	0.0	239.7	22.0
WH	5 - 8	LIVE	3 SAW	8.8	27.0	43	0.0	31.4	2.3
WH	9 - 11	LIVE	3 SAW	11.6	40.0	222	10.0	99.9	12.0
WH	12 - 14	LIVE	2 SAW	13.2	40.0	437	7.7	192.4	23.7
WH	15 - 19	LIVE	2 SAW	17.2	40.0	1,345	8.3	664.3	73.0

Unit Log Sort x Diameter Bin Summary: ODE TO JOYCE U1

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.7	28.0	401	0.0	663.6	21.8
DF	5 - 8	LIVE	Pulp	5.2	40.0	35	0.0	32.5	1.9
DF	5 - 8	LIVE	Domestic	7.7	33.0	1,969	2.0	1,005.6	106.9
DF	9 - 11	LIVE	Cull	10.1	40.0	0	100.0	0.0	0.0
DF	9 - 11	LIVE	Domestic	10.7	38.0	2,828	4.4	1,181.1	153.5
DF	12 - 14	LIVE	Domestic	13.2	40.0	7,392	6.5	3,083.6	401.4
DF	12 - 14	LIVE	HQ-A	14.7	34.0	576	0.0	234.9	31.3
DF	15 - 19	LIVE	Cull	16.0	40.0	0	100.0	0.0	0.0
DF	15 - 19	LIVE	Domestic	17.4	40.0	11,462	7.4	3,919.1	622.4
DF	15 - 19	LIVE	HQ-A	17.7	34.0	3,062	6.0	1,177.2	166.3
DF	15 - 19	LIVE	HQ-B	17.9	34.0	2,891	5.5	1,171.4	157.0
DF	20+	LIVE	Cull	20.1	40.0	0	100.0	0.0	0.0
DF	20+	LIVE	HQ-B	22.7	34.0	8,184	10.4	3,064.9	444.4
DF	20+	LIVE	Domestic	23.4	40.0	7,761	11.2	2,728.5	421.4
DF	20+	LIVE	HQ-A	25.7	34.0	1,512	2.9	471.6	82.1
MA	5 - 8	LIVE	Pulp	7.8	15.0	171	0.0	35.2	9.3
RA	< 5	LIVE	Pulp	2.1	14.0	31	0.0	31.1	1.7
RA	5 - 8	LIVE	Domestic	6.2	35.0	900	8.6	492.1	48.9
RA	9 - 11	LIVE	Domestic	10.0	40.0	208	10.5	95.1	11.3
RA	12 - 14	LIVE	Domestic	13.2	34.0	333	14.5	176.8	18.1
RC	5 - 8	LIVE	Cull	5.1	9.0	0	100.0	0.0	0.0
RC	5 - 8	LIVE	Domestic	6.1	26.0	1,238	5.7	573.5	67.2
RC	9 - 11	LIVE	Domestic	10.7	33.0	564	7.3	225.0	30.7
RC	12 - 14	LIVE	Domestic	12.8	36.0	1,014	14.3	480.5	55.0
RC	15 - 19	LIVE	Domestic	16.8	36.0	1,656	17.5	697.3	89.9

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
RC	20+	LIVE	Domestic	24.4	36.0	849	23.7	346.7	46.1
WH	< 5	LIVE	Pulp	2.0	17.0	25	0.0	35.3	1.3
WH	5 - 8	LIVE	Domestic	5.9	34.0	449	0.0	271.2	24.4
WH	9 - 11	LIVE	Domestic	11.6	40.0	222	10.0	99.9	12.0
WH	12 - 14	LIVE	Domestic	13.2	40.0	437	7.7	192.4	23.7
WH	15 - 19	LIVE	Domestic	17.2	40.0	1,345	8.3	664.3	73.0

Cruise Unit Report ODE TO JOYCE U2

Unit Sale Notice Volume (MBF): ODE TO JOYCE U2

Sp	QMD	Rings/In	Age	MBF Volume by Grade					
				All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	28.7	8.0		496.8	29.8	394.3	65.0	4.7	3.0
RC	18.4			60.8			55.3	5.5	
RA	11.3			19.9				19.1	0.7
WH	10.0			10.3				9.8	0.5
ALL	21.1	8.0		587.7	29.8	394.3	120.3	39.1	4.2

Unit Sale Notice Weight (tons): ODE TO JOYCE U2

Sp	Tons by Grade					
	All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	3,606.5	198.3	2,707.4	533.3	44.5	123.1
RC	465.3			421.1	44.2	
RA	195.7				184.0	11.7
WH	114.7				107.1	7.6
ALL	4,382.2	198.3	2,707.4	954.4	379.7	142.4

Unit Cruise Design: ODE TO JOYCE U2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (71.11, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	11.0	11.0	6	6	0

Unit Cruise Summary: ODE TO JOYCE U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	19	19	3.2	2
RC	7	7	1.2	0
RA	3	3	0.5	0
WH	1	1	0.2	0
ALL	30	30	5.0	2

Unit Cruise Statistics (Cut + Leave Trees): ODE TO JOYCE U2

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	225.2	67.5	27.6	200.6	20.2	4.6	45,163	70.4	27.9
RC	46.7	113.9	46.5	118.4	28.0	10.6	5,524	117.3	47.7
RA	20.0	244.9	100.0	90.2	14.7	8.5	1,805	245.4	100.4
WH	11.9	244.9	100.0	78.8	0.0	0.0	934	244.9	100.0
ALL	303.7	37.3	15.2	175.9	33.4	6.1	53,426	50.0	16.4

Unit Summary: ODE TO JOYCE U2

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	19	ALL	28.7	115	147	45,163	7.9	50.1	225.2	42.0	3,606.5	496.8
RA	LIVE	CUT	3	ALL	11.3	56	68	1,805	7.0	28.7	20.0	5.9	195.7	19.9
RC	LIVE	CUT	7	ALL	18.4	55	69	5,524	16.7	25.3	46.7	10.9	465.3	60.8
WH	LIVE	CUT	1	ALL	10.0	50	60	934	0.0	21.7	11.9	3.7	114.7	10.3
ALL	LIVE	CUT	30	ALL	21.0	78	98	53,426	8.7	125.8	303.8	62.5	4,382.2	587.8
ALL	ALL	ALL	30	ALL	21.0	78	98	53,426	8.7	125.8	303.8	62.5	4,382.2	587.8
ALL	ALL	ALL	30	ALL	21.0	78	98	53,426	8.7	125.8	303.8	62.5	4,382.2	587.8

Unit Stand Table: ODE TO JOYCE U2

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	20	LIVE	CUT	1	20.0	100	127	1,701	11.6	5.4	11.9	2.7	170.3	18.7
DF	22	LIVE	CUT	1	21.0	80	101	1,064	16.3	4.9	11.9	2.6	143.6	11.7
DF	26	LIVE	CUT	4	25.2	115	148	8,279	7.2	13.6	47.4	9.4	730.2	91.1
DF	28	LIVE	CUT	1	28.0	120	154	2,436	3.2	2.8	11.9	2.2	188.6	26.8
DF	30	LIVE	CUT	3	29.3	123	159	8,020	3.6	7.6	35.6	6.6	582.5	88.2
DF	32	LIVE	CUT	2	31.0	128	165	5,206	7.8	4.5	23.7	4.3	402.0	57.3
DF	34	LIVE	CUT	1	34.0	125	161	2,489	8.9	1.9	11.9	2.0	201.0	27.4
DF	36	LIVE	CUT	3	35.3	124	159	7,854	8.3	5.2	35.6	6.0	590.5	86.4
DF	38	LIVE	CUT	1	38.0	125	161	2,849	6.5	1.5	11.9	1.9	194.9	31.3
DF	40	LIVE	CUT	1	40.0	125	161	2,440	16.5	1.4	11.9	1.9	201.4	26.8
DF	42	LIVE	CUT	1	42.0	130	168	2,824	10.4	1.2	11.9	1.8	201.6	31.1
RA	10	LIVE	CUT	1	10.0	51	61	501	8.9	12.2	6.7	2.1	59.1	5.5
RA	12	LIVE	CUT	1	11.0	55	67	636	4.5	10.1	6.7	2.0	61.1	7.0
RA	14	LIVE	CUT	1	14.0	69	85	667	7.8	6.2	6.7	1.8	75.4	7.3
RC	10	LIVE	CUT	1	9.0	36	43	362	14.3	15.1	6.7	2.2	31.2	4.0
RC	20	LIVE	CUT	1	19.0	75	95	725	8.2	3.4	6.7	1.5	64.8	8.0

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
RC	26	LIVE	CUT	2	25.5	86	109	1,660	14.8	3.8	13.3	2.6	142.9	18.3
RC	28	LIVE	CUT	1	28.0	90	115	759	20.3	1.6	6.7	1.3	71.7	8.4
RC	34	LIVE	CUT	1	34.0	92	118	1,016	16.1	1.1	6.7	1.1	75.4	11.2
RC	56	LIVE	CUT	1	55.0	100	129	1,001	23.6	0.4	6.7	0.9	79.2	11.0
WH	10	LIVE	CUT	1	10.0	50	60	934	0.0	21.8	11.9	3.8	114.7	10.3

Unit Log Grade Summary: ODE TO JOYCE U2

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	17.8	38.0	35,844	8.8	2,707.4	394.3
DF	LIVE	3 SAW	9.9	38.0	5,912	1.7	533.3	65.0
DF	LIVE	4 SAW	7.1	23.0	424	4.7	44.5	4.7
DF	LIVE	SPECIAL MILL	19.8	34.0	2,708	8.6	198.3	29.8
DF	LIVE	UTILITY	2.3	28.0	275	0.0	123.1	3.0
RA	LIVE	4 SAW	6.0	37.0	1,738	7.2	184.0	19.1
RA	LIVE	UTILITY	2.1	15.0	67	0.0	11.7	0.7
RC	LIVE	3 SAW	13.3	35.0	5,026	17.1	421.1	55.3
RC	LIVE	4 SAW	5.2	23.0	498	10.8	44.2	5.5
RC	LIVE	CULL	5.0	10.0	0	100.0	0.0	0.0
WH	LIVE	4 SAW	5.0	38.0	891	0.0	107.1	9.8
WH	LIVE	UTILITY	2.0	14.0	43	0.0	7.6	0.5

Unit Log Sort Summary: ODE TO JOYCE U2

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	12.8	37.0	28,126	8.1	2,197.2	309.4
DF	LIVE	HQ-A	19.8	34.0	2,708	8.6	198.3	29.8
DF	LIVE	HQ-B	19.8	34.0	14,054	7.5	1,087.9	154.6
DF	LIVE	Pulp	2.3	28.0	275	0.0	123.1	3.0
RA	LIVE	Domestic	6.0	37.0	1,738	7.2	184.0	19.1
RA	LIVE	Pulp	2.1	15.0	67	0.0	11.7	0.7
RC	LIVE	Cull	5.0	10.0	0	100.0	0.0	0.0
RC	LIVE	Domestic	9.3	29.0	5,524	16.5	465.3	60.8
WH	LIVE	Domestic	5.0	38.0	891	0.0	107.1	9.8
WH	LIVE	Pulp	2.0	14.0	43	0.0	7.6	0.5

Unit Log Grade x Sort Summary: ODE TO JOYCE U2

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	16.7	40.0	21,790	9.7	1,619.5	239.7
DF	LIVE	2 SAW	HQ-B	19.8	34.0	14,054	7.5	1,087.9	154.6
DF	LIVE	3 SAW	Domestic	9.9	38.0	5,912	1.7	533.3	65.0
DF	LIVE	4 SAW	Domestic	7.1	23.0	424	4.7	44.5	4.7
DF	LIVE	SPECIAL MILL	HQ-A	19.8	34.0	2,708	8.6	198.3	29.8
DF	LIVE	UTILITY	Pulp	2.3	28.0	275	0.0	123.1	3.0
RA	LIVE	4 SAW	Domestic	6.0	37.0	1,738	7.2	184.0	19.1
RA	LIVE	UTILITY	Pulp	2.1	15.0	67	0.0	11.7	0.7
RC	LIVE	3 SAW	Domestic	13.3	35.0	5,026	17.1	421.1	55.3
RC	LIVE	4 SAW	Domestic	5.2	23.0	498	10.8	44.2	5.5
RC	LIVE	CULL	Cull	5.0	10.0	0	100.0	0.0	0.0
WH	LIVE	4 SAW	Domestic	5.0	38.0	891	0.0	107.1	9.8
WH	LIVE	UTILITY	Pulp	2.0	14.0	43	0.0	7.6	0.5

Unit Log Grade x Diameter Bin Summary: ODE TO JOYCE U2

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.3	28.0	275	0.0	123.1	3.0
DF	5 - 8	LIVE	4 SAW	7.1	23.0	424	4.7	44.5	4.7
DF	5 - 8	LIVE	3 SAW	8.0	39.0	1,508	3.2	161.4	16.6
DF	9 - 11	LIVE	3 SAW	10.7	36.0	2,712	0.6	236.1	29.8
DF	12 - 14	LIVE	3 SAW	12.5	40.0	1,692	2.0	135.8	18.6
DF	12 - 14	LIVE	2 SAW	13.4	40.0	4,837	10.2	450.9	53.2
DF	15 - 19	LIVE	SPECIAL MILL	17.1	34.0	1,203	11.7	99.2	13.2
DF	15 - 19	LIVE	2 SAW	17.4	37.0	14,390	6.0	1,033.6	158.3
DF	20+	LIVE	2 SAW	22.6	37.0	16,617	10.8	1,222.8	182.8
DF	20+	LIVE	SPECIAL MILL	26.0	34.0	1,505	5.8	99.1	16.6
RA	< 5	LIVE	UTILITY	2.1	15.0	67	0.0	11.7	0.7
RA	5 - 8	LIVE	4 SAW	6.0	37.0	1,738	7.2	184.0	19.1
RC	5 - 8	LIVE	CULL	5.0	10.0	0	100.0	0.0	0.0
RC	5 - 8	LIVE	4 SAW	5.2	23.0	498	10.8	44.2	5.5
RC	5 - 8	LIVE	3 SAW	6.0	36.0	193	0.0	15.8	2.1
RC	9 - 11	LIVE	3 SAW	10.6	33.0	792	4.9	58.2	8.7
RC	12 - 14	LIVE	3 SAW	12.2	36.0	532	10.8	49.1	5.9
RC	15 - 19	LIVE	3 SAW	16.5	35.0	1,987	18.2	176.5	21.9
RC	20+	LIVE	3 SAW	25.9	36.0	1,521	24.2	121.6	16.7
WH	< 5	LIVE	UTILITY	2.0	14.0	43	0.0	7.6	0.5

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	5 - 8	LIVE	4 SAW	5.0	38.0	891	0.0	107.1	9.8

Unit Log Sort x Diameter Bin Summary: ODE TO JOYCE U2

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.3	28.0	275	0.0	123.1	3.0
DF	5 - 8	LIVE	Domestic	7.7	33.0	1,931	3.5	205.9	21.2
DF	9 - 11	LIVE	Domestic	10.7	36.0	2,712	0.6	236.1	29.8
DF	12 - 14	LIVE	Domestic	13.2	40.0	6,530	8.2	586.7	71.8
DF	15 - 19	LIVE	Domestic	17.1	40.0	8,386	6.3	540.8	92.2
DF	15 - 19	LIVE	HQ-A	17.1	34.0	1,203	11.7	99.2	13.2
DF	15 - 19	LIVE	HQ-B	17.9	34.0	6,004	5.5	492.8	66.0
DF	20+	LIVE	HQ-B	22.1	34.0	8,051	8.9	595.1	88.6
DF	20+	LIVE	Domestic	23.2	40.0	8,567	12.5	627.7	94.2
DF	20+	LIVE	HQ-A	26.0	34.0	1,505	5.8	99.1	16.6
RA	< 5	LIVE	Pulp	2.1	15.0	67	0.0	11.7	0.7
RA	5 - 8	LIVE	Domestic	6.0	37.0	1,738	7.2	184.0	19.1
RC	5 - 8	LIVE	Cull	5.0	10.0	0	100.0	0.0	0.0
RC	5 - 8	LIVE	Domestic	5.3	25.0	692	8.0	60.0	7.6
RC	9 - 11	LIVE	Domestic	10.6	33.0	792	4.9	58.2	8.7
RC	12 - 14	LIVE	Domestic	12.2	36.0	532	10.8	49.1	5.9
RC	15 - 19	LIVE	Domestic	16.5	35.0	1,987	18.2	176.5	21.9
RC	20+	LIVE	Domestic	25.9	36.0	1,521	24.2	121.6	16.7
WH	< 5	LIVE	Pulp	2.0	14.0	43	0.0	7.6	0.5
WH	5 - 8	LIVE	Domestic	5.0	38.0	891	0.0	107.1	9.8

Cruise Unit Report ODE TO JOYCE U3

Unit Sale Notice Volume (MBF): ODE TO JOYCE U3

Sp	QMD	Rings/In	Age	MBF Volume by Grade					
				All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	29.3			1,314.8	155.0	949.8	187.2	7.5	15.2
RC	17.0			207.6			187.7	19.8	
WH	25.3			78.5		64.6	9.6	3.9	0.4
RA	16.9			24.5		6.9	5.8	11.5	0.4
MA	10.0			3.1					3.1
ALL	22.9			1,628.4	155.0	1,021.2	390.3	42.8	19.0

Unit Sale Notice Weight (tons): ODE TO JOYCE U3

Sp	Tons by Grade					
	All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	9,234.9	982.8	6,378.6	1,428.9	75.8	368.9
RC	1,706.0			1,566.5	139.5	
WH	716.7		571.6	87.6	42.4	15.1
RA	259.6		69.9	53.9	126.9	8.9
MA	11.7					11.7
ALL	11,928.9	982.8	7,020.1	3,136.9	384.6	404.6

Unit Cruise Design: ODE TO JOYCE U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (71.11, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	32.2	32.2	16	7	0

Unit Cruise Summary: ODE TO JOYCE U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	19	44	2.8	2
RC	9	25	1.6	0
WH	3	3	0.2	0
RA	3	3	0.2	0
MA	1	1	0.1	0
ALL	35	76	4.8	2

Unit Cruise Statistics (Cut + Leave Trees): ODE TO JOYCE U3

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	195.6	63.0	15.7	213.7	13.1	3.0	41,781	64.3	16.0
RC	62.5	96.3	24.1	103.1	35.2	11.7	6,446	102.5	26.8
WH	13.3	290.1	72.5	182.8	7.6	4.4	2,437	290.2	72.7
RA	7.5	400.0	100.0	101.6	10.2	5.9	762	400.1	100.2
MA	2.5	400.0	100.0	38.5	0.0	0.0	96	400.0	100.0
ALL	281.4	35.2	8.8	183.1	34.2	5.8	51,521	49.1	10.5

Unit Summary: ODE TO JOYCE U3

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	19	ALL	29.3	122	157	40,831	8.0	40.8	191.1	35.3	9,234.9	1,314.8
DF	LIVE	LEA	0	ALL	36.0			950	8.0	0.6	4.4	0.7	214.8	30.6
MA	LIVE	CUT	1	ALL	10.0	18	19	96	0.0	4.6	2.5	0.8	11.7	3.1
RA	LIVE	CUT	3	ALL	16.9	72	89	762	13.2	4.8	7.5	1.8	259.6	24.5
RC	LIVE	CUT	9	ALL	17.0	58	72	6,446	14.6	39.7	62.5	15.2	1,706.0	207.6
WH	LIVE	CUT	3	ALL	25.3	110	140	2,437	7.8	3.8	13.3	2.7	716.7	78.5
ALL	LIVE	CUT	35	ALL	23.3	87	110	50,572	8.9	93.7	276.9	55.8	11,928.9	1,628.5
ALL	LIVE	LEA	0	ALL	36.0			950	7.9	0.6	4.4	0.7	214.8	30.6
ALL	ALL	ALL	35	ALL	23.4	86	109	51,522	8.9	94.3	281.3	56.5	12,143.7	1,659.1
ALL	ALL	ALL	35	ALL	23.3	87	110	50,572	8.9	93.7	276.9	55.8	11,928.9	1,628.5

Unit Stand Table: ODE TO JOYCE U3

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	22	LIVE	CUT	1	21.0	118	151	1,957	5.5	4.2	10.1	2.2	472.0	63.0
DF	26	LIVE	CUT	5	25.2	115	148	9,308	7.0	14.5	50.3	10.0	2,294.6	299.7
DF	28	LIVE	CUT	2	28.0	128	164	4,312	8.8	4.7	20.1	3.8	1,003.8	138.8
DF	30	LIVE	CUT	2	29.5	130	168	4,769	5.4	4.2	20.1	3.7	1,007.5	153.6
DF	32	LIVE	CUT	1	32.0	125	161	2,118	9.5	1.8	10.1	1.8	480.9	68.2
DF	34	LIVE	CUT	2	33.5	130	168	4,462	8.5	3.3	20.1	3.5	1,013.6	143.7
DF	36	LIVE	CUT	3	36.0	127	163	6,991	8.6	4.3	30.2	5.0	1,493.9	225.1
DF	38	LIVE	CUT	2	38.0	125	161	4,845	6.3	2.6	20.1	3.3	968.2	156.0
DF	40	LIVE	CUT	1	40.0	125	161	2,070	16.5	1.2	10.1	1.6	500.4	66.7
DF	36	LIVE	LEA	1	36.0			950	8.0	0.6	4.4	0.7	214.8	30.6
MA	10	LIVE	CUT	1	10.0	18	19	96	0.0	4.6	2.5	0.8	11.7	3.1
RA	14	LIVE	CUT	1	14.0	65	80	229	11.7	2.3	2.5	0.7	78.7	7.4

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
RA	18	LIVE	CUT	1	18.0	76	94	252	15.6	1.4	2.5	0.6	85.2	8.1
RA	22	LIVE	CUT	1	21.0	82	102	281	12.1	1.0	2.5	0.5	95.7	9.0
RC	10	LIVE	CUT	1	10.0	32	37	344	0.0	12.7	6.9	2.2	86.7	11.1
RC	14	LIVE	CUT	2	13.5	52	65	897	11.2	14.0	13.9	3.8	283.6	28.9
RC	20	LIVE	CUT	2	19.5	86	110	1,481	15.8	6.7	13.9	3.1	426.7	47.7
RC	24	LIVE	CUT	1	24.0	80	102	791	13.1	2.2	6.9	1.4	205.7	25.5
RC	28	LIVE	CUT	1	28.0	95	122	1,005	11.8	1.6	6.9	1.3	228.5	32.4
RC	30	LIVE	CUT	1	30.0	100	128	961	20.8	1.4	6.9	1.3	244.1	30.9
RC	34	LIVE	CUT	1	34.0	95	122	967	17.6	1.1	6.9	1.2	230.7	31.1
WH	24	LIVE	CUT	1	23.0	110	139	868	3.1	1.5	4.4	0.9	241.3	27.9
WH	26	LIVE	CUT	1	25.0	110	140	746	10.9	1.3	4.4	0.9	237.8	24.0
WH	30	LIVE	CUT	1	29.0	110	140	824	9.5	1.0	4.4	0.8	237.6	26.5

Unit Log Grade Summary: ODE TO JOYCE U3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	17.8	38.0	29,497	9.3	6,378.6	949.8
DF	LIVE	3 SAW	10.4	38.0	5,813	3.7	1,428.9	187.2
DF	LIVE	4 SAW	8.0	25.0	233	7.1	75.8	7.5
DF	LIVE	SPECIAL MILL	20.6	34.0	4,815	5.6	982.8	155.0
DF	LIVE	UTILITY	3.3	30.0	473	0.0	368.9	15.2
MA	LIVE	UTILITY	7.8	15.0	96	0.0	11.7	3.1
RA	LIVE	2 SAW	13.8	40.0	213	15.3	69.9	6.9
RA	LIVE	3 SAW	12.7	30.0	180	13.6	53.9	5.8
RA	LIVE	4 SAW	7.0	32.0	358	12.0	126.9	11.5
RA	LIVE	UTILITY	2.1	14.0	11	0.0	8.9	0.4
RC	LIVE	3 SAW	10.6	35.0	5,831	14.4	1,566.5	187.7
RC	LIVE	4 SAW	5.4	19.0	615	0.0	139.5	19.8
RC	LIVE	CULL	5.1	9.0	0	100.0	0.0	0.0
WH	LIVE	2 SAW	15.7	40.0	2,005	8.1	571.6	64.6
WH	LIVE	3 SAW	10.5	35.0	298	8.5	87.6	9.6
WH	LIVE	4 SAW	7.3	27.0	122	0.0	42.4	3.9
WH	LIVE	UTILITY	2.0	22.0	11	0.0	15.1	0.4

Unit Log Sort Summary: ODE TO JOYCE U3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	13.5	38.0	24,821	8.3	5,422.6	799.2
DF	LIVE	HQ-A	18.6	34.0	5,831	4.7	1,228.3	187.7

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	HQ-B	20.1	34.0	9,706	9.2	2,215.1	312.5
DF	LIVE	Pulp	3.3	30.0	473	0.0	368.9	15.2
MA	LIVE	Pulp	7.8	15.0	96	0.0	11.7	3.1
RA	LIVE	Domestic	8.6	33.0	751	13.3	250.7	24.2
RA	LIVE	Pulp	2.1	14.0	11	0.0	8.9	0.4
RC	LIVE	Cull	5.1	9.0	0	100.0	0.0	0.0
RC	LIVE	Domestic	8.5	29.0	6,446	13.2	1,706.0	207.6
WH	LIVE	Domestic	12.5	36.0	2,426	7.8	701.6	78.1
WH	LIVE	Pulp	2.0	22.0	11	0.0	15.1	0.4

Unit Log Grade x Sort Summary: ODE TO JOYCE U3

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	17.2	40.0	18,775	9.7	3,917.9	604.5
DF	LIVE	2 SAW	HQ-A	14.7	34.0	1,016	0.0	245.6	32.7
DF	LIVE	2 SAW	HQ-B	20.1	34.0	9,706	9.2	2,215.1	312.5
DF	LIVE	3 SAW	Domestic	10.4	38.0	5,813	3.7	1,428.9	187.2
DF	LIVE	4 SAW	Domestic	8.0	25.0	233	7.1	75.8	7.5
DF	LIVE	SPECIAL MILL	HQ-A	20.6	34.0	4,815	5.6	982.8	155.0
DF	LIVE	UTILITY	Pulp	3.3	30.0	473	0.0	368.9	15.2
MA	LIVE	UTILITY	Pulp	7.8	15.0	96	0.0	11.7	3.1
RA	LIVE	2 SAW	Domestic	13.8	40.0	213	15.3	69.9	6.9
RA	LIVE	3 SAW	Domestic	12.7	30.0	180	13.6	53.9	5.8
RA	LIVE	4 SAW	Domestic	7.0	32.0	358	12.0	126.9	11.5
RA	LIVE	UTILITY	Pulp	2.1	14.0	11	0.0	8.9	0.4
RC	LIVE	3 SAW	Domestic	10.6	35.0	5,831	14.4	1,566.5	187.7
RC	LIVE	4 SAW	Domestic	5.4	19.0	615	0.0	139.5	19.8
RC	LIVE	CULL	Cull	5.1	9.0	0	100.0	0.0	0.0
WH	LIVE	2 SAW	Domestic	15.7	40.0	2,005	8.1	571.6	64.6
WH	LIVE	3 SAW	Domestic	10.5	35.0	298	8.5	87.6	9.6
WH	LIVE	4 SAW	Domestic	7.3	27.0	122	0.0	42.4	3.9
WH	LIVE	UTILITY	Pulp	2.0	22.0	11	0.0	15.1	0.4

Unit Log Grade x Diameter Bin Summary: ODE TO JOYCE U3

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	3.2	29.0	412	0.0	334.9	13.3
DF	5 - 8	LIVE	UTILITY	5.2	40.0	61	0.0	34.0	2.0
DF	5 - 8	LIVE	4 SAW	8.0	25.0	233	7.1	75.8	7.5

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 8	LIVE	3 SAW	8.1	36.0	907	1.0	263.7	29.2
DF	9 - 11	LIVE	3 SAW	10.7	40.0	3,077	6.5	734.6	99.1
DF	12 - 14	LIVE	3 SAW	12.7	39.0	1,830	0.0	430.6	58.9
DF	12 - 14	LIVE	2 SAW	13.9	39.0	4,547	5.4	1,041.6	146.4
DF	15 - 19	LIVE	2 SAW	17.4	38.0	11,496	7.5	2,432.7	370.2
DF	15 - 19	LIVE	SPECIAL MILL	18.0	34.0	2,150	8.8	489.8	69.2
DF	20+	LIVE	2 SAW	22.3	37.0	13,454	11.9	2,904.2	433.2
DF	20+	LIVE	SPECIAL MILL	25.7	34.0	2,665	2.9	493.0	85.8
MA	5 - 8	LIVE	UTILITY	7.8	15.0	96	0.0	11.7	3.1
RA	< 5	LIVE	UTILITY	2.1	14.0	11	0.0	8.9	0.4
RA	5 - 8	LIVE	4 SAW	7.0	32.0	358	12.0	126.9	11.5
RA	12 - 14	LIVE	3 SAW	12.7	30.0	180	13.6	53.9	5.8
RA	12 - 14	LIVE	2 SAW	13.8	40.0	213	15.3	69.9	6.9
RC	5 - 8	LIVE	CULL	5.1	9.0	0	100.0	0.0	0.0
RC	5 - 8	LIVE	4 SAW	5.4	19.0	615	0.0	139.5	19.8
RC	5 - 8	LIVE	3 SAW	7.7	35.0	1,449	8.2	449.7	46.6
RC	9 - 11	LIVE	3 SAW	9.8	20.0	53	0.0	15.0	1.7
RC	12 - 14	LIVE	3 SAW	12.7	36.0	1,580	13.7	427.6	50.9
RC	15 - 19	LIVE	3 SAW	17.0	36.0	2,164	16.8	519.3	69.7
RC	20+	LIVE	3 SAW	21.8	36.0	586	22.2	154.9	18.9
WH	< 5	LIVE	UTILITY	2.0	22.0	11	0.0	15.1	0.4
WH	5 - 8	LIVE	4 SAW	7.3	27.0	122	0.0	42.4	3.9
WH	5 - 8	LIVE	3 SAW	8.8	27.0	48	0.0	21.0	1.6
WH	9 - 11	LIVE	3 SAW	11.6	40.0	250	10.0	66.7	8.0
WH	12 - 14	LIVE	2 SAW	13.2	40.0	492	7.7	128.4	15.8
WH	15 - 19	LIVE	2 SAW	17.2	40.0	1,514	8.3	443.2	48.7

Unit Log Sort x Diameter Bin Summary: ODE TO JOYCE U3

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	3.2	29.0	412	0.0	334.9	13.3
DF	5 - 8	LIVE	Pulp	5.2	40.0	61	0.0	34.0	2.0
DF	5 - 8	LIVE	Domestic	8.0	32.0	1,140	2.3	339.6	36.7
DF	9 - 11	LIVE	Domestic	10.7	40.0	3,077	6.5	734.6	99.1
DF	12 - 14	LIVE	Domestic	13.3	40.0	5,361	4.7	1,226.6	172.6
DF	12 - 14	LIVE	HQ-A	14.7	34.0	1,016	0.0	245.6	32.7
DF	15 - 19	LIVE	Domestic	17.4	40.0	8,385	8.9	1,694.7	270.0
DF	15 - 19	LIVE	HQ-B	17.4	34.0	3,111	3.7	738.0	100.2

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	15 - 19	LIVE	HQ-A	18.0	34.0	2,150	8.8	489.8	69.2
DF	20+	LIVE	Domestic	22.3	40.0	6,859	12.1	1,427.2	220.9
DF	20+	LIVE	HQ-B	22.3	34.0	6,595	11.7	1,477.1	212.4
DF	20+	LIVE	HQ-A	25.7	34.0	2,665	2.9	493.0	85.8
MA	5 - 8	LIVE	Pulp	7.8	15.0	96	0.0	11.7	3.1
RA	< 5	LIVE	Pulp	2.1	14.0	11	0.0	8.9	0.4
RA	5 - 8	LIVE	Domestic	7.0	32.0	358	12.0	126.9	11.5
RA	12 - 14	LIVE	Domestic	13.2	34.0	393	14.5	123.8	12.7
RC	5 - 8	LIVE	Cull	5.1	9.0	0	100.0	0.0	0.0
RC	5 - 8	LIVE	Domestic	6.4	26.0	2,064	5.9	589.2	66.5
RC	9 - 11	LIVE	Domestic	9.8	20.0	53	0.0	15.0	1.7
RC	12 - 14	LIVE	Domestic	12.7	36.0	1,580	13.7	427.6	50.9
RC	15 - 19	LIVE	Domestic	17.0	36.0	2,164	16.8	519.3	69.7
RC	20+	LIVE	Domestic	21.8	36.0	586	22.2	154.9	18.9
WH	< 5	LIVE	Pulp	2.0	22.0	11	0.0	15.1	0.4
WH	5 - 8	LIVE	Domestic	7.7	27.0	171	0.0	63.3	5.5
WH	9 - 11	LIVE	Domestic	11.6	40.0	250	10.0	66.7	8.0
WH	12 - 14	LIVE	Domestic	13.2	40.0	492	7.7	128.4	15.8
WH	15 - 19	LIVE	Domestic	17.2	40.0	1,514	8.3	443.2	48.7

Cruise Unit Report ODE TO JOYCE U4

Unit Sale Notice Volume (MBF): ODE TO JOYCE U4

Sp	QMD	Rings/In	Age	MBF Volume by Grade					
				All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	14.3			514.1	22.2	157.0	227.0	97.2	10.8
WH	11.9			258.7		67.2	105.4	80.3	5.9
RA	9.9			15.1				14.9	0.2
ALL	13.0			787.9	22.2	224.1	332.4	192.4	16.9

Unit Sale Notice Weight (tons): ODE TO JOYCE U4

Sp	Tons by Grade					
	All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	4,501.6	166.1	1,203.4	1,975.6	940.1	216.4
WH	2,774.8		713.1	1,158.3	761.1	142.3
RA	139.5				134.5	5.0
ALL	7,415.9	166.1	1,916.5	3,133.9	1,835.7	363.7

Unit Cruise Design: ODE TO JOYCE U4

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	28.2	28.3	14	7	0

Unit Cruise Summary: ODE TO JOYCE U4

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	21	43	3.1	1
WH	11	24	1.7	0
RA	3	3	0.2	0
ALL	35	70	5.0	1

Unit Cruise Statistics (Cut + Leave Trees): ODE TO JOYCE U4

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	166.2	30.2	8.1	109.7	32.5	7.1	18,231	44.3	10.7
WH	93.3	86.9	23.2	98.3	28.5	8.6	9,174	91.5	24.8

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RA	8.6	198.7	53.1	62.4	12.2	7.0	535	199.1	53.6
ALL	268.1	19.3	5.1	104.2	32.7	5.5	27,940	37.9	7.5

Unit Summary: ODE TO JOYCE U4

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	21	ALL	14.3	59	74	18,231	2.8	149.0	166.2	43.9	4,501.6	514.1
RA	LIVE	CUT	3	ALL	9.9	39	45	535	0.0	16.0	8.6	2.7	139.5	15.1
WH	LIVE	CUT	11	ALL	11.9	52	63	9,174	5.3	120.8	93.3	27.1	2,774.8	258.7
ALL	LIVE	CUT	35	ALL	13.1	55	68	27,940	3.6	285.8	268.1	73.7	7,415.9	787.9
ALL	ALL	ALL	35	ALL	13.1	55	68	27,940	3.6	285.8	268.1	73.7	7,415.9	787.9
ALL	ALL	ALL	35	ALL	13.1	55	68	27,940	3.6	285.8	268.1	73.7	7,415.9	787.9

Unit Stand Table: ODE TO JOYCE U4

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	10	LIVE	CUT	2	9.5	40	48	1,041	0.0	32.8	16.0	5.2	233.8	29.4
DF	12	LIVE	CUT	6	11.5	53	65	3,240	0.0	63.8	46.0	13.6	987.9	91.4
DF	14	LIVE	CUT	2	14.0	63	79	1,603	0.0	15.0	16.0	4.3	402.1	45.2
DF	16	LIVE	CUT	1	16.0	77	97	1,090	0.0	5.7	8.0	2.0	238.9	30.7
DF	18	LIVE	CUT	2	18.0	87	110	2,129	4.3	9.1	16.0	3.8	515.5	60.0
DF	20	LIVE	CUT	1	19.0	84	106	1,056	0.0	4.1	8.0	1.8	257.4	29.8
DF	22	LIVE	CUT	1	22.0	90	114	1,059	3.3	3.0	8.0	1.7	264.8	29.9
DF	24	LIVE	CUT	3	23.7	90	114	3,540	3.4	7.9	24.0	4.9	797.2	99.8
DF	26	LIVE	CUT	2	25.5	92	117	2,289	8.9	4.5	16.0	3.2	533.2	64.5
DF	28	LIVE	CUT	1	27.0	95	121	1,184	4.7	2.0	8.0	1.5	271.0	33.4
RA	10	LIVE	CUT	2	9.5	36	42	358	0.0	11.7	5.7	1.9	85.8	10.1
RA	12	LIVE	CUT	1	11.0	45	54	177	0.0	4.3	2.9	0.9	53.7	5.0
WH	8	LIVE	CUT	2	8.0	38	45	1,410	0.0	48.6	17.0	6.0	307.1	39.8
WH	10	LIVE	CUT	1	10.0	44	53	576	0.0	15.6	8.5	2.7	168.5	16.2
WH	12	LIVE	CUT	2	11.5	52	63	1,253	0.0	23.7	17.0	5.0	429.3	35.3
WH	14	LIVE	CUT	1	13.0	55	67	608	0.0	9.2	8.5	2.4	232.6	17.1
WH	16	LIVE	CUT	1	16.0	75	94	1,045	8.5	6.1	8.5	2.1	296.1	29.5
WH	18	LIVE	CUT	1	18.0	82	103	1,080	0.0	4.8	8.5	2.0	316.3	30.5
WH	20	LIVE	CUT	2	19.0	89	112	2,215	11.4	8.6	17.0	3.9	684.4	62.5
WH	22	LIVE	CUT	1	21.0	88	110	988	11.7	3.5	8.5	1.9	340.5	27.8

Unit Log Grade Summary: ODE TO JOYCE U4

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	15.1	36.0	5,566	3.5	1,203.4	157.0
DF	LIVE	3 SAW	8.6	39.0	8,049	3.8	1,975.6	227.0
DF	LIVE	4 SAW	5.3	32.0	3,446	0.5	940.1	97.2
DF	LIVE	SPECIAL MILL	17.9	34.0	786	0.0	166.1	22.2
DF	LIVE	UTILITY	2.4	19.0	384	0.0	216.4	10.8
RA	LIVE	4 SAW	5.0	31.0	529	0.0	134.5	14.9
RA	LIVE	UTILITY	2.1	10.0	6	0.0	5.0	0.2
WH	LIVE	2 SAW	13.1	40.0	2,382	13.1	713.1	67.2
WH	LIVE	3 SAW	8.0	40.0	3,737	3.9	1,158.3	105.4
WH	LIVE	4 SAW	5.0	30.0	2,847	0.0	761.1	80.3
WH	LIVE	UTILITY	2.2	16.0	208	0.0	142.3	5.9

Unit Log Sort Summary: ODE TO JOYCE U4

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	6.7	35.0	11,728	2.4	2,964.6	330.7
DF	LIVE	HQ-A	16.6	34.0	2,414	0.0	496.3	68.1
DF	LIVE	HQ-B	14.0	34.0	3,705	6.2	824.4	104.5
DF	LIVE	Pulp	2.4	19.0	384	0.0	216.4	10.8
RA	LIVE	Domestic	5.0	31.0	529	0.0	134.5	14.9
RA	LIVE	Pulp	2.1	10.0	6	0.0	5.0	0.2
WH	LIVE	Domestic	6.6	34.0	8,966	5.4	2,632.5	252.9
WH	LIVE	Pulp	2.2	16.0	208	0.0	142.3	5.9

Unit Log Grade x Sort Summary: ODE TO JOYCE U4

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	13.3	40.0	1,694	0.0	375.6	47.8
DF	LIVE	2 SAW	HQ-A	16.1	34.0	1,629	0.0	330.1	45.9
DF	LIVE	2 SAW	HQ-B	16.0	34.0	2,244	8.2	497.7	63.3
DF	LIVE	3 SAW	Domestic	8.1	40.0	6,588	4.0	1,648.9	185.8
DF	LIVE	3 SAW	HQ-B	12.4	34.0	1,461	3.0	326.7	41.2
DF	LIVE	4 SAW	Domestic	5.3	32.0	3,446	0.5	940.1	97.2
DF	LIVE	SPECIAL MILL	HQ-A	17.9	34.0	786	0.0	166.1	22.2
DF	LIVE	UTILITY	Pulp	2.4	19.0	384	0.0	216.4	10.8
RA	LIVE	4 SAW	Domestic	5.0	31.0	529	0.0	134.5	14.9
RA	LIVE	UTILITY	Pulp	2.1	10.0	6	0.0	5.0	0.2
WH	LIVE	2 SAW	Domestic	13.1	40.0	2,382	13.1	713.1	67.2

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	LIVE	3 SAW	Domestic	8.0	40.0	3,737	3.9	1,158.3	105.4
WH	LIVE	4 SAW	Domestic	5.0	30.0	2,847	0.0	761.1	80.3
WH	LIVE	UTILITY	Pulp	2.2	16.0	208	0.0	142.3	5.9

Unit Log Grade x Diameter Bin Summary: ODE TO JOYCE U4

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.4	19.0	384	0.0	216.4	10.8
DF	5 - 8	LIVE	4 SAW	5.3	32.0	3,392	0.5	927.9	95.7
DF	5 - 8	LIVE	3 SAW	7.1	40.0	3,445	1.4	911.4	97.2
DF	9 - 11	LIVE	4 SAW	9.0	12.0	54	0.0	12.2	1.5
DF	9 - 11	LIVE	3 SAW	10.0	40.0	2,790	6.2	655.2	78.7
DF	12 - 14	LIVE	3 SAW	12.3	35.0	1,814	4.5	409.0	51.2
DF	12 - 14	LIVE	2 SAW	13.2	37.0	1,527	0.0	350.9	43.1
DF	15 - 19	LIVE	2 SAW	16.2	35.0	4,040	4.7	852.5	113.9
DF	15 - 19	LIVE	SPECIAL MILL	17.9	34.0	786	0.0	166.1	22.2
RA	< 5	LIVE	UTILITY	2.1	10.0	6	0.0	5.0	0.2
RA	5 - 8	LIVE	4 SAW	5.0	31.0	529	0.0	134.5	14.9
WH	< 5	LIVE	UTILITY	2.2	16.0	208	0.0	142.3	5.9
WH	5 - 8	LIVE	4 SAW	5.0	30.0	2,847	0.0	761.1	80.3
WH	5 - 8	LIVE	3 SAW	7.1	40.0	2,040	2.7	694.0	57.5
WH	9 - 11	LIVE	3 SAW	11.0	40.0	1,697	5.4	464.3	47.9
WH	12 - 14	LIVE	2 SAW	13.1	40.0	2,382	13.1	713.1	67.2

Unit Log Sort x Diameter Bin Summary: ODE TO JOYCE U4

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.4	19.0	384	0.0	216.4	10.8
DF	5 - 8	LIVE	Domestic	5.9	35.0	6,838	1.0	1,839.3	192.8
DF	9 - 11	LIVE	Domestic	9.9	37.0	2,844	6.1	667.4	80.2
DF	12 - 14	LIVE	Domestic	12.0	40.0	1,146	3.4	268.0	32.3
DF	12 - 14	LIVE	HQ-B	13.0	34.0	2,195	2.0	491.9	61.9
DF	15 - 19	LIVE	Domestic	15.5	40.0	901	0.0	189.9	25.4
DF	15 - 19	LIVE	HQ-A	16.6	34.0	2,414	0.0	496.3	68.1
DF	15 - 19	LIVE	HQ-B	16.7	34.0	1,510	11.7	332.5	42.6
RA	< 5	LIVE	Pulp	2.1	10.0	6	0.0	5.0	0.2
RA	5 - 8	LIVE	Domestic	5.0	31.0	529	0.0	134.5	14.9
WH	< 5	LIVE	Pulp	2.2	16.0	208	0.0	142.3	5.9
WH	5 - 8	LIVE	Domestic	5.6	33.0	4,887	1.1	1,455.1	137.8

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	9 - 11	LIVE	Domestic	11.0	40.0	1,697	5.4	464.3	47.9
WH	12 - 14	LIVE	Domestic	13.1	40.0	2,382	13.1	713.1	67.2

Cruise Unit Report 5ROW

Unit Sale Notice Volume (MBF): 5ROW

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	23.0			113.6	84.5	25.5	2.2	1.4
ALL	23.0			113.6	84.5	25.5	2.2	1.4

Unit Sale Notice Weight (tons): 5ROW

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
DF	846.7	607.5	194.4	18.4	26.4
ALL	846.7	607.5	194.4	18.4	26.4

Unit Cruise Design: 5ROW

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	2.1		1	1	0

Unit Cruise Summary: 5ROW

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	5	5	5.0	0
ALL	5	5	5.0	0

Unit Cruise Statistics (Cut + Leave Trees): 5ROW

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	272.2	0.0	0.0	198.8	4.5	2.0	54,113	4.5	2.0
ALL	272.2	0.0	0.0	198.8	4.5	2.0	54,113	4.5	2.0

Unit Summary: 5ROW

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	5	ALL	23.0	118	152	54,113	7.9	94.3	272.2	56.8	846.7	113.6
ALL	LIVE	CUT	5	ALL	23.0	118	152	54,113	7.9	94.3	272.2	56.8	846.7	113.6

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
ALL	ALL	ALL	5	ALL	23.0	118	152	54,113	7.9	94.3	272.2	56.8	846.7	113.6
ALL	ALL	ALL	5	ALL	23.0	118	152	54,113	7.9	94.3	272.2	56.8	846.7	113.6

Unit Stand Table: 5ROW

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	18	LIVE	CUT	1	18.0	115	147	10,753	0.0	30.8	54.4	12.8	167.8	22.6
DF	22	LIVE	CUT	1	21.0	115	147	10,478	5.5	22.6	54.4	11.9	162.5	22.0
DF	26	LIVE	CUT	1	25.0	120	155	10,461	9.7	16.0	54.4	10.9	166.3	22.0
DF	28	LIVE	CUT	1	27.0	125	161	10,775	13.5	13.7	54.4	10.5	179.4	22.6
DF	30	LIVE	CUT	1	30.0	125	161	11,645	9.5	11.1	54.4	9.9	170.6	24.5

Unit Log Grade Summary: 5ROW

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	15.2	38.0	40,260	8.3	607.5	84.5
DF	LIVE	3 SAW	9.1	38.0	12,162	7.6	194.4	25.5
DF	LIVE	4 SAW	5.4	32.0	1,048	0.0	18.4	2.2
DF	LIVE	UTILITY	2.8	24.0	644	0.0	26.4	1.4

Unit Log Sort Summary: 5ROW

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	10.5	38.0	36,621	7.9	561.0	76.9
DF	LIVE	HQ-B	16.7	34.0	16,848	8.2	259.3	35.4
DF	LIVE	Pulp	2.8	24.0	644	0.0	26.4	1.4

Unit Log Grade x Sort Summary: 5ROW

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	14.3	40.0	23,412	8.3	348.2	49.2
DF	LIVE	2 SAW	HQ-B	16.7	34.0	16,848	8.2	259.3	35.4
DF	LIVE	3 SAW	Domestic	9.1	38.0	12,162	7.6	194.4	25.5
DF	LIVE	4 SAW	Domestic	5.4	32.0	1,048	0.0	18.4	2.2
DF	LIVE	UTILITY	Pulp	2.8	24.0	644	0.0	26.4	1.4

Unit Log Grade x Diameter Bin Summary: 5ROW

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.8	24.0	644	0.0	26.4	1.4
DF	5 - 8	LIVE	4 SAW	5.4	32.0	1,048	0.0	18.4	2.2
DF	5 - 8	LIVE	3 SAW	7.9	36.0	3,428	10.1	71.0	7.2
DF	9 - 11	LIVE	3 SAW	10.0	40.0	8,734	6.5	123.4	18.3
DF	12 - 14	LIVE	2 SAW	13.4	38.0	18,731	3.0	283.8	39.3
DF	15 - 19	LIVE	2 SAW	17.4	38.0	15,707	12.6	236.7	33.0
DF	20+	LIVE	2 SAW	20.5	34.0	5,823	11.8	87.0	12.2

Unit Log Sort x Diameter Bin Summary: 5ROW

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.8	24.0	644	0.0	26.4	1.4
DF	5 - 8	LIVE	Domestic	7.0	34.0	4,475	7.9	89.4	9.4
DF	9 - 11	LIVE	Domestic	10.0	40.0	8,734	6.5	123.4	18.3
DF	12 - 14	LIVE	Domestic	13.0	40.0	13,231	4.3	198.4	27.8
DF	12 - 14	LIVE	HQ-B	14.6	34.0	5,499	0.0	85.3	11.5
DF	15 - 19	LIVE	HQ-B	17.1	34.0	5,526	11.7	87.0	11.6
DF	15 - 19	LIVE	Domestic	17.6	40.0	10,181	13.1	149.7	21.4
DF	20+	LIVE	HQ-B	20.5	34.0	5,823	11.8	87.0	12.2



Forest Practices Application/Notification Notice of Decision

FPA/N No: 2616849

Effective Date: 2/21/2021

Expiration Date: 2/21/2024

Shut Down Zone: 653S

EARR Tax Credit: Eligible Non-eligible

Reference: DNR

Ode to Joyce

Decision

- Notification Accepted** 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.
- Withdrawn** Applicant has withdrawn the Forest Practices Application/Notification (FPA/N).
- Closed** All forest practices obligations are met.

FPA/N Classification

- Class II Class III Class IVG Class IVS

Number of Years Granted on Multi-Year Request

- 4 years 5 years

Conditions on Approval/Reasons for Disapproval

Issued By: Erik Dukes

Region: Olympic

Title: Forest Practice Forester

Date: 2/21/2021

Copies to: Landowner, Timber Owner Operator

Issued in person: Landowner Timber Owner Operator

By: 
Katelynn McGoff

Appeal Information

You have thirty (30) days to *file* (i.e., *actually deliver*) an appeal in writing of this Decision and any related State Environmental Policy Act (SEPA) determinations to the Pollution Control Hearings Board, the Attorney General’s Office, and the Department of Natural Resources’ region office. See RCW 76.09.205. The appeal period starts when the applicant receives this decision, which usually happens electronically on the date indicated below.

You must file your appeal at all three addresses below:

Pollution Control Hearings Board	Office of the Attorney General Natural Resources Division	Department Of Natural Resources Olympic Region
<u>Physical Address</u> 1111 Israel Road, SW Suite 301 Tumwater, WA 98501 <u>Mailing address</u> Post Office Box 40903 Olympia, WA 98504-0903	<u>Physical Address</u> 1125 Washington Street, SE Olympia, WA 98504 <u>Mailing Address</u> Post Office Box 40100 Olympia, WA 98504-0100	<u>Physical & Mailing Address</u> 411 Tillicum Lane Forks, WA 98331

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

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 <https://www.dnr.wa.gov/programs-and-services/forest-practices/review-applications-fpars/forest-practices-forms-and>. Notify DNR of new Operators within 48 hours.

Continuing Forestland 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 forestland 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 and 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 forestland obligation, the seller must pay the buyer’s costs related to continuing forestland obligations, including all legal costs and reasonable attorneys’ fees incurred by the buyer in enforcing the continuing forestland obligation against the seller.

Failure by the seller to send the required notice to 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 forestland obligation prior to sale.

DNR Affidavit of Mailing

On this day 2/21/2021, I placed in the United States mail at Forks, WA, postage paid, a true and accurate copy of this document. Notice of Decision FPA #2616849

Choose an item.

 (Printed Name)

 (Signature)

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

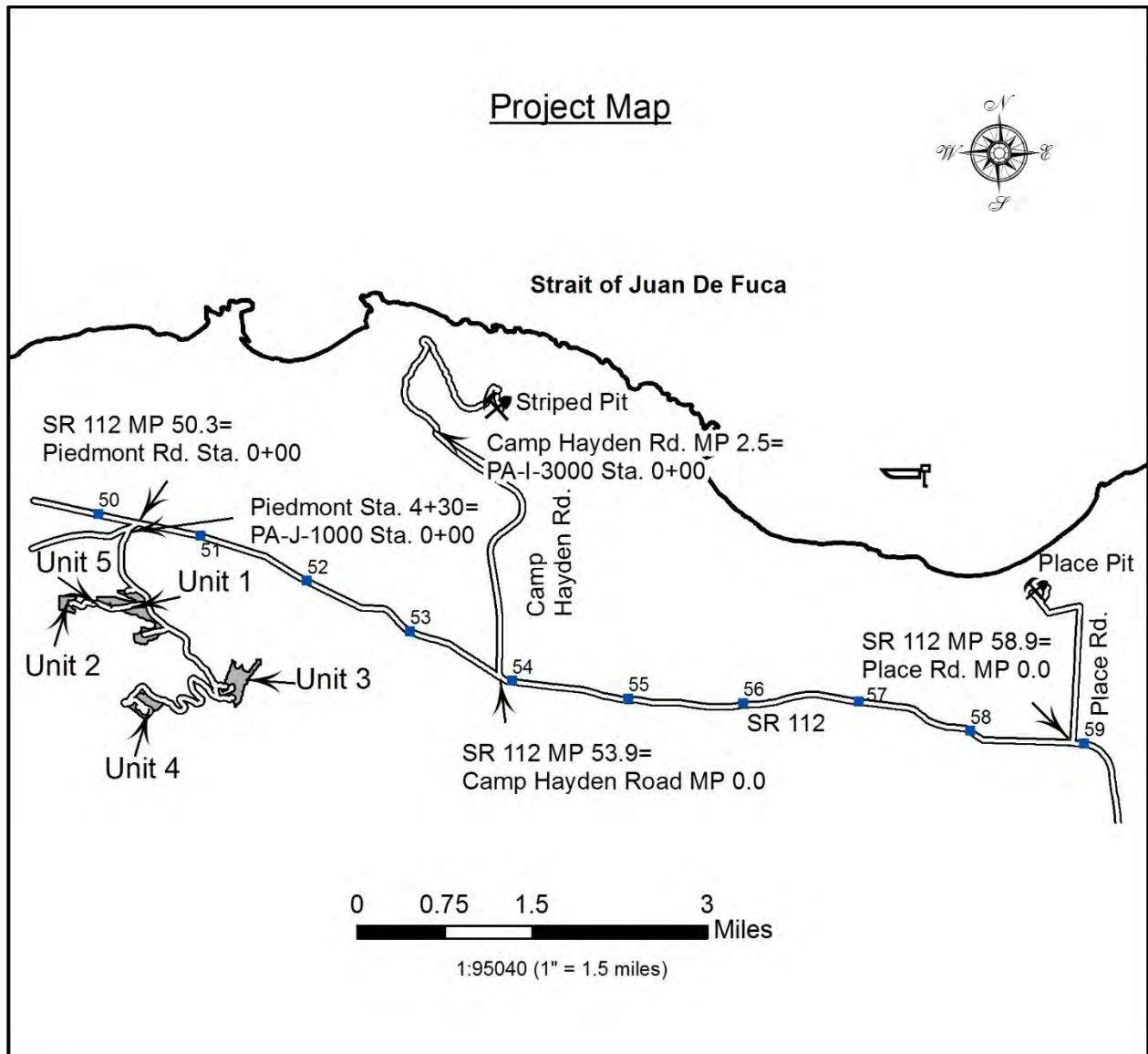
ODE TO JOYCE TIMBER SALE ROAD PLAN
CLALLAM COUNTY
STRAITS DISTRICT
OLYMPIC REGION

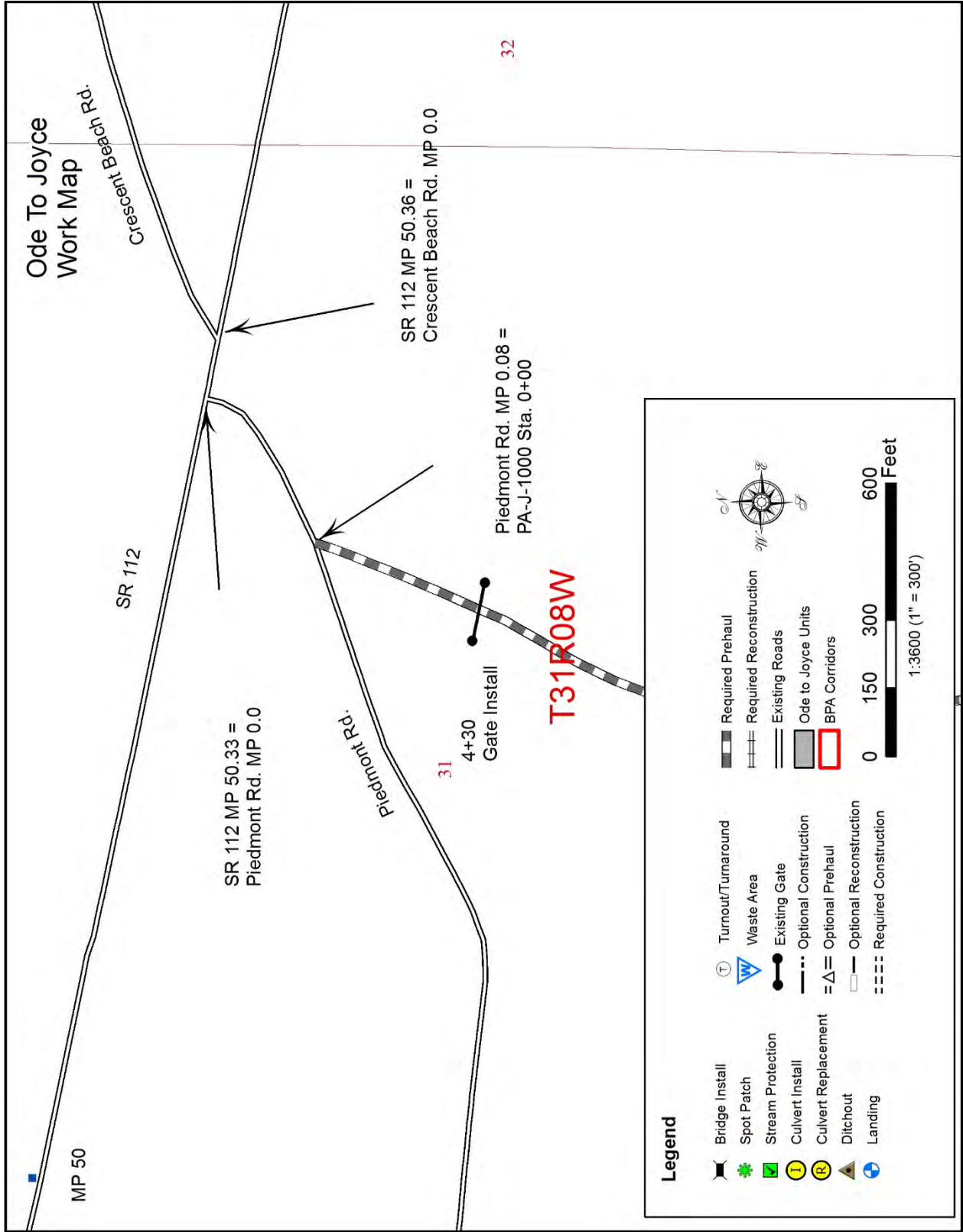
AGREEMENT NO.: 30-100666

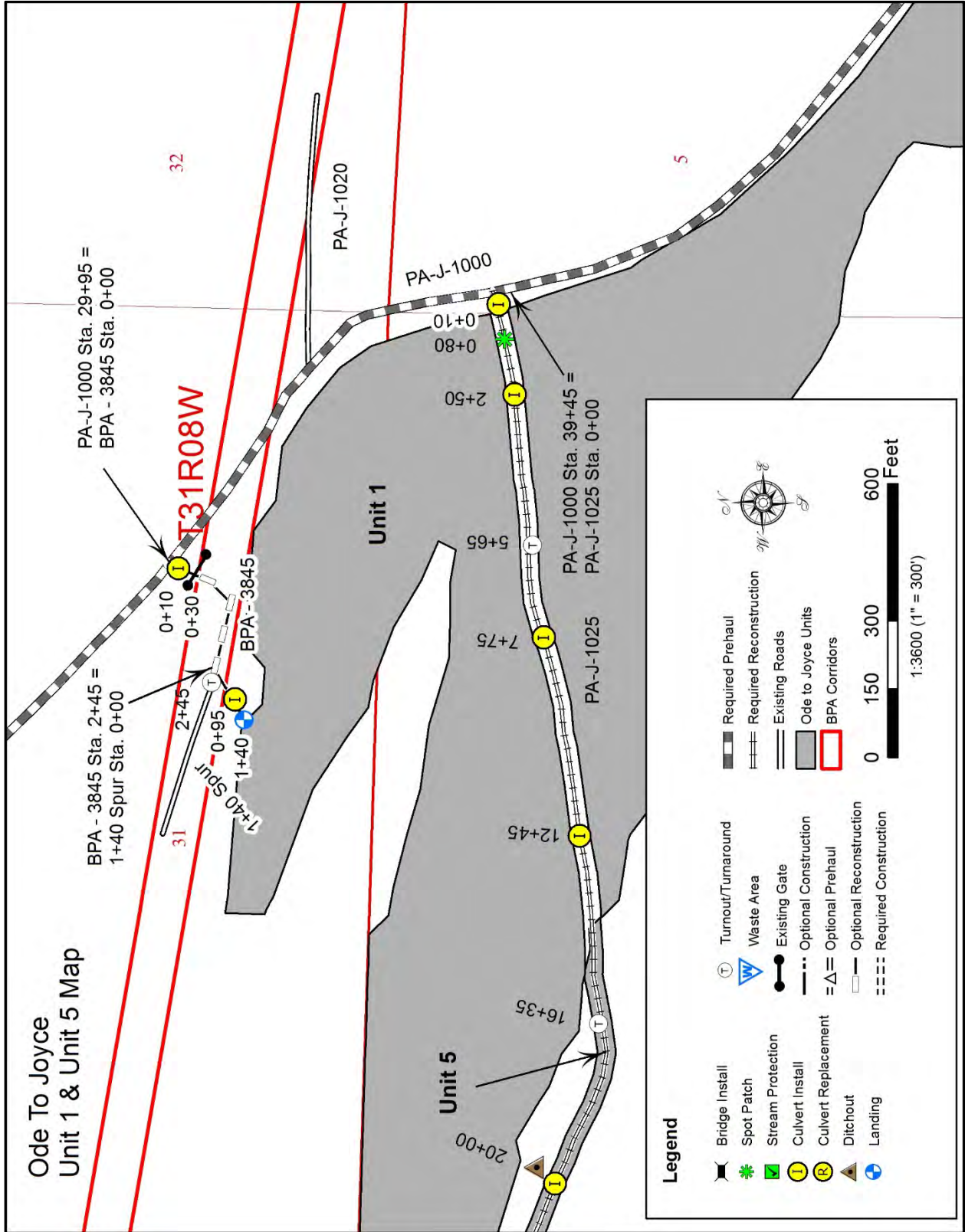
DISTRICT ENGINEER: GREG ELLIS

DATE: 10/31/2020

DRAWN & COMPILED BY: GREG ELLIS



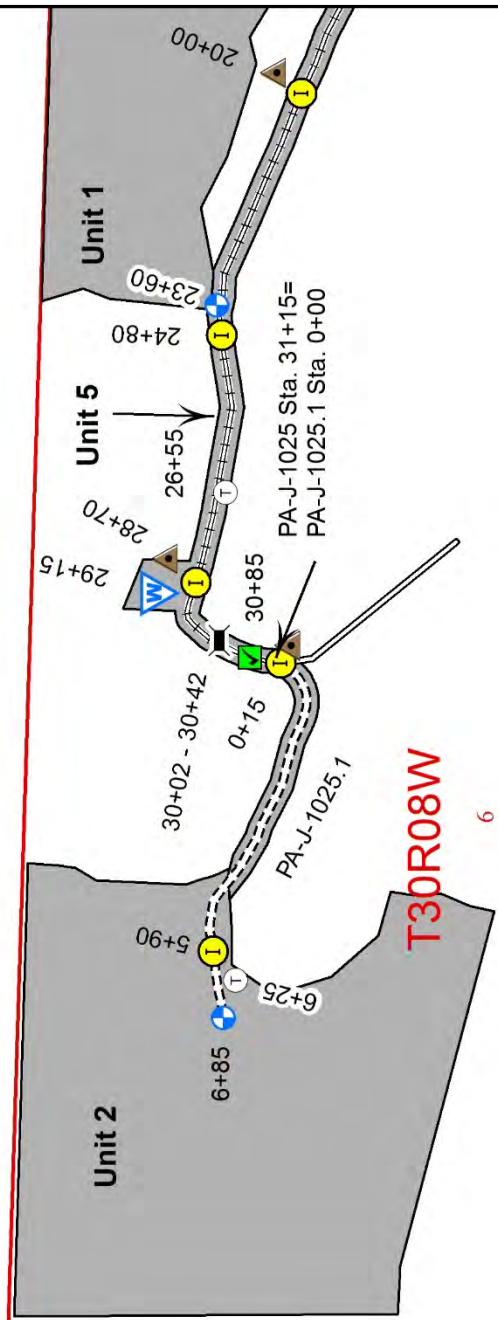




Ode To Joyce
Unit 1, 2 & Unit 5 Map

T31R08W

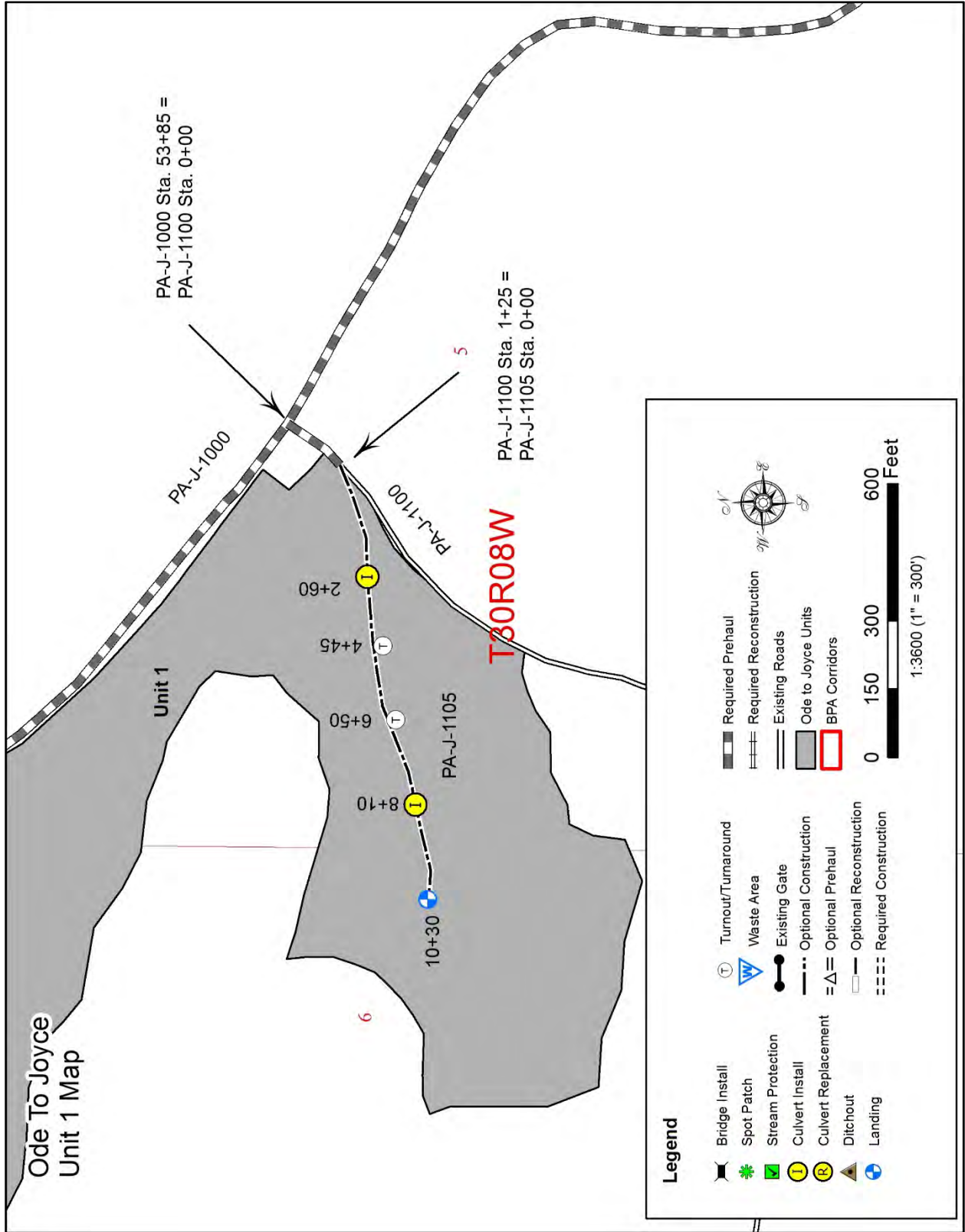
31

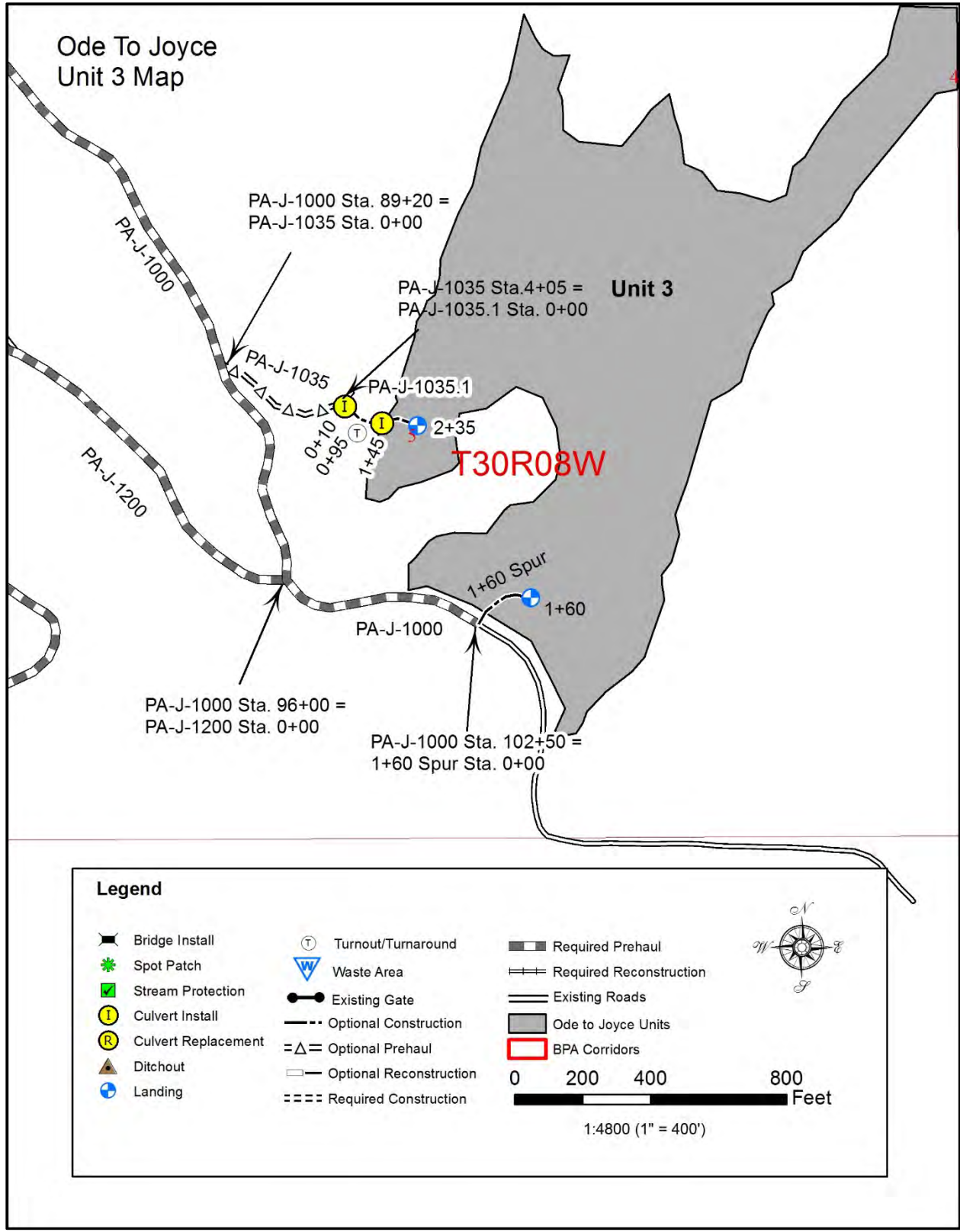


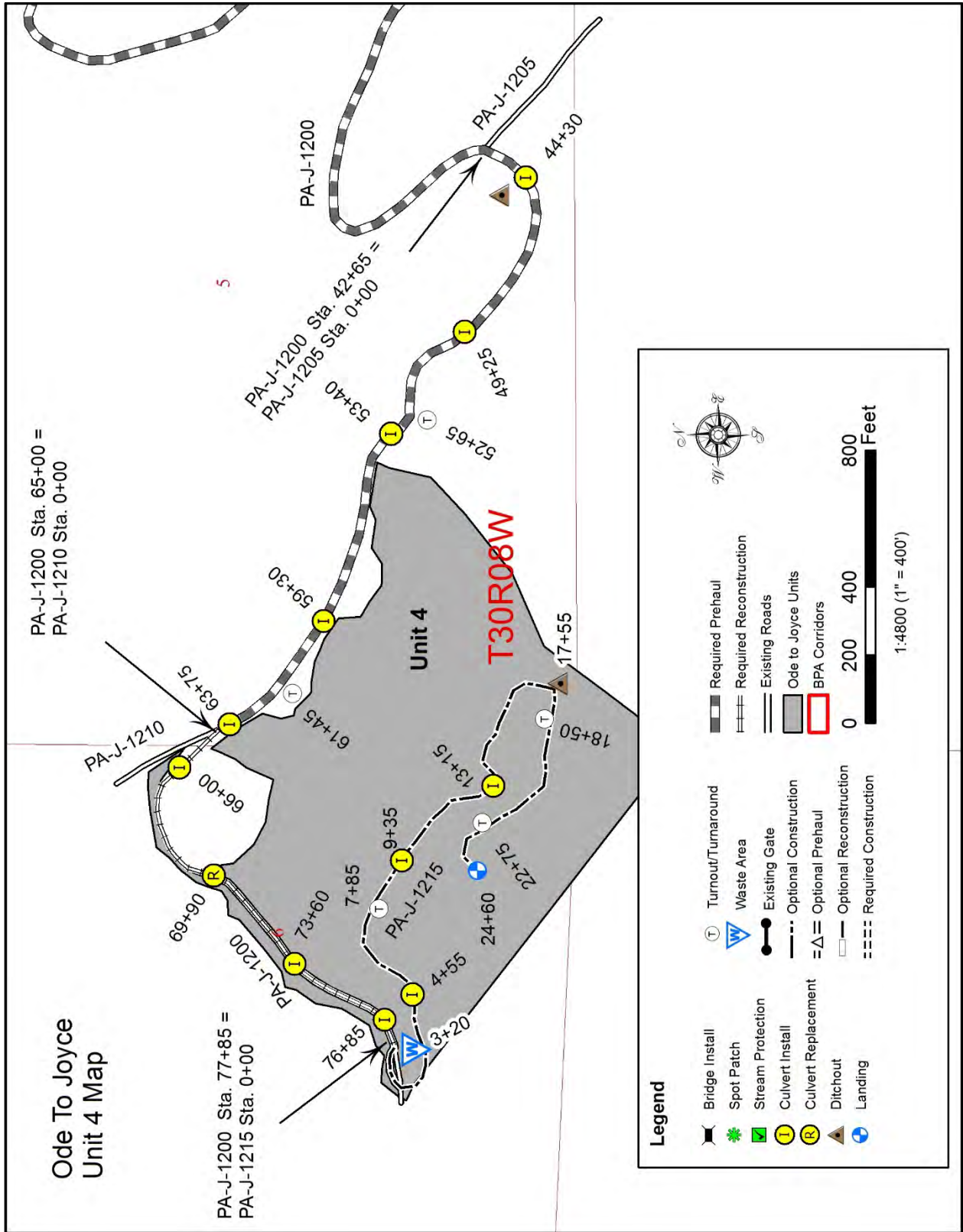
Legend

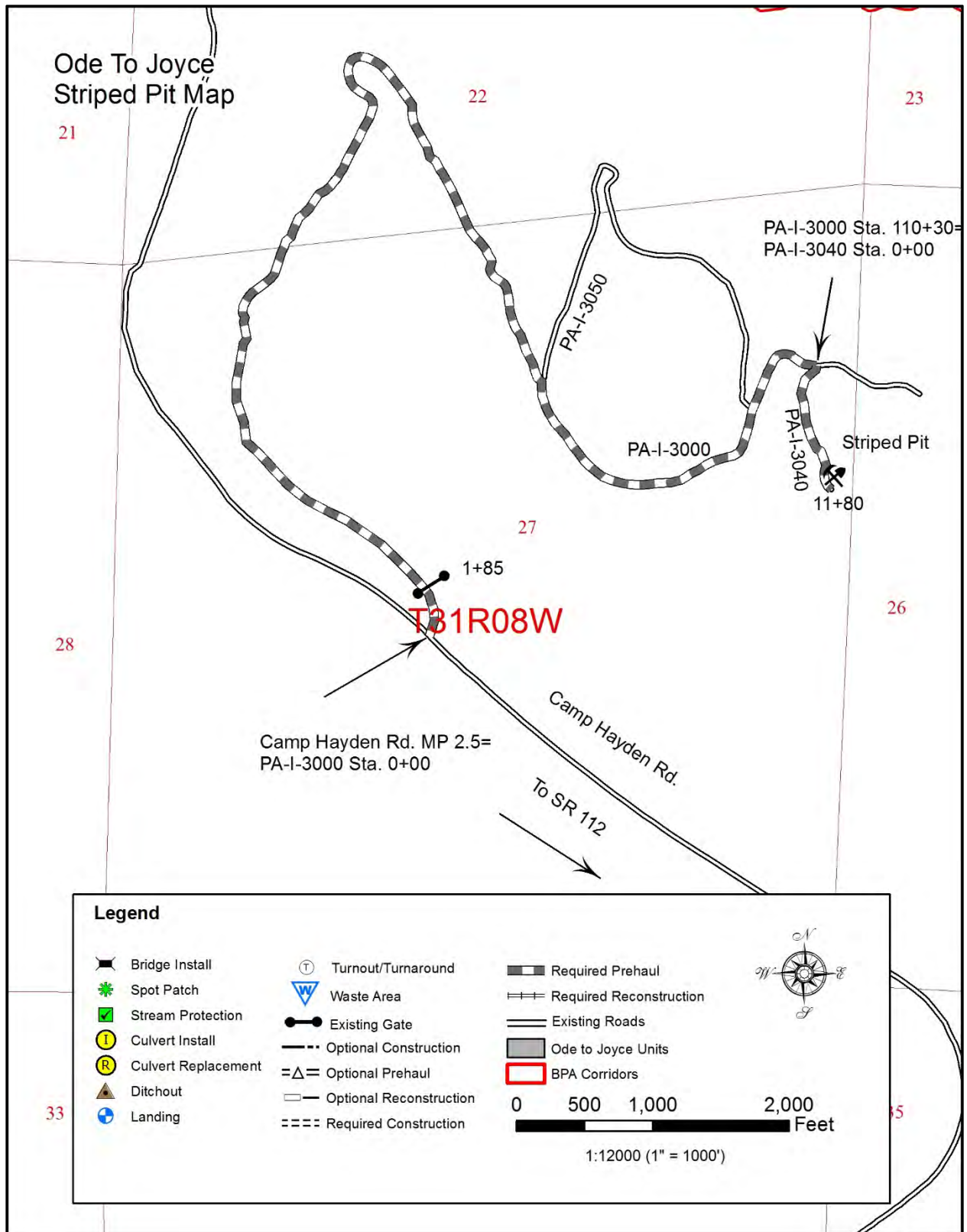
	Bridge Install		Turnout/Turnaround
	Spot Patch		Waste Area
	Stream Protection		Existing Gate
	Culvert Install		Optional Construction
	Culvert Replacement		Optional Prehaul
	Ditchout		Optional Reconstruction
	Landing		Required Reconstruction
	Required Prehaul		Existing Roads
	Required Reconstruction		Ode to Joyce Units
	BPA Corridors		0 150 300 600 Feet

1:3600 (1" = 300')

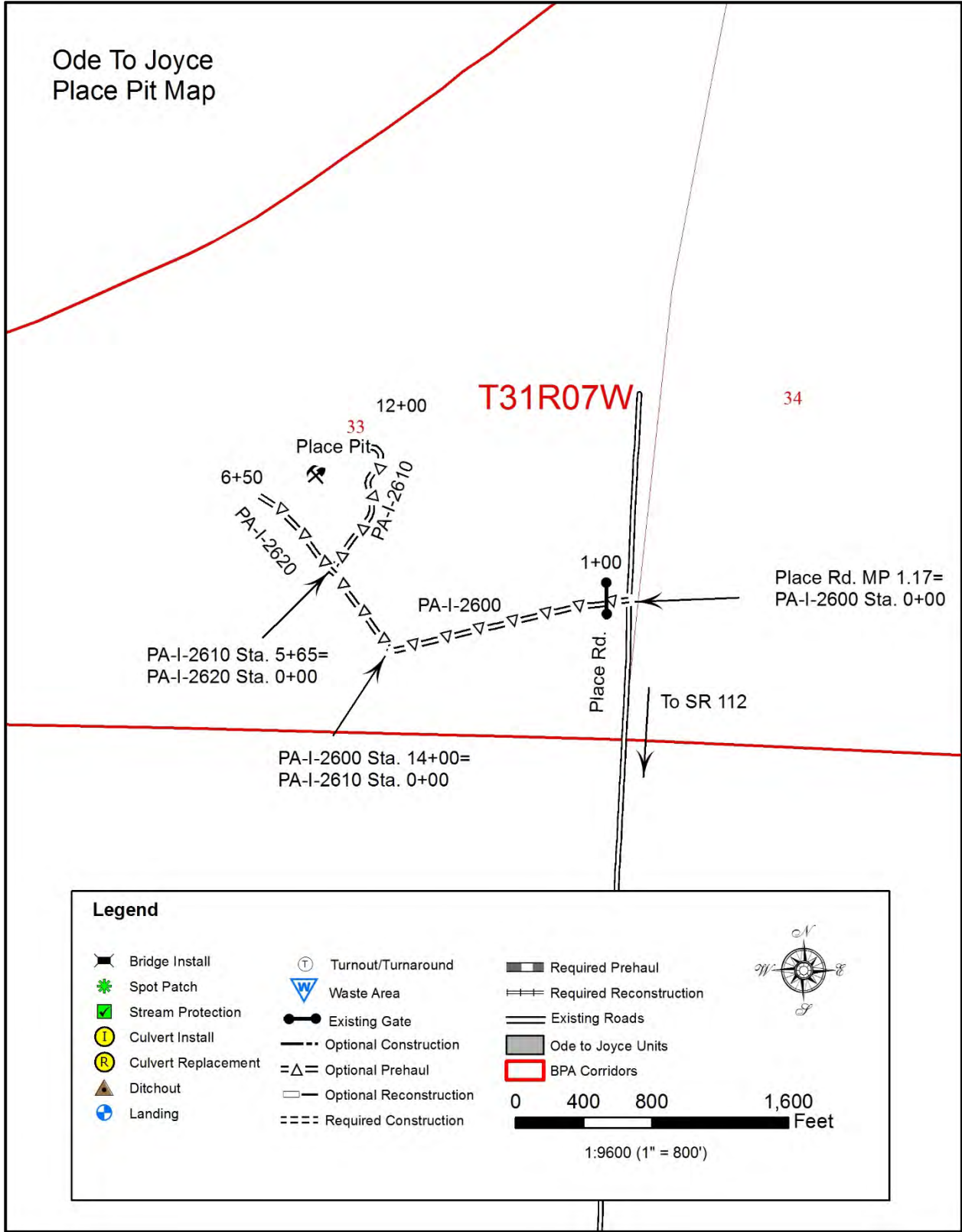








Ode To Joyce
Place Pit Map



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>
PA-J-1000	0+00 – 102+50	Prehaul Maintenance
PA-J-1025	0+00 – 31+15	Reconstruction
PA-J-1025.1	0+00 – 6+85	Construction
PA-J-1100	0+00 – 1+25	Prehaul Maintenance
PA-J-1200	0+00 – 65+00	Prehaul Maintenance
PA-J-1200	65+00 – 77+85	Reconstruction
PA-I-3000	0+00 – 110+30	Prehaul Maintenance
PA-I-3040	0+00 – 11+80	Prehaul Maintenance

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>
BPA - 3845	0+00 – 2+45	Reconstruction
1+40 Spur	0+00 – 1+40	Construction
PA-J-1105	0+00 – 10+30	Construction
PA-J-1035	0+00 – 4+05	Prehaul Maintenance
PA-J-1035.1	0+00 – 2+35	Construction
PA-J-1215	0+00 – 24+60	Construction
1+60 Spur	0+00 – 1+60	Construction
PA-I-2600	0+00 – 14+00	Prehaul Maintenance
PA-I-2610	0+00 – 12+00	Prehaul Maintenance
PA-I-2620	0+00 – 6+50	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>
1+40 Spur	0+00 – 1+40	See Below
PA-J-1025.1	0+00 – 6+85	
PA-J-1105	0+00 – 10+30	

PA-J-1035.1	0+00 – 2+35	
PA-J-1215	0+00 – 24+60	
1+60 Spur	0+00 – 1+60	
Total Stations	47.10 Stations	

Construction includes, but is not limited to: Clearing, grubbing, right-of-way debris disposal, excavation and/or embankment to subgrade, end hauling material for construction, compacting road surfaces, constructing ditchlines, constructing ditchouts, constructing turnouts and turnarounds, curve widening, acquisition and installation of drainage structures, application of rock, spreading grass seed and hay.

0-5 RECONSTRUCTION

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
BPA - 3845	0+00 – 2+45	See Below
PA-J-1025	0+00 – 31+15	
PA-J-1200	65+00 – 77+85	
Total Stations	46.45 Stations	

Reconstruction includes, but is not limited to: Removal of all vegetative material with minimum loss of rock and dispose of in accordance with Clause 2-9 and Clause 3-23. Cleaning ditches and constructing ditches, constructing headwalls, cleaning culvert inlets and outlets in accordance with Clause 2-6 and Clause 2-7. Installing additional culverts and replacing culverts in accordance with the culvert list. Grading, shaping and compacting existing road surface, turnouts and turnaround in accordance with Clause 2-5, realigning road segments, spreading grass seed and hay, and the application of rock in accordance with the Rock List.

0-6 PRE-HAUL MAINTENANCE

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
PA-J-1000	0+00 – 102+50	Grade, shape and compact existing running surface in accordance to Clause 2-5, apply rock in accordance with Rock list and gate install in accordance with clause 7-76.
PA-J-1100	0+00 – 1+25	Grade, shape and compact existing running surface in accordance to Clause 2-5 as directed by contract

		administrator and apply rock in accordance with Rock List.
PA-J-1035	0+00 – 4+05	Remove all vegetative material with a minimum loss of rock and dispose of in accordance with Clause 2-9 and Clause 3-23, grade, shape and compact existing running surface in accordance with Clause 2-5, apply rock in accordance with Rock list and clean/construct ditch lines in accordance with Clause 2-7.
PA-J-1200	0+00 – 65+00	Grade, shape and compact existing running surface in accordance to Clause 2-5, apply rock in accordance with Rock list, install culverts in accordance with culvert list, clean/construct ditch lines in accordance with Clause 2-7, construct ditchouts in accordance with Clause 4-29, Brush road in accordance with Clause 3-1, perform gate maintenance in accordance with Clause 7-75 and add turnouts/turnarounds.
PA-I-3000	0+00 – 110+30	Grade, shape and compact existing running surface in accordance to Clause 2-5 and apply rock in accordance with Rock list.
PA-I-3040	0+00 – 11+80	Grade, shape and compact existing running surface in accordance to Clause 2-5 as directed by contract administrator.
PA-I-2600	0+00 – 14+00	Grade, shape and compact existing running surface in accordance to Clause 2-5 as directed by contract administrator.
PA-I-2610	0+00 – 12+00	Grade, shape and compact existing running surface in accordance to Clause 2-5 as directed by contract administrator.
PA-I-2620	0+00 – 6+50	Grade, shape and compact existing running surface in accordance to

		Clause 2-5 as directed by contract administrator.
Total Stations	327.40 Stations	

Pre-haul 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 replacements, 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.

0-12 DEVELOP ROCK SOURCE

Purchaser shall develop existing rock source called Striped Pit. Rock source development will involve stripping approximately 0.8 acres, drilling and shooting to obtain a minimum of 7630 yds³ of Clean rock Shot Ballast, 75 yds³ of Light Loose Rip Rap and the manufacture of a minimum of 14935 yds³ of 3" minus Jaw Run Rock in accordance with Clause 6-20.

Purchaser may develop an existing rock source called Place Pit. Rock source development will involve digging and loading useable rock as determined by the Contract Administrator out of the stockpiles to obtain crushed rock material. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

0-13 STRUCTURES

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

1-2 UNFORESEEN CONDITIONS

Quantities established in this road plan are minimum acceptable values. Additional quantities required by the state due to unforeseen conditions, or Purchaser's choice of construction season or techniques will be at the Purchaser's expense. Unforeseen

conditions include, but are not limited to, solid subsurface rock, subsurface springs, saturated ground, and unstable soils.

1-3 ROAD DIMENSIONS

Purchaser shall perform road work in accordance with the dimensions shown on the TYPICAL SECTION SHEET and the specifications within this road plan , unless controlled by construction stakes or design data (plan, profile, and cross-sections).

1-4 ROAD TOLERANCES

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

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

1-5 DESIGN DATA

Log Stringer design data is available upon request at the Department of Natural Resources Straits District Office in Port Angeles, WA.

1-6 ORDER OF PRECEDENCE

Any conflict or inconsistency in the road plan will be resolved by giving the documents precedence in the following order:

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

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

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

Purchaser shall repair or replace all materials, roadway infrastructure, and road components damaged during road work or operation activities. The Contract Administrator will direct repairs and replacements. Repairs to structural materials must be made in accordance with the manufacturer’s recommendation, and may not begin without written approval from the Contract Administrator.

1-9 DAMAGED METALLIC COATING

Any cut ends, or 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 or cold galvanizing compound.

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>
PA-J-1025	29+94 to 30+39	Log Stringer Bridge Installation

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.

1-13 LOG LOADING

At no time shall the loading of logs occur on the PA-J-1000 road. In addition, no debris from harvesting operations shall be allowed on this road.

SUBSECTION ROAD MARKING

1-15 ROAD MARKING

Purchaser shall perform road work 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 reconstruction, construction and pre-haul road work before the start of timber haul.

1-21 HAUL APPROVAL

Purchaser shall not use roads under this road plan without written approval from the Contract Administrator.

1-22 WORK NOTIFICATIONS

Purchaser shall notify the Contract Administrator a minimum of 3 business days before work begins.

1-23 ROAD WORK PHASE APPROVAL

Purchaser shall obtain written approval from the Contract Administrator upon completion of each of the following phases of road work:

- Subgrade construction
- Drainage installation
- Subgrade compaction
- Rock application
- Rock compaction

SUBSECTION RESTRICTIONS

1-25 ACTIVITY TIMING RESTRICTION

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

<u>Road</u>	<u>Stations</u>	<u>Activity</u>	<u>Closure Period</u>
All	All	All	Weekends and State Recognized Holidays
All	All	All roadwork activities including Timber Haul and rock pit development.	November 1 st – April 30 th
All	All	All	8:00 PM – 6:00AM

PA-J-1025	29+94 – 30+39	Bridge Installation	October 1 st – June 30 th
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1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION or Contract Clause H-130 HAULING SCHEDULE, Purchaser shall provide a maintenance plan to include further protection of state resources. Purchaser shall obtain written approval from the Contract Administrator for the maintenance plan, and shall put preventative measures in place before operating during the closure period. Purchaser is required to maintain all haul roads at their own expense including those listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER. If other operators are using, or desire to use these designated maintainer roads, a joint operating plan must be developed. All parties shall follow this plan.

1-29 SEDIMENT RESTRICTION

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

1-30 CLOSURE TO PREVENT DAMAGE

In accordance with Contract Clause G-220 STATE SUSPENDS OPERATION, the Contract Administrator will suspend road work or hauling right-of-way timber, forest products, or rock under the following conditions:

- Wheel track rutting exceeds 6 inches on jaw run or pit run roads.
- Wheel track rutting exceeds 4 inches on crushed rock roads.
- Wheel track rutting exceeds 4 inches on native surface roads.
- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.
- When, in the opinion of the Contract Administrator excessive road damage or rutting may occur.

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

1-32 BRIDGE AND/OR 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, approved in writing by Contract Administrator, must be used.

If tracked equipment is used on asphalt surfaces, Purchaser shall immediately cease all road construction and hauling operations. Purchaser shall remove any dirt, rock, or other material tracked or spilled on the asphalt surface(s) and have surface(s) evaluated

by the District Engineer or their designee for any damage caused by transporting equipment. Any damage to the surface(s) will be repaired, at the Purchaser's expense, as directed by the Contract Administrator.

1-33 SNOW PLOWING RESTRICTION

On the following road(s), snowplowing will be allowed after the execution of a SNOW PLOWING AGREEMENT, which is available from the Contact 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

Purchaser shall immediately remove any mud, dirt, rock, or other material tracked or spilled on to county roads and state highways.

If additional damage to the surface, signs, guardrails, etc. occurs then the damage will 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>
Camp Hayden Rd.
Piedmont Rd.
SR 112
Place Rd.

1-41 REQUIREMENTS FOR PAVED ROAD APPROACHES

Requirements for all paved road approaches associated with this sale:

Purchaser shall build up approaches to allow a smooth grade transition between the DNR roads and all paved roads associated with this sale. The top of the DNR road surfacing must be kept level with the surface of all paved roads associated with this sale at all times. The surface of the DNR road approaches must slope from the edge of the paved roads at the rate of 2% , unless otherwise directed by the Contract Administrator.

1-42 UTILITY ACCESS ROAD

The following road(s) intersect(s) existing utility access roads. Purchaser shall conduct road work on the intersecting roads so that the utility access roads are accessible at all times.

<u>Road</u>	<u>Stations</u>
PA-J-1000	0+00 – 34+90

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. Purchaser shall work in accordance with all applicable laws or rules concerning utilities. Purchaser is responsible for all notification, including “call before you dig”, and liabilities associated with the utilities and their rights-of-way. Purchaser shall notify the utility before starting road work. **BPA Guidelines for Logging Activities shall be followed.**

<u>Road</u>	<u>Stations</u>	<u>Utility</u>	<u>Utility Contact</u>
PA-J-1000	0+00 – 102+50	Buried Utilities	811
PA-J-1000	29+95 – 34+90	Overhead BPA	811
BPA - 3845	0+00 – 2+45	Overhead BPA	811
1+40 Spur	0+00 – 1+40	Overhead BPA	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.

2-4 PASSAGE OF LIGHT VEHICLES

Purchaser shall maintain road(s) in a condition that will allow the passage of light administrative vehicles.

2-5 MAINTENANCE GRADING – EXISTING ROAD

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
PA-J-1000	0+00 – 102+50	Grade, shape, compact and remove shoulder vegetation.
PA-J-1100	0+00 – 1+25	Grade, shape, compact and remove shoulder vegetation as required by contract administrator.
PA-J-1035	0+00 – 4+05	Grade, shape, compact and remove shoulder vegetation.
PA-J-1200	0+00 – 65+00	Grade, shape, compact and remove shoulder vegetation.
PA-I-3000	0+00 – 110+30	Grade, shape, compact and remove shoulder vegetation.
PA-I-3040	0+00 – 11+80	Grade, shape, compact and remove shoulder vegetation as required by contract administrator.
PA-I-2600	0+00 – 14+00	Grade, shape, compact and remove shoulder vegetation as required by contract administrator.
PA-I-2610	0+00 – 12+00	Grade, shape, compact and remove shoulder vegetation as required by contract administrator.
PA-I-2620	0+00 – 6+50	Grade, shape, compact and remove shoulder vegetation as required by contract administrator.

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

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

<u>Road</u>	<u>Stations</u>	<u>Left and/or Right</u>	<u>Comments</u>
PA-J-1025	30+85 – 31+15	Right	Ditching
PA-J-1025	30+85	Left and Right	Catchbasin Install x 3
PA-J-1025	0+00 – 31+15	Left	Ditching
PA-J-1035	0+00 – 4+05	Right	Ditching
PA-J-1200	42+65 – 77+85	Left	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 must be disposed of as specified in Clauses 4-35 through 4-38.

<u>Road</u>	<u>Stations</u>
BPA - 3845	0+00 – 2+45
PA-J-1025	0+00 – 31+15
PA-J-1035	0+00 – 4+05
PA-J-1200	65+00 – 77+85

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

SUBSECTION BRUSHING

3-1 BRUSHING

On the following road(s), Purchaser shall cut vegetative material up to 5 inches in diameter, including limbs, as shown on the BRUSHING DETAIL. Brushing must be achieved by mechanical cutting of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Purchaser shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
PA-J-1200	42+65 – 65+00

3-2 BRUSHING RESTRICTION

Pulling, digging, pushing over, and other non-cutting methods used for vegetation removal may not be used for brushing. Excavator buckets, log loaders and similar equipment may not be used for brushing unless otherwise approved in writing by the Contract Administrator.

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 as approved by Contract Administrator. Clearing must be completed before starting excavation and embankment.

3-6 CLEARING WITHIN RIPARIAN AREA AT TYPE 1-3 STREAM CROSSING

At the following stream crossing location(s), Purchaser shall retain 2 root wads from 2 cedar trees 24-18" in diameter cut from within the Inner Zone (25 feet either side of the stream) in the stream in accordance with log stringer detail sheets.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
PA-J-1025	29+94 – 30+39	Log Stringer Bridge Installation

3-7 RIGHT-OF-WAY DECKING

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

3-8 PROHIBITED DECKING AREAS

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

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

SUBSECTION GRUBBING

3-10 GRUBBING

Purchaser shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Purchaser shall also remove stumps with undercut roots outside the grubbing limits. Purchaser shall remove stumps using a hydraulic mounted excavator unless authorized in writing by the Contract Administrator. Grubbing must be completed before starting excavation and embankment.

3-11 GRUBBING WITHIN RIPARIAN AREA AT TYPE 1-3 STREAM CROSSING

Purchaser shall retain 2 grubbed stumps (root wads) within the Inner Zone (25 feet either side of the stream) for placement in accordance with log stringer detail sheets.

Stumps shall be shaken free of dirt and debris. Two root wads must be placed in or adjacent to the stream channel. The remaining stumps grubbed from the Inner Zone must be placed in the waste area.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
PA-J-1025	29+94 – 30+39	Log Stringer Bridge Installation

3-12 STUMP PLACEMENT

Purchaser shall place grubbed stumps outside of the clearing limits, as directed by the Contract Administrator and in compliance with all other clauses in this road plan. Stumps must 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.

Road	Stations
PA-J-1025.1	0+00 – 6+85
PA-J-1035.1	0+00 – 2+35

3-14 STUMPS WITHIN DESIGNATED WASTE AREAS

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

Road	Waste Area
PA-J-1025	Waste Area Location 29+15

SUBSECTION ORGANIC DEBRIS

3-20 ORGANIC DEBRIS DEFINITION

Organic debris is defined as all vegetative material not eligible for removal by Contract Clause G-010 PRODUCTS SOLD AND SALE AREA or G-011 RIGHT TO REMOVE FOREST PRODUCTS AND CONTRACT AREA, that is larger than one cubic foot in volume within the grubbing limits as shown on the TYPICAL SECTION SHEET.

3-21 DISPOSAL COMPLETION

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

3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS

Waste areas for organic debris are located as listed below.

<u>Road</u>	<u>Stations</u>	<u>Disposal Location</u>	<u>Requirements</u>
PA-J-1025	29+94 – 31+15	Waste Area Location PA-J-1025 Sta. 29+15	Deposit organic waste from bridge installation and road construction into waste area.
PA-J-1025.1	0+00 – 4+90	Waste Area Location PA-J-1025 Sta. 29+15	Deposit organic waste from road building into waste area between stations 0+00 – 4+90.
PA-J-1200	9+50 – 17+00	Waste Area Location 3+20	Deposit organic waste where slopes are not greater than 45% between stations 9+50 – 17+00.

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland ,unless used to comply with the specifications detailed in the Riparian Strategy, Clause 3-6 CLEARING WITHIN RIPARIAN AREA AT TYPE 1-3 STREAM CROSSING, and Clause 3-11 GRUBBING WITHIN RIPARIAN AREA AT TYPE 1-3 STREAM CROSSING.
- On road subgrades, or 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 can fall into the ditch or onto the road surface.
- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-25 SCATTERING ORGANIC DEBRIS

Purchaser shall scatter organic debris outside of the grubbing limits in accordance with Clause 3-23 unless otherwise detailed in this road plan and as directed by the Contract Administrator.

SUBSECTION PILE

3-32 END HAULING ORGANIC DEBRIS

On the following road(s), and on slopes greater than 45%, Purchaser shall end haul or push organic debris to the designated waste areas specified in Clause 3-22

DESIGNATED WASTE AREA FOR ORGANIC DEBRIS, or to a waste area located by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
PA-J-1215	9+50 – 17+00

SECTION 4 – EXCAVATION

4-1 EXCAVATOR CONSTRUCTION

Purchaser shall use a track mounted hydraulic excavator for construction, reconstruction and maintenance work unless stated otherwise within this Road Plan or authorized in writing by the Contract Administrator.

4-2 PIONEERING

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

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

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Purchaser shall follow these standards for road grade and alignment:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 16 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 5% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

4-4 SWITCHBACK STANDARDS

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

Purchaser shall follow these standards for switchbacks:

- Maximum adverse grades for switchbacks is 10%.
- Maximum favorable grades for switchbacks is 12%.

- Maximum transition grades entering and leaving switchbacks is a 5% grade change.
- Transition grades required to meet switchback grade limitations must be constructed on the tangents preceding and departing from the switchbacks.

4-5 CUT SLOPE RATIO

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

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

4-6 EMBANKMENT SLOPE RATIO

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

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

4-7 SHAPING CUT AND FILL SLOPE

Purchaser shall construct excavation and embankment slopes to a uniform line and left rough for easier revegetation.

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

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

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

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

4-12 FULL BENCH CONSTRUCTION

On the following road(s), and where side slopes exceed 45%, Purchaser shall use full bench construction for the entire subgrade width. Purchaser shall end haul waste material to the location specified in Clause 4-37 WASTE AREA LOCATION.

<u>Road</u>	<u>Full Bench Location</u>
PA-J-1215	9+00 – 17+00

SUBSECTION INTERSECTIONS, TURNOUTS AND TURNAROUNDS

4-21 TURNOUTS

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

4-22 TURNAROUNDS

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

SUBSECTION DITCH CONSTRUCTION

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

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

4-27 DITCH WORK – MATERIAL USE PROHIBITED

Purchaser shall not pull ditch material across the road or mix in with the road surface. Excavated material must be end hauled to the location specified in Clauses 4-36 through 4-38.

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

Purchaser shall construct ditchouts as identified in the table below and as needed to fit as built conditions. Ditchouts must be constructed in a manner that diverts ditch water onto the forest floor and must have excavation backslopes no steeper than a 1:1 ratio. L or R denotes ditchout left or ditchout right.

<u>Road</u>	<u>Stations</u>	<u>L or R</u>
PA-J-1025	20+00 (approx. 30')	R
PA-J-1025	28+70 (approx. 20')	R
PA-J-1025.2	0+15 (approx. 30')	L
PA-J-1200	44+30 (approx. 20')	R
PA-J-1215	17+55 (approx. 20')	L

SUBSECTION WASTE MATERIAL (DIRT)

4-35 WASTE MATERIAL DEFINITION

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

4-36 DISPOSAL OF WASTE MATERIAL

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

4-37 WASTE AREA LOCATION

Purchaser shall deposit waste material in the listed designated areas. The amount of material allowed in a waste area is 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>
PA-J-1025 Sta. 29+15	PA-J-1025	30+02 - 31+15	200 CY
PA-J-1025 Sta. 29+15	PA-J-1025.1	0+00 – 4+90	750 CY
PA-J-1215 Sta. 3+20	PA-J-1215	9+50 – 17+00	4500 CY

4-38 PROHIBITED WASTE DISPOSAL AREAS

Purchaser shall not deposit waste material in the following areas:

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

4-47 NATIVE MATERIAL

Native material consists of naturally occurring material that is free of organic debris, trash, and rocks greater than 12 inches in any dimension.

4-48 BORROW MATERIAL

Borrow material may not contain more than 5% clay, organic debris, or trash by volume.

SUBSECTION SHAPING

4-55 ROAD SHAPING

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

4-56 DRY WEATHER SHAPING

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 for 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

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

4-63 EXISTING SURFACE COMPACTION

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

4-64 WASTE MATERIAL COMPACTION

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

4-65 CULVERT BACKFILL COMPACTION

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

4-66 COMPACTION BY METHOD

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

SUBSECTION SUBGRADE REINFORCEMENT

4-70 SUBGRADE REINFORCEMENT

On the following road(s), Purchaser shall provide and install geotextile fabric directed by the Contract Administrator or as specified in the Engineer's design. Subgrade reinforcement must be installed to a width that is 2 feet more than the subgrade width, including turnouts. Geotextile fabric must overlap by a minimum of 2 feet at all joints. The geotextile fabric must be covered with a minimum of 18 inches of compacted rock

as specified in the TYPICAL SECTION SHEET. Geotextile fabric must meet the specifications in Clause 10-3 GEOTEXTILE FOR STABILIZATION.

<u>Road</u>	<u>Stations</u>
1+40 Spur	0+40 – 1+40

SECTION 5 – DRAINAGE

5-1 REMOVAL OF SHOULDER BERMS

On the following road(s), Purchaser shall remove berms from road shoulders. The construction of ditchouts is required where ponding could result from the effects of sidecast debris.

<u>Road</u>	<u>Stations</u>
PA-J-1035	0+00 – 4+05
PA-J-1200	0+00 – 65+00

5-3 PUNCHEON PLACEMENT

On the following road(s), puncheon shall be utilized in the subgrade on the following road. Puncheon shall consist of logs of at least 4 inches in diameter and shall be at least 17 feet long.

<u>Road</u>	<u>Stations</u>
PA-J-1025.1	0+00 – 6+85
PA-J-1035.1	0+00 – 2+35

5-4 PUNCHEON RESTRICTED

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

SUBSECTION CULVERTS

5-5 CULVERTS

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

5-7 USED CULVERT MATERIAL

On the following road(s), Purchaser may install used culverts. All other culverts must have new culverts installed. Purchaser shall obtain approval from the Contract Administrator for the quality of the used culverts before installation. Culverts must meet the specifications in Clauses 10-15 through 10-23.

<u>Road</u>	<u>Stations</u>
1+40 Spur	0+95
PA-J-1035.1	0+10, 1+45

5-12 UNUSED MATERIALS STATE PROPERTY

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

5-13 CONTINGENCY CULVERTS

The following culverts will be supplied by the Purchaser and are available for installation as directed by the Contract Administrator. In the event that culverts are not used, culverts shall be stockpiled at Place Pit.

<u>Road</u>	<u>Size</u>
On any portion of road used for timber or rock haul.	2- 18" x 30' culvert
	1-18" culvert band
	1 – 24" x 30' culvert

SUBSECTION CULVERT INSTALLATION

5-15 CULVERT INSTALLATION

Culvert installation must be in accordance with the TYPICAL CROSS DRAIN CULVERT INSTALLATION DETAIL SHEET, TYPICAL TYPE NS NP CULVERT INSTALLATION DETAIL SHEET, 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 must be installed in a manner consistent with the manufacturer's recommendations. Culverts over 15 inches diameter shall be banded using lengths of no less than 10 feet, and no more than one length less than 16 feet. Shorter section of banded culvert shall be installed at the inlet end.

5-17 CROSS DRAIN SKEW AND SLOPE

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

5-18 CULVERT DEPTH OF COVER

Cross drain culverts must be installed with a depth of cover of not less than 18 inches of compacted subgrade over the top of the culvert at the shallowest point. Stream crossing culverts must be installed with a depth of cover specified in the Engineer's design, TYPICAL TYPE NS NP DETAIL SHEET, or recommended by the culvert manufacturer for the type and size of the pipe, whichever is greater.

SUBSECTION CATCH BASINS, HEADWALLS, AND ARMORING

5-25 CATCH BASINS

Purchaser shall construct catch basins to resist erosion. Minimum dimensions of catch basins are 1-2 feet wide, 1-2 feet deep and 2-4 feet long.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Purchaser shall construct headwalls 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 must consist of oversize or quarry spall material. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Minimum specifications require that rock be placed at a width of one culvert diameter on each side of the culvert opening, and to a height of one culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. No placement by end dumping or dropping of rock is allowed.

SECTION 6 – ROCK AND SURFACING

SUBSECTION ROCK SOURCE

6-2 ROCK SOURCE ON STATE LAND

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

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Striped Pit	T31R08W Sec 26 &27	3" minus Jaw Run Rock, Shot Rock Ballast, Light Loose Rip Rap
Place Pit	T31R07W Sec 33	1 ¼" minus Crushed Rock

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 not remove more than 750 cubic yards of 1 ¼" minus crushed rock. Purchaser shall not remove additional yardage without prior written approval from the Contract Administrator. Other stockpiles may not be used.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>	<u>Quantity</u>
Place Pit	T31R08W Sec 33	1 ¼" minus Crushed Rock	850 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 are subject to written approval by the Contract Administrator before their use. Prior to approval, purchaser shall submit a passing sieve test performed by procedure described in WSDOT FOP for WAQTC T 27/11.

SUBSECTION ROCK SOURCE DEVELOPMENT

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

Purchaser may and/or shall conduct rock source development and use at the following sources, in accordance with the written ROCK SOURCE DEVELOPMENT PLAN prepared by the state and included in this road plan. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN, and approved in writing by the Contract Administrator. Purchaser shall notify the Contract Administrator a minimum of 5 business days before starting any operations in the rock source.

<u>Source</u>	<u>Rock Type</u>
Striped Pit	3" Minus Jaw Run Rock, Shot Rock Ballast, Light Loose Rip Rap
Place Pit	1 ¼" Minus Crushed Rock

6-12 ROCK SOURCE SPECIFICATIONS

Rock sources must be in accordance with the following specifications, unless otherwise specified in the ROCK SOURCE DEVELOPMENT PLAN:

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

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

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

Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.

- All vehicle access to the top of the pit faces must be blocked.

6-14 DRILL AND SHOOT

Rock drilling and shooting must meet the following specifications:

- Oversize material remaining in the rock source at the conclusion of the timber sale may not exceed 5% of the total volume mined in that source.
- Oversize material is defined as rock fragments larger than five feet in any dimension.
- Oversized rock that exceeds the maximum allowable amount must be shot or broken up.
- Purchaser shall notify the Contract Administrator a minimum of 3 working days before blasting operations.
- Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator 10 working days before any drilling (Form #M-126PAC).
- All operations must be carried out in compliance with 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 the Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- Purchaser shall block access roads and trails before blasting operations.
- Purchaser shall notify Pencom prior to blasting.

6-16 DRILL AND SHOOT TECHNICAL SPECIFICATIONS

DRILLING

The Purchaser shall drill in accordance to an approved Shot Plan. Drill depth shall not extend more than 5 feet below existing pit floor. The District Engineer or their designee and Purchaser shall jointly measure and determine drill depths, hole spacing and pattern and must be approved prior to loading explosives. During drilling operation, drill operator shall keep a bore log which includes the depth and location of each hole drilled. The District Engineer or their designee may ask to see the bore log during and after the drilling process has completed.

BLASTING

The Purchaser shall furnish and load appropriate explosives, detonators, and ignition sources in accordance to all State and Federal laws and in accordance to an approved Shot Plan.

DRILLING AND SHOOTING PLAN "SHOT PLAN"

The Purchaser shall submit a written drilling and shooting plan, including drawings, to the District Engineer or their designee, which must meet the approval of the District Engineer or their designee prior to the start of the drilling operation. The plan and drawing(s) shall

include the following proposals: drill hole diameter, drill hole spacing, drill hole pattern, drill hole depth, any stemming depths, type and depth of explosive including amount per drill hole, detonator and ignition type, and proposed delay pattern. Any adjustment or modifications to the proposals during operations must be noted and resubmitted prior to loading of explosives.

WEATHER LIMITATIONS

When, in the opinion of the District Engineer or their designee, the weather is such that satisfactory results cannot be obtained in any phase of operation, Purchaser shall suspend operations until the weather is favorable. Before and during any suspension, Purchaser shall protect the work from damage or deterioration.

SUBSECTION ROCK MANUFACTURE

6-20 ROCK CRUSHING OPERATIONS

Rock crushing operations must conform to the following specifications:

- Operations and placement of oversize material must be conducted in or near the rock source site, as approved in writing by the Contract Administrator.
- The crushing operation must be concluded within 45 working days from the time it begins.
- All testing and operations must be performed in accordance with the attached ROCK CRUSHING COMPLIANCE PROCEDURE.
- Purchaser shall produce sieve analysis for crushing operations as described in Clause 6-24 ROCK CRUSHING COMPLIANCE PROCEDURE.
- Purchaser may use a commercial testing lab to produce sieve analyses.
- Sieve analysis for acceptance of aggregate shall be performed by procedure described in WSDOT FOP for WAQTC T 27/11.

6-23 ROCK GRADATION TYPES

Purchaser shall manufacture rock in accordance with the types and amounts listed in the Manufacturing list below. Rock must meet the following specifications for gradation and uniform quality during manufacture and placement into a stockpile. Purchaser shall provide a sieve analysis upon request from the Contract Administrator.

<u>Rock Type</u>	<u>Amount</u>
3" minus Jaw Run Rock	14935 yd ³
Shot Rock Ballast	7630 yd ³
Light Loose Rip Rap	75 yd ³

6-24 ROCK CRUSHING COMPLIANCE PROCEDURE

Phase I. Equipment Adjustment

Step 1:

At start up of crushing operations, the Purchaser will notify the Contract Administrator when the rock meets the gradation specifications in the contract. None of the rock crushed during this calibration period will be counted toward the amount required to be crushed, and this rock must be kept separate from accepted rock crushed later.

Step 2:

The Purchaser will test the rock. Two samples will be taken. If the rock meets specifications, crushing may begin. If the rock does not meet specifications, return to Step 1.

Phase II. Production

Step 3:

The Purchaser will continue periodic testing to ensure that rock stays in spec. Testing will take place according to the following schedule:

- After the first 500 yards
- After every 2,000 yards thereafter.

- a) Any time a sample is out of spec, but is within 5%*, the Purchaser will be notified and a second sample will be taken later in the day. If the second sample meets specifications, the rock crushed during that day will be accepted. If the second sample also fails to meet spec, none of the rock crushed since the last acceptable test will be counted toward the amount to be crushed.
- b) Any time a sample is out of spec and is more than 5% off in any category, none of the rock crushed since the last acceptable test will be accepted and that rock must be kept separate from the stockpile. Return to Step 1.
- c) Purchaser is strongly encouraged to take their own samples regularly and keep their operations in spec to avoid unnecessary expenses.
 - The 5% will be applied only to sieve specs for 2" to ¼"; rock that is out of spec in larger sizes must be kept separate from the acceptable rock.

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 may not contain more than 0.2 percent organic debris and trash. All percentages are by weight.

6-34 3-INCH JAW RUN MINUS BALLAST ROCK

% Passing 3" square sieve	100%
% Passing 1 1/2" square sieve	45 - 65%

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

6-42 CLEAN ROCK, SHOT BALLAST

No more than 10 percent of the rock by visual inspection may exceed 8 inches in any dimension and no rock may be larger than 12 inches in any dimension. Shot Ballast rock may not contain more than 5 percent by weight of organic debris, dirt, and trash.

6-50 LIGHT LOOSE RIP RAP

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

<u>Quantity</u>	<u>Approximate Size Range</u>
20% to 90%	500 lbs. to 1 ton (18" - 28")
15% to 80%	50 lbs. to 500 lbs. (8" - 18")
10% to 20%	3 inch to 50 lbs. (3" - 8")

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

Purchaser shall obtain written approval from the Contract Administrator for subgrade drainage installation included grading and compaction before rock application.

6-71 ROCK APPLICATION

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

<u>Road</u>	<u>Stations</u>	<u>Rock Type</u>	<u>Amount</u>
PA-J-1000	0+00 – 102+50	1 ¼" minus	200 yd ³
PA-J-1100	0+00 – 1+25	3" minus	50 yd ³
PA-J-1200	0+00 – 42+65	1 ¼" minus	100 yd ³
PA-J-1200	42+65 – 65+00	3" minus	100 yd ³
PA-I-3000	0+00 – 110+30	1 ¼" minus	300 yd ³

6-73 ROCK FOR WIDENED PORTIONS

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

6-76 DRY WEATHER ROCK COMPACTION

On the following roads, The Contract Administrator may require the application of water to facilitate compaction of the rock surfacing. The method of water application is subject to approval by the Contract Administrator.

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

7-1 SIGN INSTALLATION

Purchaser shall purchase, install, and maintain the following road signs. Signs must be installed a minimum of 7 days before hauling logs and/or rock. Signs must comply with the Federal Highway Administration’s Manual on Uniform Traffic Control Devices.

<u>Road</u>	<u>Station</u>	<u>Sign</u>
Piedmont Rd.	Junction of PA-J-1000 and Piedmont Rd.	2 Truck Crossing Signs North and South
Camp Hayden Rd.	Junction of PA-I-3000 and Piedmont Rd.	2 Truck Crossing Signs East and West

SUBSECTION STREAM CROSSING STRUCTURES GENERAL

7-5 STRUCTURE DEBRIS

Purchaser shall not allow debris from the installation or removal of structures to enter any stream. Components removed from existing structure(s) must be removed from state land or, as directed in writing, by the Contract Administrator. Purchaser shall maintain a clean jobsite, with all materials stored away from the high water mark or other area presenting a risk of the materials entering a stream. Debris entering any stream must be removed immediately, and placed in the site(s) designated for stockpiling or disposal. Purchaser shall retrieve all material carried downstream from the jobsite.

7-6 STREAM CROSSING INSTALLATION

Purchaser shall install stream crossing structures 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

Purchaser shall design and construct bank protection to prevent the undermining of the structure.

SUBSECTION ACCEPTANCE

7-17 INSTALLATION PRODUCTION SCHEDULE

Purchaser shall provide the Contract Administrator or their designee, with a production schedule showing projected completion dates for the following items before starting construction of the structure(s). Production schedule must include:

- dewatering
- excavation
- placement of sills/abutments/footings/structure
- backfill compaction, rock application and compaction

7-18 INSTALLATION STAGE ACCEPTANCE

Purchaser shall ensure that all materials and procedures used during construction comply with the design. Purchaser shall obtain written approval from the Contract Administrator or their designee, for each stage of construction, listed in Clause 7-17 INSTALLATION PRODUCTION SCHEDULE, before starting construction on the next stage. Purchaser shall notify the Contract Administrator when each construction stage is complete.

7-19 INSTALLATION FINAL ACCEPTANCE

Purchaser shall notify the Contract Administrator in writing when each structure is complete.

SUBSECTION BRIDGE MAINTENANCE

7-39 PA-J-1025 BRIDGE DELINEATOR INSTALLATION

Purchaser shall install 4 4x4 wooden posts and 4 delineators on each side (2 inbound and 2 outbound) of the bridge with reflector stripes angled downward and guiding traffic towards the center of the bridge. Bridge delineators shall consist of 12" x 36" MUTCD 2 OM3-L and 2 OM3-R black and retroreflective yellow striped markers. The minimum width of the stripes shall be 3". At a minimum, the sheeting shall meet the specifications of Type III sheeting (high intensity sheeting) as per ASTM Specification D4956.

SUBSECTION BRIDGE INSTALLATION

7-45 PURCHASER SUPPLIED BRIDGE

Purchaser shall provide, and construct each bridge listed below. Refer to design sheets and Road Plan for details.

Road	Station	Length (ft.)	W.B.S.R. ¹ (ft.)	Loading/Deflection Ratio	Type	Vert. Clear ² (ft.)	Hor. Align ³ (ft.)
PA-J-1025	29+94 – 30+39	45	16'	U-80	Log Stringer	5.9'	P.P. & C.S.

¹W.B.S.R. = Width between shear rails.

²Vertical clearance shall be measured from 100 year flood level.

³Horizontal alignment: P.P. = on the attached plan/profile, C.S. = according to construction stakes on the ground.

7-47 PURCHASER SUPPLIED BRIDGE COMPONENTS

Purchaser is responsible for acquiring stringers and abutments from timber sale unit 1. Stringers shall meet a minimum mid-span diameter of 32" with a minimum length of 45'. Abutments/Sill logs shall meet a minimum mid span diameter of 32" with a minimum length of 28' unless approved by Contract Administrator. Tie back logs shall have a minimum mid-span diameter of 12" with a minimum length of 20' unless approved by Contract Administrator. Curbs shall meet a minimum small end diameter of 18" and the needle beam shall meet a minimum mid-span diameter of 12". Stringers, abutments/sills and curbs shall be constructed of Douglas fir. Needle beam may be constructed of Douglas fir or cedar. District Engineer shall be onsite for the cutting and processing of Stringers and Abutments/Sill logs for acceptance.

7-51 EMBANKMENT RETENTION

Purchaser shall provide embankment retention to ensure that bridge approach embankments are stable, contained, and do not encroach the stream channel. As designed, Bin wall or Hilfiker systems are three pre-approved designs. Alternate designs for embankment retention must be submitted to District Engineer or designee for consideration. Reports and plans will be accepted or rejected within 10 working days of receipt.

7-53 BRIDGE INSTALLATION

Purchaser shall install bridges ensuring there is a full width, continuous deck with no gaps that allow water and sediment to drain from the bridge to the stream.

SUBSECTION GATE CLOSURE

7-70 GATE CLOSURE

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

<u>Road</u>	<u>Station</u>
BPA - 3845	0+30
PA-J-1200	2+15
PA-I-2600	1+00

SUBSECTION GATES AND FENCES

7-75 GATE MAINTENANCE

Purchaser shall conduct gate maintenance as listed.

<u>Road</u>	<u>Station</u>	<u>Requirements</u>
PA-J-1200	2+15	Grease all lubrication points.
PA-I-2600	1+00	Grease all lubrication points.

7-76 GATE INSTALLATION

Purchaser shall install the listed gate(s). Gate installations must be completed prior to Pre-Haul maintenance approval.

<u>Road</u>	<u>Station</u>	<u>Type</u>	<u>Provided by</u>
PA-J-1000	4+30	Large Gate	Purchaser

Large gate installation(s) must be in accordance with the LARGE GATE DETAIL.

The gate and lock box must be installed plumb and aligned to ensure all mating components match with precision. Each post must be filled with concrete, capped and set in a minimum of 2 cubic yards of poured-in-place concrete. The gate must be installed with a post and locking device to allow the gate to be locked in an open position. The Contract Administrator will provide Purchaser with a padlock.

If Purchaser wishes to install an alternate design, detailed plans for the construction of the gate must be submitted to the Contract Administrator. Purchaser shall obtain written approval for the plans from the Contract Administrator or their designee, before gate installation begins.

The gate must be primed and painted yellow.

SECTION 8 – EROSION CONTROL

8-1 SEDIMENT CONTROL STRUCTURES

On the following road(s), Sediment control shall be as listed below or other methods as approved in writing by the Contract Administrator.

<u>Road</u>	<u>Stations</u>	<u>Left and/or Right</u>	<u>Comments</u>
PA-J-1200	30+85	Left and Right	Silt Fence in Ditch x 3

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall provide and evenly spread a 3-inch layer of straw or hay to all exposed soils at bridge installation and at culvert installations within 100 feet of a stream or wetland. Soils must be covered before the first anticipated storm event. Soils may not sit exposed during any rain event.

SUBSECTION REVEGETATION

8-15 REVEGETATION

Purchaser shall spread grass seed and straw and/or hay mulch on all exposed soils including, but not limited to, stream culverts, waste areas, sidecast pullback 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 covering must be approved in writing by the Contract Administrator.

8-16 REVEGETATION SUPPLY

The Purchaser shall provide the all seed, mulch, straw and/or hay, matting etc..

8-17 REVEGETATION TIMING

Purchaser shall revegetate during the first available opportunity. Soils may not be allowed to sit exposed for longer than one month without receiving revegetation treatment unless otherwise approved in writing by the Contract Administrator. 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 straw and/or hay mulch 3” thick or jute matting. Seed must be covered before the first anticipated storm event.

8-19 ASSURANCE FOR SEEDED AREA

Purchaser shall ensure the growth of a uniform and dense crop (at least 50% coverage) of 3-inch tall grass. Purchaser shall reapply the grass seed and/or straw and/or hay mulch in areas that have failed to germinate or have been damaged through any cause, restore eroded or disturbed areas, clean up and properly dispose of eroded materials, and reapply the grass seed and/or straw and/or hay mulch at no addition 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 soil at a rate of 60 pounds per acre of exposed soil. Grass seed must meet the following specifications:

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

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>	<u>Minimum % germination</u>
Perennial Rye	35-45	90
Red Fescue	30-40	90
Highland Bent	5-15	85
White Clover	10-20	90
Inert and Other Crop	0.5	

SECTION 9 – POST-HAUL ROAD WORK

SUBSECTION STRUCTURES

9-1 EARTHEN BARRICADES

Purchaser shall construct barricades in accordance with the EARTHEN BARRICADE DETAIL.

<u>Road</u>	<u>Stations</u>
1+40 Spur	0+10
PA-J-1025	0+20
PA-J-1035	0+10
1+60 Spur	0+10

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND

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

SUBSECTION POST-HAUL MAINTENANCE

9-5 POST-HAUL MAINTENANCE

Purchaser shall perform post-haul maintenance 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.
PA-J-1000	0+00 – 102+50	Apply post haul rock per Clause 6-72.
PA-J-1100	0+00 – 1+25	
PA-J-1200	0+00 – 65+00	
PA-J-1200	0+00 – 77+85	
PA-I-3000	0+00 – 110+30	

SUBSECTION POST-HAUL LANDING MAINTENANCE

9-10 LANDING DRAINAGE

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

9-11 LANDING EMBANKMENT

Purchaser shall slope landing embankments to the original construction specifications.

SECTION 10 MATERIALS

SUBSECTION GEOTEXTILES

10-2 GEOTEXTILE FOR SEPARATION

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

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

10-3 GEOTEXTILE FOR STABILIZATION

Geotextiles must meet the following minimum requirements for strength and property qualities, and must be designed by the manufacturer to be used for stabilization or reinforcement, and filtration. Material must be free of defects, cuts, and tears.

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Woven
Apparent opening size	D 4751	No. 40 max
Water permittivity	D 4491	0.10 sec ⁻¹
Grab tensile strength	D 4632	315 lb
Grab tensile elongation	D 4632	<50%
Puncture strength	D 6241	620 lb
Tear strength	D 4533	112 lb
Ultraviolet stability	D 4355	50% retained after 500 hours of exposure

10-6 GEOTEXTILE FOR TEMPORARY SILT FENCE

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

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Unsupported between posts
Apparent opening size	D 4751	No. 30 max., No. 100 min.
Water permittivity	D 4491	0.02 sec ⁻¹

Grab tensile strength	D 4632	180 lb in machine direction, 100lb in cross-machine direction
Grab tensile elongation	D 4632	30% max. at 180 lb or more
Ultraviolet stability	D 4355	70% retained after 500 hours of exposure

SUBSECTION CULVERTS

10-15 CORRUGATED STEEL CULVERT

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

10-17 CORRUGATED PLASTIC CULVERT

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

10-20 FLUME AND DOWNSPOUT

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

10-21 METAL BAND

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

10-22 PLASTIC BAND

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

10-23 RUBBER CULVERT GASKETS

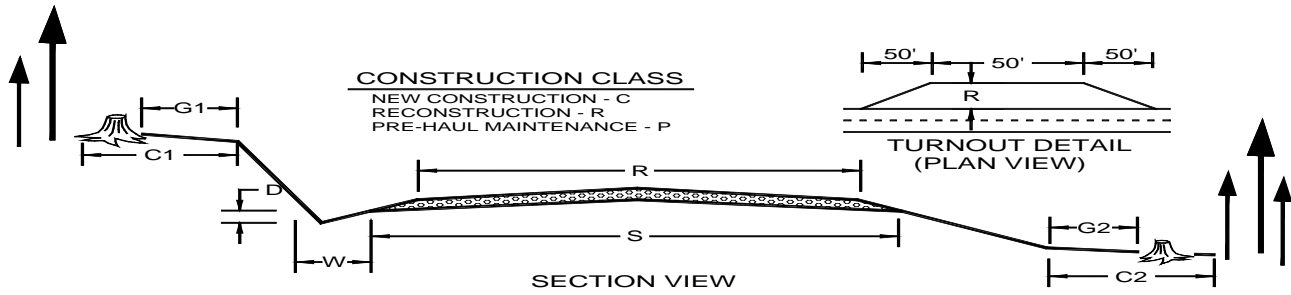
Rubber gaskets must be continuous closed cell, synthetic expanded rubber gaskets conforming to the requirements of ASTM D 1056. Rubber gaskets must be used with all corrugated metal pipe coupling bands.

10-24 GAUGE AND CORRUGATION

Unless otherwise stated in the design, detail sheets or in Clause 7-55 LARGE CULVERT INSTALLATION, metal culverts must conform to the following specifications for gage and corrugation as a function of diameter.

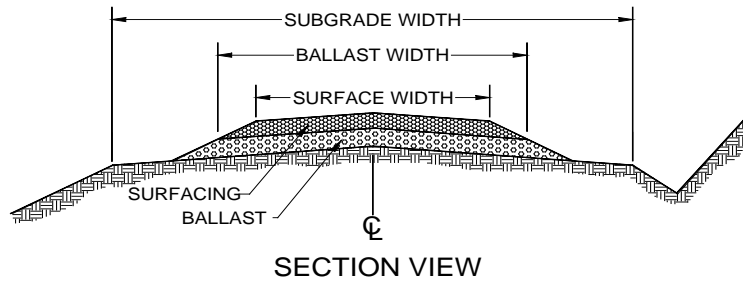
<u>Diameter</u>	<u>Gauge</u>	<u>Corrugation</u>
18"	16 (0.064")	2 ² / ₃ " X 1 ¹ / ₂ "
24" to 48"	14 (0.079")	2 ² / ₃ " X 1 ¹ / ₂ "
54" to 96"	12 (0.109")	3" X 1" or 5" x 1"

TYPICAL SECTION SHEET



ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS	TOLERANCE 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)
PA-J-1000	0+00	102+50	P			12'	3"	3'	1'				
BPA-3845	0+00	2+45	R	C	17'	12'	3"	3'	1'	5'	5'	10'	5'
1+40 Spur	0+00	1+40	C	C	17'	12'	3"	3'	1'	5'	5'	10'	5'
PA-J-1025	0+00	28+95	R	B	17'	12'	3"	3'	1'	5'	5'	10'	5'
PA-J-1025	28+95	30+90	R	B	17'- 21'	12'- 16'	3"	3'	1'	5'	5'	10'	5'
PA-J-1025	30+90	31+15	R	B	17'	12'	3"	3'	1'	5'	5'	10'	5'
PA-J-1025.1	0+00	6+85	C	B	17'	12'	3"	3'	1'	5'	5'	10'	5'
PA-J-1100	0+00	1+25	P			12'	3"	3'	1'				
PA-J-1105	0+00	10+30	C	C	17'	12'	3"	3'	1'	5'	5'	10'	5'
PA-J-1035	0+00	1+04	P			12'	3"	3'	1'				
PA-J-1035.1	0+00	2+35	C	C	17'	12'	3"	3'	1'	5'	5'	10'	5'
PA-J-1200	0+00	65+00	P			12'	3"	3'	1'				
PA-J-1200	65+00	77+85	R	B	17'	12'	3"	3'	1'	5'	5'	10'	5'
PA-J-1215	0+00	24+60	C	C	17'	12'	3"	3'	1'	5'	5'	10'	5'
1+60 Spur	0+00	1+60	C	C	17'	12'	3"	3'	1'	5'	5'	10'	5'
PA-I-3000	0+00	110+30	P			12'	3"	3'	1'				
PA-I-3040	0+00	11+80	P			12'	3"	3'	1'				
PA-I-2600	0+00	14+00	P			12'	3"	3'	1'				
PA-I-2610	0+00	12+00	P			12'	3"	3'	1'				
PA-I-2620	0+00	6+50	P			12'	3"	3'	1'				

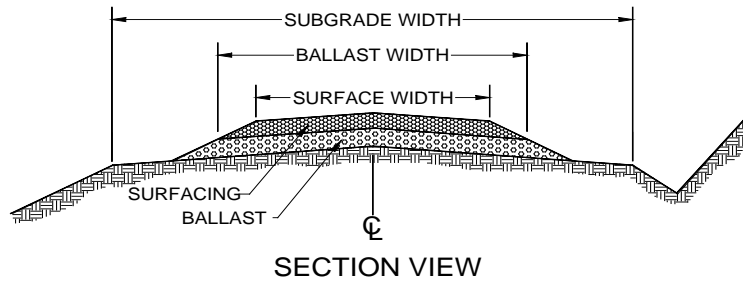
ROCK LIST SHEET



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

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)
PA-J-1000															
Misc.	0+00	102+50							3,5				100		
Post Haul	0+00	102+50							3,5				200		
BPA 3845															
Lift	0+00	2+45	17	1	14	12	70	170	2	12	6	35	90		
Turnaround	2+45			1				50							
1+40 Spur															
Lift	0+00	1+40	17	1	14	12	70	100	2	12	6	35	50		
Culvert Install	0+95								2				20		
Landing	1+40			1				50							
PA-J-1025															
Lift	0+00	31+20	17	1	14	12	70	2190	2	12	6	35	1090		
Culvert Install	0+10								2				20		
Spot Patch	0+80			1				20							
Turnout (L)	5+65			1				35							
Culvert Install	7+75								2				20		
Culvert Install	12+45								2				20		
Turnout (R)	16+35			1				35							
Totals:								1 : 2650					2 : 1310, 3,5 : 300		

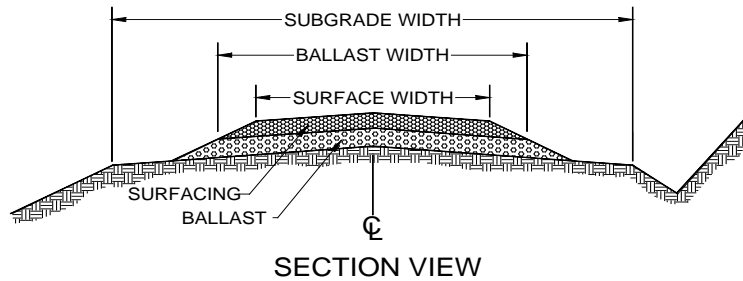
ROCK LIST SHEET CONTINUED



1. Rock quantities, subtotals and totals are “truck measure” estimates. Rock shall be applied to at least the depths listed.
2. All depths are compacted depths.
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6. Rock sources= 1: Striped Shot Rock Ballast, 2: Striped 3” minus, 3: Place Pit 1 ¼” minus, 4: Striped Light Loose Rip Rap, 5: Commerical Source.

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)
PA-J-1025 Cont.															
Culvert Install	20+00								2				20		
Landing (R)	23+60			1				100							
Culvert Install	24+80								2				20		
Turnout (L)	26+55			1				35							
Bridge Install	30+16			1				220	2				20	4	40
PA-J-1025.1															
Lift	0+00	6+85	17	1	14	12	70	480	2	12	6	35	240		
Culvert Install	0+15								2				20		
Culvert Install	5+90								2				20		
Turnaround (R)	6+25			1				50							
Landing	6+85			1				50							
PA-J-1100															
Post Haul	0+00	1+25							2				50		
PA-J-1105															
Lift	0+00	10+30	17	1	14	12	70	720	2	12	6	35	360		
Culvert	2+60								2				20		
Totals:								1 : 1655					2 : 770		4 : 40

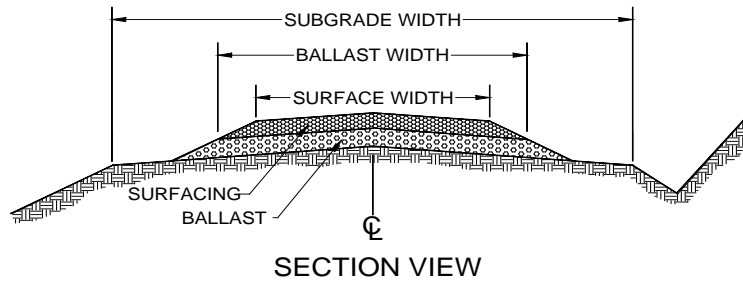
ROCK LIST SHEET CONTINUED



1. Rock quantities, subtotals and totals are "truck measure" estimates. Rock shall be applied to at least the depths listed.
2. All depths are compacted depths.
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4. All rock sources are subject to approval by the Contract Administrator.
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6. Rock sources= 1: Striped Shot Rock Ballast, 2: Striped 3" minus, 3: Place Pit 1 ¼" minus, 4: Striped Light Loose Rip Rap, 5: Commerical Source.

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)
PA-J-1105 Cont.															
Turnout (L)	4+45			1				35							
Turnaround (L)	6+50			1				50							
Culvert Install	8+10			1					2				20		
Landing	10+30			1				50							
PA-J-1035															
Lift	0+00	4+05							2	12	6	35	140		
PA-J-1035.1															
Lift	0+00	2+35	17	1	14	12	70	170	2	12	6	35	80		
Culvert Install	0+10								2				20		
Culvert Install	1+45								2				20		
Landing	2+35			1				50							
PA-J-1200															
Lift	42+65	65+00							2	12	6	35	780		
Culvert Install	44+30								2				20		
Culvert Install	49+25								2				20		
Turnout (L)	52+65								2				35		
Totals:								1 : 355					2 : 1135		

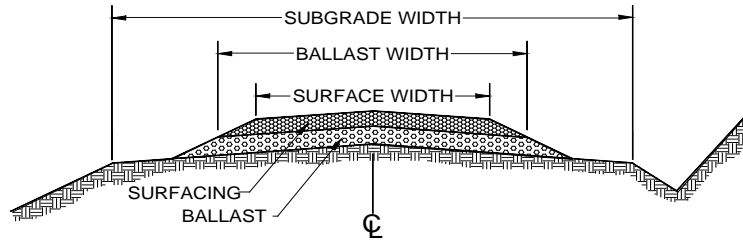
ROCK LIST SHEET CONTINUED



1. Rock quantities, subtotals and totals are "truck measure" estimates. Rock shall be applied to at least the depths listed.
2. All depths are compacted depths.
3. Rock slopes shall be 1½ (H) : 1 (V).
4. All rock sources are subject to approval by the Contract Administrator.
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6. Rock sources= 1: Striped Shot Rock Ballast, 2: Striped 3" minus, 3: Place Pit 1 ¼" minus, 4: Striped Light Loose Rip Rap, 5: Commerical Source.

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)
PA-J-1200 Cont.															
Culvert Install	53+40								2				20	4	5
Culvert Install	59+30								2				20	4	5
Turnaround (L)	61+45								2				50		
Culvert Install	63+75								2				20	4	10
Lift	65+00	77+85	17	1	14	12	70	900	2	12	6	35	450		
Culvert Install	66+00								2				20		
Culvert Replace	69+90			1				20	2				20		
Culvert Install	73+60								2				20		
Culvert Install	76+85								2				20		
Post Haul	0+00	42+65							3,5				100		
Post Haul	42+65	65+00							2				100		
PA-J-1215															
Lift	0+00	24+60	17	1	14	12	70	1720	2	12	6	35	860		
Culvert Install	4+55								2				20	4	5
Turnout (R)	7+85			1				35							
Culvert Install	9+35								2				20	4	5
Culvert Install	13+15								2				20	4	5
Turnout (R)	18+50			1				35							
Totals:								1 : 2710					2 : 1660, 3,5 : 100		4 : 35

ROCK LIST SHEET CONTINUED



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

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)
PA-J-1215 Cont.															
Turnaround (R)	22+75			1				50							
Landing	24+60			1				50							
1+60 Spur															
Lift	0+00	1+60	17	1	14	12	70	110	2	12	6	35	60		
Landing	1+60			1				50							
PA-I-3000															
Misc.	0+00	110+30							3,5				150		
Post Haul	0+00	110+30							3,5				300		
Stockpile									2				10000		
Totals:								1 : 260					2 : 10060, 3,5 : 450		
Grand Totals:								1:7630					2: 14935, 3,5: 850		4: 75

CULVERT LIST

ROAD NAME	STATION	CULVERT DIAMETER (in)	CULVERT LENGTH (ft)	FLUME LENGTH (ft)		RIP RAP - INLET (cy)	RIP RAP - OUTLET (cy)	BACKFILL MATERIAL	NOTES
BPA 3845	0+10	18	40					CR	Culvert Install
1+40 Spur	0+95	18	30					CR	Culvert Install/Remove culvert during Decommissioning
PA-J-1025	0+10	18	40					CR	Culvert Install
PA-J-1025	2+50	18	30					CR	Culvert Install
PA-J-1025	7+75	18	30					CR	Culvert Install
PA-J-1025	12+45	18	30					CR	Culvert Install
PA-J-1025	20+00	18	30					CR	Culvert Install
PA-S-1025	24+80	18	30					CR	Culvert Install
PA-J-1025	28+70	18	30					CR	Culvert Install
PA-J-1025.1	0+15	18	40					CR	Culvert Install
PA-J-1025.1	5+90	18	30					CR	Culvert Install
PA-J-1105	2+60	18	30					CR	Culvert Install
PA-J-1105	8+10	18	30					CR	Culvert Install
PA-J-1035.1	0+10	18	40					CR	Culvert Install/Remove culvert during Decommissioning
PA-J-1035.1	1+45	18	30					CR	Culvert Install/Remove culvert during Decommissioning
PA-J-1200	44+30	18	30					CR	Culvert Install
PA-J-1200	49+25	18	30					CR	Culvert Install
PA-J-1200	53+40	24	30				5	CR	Culvert Install/Energy Dissapator rock
PA-J-1200	59+30	18	30				5	CR	Culvert Install/Energy Dissapator rock
PA-J-1200	63+75	18	30				10	CR	Culvert Install/Energy Dissapator rock
PA-J-1200	66+00	18	30					CR	Culvert Install
PA-J-1200	69+90	18	36					CR	Culvert Replacement
PA-J-1200	73+60	18	30					CR	Culvert Install
PA-J-1200	76+85	18	30					CR	Culvert Install
PA-J-1215	4+55	18	30				5	CR	Culvert Install/Energy Dissapator rock
PA-J-1215	9+35	18	30				5	CR	Culvert Install/Energy Dissapator rock
PA-J-1215	13+15	18	30				5	CR	Culvert Install/Energy Dissapator rock
Contingency Culverts									See Cluse 5-13

All rip rap shall be Oversize unless specified in the Rock List, or in the field.

All backfill shall be native material (NT) unless specified otherwise. CR= 3"- crushed rock, PR= Pit Run Rock.

FISH STREAM WORK PROVISIONS

1. TIMING LIMITATIONS: The fish culvert project may begin July 1 and shall be completed by September 30.
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.

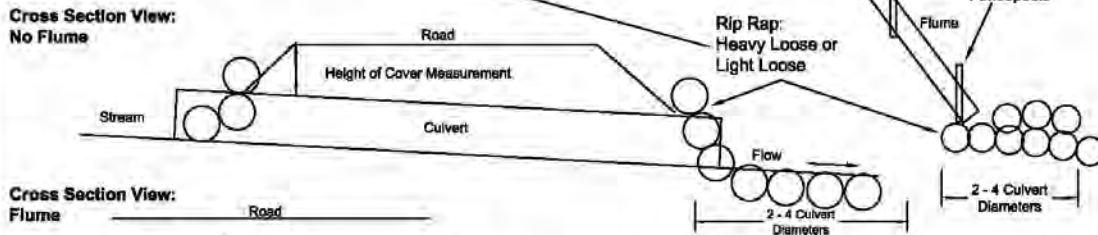
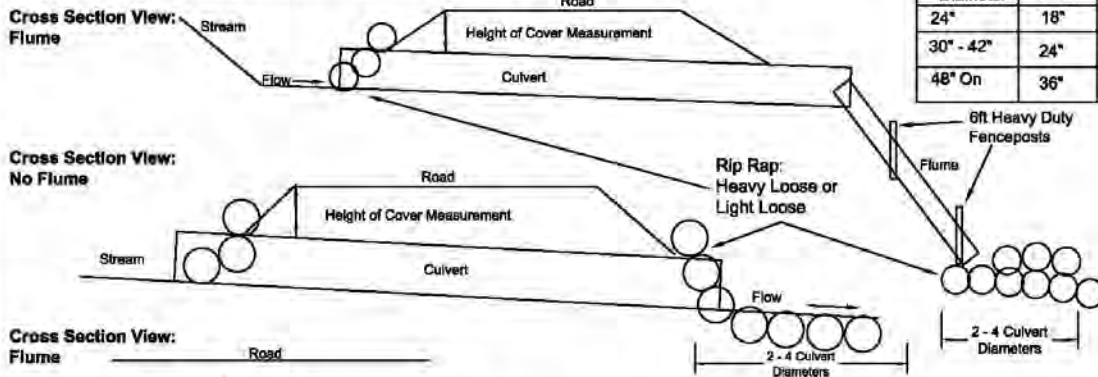
COMPACTION LIST

Road	Stations	Type	Max Depth Per Lift (inches)	Equipment Type	Minimum Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
Pre-haul	All	Culvert Backfill	8"	Jumping Jack		3	
Pre-haul	All	Rock Lifts	6"	Vibratory Smooth Drum	6,000	3	3
Pre-haul	All	Pre-haul Surface		Vibratory Smooth Drum	6,000	3	3
Construction	All	Subgrade (Except Puncheon)	6"	Vibratory Smooth Drum	6,000	2	3
Construction	All	Culvert Backfill	8"	Jumping Jack		3	
Construction	All	Rock Placement	6"	Vibratory Smooth Drum	6,000	2	3
Reconstruction	All	Subgrade (Except Puncheon)	6"	Vibratory Smooth Drum	6,000	2	3
Reconstruction	All	Culvert Backfill	8"	Jumping Jack		3	
Reconstruction	All	Rock Placement	6"	Vibratory Smooth Drum	6,000	2	3
Post-haul Maintenance	All	Rock Placement	6"	Vibratory Smooth Drum	6,000	2	3

Typical Type Ns, Np Culvert Installation Detail Sheet.

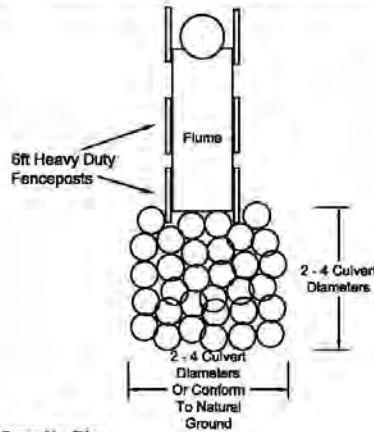
- Water shall be diverted away from the work site before any "in stream" work begins, and shall continue until culvert installation is complete.
- Culvert lay shall match stream gradient up to 5%.
- Flumes longer than 10ft shall be staked on both sides at maximum intervals of 10ft with 6ft heavy duty 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"

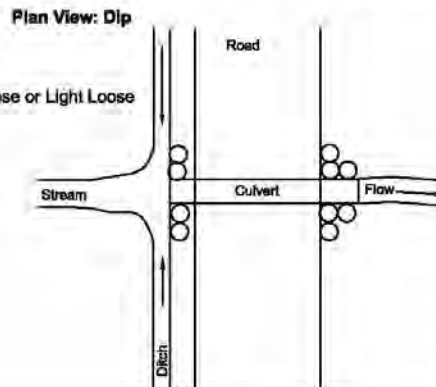
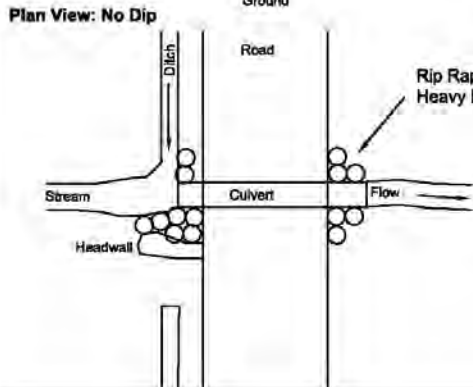
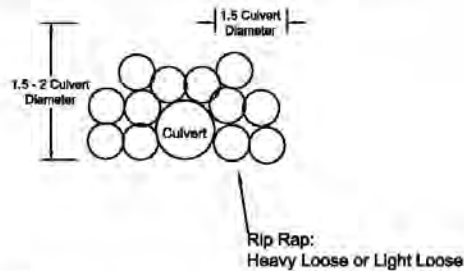


Cross Section View: Flume

Cross Section View: No Flume



Cross Section View: No Flume



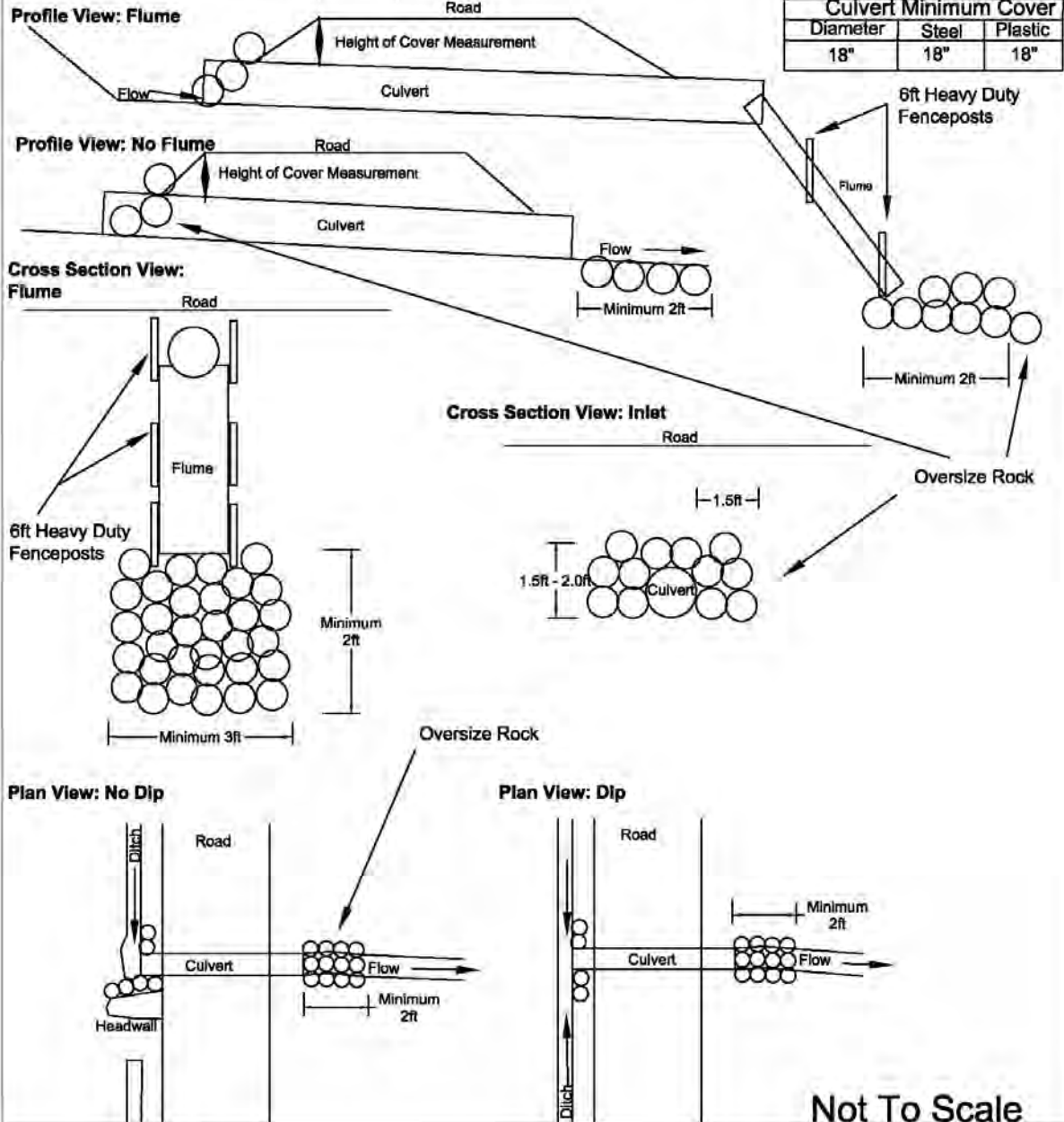
Plan View: No Dip

Plan View: Dip

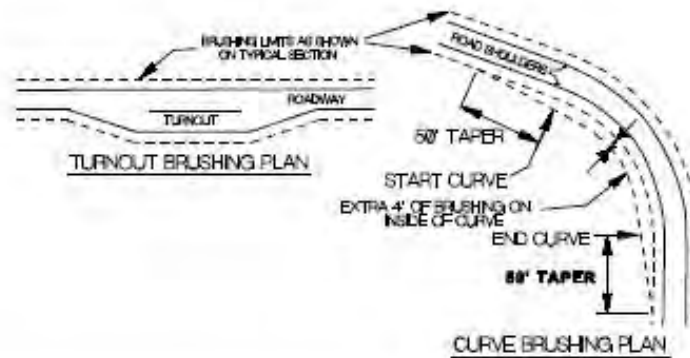
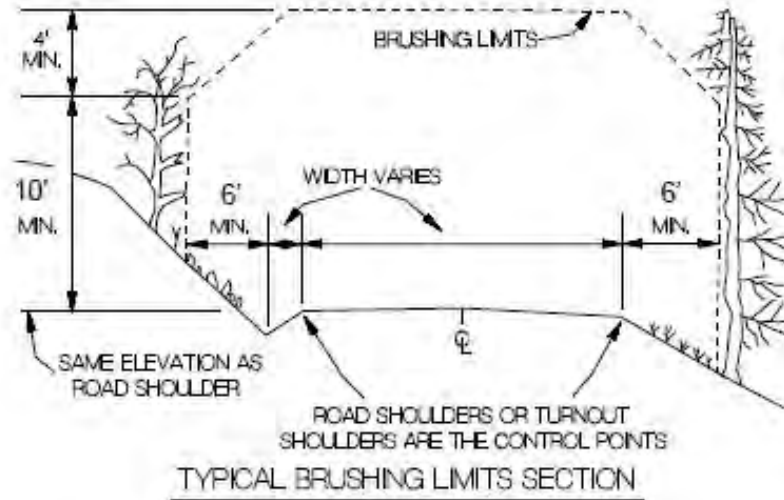
Not To Scale

Typical Cross Drain Culvert Installation Detail Sheet

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

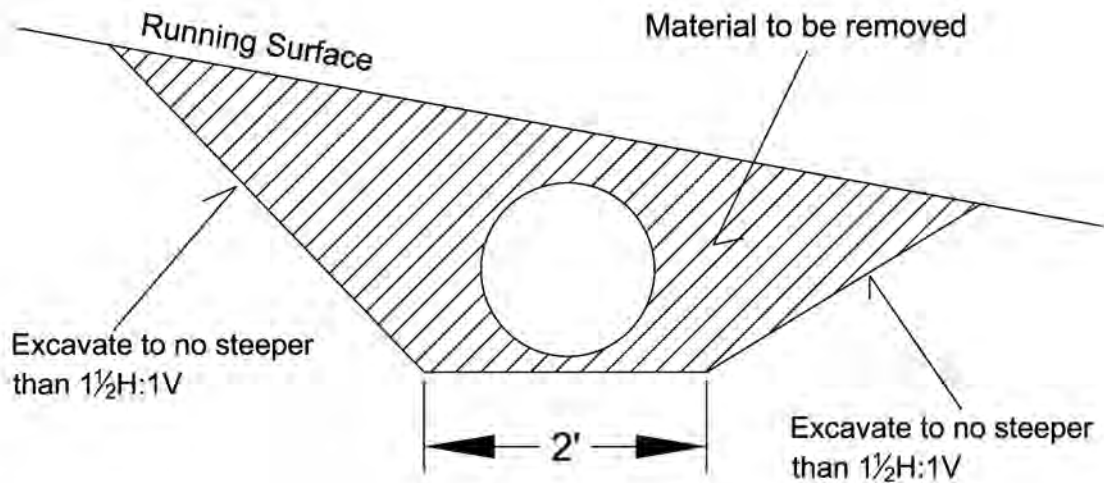


BRUSHING DETAIL



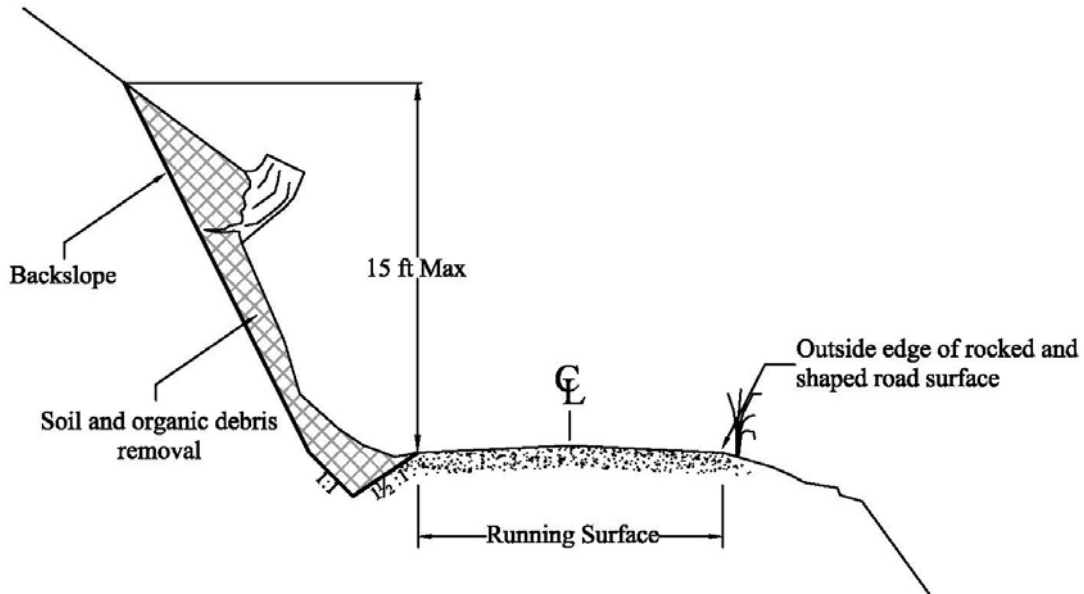
1. All vegetation within the brushing limits shall be cut to within 3 inches of the ground, unless otherwise directed by the Contract Administrator
2. All brush, trees, limbs, etc. shall be removed from the road surface, cut banks, culvert inlets/outlets, and ditch lines
3. All debris that may roll or move into the ditch line shall be removed and placed in a stable location

CROSSDRAIN REMOVAL DETAIL



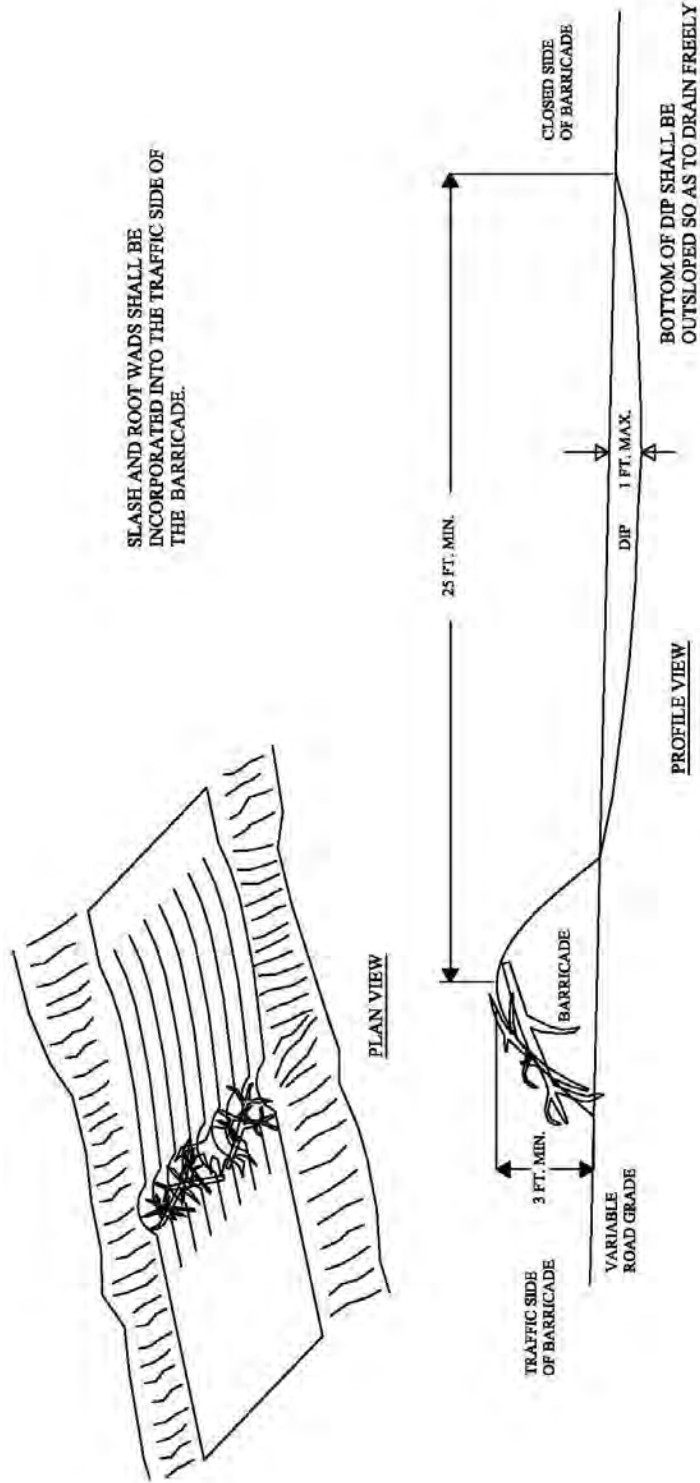
- 1) Excavated material may be wasted on the road surface on the downhill side of the excavation. Waste material shall be sloped at no steeper than $\frac{1}{2}$ H:1V.
- 2) Resulting trench shall be keyed into the ditchline and sloped towards the outside edge of the road with a drop of at least 1 foot in 10 feet.

Ditch Cleaning Detail

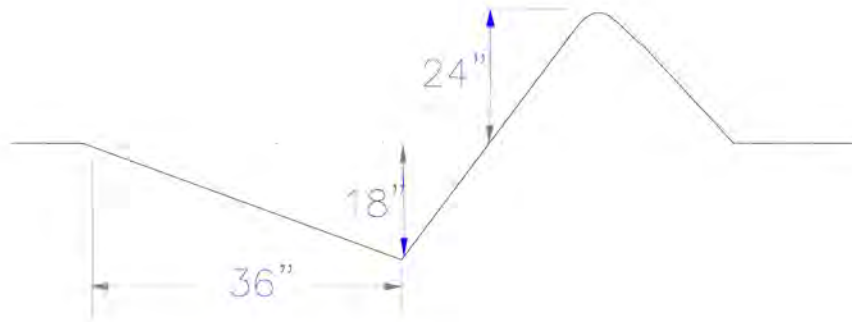
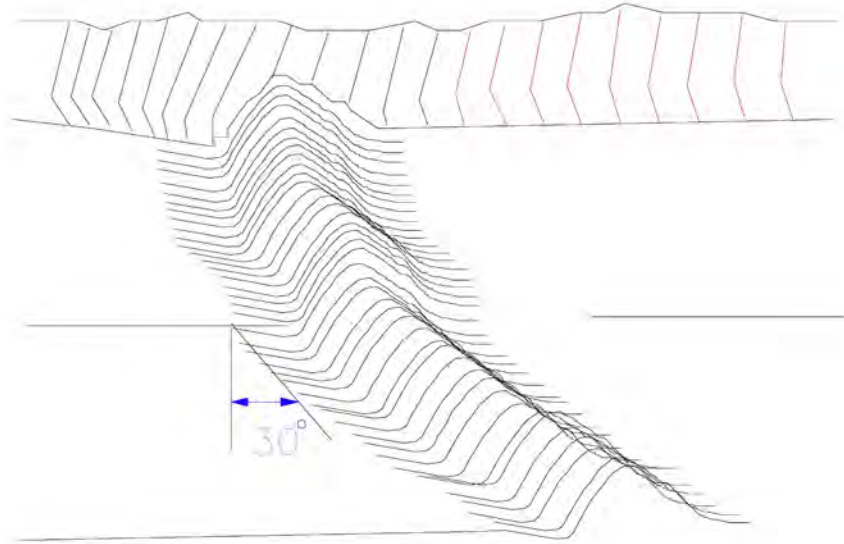


1. The backslope shall be no steeper than $\frac{1}{2}:1$, unless the material is hardpan or solid rock, in which case it may be $\frac{1}{4}:1$.
2. If there is sufficient width for the ditch without affecting the cut bank, than removing bank material is not required.
3. Bank material above the ditch shall be removed to a maximum height of 15 feet, if needed to meet the requirements of this detail.
4. If there is insufficient width to clean or construct a ditch without disturbing more than 15 vertical feet of bank, the Contract Administrator may authorize changes to this plan in order to still meet the intent of having a ditch, while staying within the excavation limits already set.
5. Ditch cleaning or construction shall not shrink the running surface of the road.

EARTHEN BARRICADE DETAIL

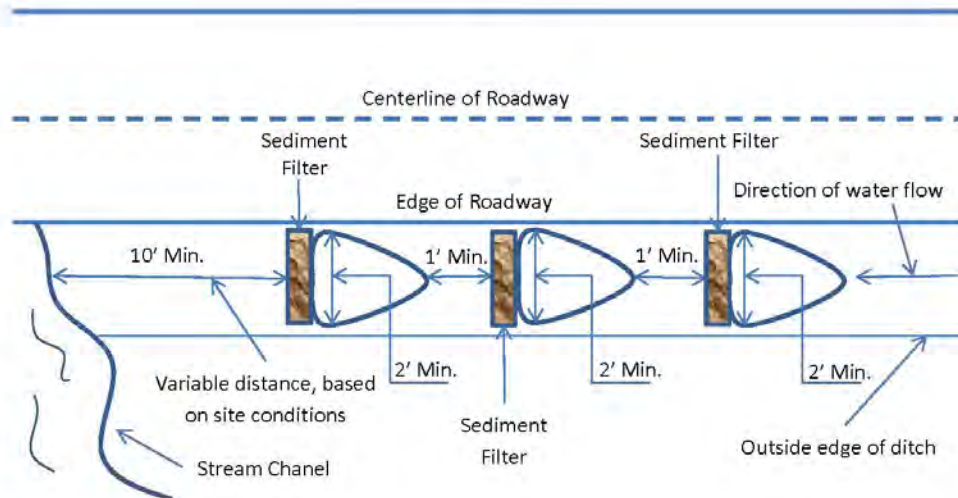


NON-DRIVABLE WATER BAR DETAIL

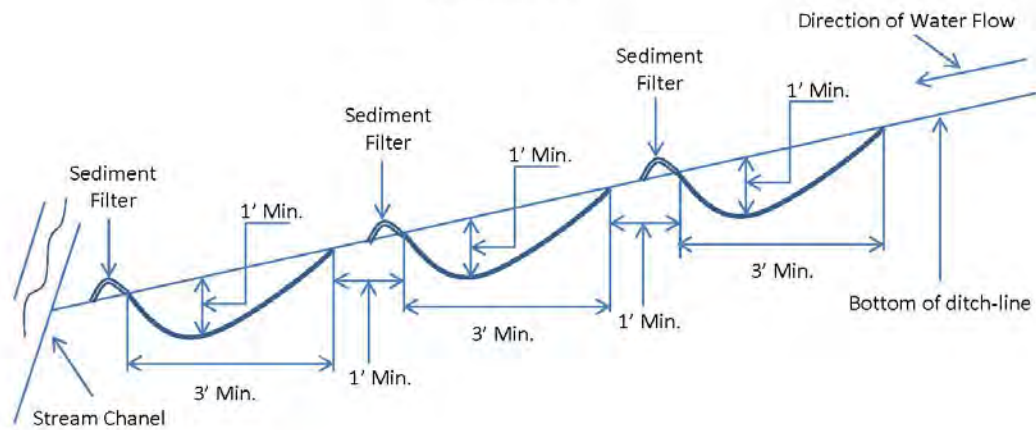


SEDIMENT TRAP DETAIL

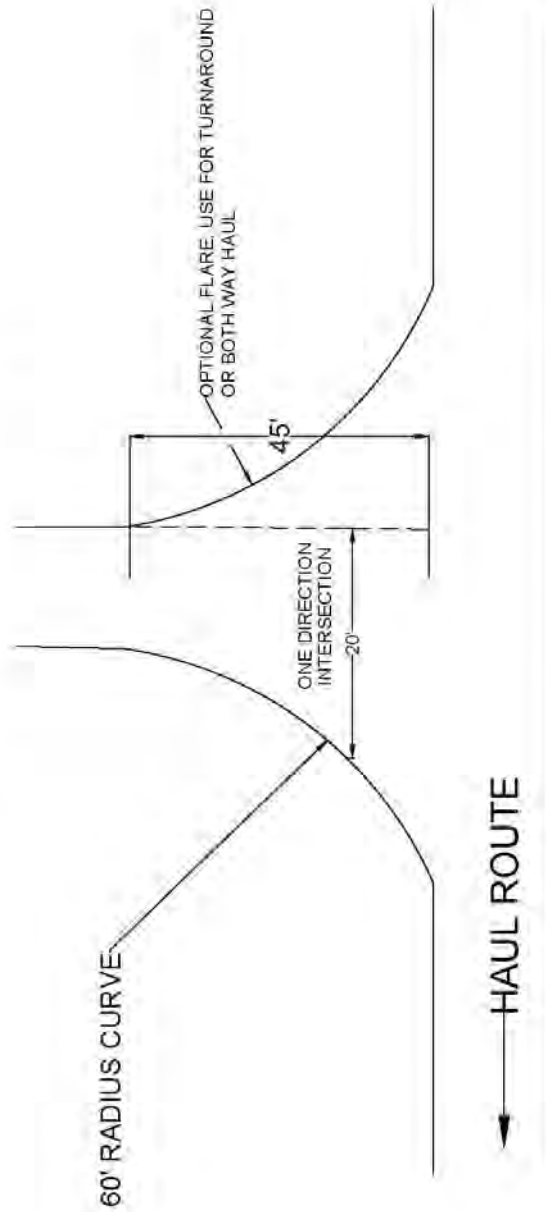
Top View



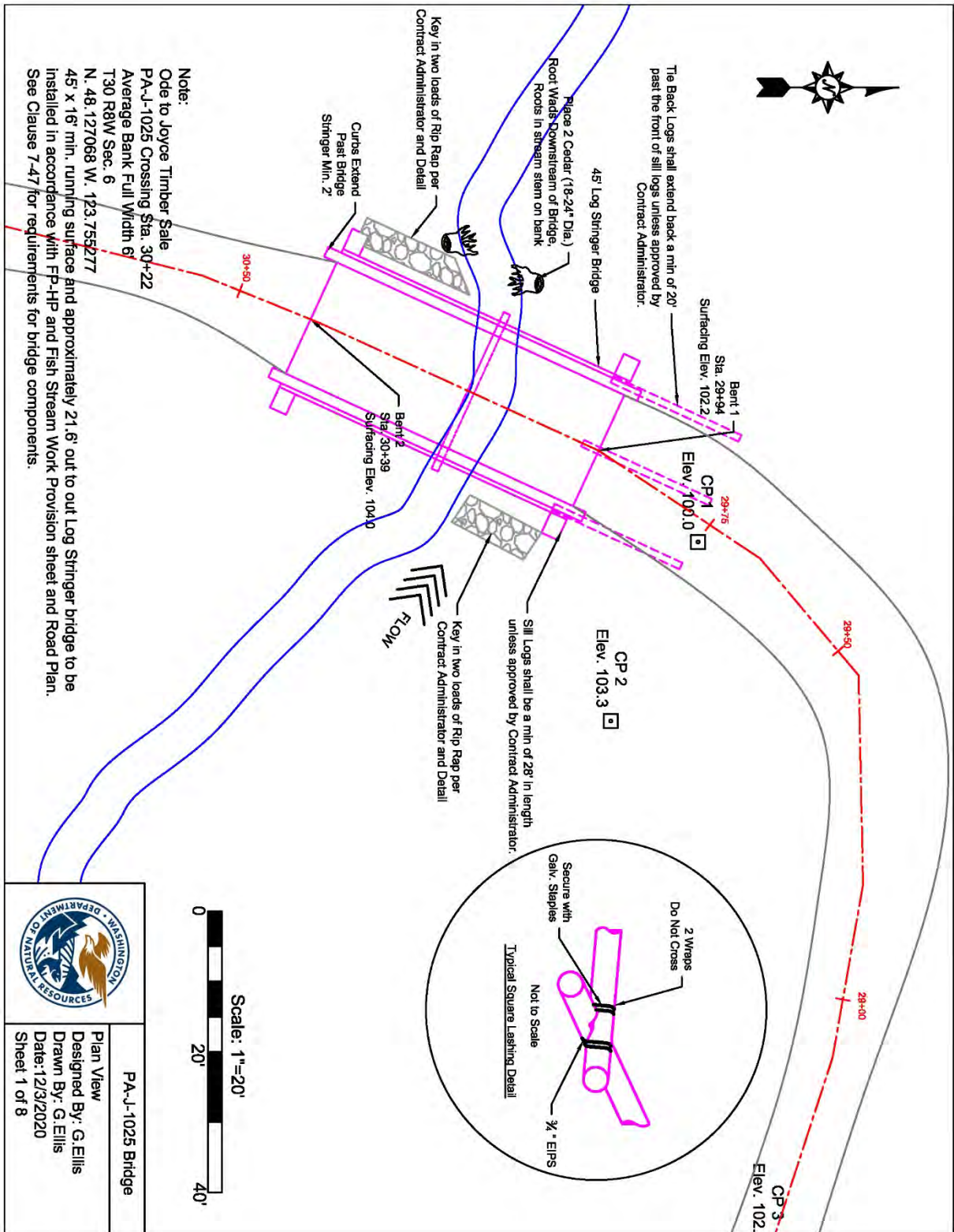
Profile View

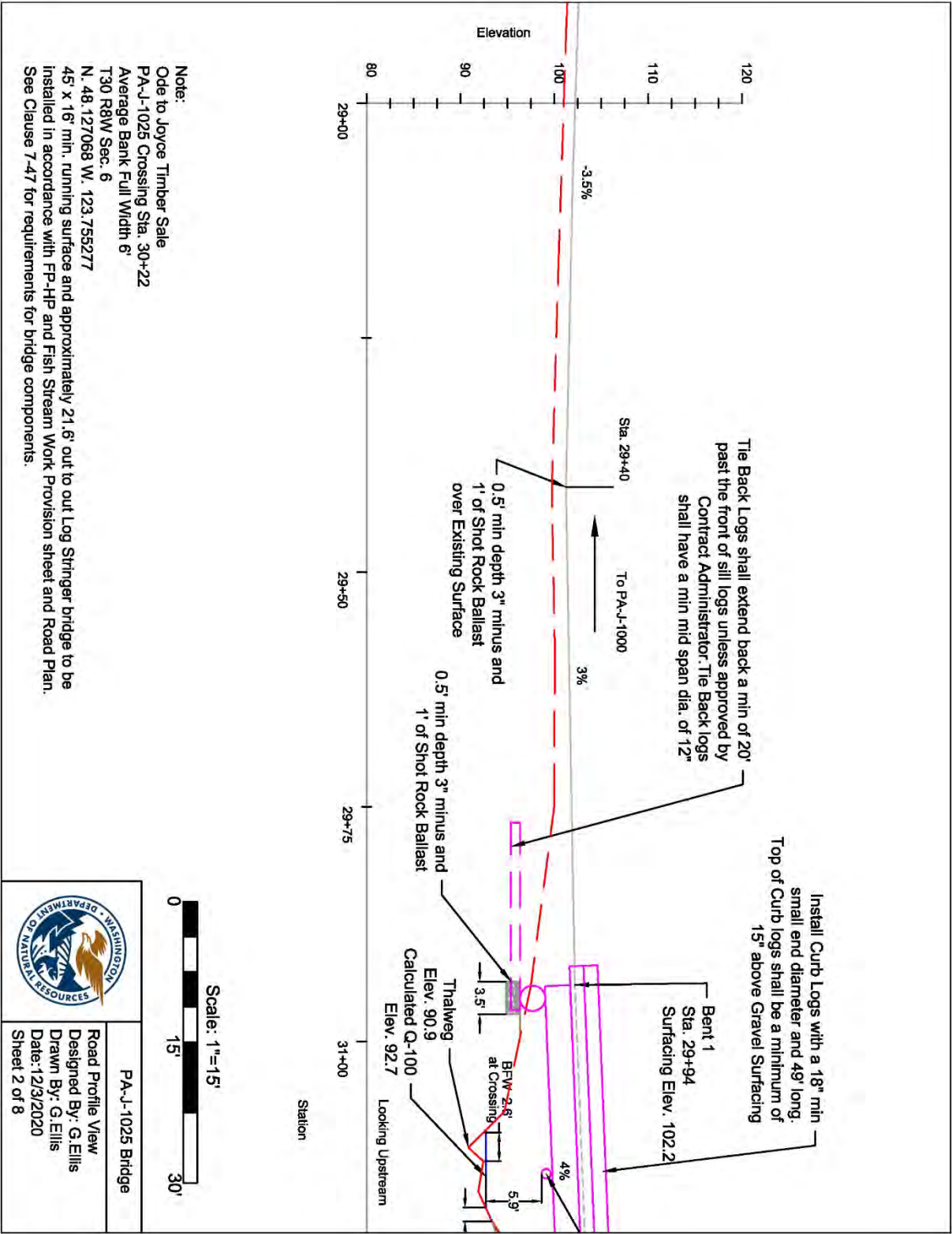


TYPICAL INTERSECTION



NOT TO SCALE

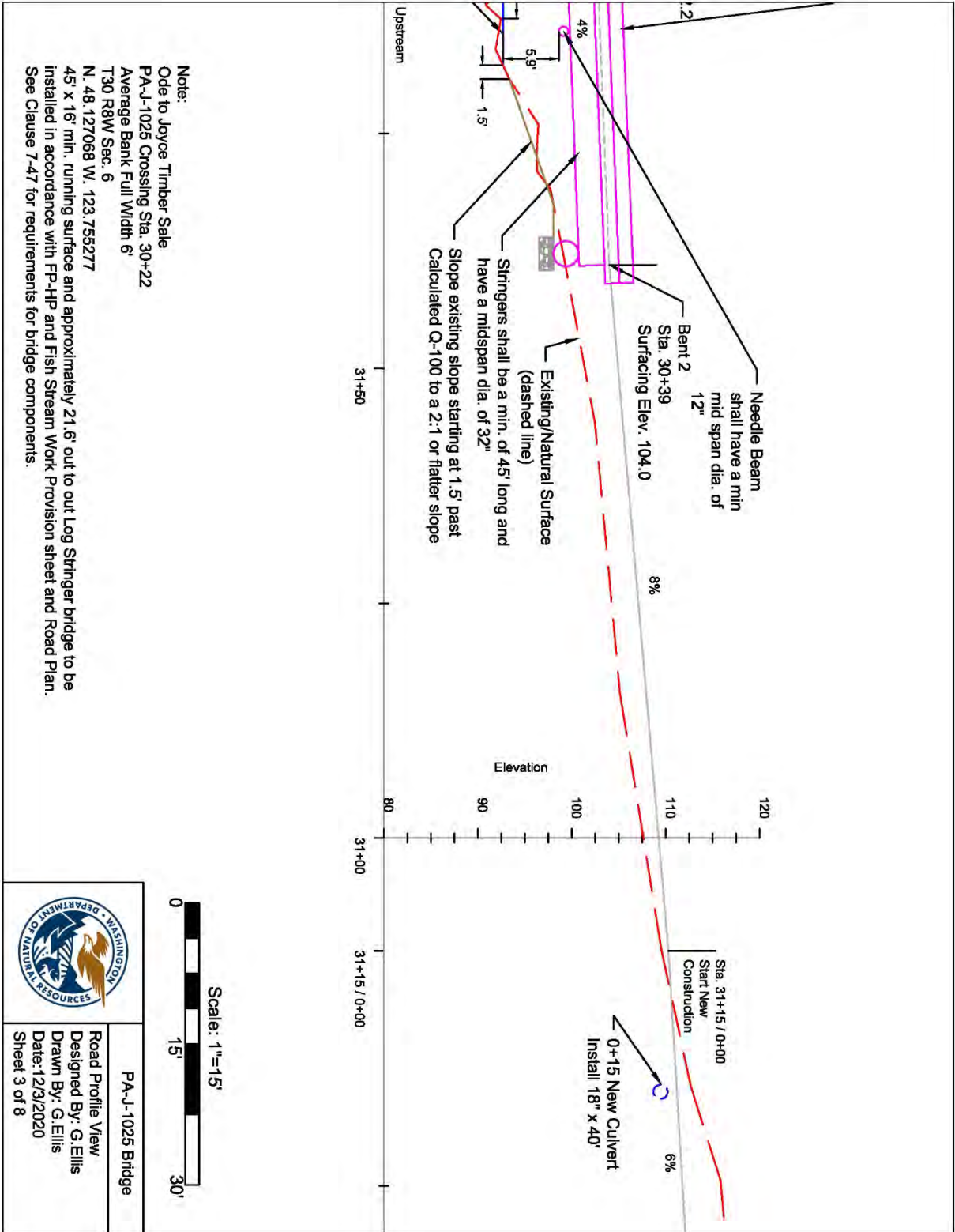


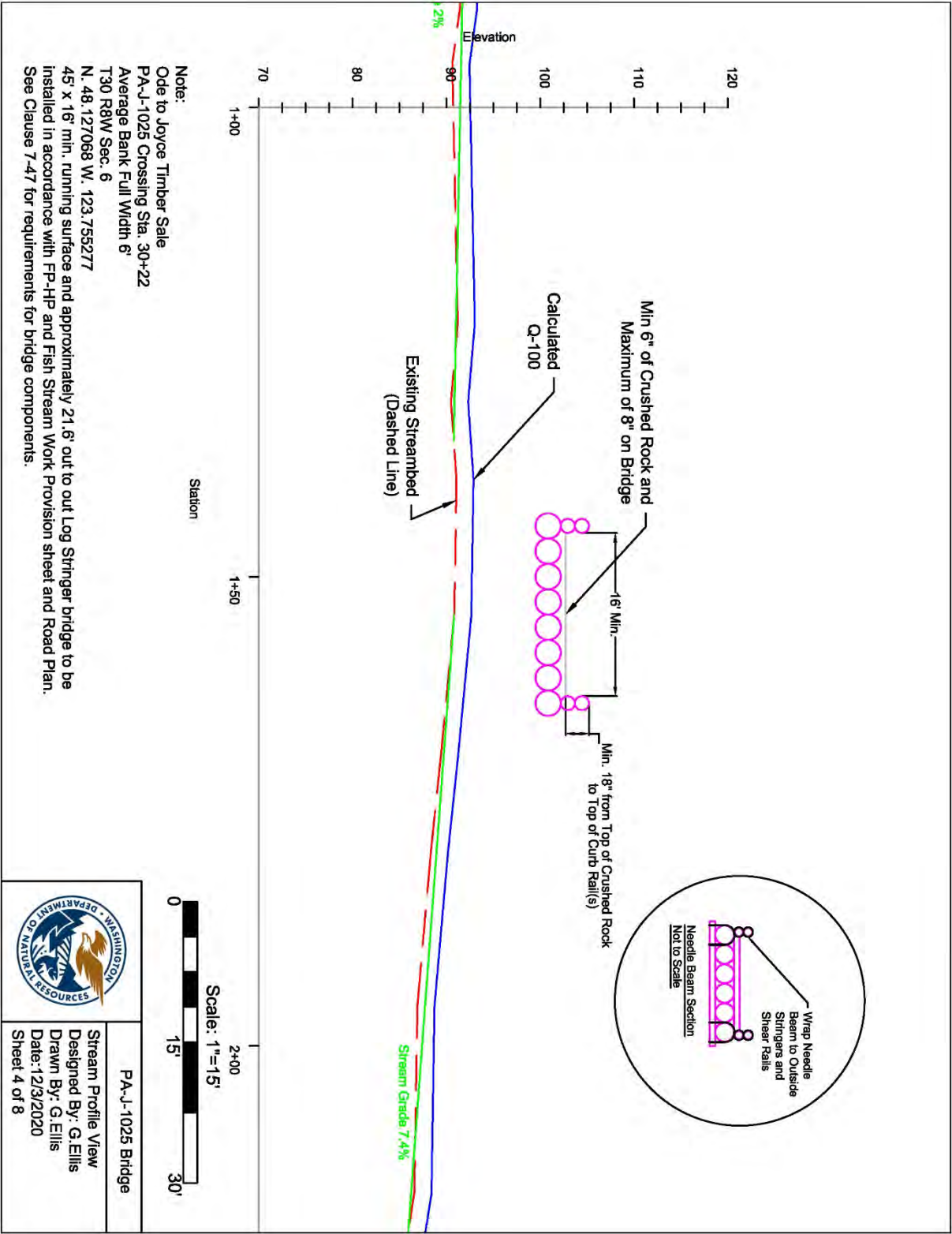


Note:
 Ode to Joyce Timber Sale
 PA-J-1025 Crossing Sta. 30+22
 Average Bank Full Width 6'
 T30 R8W Sec. 6
 N. 48.127068 W. 123.755277
 45' x 16' min. running surface and approximately 21.6' out to out Log Stringer bridge to be installed in accordance with FP-HP and Fish Stream Work Provision sheet and Road Plan.
 See Clause 7-47 for requirements for bridge components.



	PA-J-1025 Bridge
	Road Profile View Designed By: G.Ellis Drawn By: G.Ellis Date: 12/3/2020 Sheet 2 of 8

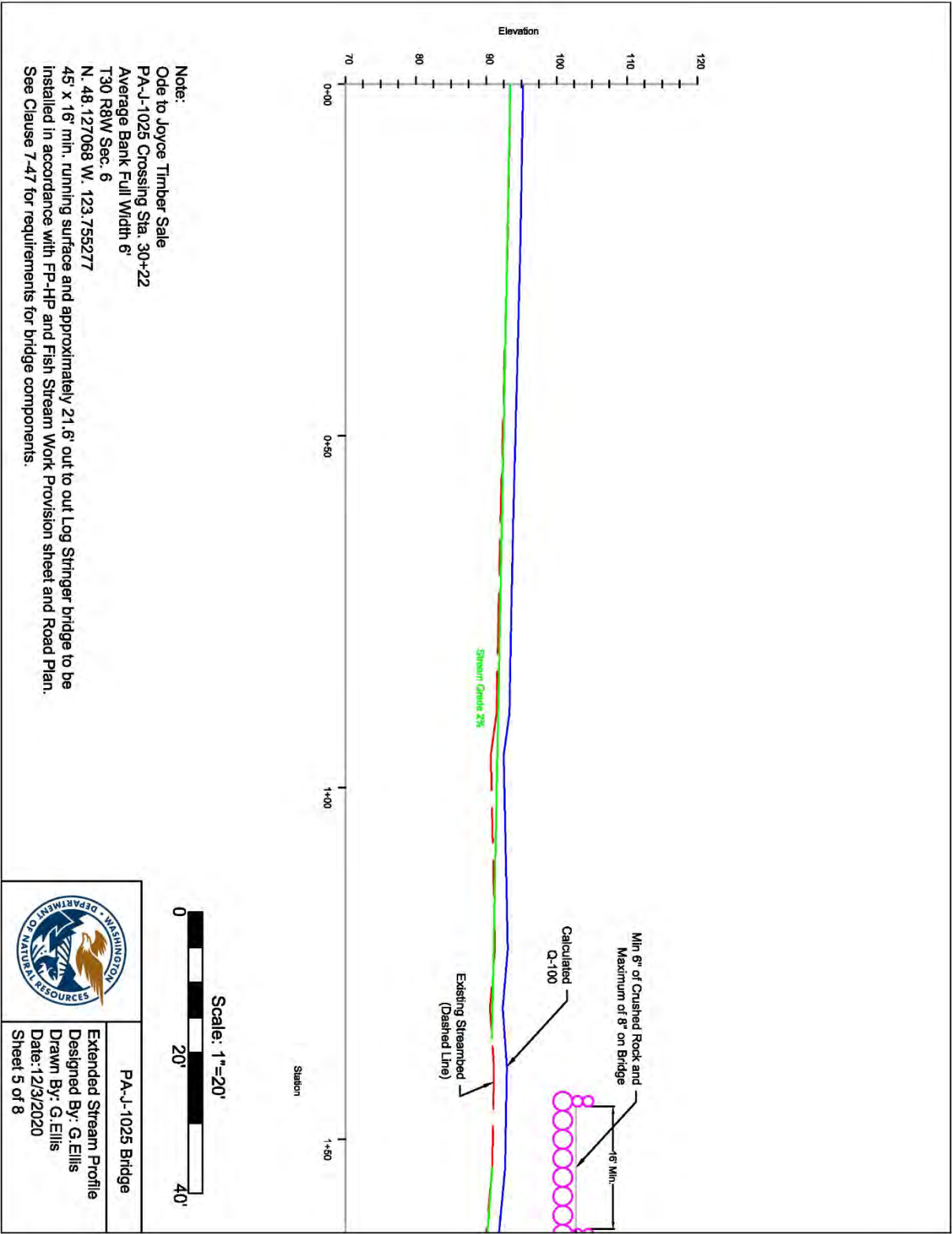


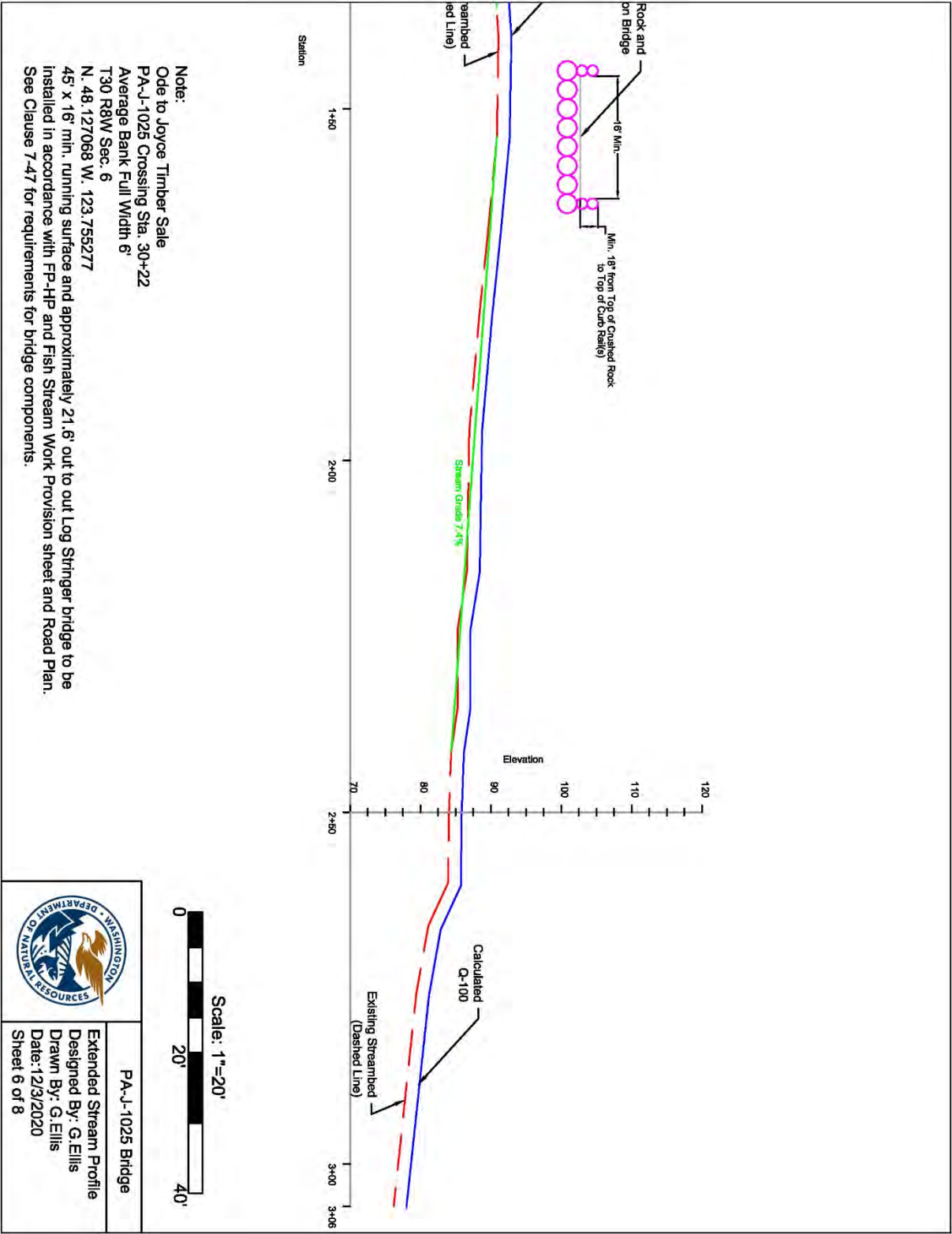


Note:
 Ode to Joyce Timber Sale
 PA-J-1025 Crossing Sta. 30+22
 Average Bank Full Width 6'
 T30 R8W Sec. 6
 N. 48. 127068 W. 123. 755277
 45' x 16' min. running surface and approximately 21.6' out to out Log Stringer bridge to be installed in accordance with FP-HP and Fish Stream Work Provision sheet and Road Plan.
 See Clause 7-47 for requirements for bridge components.



	PA-J-1025 Bridge
	Stream Profile View Designed By: G.Ellis Drawn By: G.Ellis Date: 12/3/2020 Sheet 4 of 8

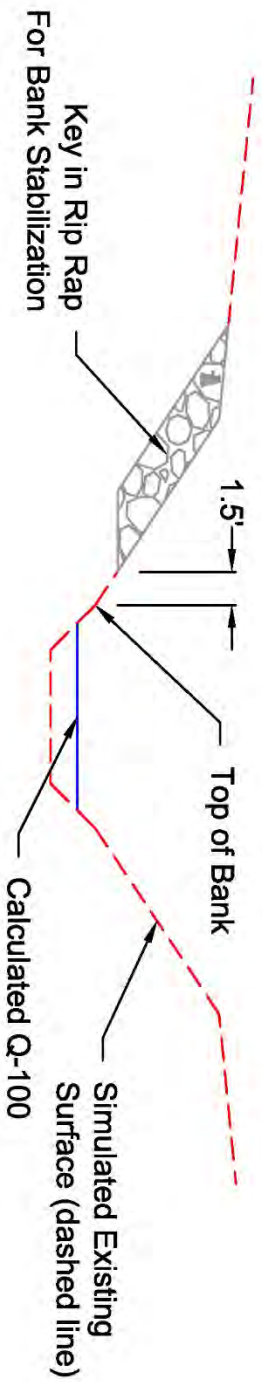




Note:
 Ode to Joyce Timber Sale
 PA-J-1025 Crossing Sta. 30+22
 Average Bank Full Width 6'
 T30 R8W Sec. 6
 N. 48.127068 W. 123.755277
 45' x 16' min. running surface and approximately 21.6' out to out Log Stringer bridge to be installed in accordance with FP-HP and Fish Stream Work Provision sheet and Road Plan.
 See Clause 7-47 for requirements for bridge components.



	PA-J-1025 Bridge
	Extended Stream Profile Designed By: G. Ellis Drawn By: G. Ellis Date: 12/3/2020 Sheet 6 of 8



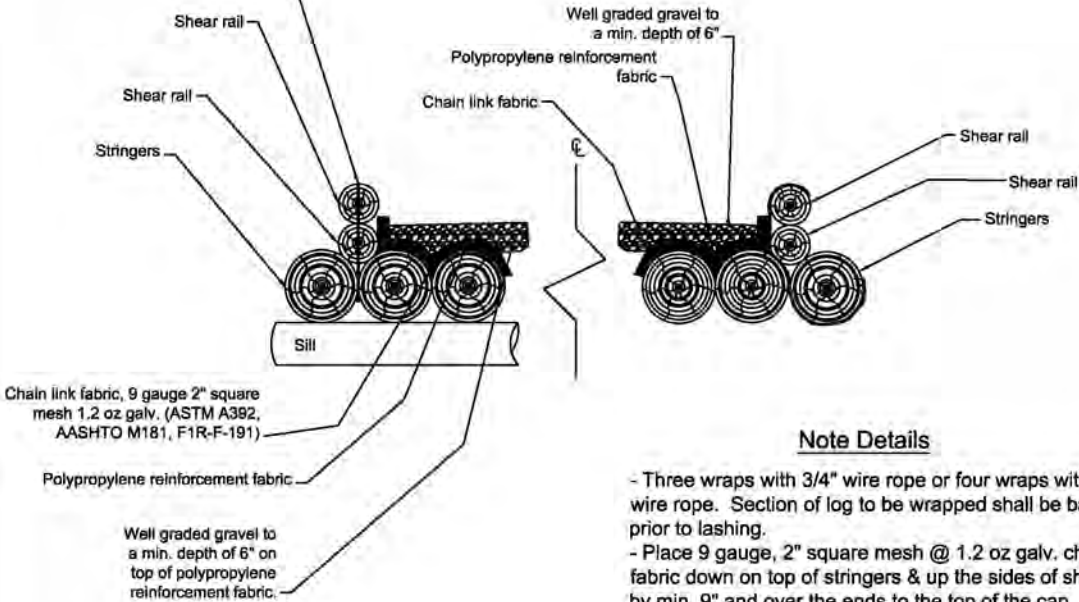
Drawing not to scale

Note:
 Ode to Joyce Timber Sale
 PA-J-1025 Crossing Sta. 30+22
 Average Bank Full Width 6'
 T30 R8W Sec. 6
 N. 48.127068 W. 123.755277
 45' x 16' min. running surface and approximately 21.6' out to out Log Stringer bridge to be installed in accordance with FP-HP and Fish Stream Work Provision sheet and Road Plan.
 See Clause 7-47 for requirements for bridge components.

	PA-J-1025 Bridge
	Keyed Rip Rap Detail Designed By: G. Ellis Drawn By: G. Ellis Date: 12/3/2020 Sheet 7 of 8

Bridge Surfacing & Shear Rail Details

1" Ø rod (drift pin) through both shear rails, lashed to log stringer. Minimum of 4 pins shall be used

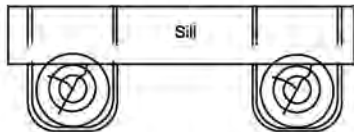


Chain link fabric, 9 gauge 2" square mesh 1.2 oz galv. (ASTM A392, AASHTO M181, F1R-F-191)

Polypropylene reinforcement fabric

Well graded gravel to a min. depth of 6" on top of polypropylene reinforcement fabric.

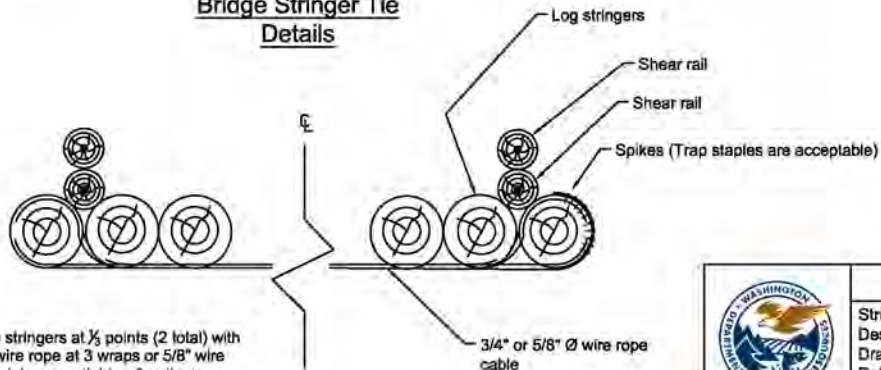
Lashing Detail



Note Details

- Three wraps with 3/4" wire rope or four wraps with 5/8" wire rope. Section of log to be wrapped shall be barked prior to lashing.
- Place 9 gauge, 2" square mesh @ 1.2 oz galv. chain link fabric down on top of stringers & up the sides of shear rails by min. 9" and over the ends to the top of the cap.
- After placement of chain link fabric, place polypropylene reinforcement fabric over the chain link fabric.
- Place well graded gravel over the polypropylene reinforcement fabric to a min. depth of 6". Finished surface elevation shall transition smoothly to road surface.
- Rail logs shall be selected and placed so that at least 15" are free and above the top of the gravel surfacing.

Bridge Stringer Tie Details



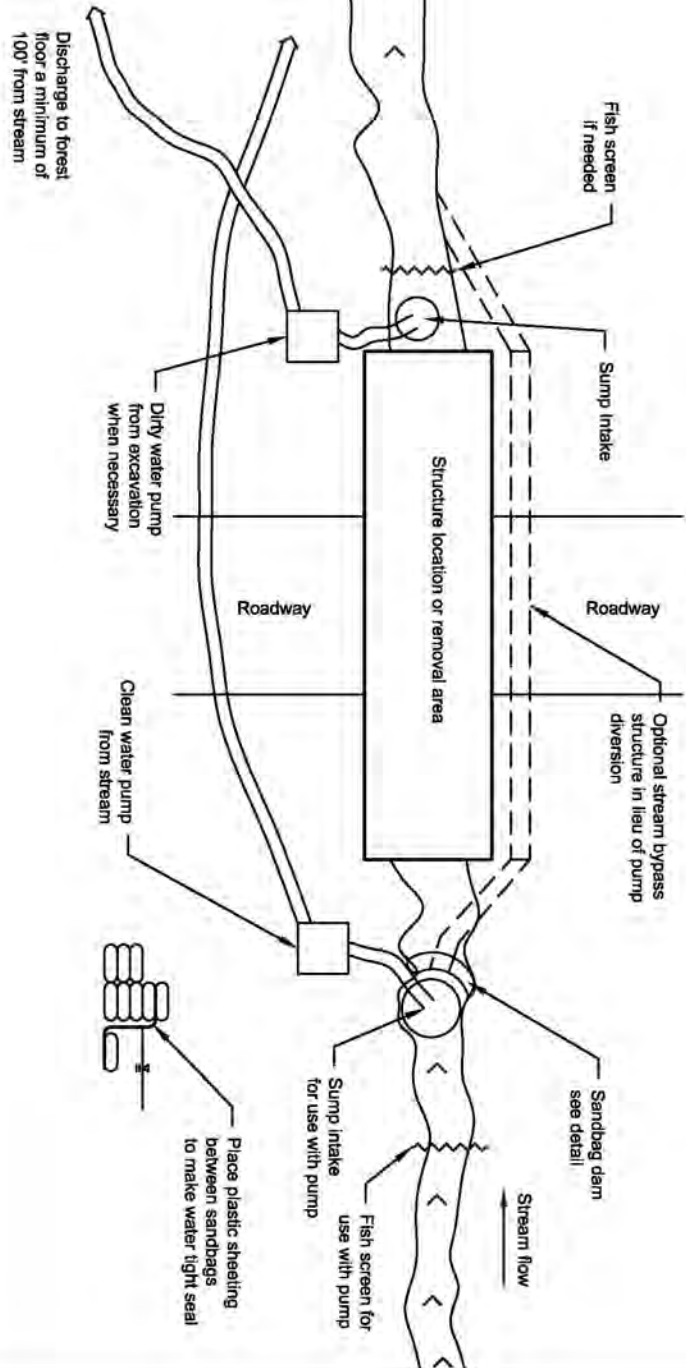
Wrap stringers at $\frac{1}{3}$ points (2 total) with 3/4" wire rope at 3 wraps or 5/8" wire rope at 4 wraps, tighten & spike to stringers.



PA-J-1025 Bridge

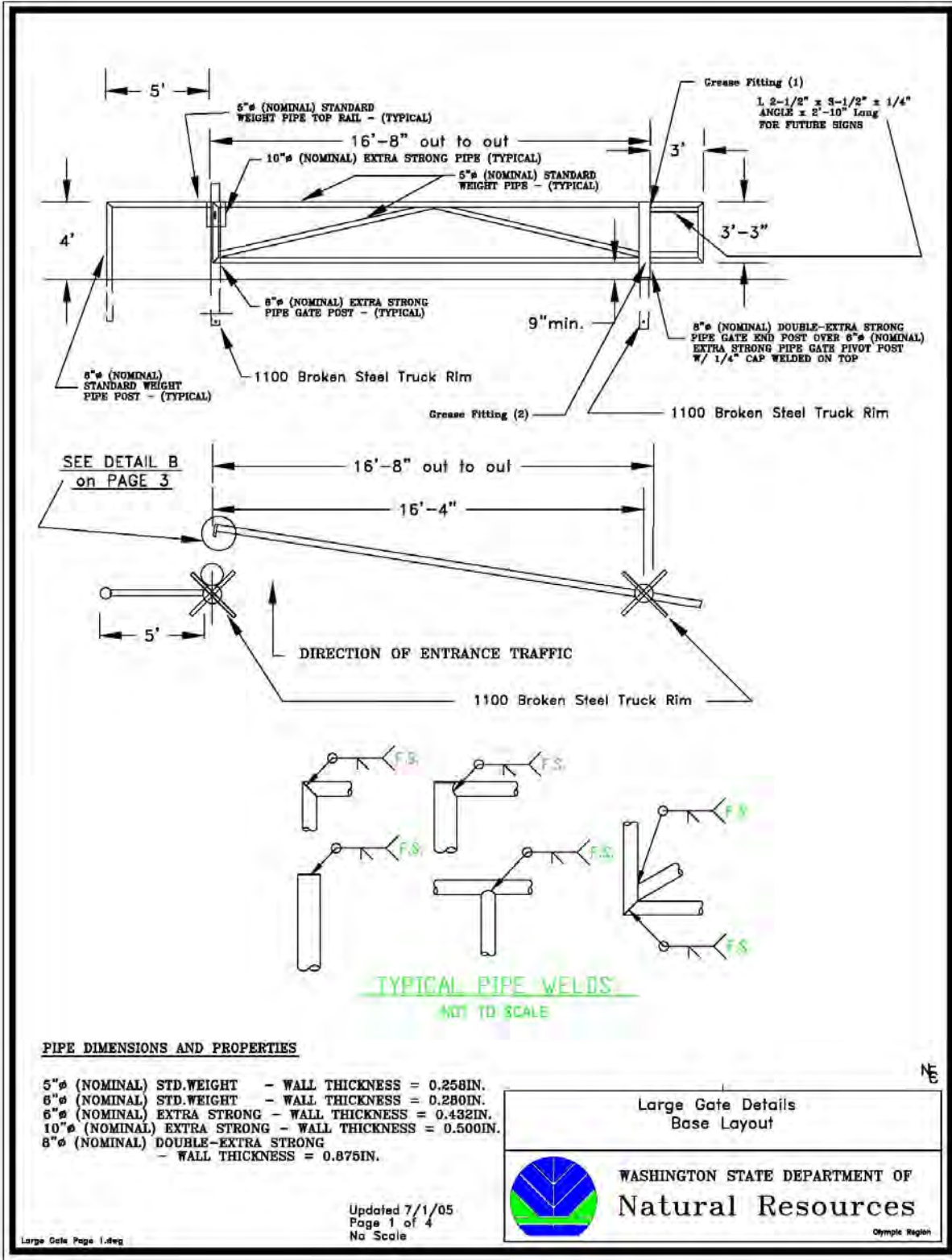
Stringer and Rail Details
Designed By: G.Ellis
Drawn By: G.Ellis
Date: 12/3/2020
Sheet 8 of 8

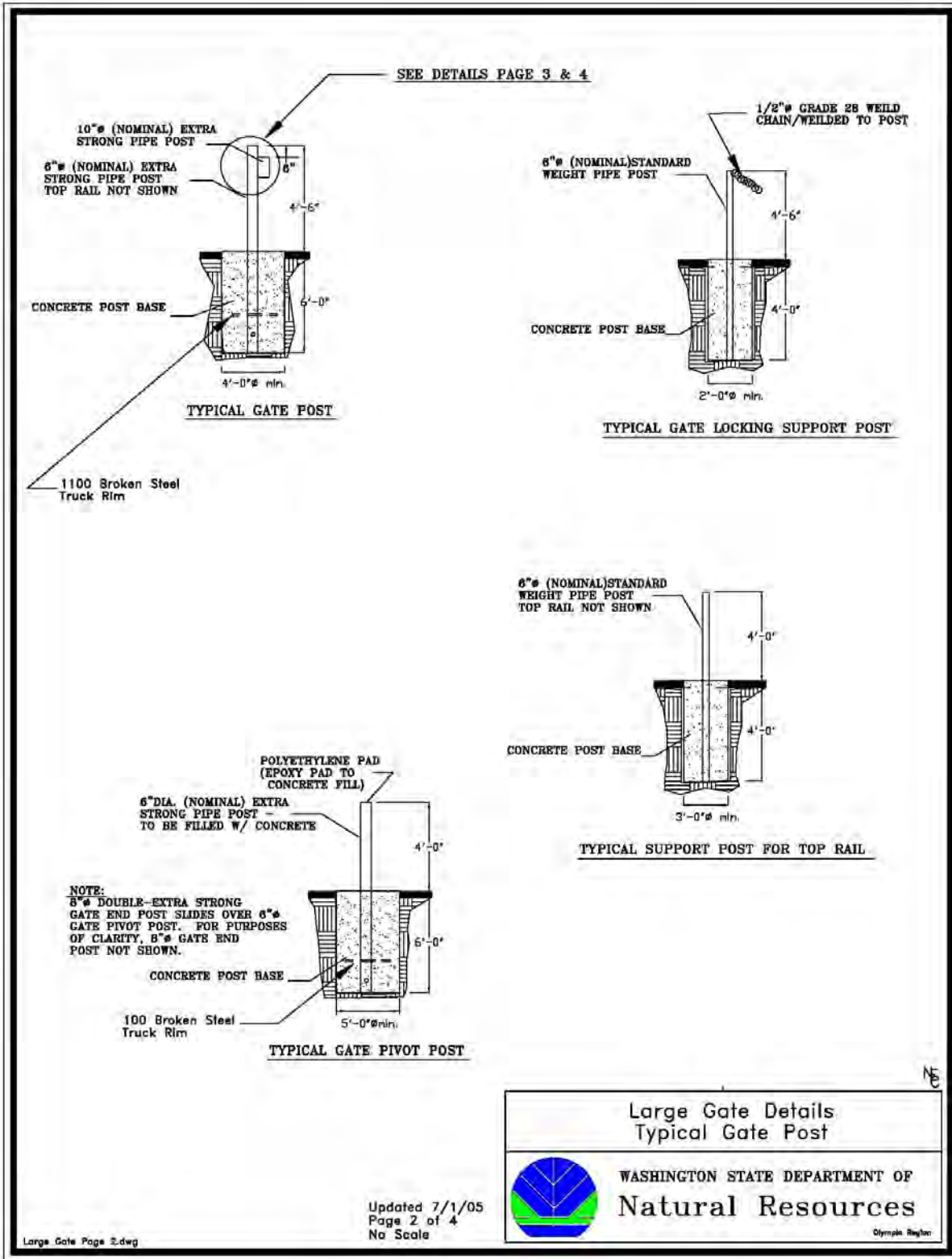
General Stream Diversion Plan

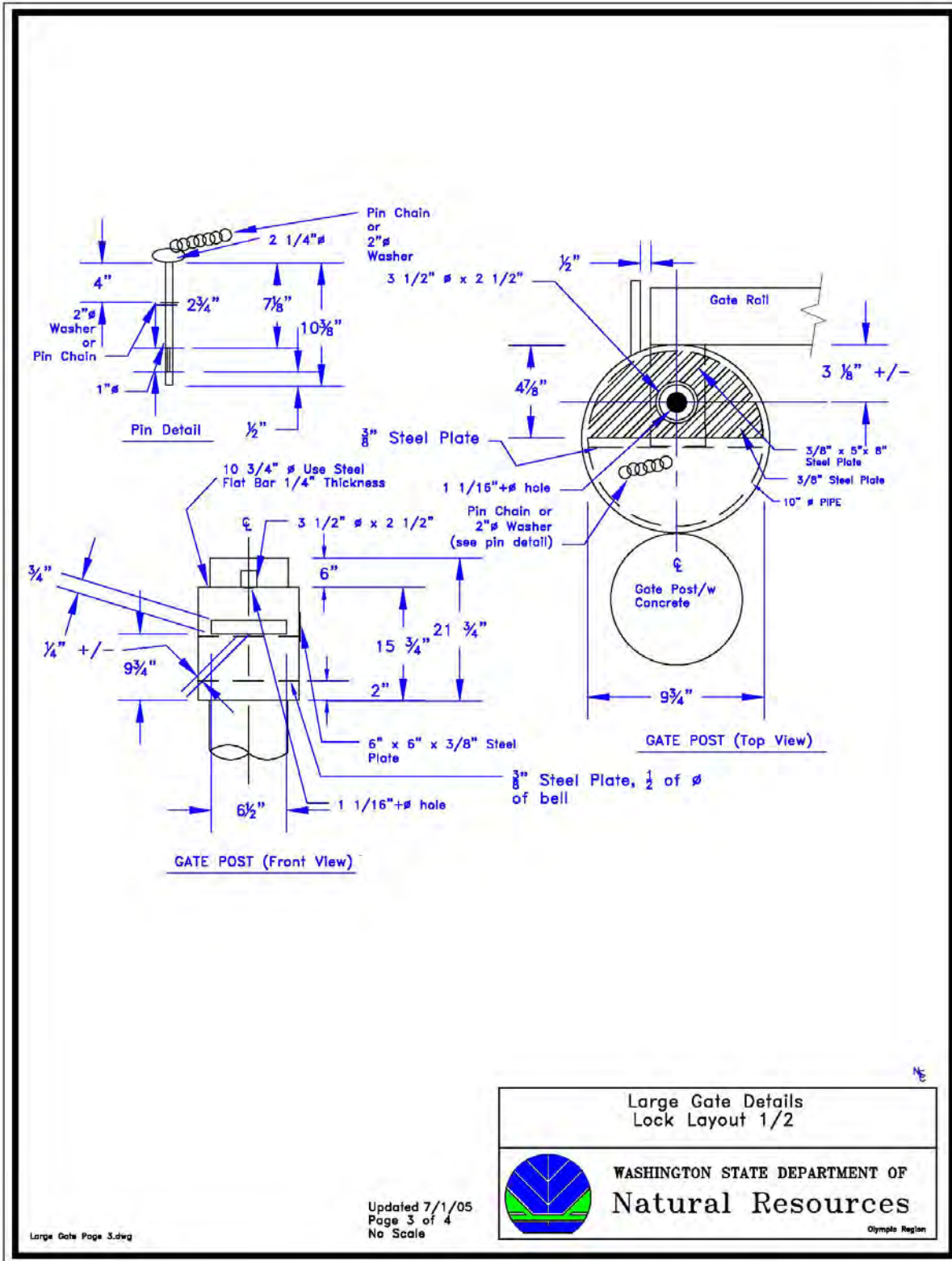


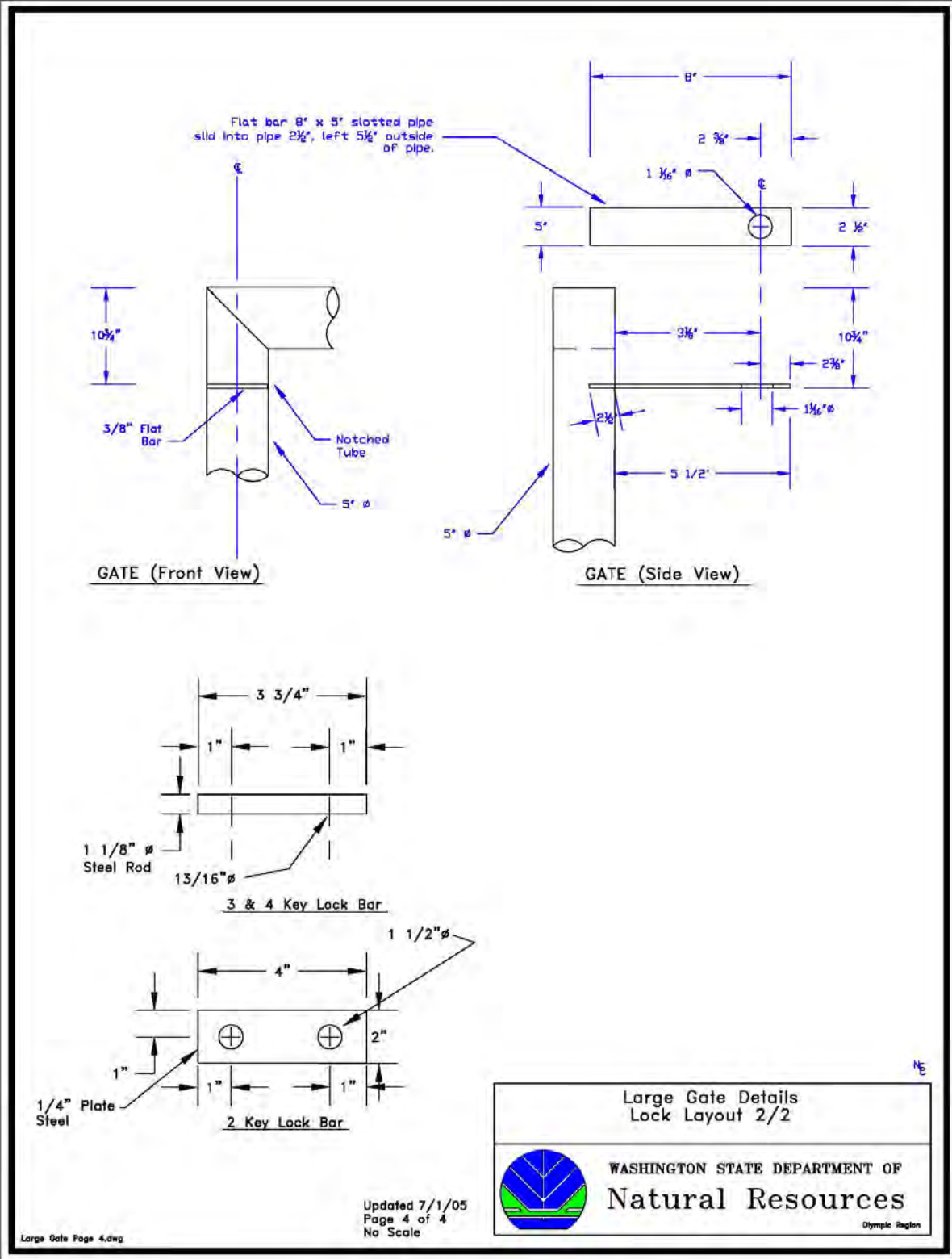
Note:
Drawing not to Scale

	General Stream Diversion Plan
	Contract: 30-100666 Designed By: G. Ellis Drawn By: G. Ellis Date: 12/3/2020



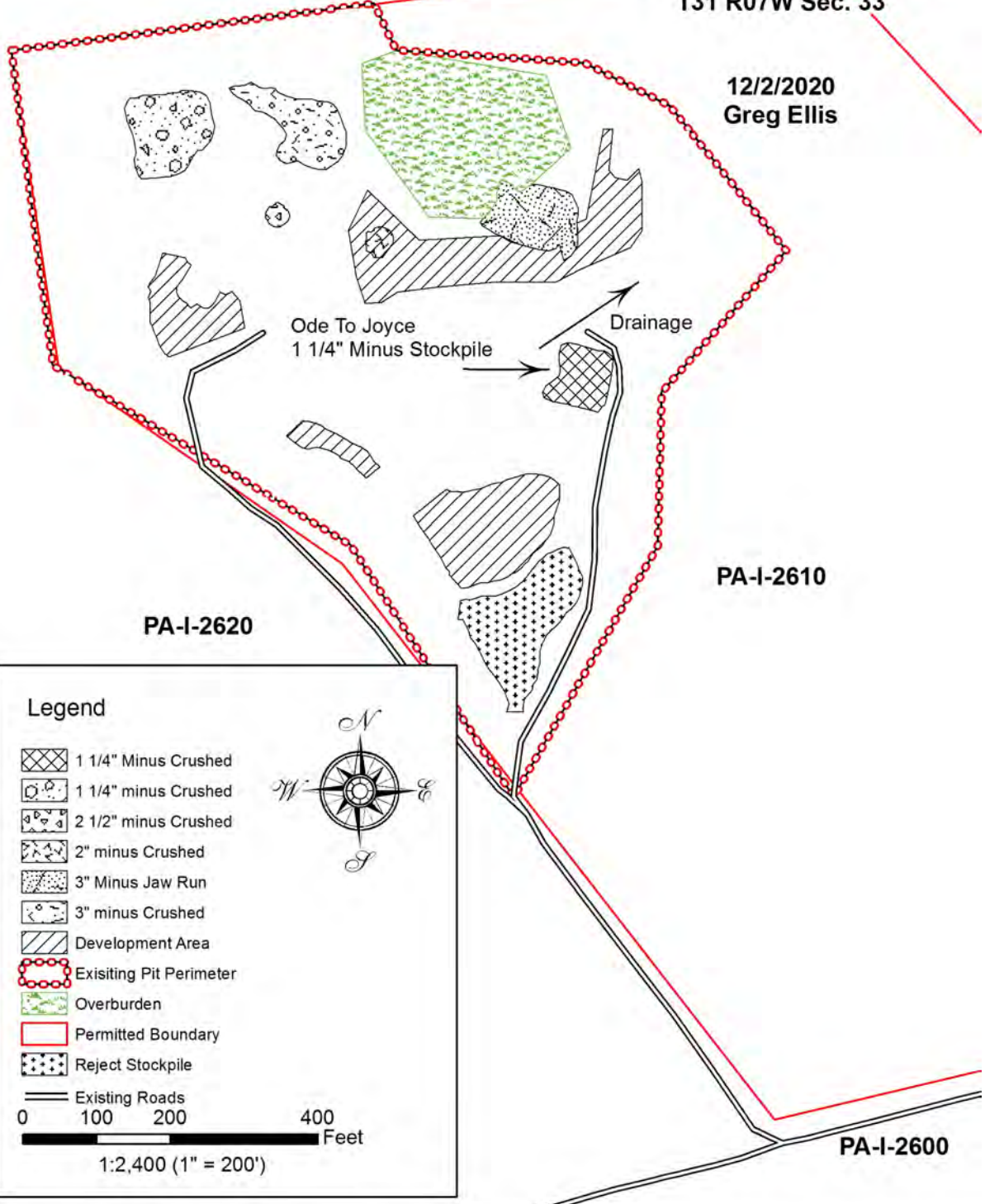






Ode To Joyce
Place Pit Development Plan
T31 R07W Sec. 33

12/2/2020
Greg Ellis



PA-I-2620

PA-I-2610

PA-I-2600

Legend

- 1 1/4" Minus Crushed
- 1 1/4" minus Crushed
- 2 1/2" minus Crushed
- 2" minus Crushed
- 3" Minus Jaw Run
- 3" minus Crushed
- Development Area
- Existing Pit Perimeter
- Overburden
- Permitted Boundary
- Reject Stockpile
- Existing Roads

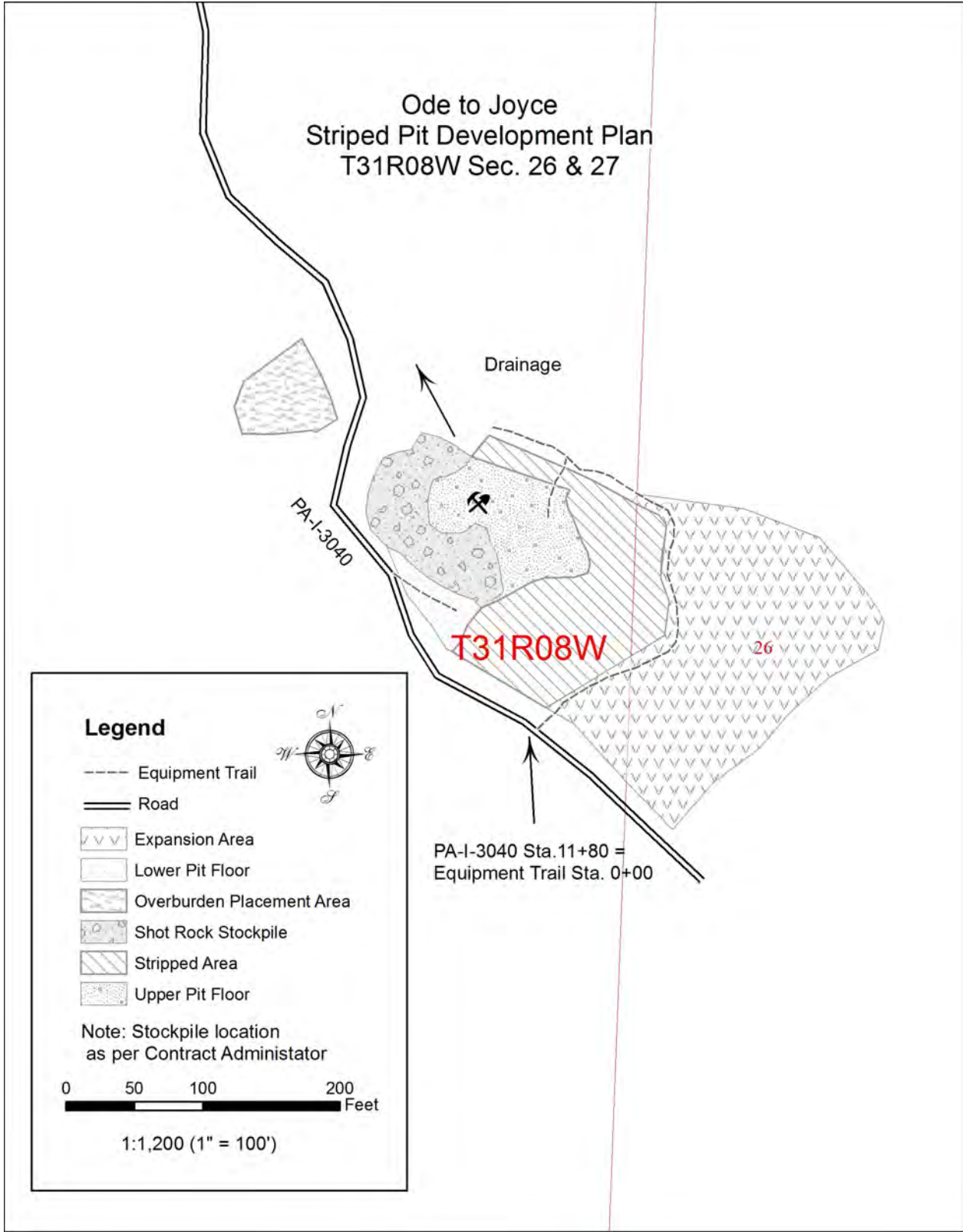
1:2,400 (1" = 200')

Place Pit
ROCK SOURCE DEVELOPMENT PLAN
Sec. 33, T.31N., R.07W.
PIT USE REQUIREMENTS

PIT USE REQUIREMENTS include but are not limited to the following:

1. Activity and Marbled Murrelet restrictions per **Clause 1-25** and **Clause 1-27**
2. Purchaser shall give the Contract Administrator a minimum of 7 days' notice prior to commencing any operations, and prepare an approved ROCK SOURCE DEVELOPMENT PLAN as per **Clause 6-10**.
3. Only the quantities and sorts specified in this road plan for this sale may be used or manufactured, unless otherwise approved by the Contract Administrator in writing.
4. If Purchaser elects to use rock from a stockpile or from a pit face, Purchaser shall remove no more than the following volume of material (cubic yards truck measure) from the existing stockpile or pit face as shown on the PLAN VIEW and PROFILE VIEW, unless otherwise approved by the Contract Administrator in writing.
5. Maintain drainage of the pit floor and all drainage structures within the pit boundaries at all times to the designated settling ponds.
6. Excavated face height shall not exceed 15 feet.
7. All excavated slopes shall have a 1 1/2:1 backslope or less at the completion of operations.
8. A minimum 4 foot high berm shall be constructed and constantly maintained along the upper edge of excavated pit faces. No pit faces shall be left unblocked at any time.
9. All operations shall be completed prior to the end of each operating season, including but not limited to: drainage maintenance, sloping of the excavated face, and construction of berms, unless otherwise approved in writing by the Contract Administrator.
10. The quality and quantity of rock and materials are not guaranteed.
11. All material shall remain the property of the State.
12. At the conclusion of operations, Purchaser shall ask the Contract Administrator for written approval of the final rock source condition and compliance with the terms of this plan.
13. All operations shall be carried out in compliance with the regulation of:
 - a. Regulations and Standards Applicable to "Metal and Nonmetal Mining and Milling Operations" (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration
14. All work shall be conducted according to relevant specifications in this Road Plan, and the Contract Administrator.

Ode to Joyce
Striped Pit Development Plan
T31R08W Sec. 26 & 27



Striped Pit
ROCK SOURCE DEVELOPMENT PLAN
Sec. 26 & 27, T.31N., R.08W.
PIT USE REQUIREMENTS

1. Pit expansion shall commence in the following order until the desired quantity of rock is achieved; Mid Pit Stripped Areas; then Upper Pit Stripped Areas and then Expansion area.
2. Activity restrictions per Clause 1-25.
3. Only the quantities and sorts specified in this road plan for this sale may be used or manufactured, unless otherwise approved by the Contract Administrator in writing.
4. Maintain drainage of the pit floor and all drainage structures within the pit boundaries. The pit floor shall have continuity of slope be left in a smooth and neat condition, providing drainage to the southwest at a minimum of 2 percent. All knobs, bumps, or extrusions shall be removed to the designated floor level by excavation or drill and shoot techniques.
5. Excavated face height shall not exceed 20 feet and shall be sloped no steeper than 1/4:1.
6. Excavated slopes shall have a 1 1/2:1 backslope or less at the completion of operations.
7. A minimum 4 foot high berm shall be constructed and constantly maintained along the upper edge of excavated pit faces. No pit faces shall be left unblocked at any time.
8. All operations shall be completed prior to the end of each operating season, including but not limited to: drainage maintenance, sloping of the excavated face, and construction of berms, unless otherwise approved in writing by the Contract Administrator.
9. At the end of operations, pit faces and walls shall be scaled and cleared of loose and overhanging material, benches shall have safety berms constructed or access blocked to highway vehicles. Upon completion of operations in the pit, the area will be left in a condition that will not endanger public safety, damage property, or be hazardous to animal or human life. The Purchaser shall use Light Loose Rip Rap to block the drill trail.
10. All material shall remain the property of the State.
11. At the conclusion of operations, Purchaser shall ask the Contract Administrator for written approval of the final rock source condition and compliance with the terms of this plan.
12. All work shall be conducted according to relevant specifications in this Road Plan, and the Contract Administrator.
13. All operations shall be carried out in compliance with the regulation of:
 - a. Regulations and Standards Applicable to "Metal and Nonmetal Mining and Milling Operations" (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration
14. Purchaser shall give the Contract Administrator a minimum of 7 days notice prior to commencing any operations.
15. Purchaser is required to inform Clallam County Dispatch (PenCom) of a day and approximate time of the pit blasting.

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
OLYMPIC REGION

INFORMATIONAL BLASTING PLAN

Timber Sale/Project Name: _____ App./Project No.: _____

1. Blaster-in-Charge: Name: _____
Company: _____
Address: _____

Telephone: _____
2. Quarry Name/Location: _____
3. Total Estimated Cubic Yards in Blast (loose): _____
4. Hole Spacing: _____
5. Burden: _____
6. Hole Diameter: _____
7. Hole Depth: _____
8. Sub Drill: _____
9. Number of Holes: _____
10. Stemming Depth: _____
11. Explosive (mfg., name, density, %, V.O.D.): _____

12. Type and Size of Primer (if applicable): _____
13. Total Weight of Primers for Shot: _____
14. Calculated Powder Factor/Cubic Yard: _____
15. Number of Delays (in M.S.): _____

16. Number of Holes Fired on Each Delay: _____

17. Total Amount of Explosives Fired on Each Delay: _____

18. Type of Blasting Machine: _____

19. Date, Start Drilling: _____
20. Date and Time, Start Loading: _____
21. Date and Time of Blast (approx.): _____

INFORMATIONAL BLASTING PLAN
M-126PAC (03/04)

22. Detail drawing of delay system (show hole pattern and delays in milliseconds). Attach additional sheets if required:

23. Typical cross-section of hole (show primer, main charge, sub drill, and stemming):

23. Submitted by: _____ Date: _____

24. Received by: _____ Date: _____

Note: Attach copies of manufacturer=s data sheet(s) for explosive and caps.

INFORMATIONAL BLASTING PLAN
M-126PAC (03/04)

		SUMMARY - Road Development Costs												
SALE NAME:	Ode To Joyce	CONTRACT#:	30-100666	REGION:	Olympic	DISTRICT:	Straits							
LEGAL DESCRIPTION:	0											TOTAL		
ROAD NAME:	I+40 Spur	J-1025.1	J-1105	J-1035.1	J-1215	I+60 Spur	BPA-3845	J-1025	J-1200	J-1000	J-1100	TOTAL:	SHEET #2	
ROAD TYPE:	Construction	Construction	Construction	Construction	Construction	Construction	Recon.	Recon.	Recon.	Prehaul	Prehaul			
NUMBER OF STATIONS:	140	685	1030	235	2460	160	245	3115	1285	10230	125	19730	50270	
SIDESLOPE:	5.0%	10.0%	20.0%	20.0%	60.0%	5.0%	5.0%	30.0%	50.0%	0.0%	0.0%	205%	0%	
CLEARING AND GRUBBING:	\$140	\$953	\$1,433	\$327	\$9,016	\$223	\$175	\$5,327	\$2,197	\$0	\$0	\$19,789	\$0	
ROAD BRUSHING:	\$0	\$0	\$0	\$0	\$0	\$0	\$44	\$566	\$0	\$0	\$0	\$610	\$402	
EXCAVATION AND FILL:	\$198	\$4,068	\$2,328	\$531	\$46,375	\$226	\$346	\$8,800	\$9,801	\$0	\$0	\$72,673	\$0	
ROAD GRADING:	\$0	\$0	\$0	\$0	\$0	\$0	\$16	\$202	\$84	\$666	\$8	\$976	\$3,056	
DITCH CLEANING/CONSTRUCTION:	\$0	\$0	\$0	\$0	\$0	\$0	\$96	\$1,215	\$801	\$0	\$0	\$1,812	\$1,801	
ROCK TOTALS (Cu. Yds.)/ROCK COSTS:														
Ballast:	7628	150	580	855	220	1,890	160	220	2,635	920	0	0	\$7,628	\$0
Surface:	15784	\$2,577	\$10,257	\$14,980	\$3,947	\$36,269	\$3,096	\$3,767	\$45,972	\$17,185	\$0	\$0	\$138,080	0
Oversize:	75	70	280	400	120	920	60	90	1,210	530	100	0	\$3,779	\$12,005
	\$1,535	\$6,280	\$8,897	\$2,733	\$22,025	\$1,371	\$1,966	\$26,868	\$12,682	\$1,535	\$0	\$85,893	200,169	
	0	0	0	0	15	0	0	40	0	0	0	55	20	
	\$0	\$0	\$0	\$0	\$284	\$0	\$0	\$688	\$0	\$0	\$0	\$972	\$374	
CULVERTS AND FLOWERS:	\$924	\$2,156	\$1,848	\$2,156	\$2,772	\$0	\$1,232	\$5,852	\$3,881	\$0	\$0	\$20,821	\$3,696	
STRUCTURES:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,341	\$0	\$15,000	\$0	\$31,341	\$0	
MISC. EXPENSES:	\$153	\$40	\$60	\$14	\$164	\$9	\$14	\$472	\$1,576	\$600	\$7	\$3,110	\$3,125	
OVERHEAD:	\$442	\$1,900	\$2,364	\$777	\$9,352	\$394	\$612	\$8,984	\$3,833	\$1,424	\$1	\$30,084	\$17,351	
TOTAL COSTS:	\$5,969	\$25,655	\$31,909	\$10,484	\$126,258	\$5,319	\$8,268	\$121,288	\$51,740	\$19,225	\$17	\$406,130	\$230,074	
COST PER STATION:	\$4,263	\$3,745	\$3,098	\$4,461	\$5,132	\$3,324	\$3,375	\$3,894	\$4,026	\$188	\$13	\$2,058	\$457.68	
MOBILIZATION:			\$18,700											
ROAD DEACTIVATION AND ABANDONMENT COSTS:			\$1,498											
PR Work		\$14,000												
NOTE: This appraisal has no allowance for profit and risk.														
Sheet 1 of 2														
Plans to be furnished by:														

SUMMARY - Road Development Costs													
SALE NAME:	Ode To Joyce	CONTRACT#:	30-100666	REGION:	Olympic	DISTRICT:	Straits						
LEGAL DESCRIPTION:	0												
ROAD NAME:	J-1035	J-1200	E-3000	E-3040	E-2600	E-2610	E-2620	Stockpile	J-1000	J-1100	J-1200	J-1200	E-3000
ROAD TYPE:	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul
NUMBER OF STATIONS:	405	6500	110.30	11.80	14.00	12.00	6.50	0.00	102.50	1.25	42.65	22.35	110.30
SIDESLOPE:	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
ROAD BRUSHING:	\$0	\$402	\$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
ROAD GRADING:	\$26	\$423	\$717	\$77	\$0	\$0	\$0	\$0	\$666	\$8	\$277	\$145	\$717
DITCH CLEANING/CONSTRUCTION:	\$158	\$872	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$872	\$0
ROCK TOTALS (Cu. Yds.)/ROCK COSTS:													
Ballast:	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
Oversize:	140	965	150	0	0	0	0	10,000	200	50	100	100	300
	\$3,170	\$22,867	\$1,977	\$0	\$0	\$0	\$0	\$159,800	\$3,070	\$1,110	\$1,634	\$2,369	\$4,173
CULVERTS AND FLUMES:	\$0	\$3,696	\$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
MISC. EXPENSES:	\$418	\$400	\$645	\$69	\$0	\$0	\$0	\$0	\$560	\$7	\$250	\$131	\$645
OVERHEAD:	\$302	\$2,323	\$267	\$12	\$0	\$0	\$0	\$12,784	\$430	\$113	\$216	\$352	\$554
TOTAL COSTS:	\$4,073	\$31,356	\$3,606	\$157	\$0	\$0	\$0	\$172,584	\$4,725	\$1,238	\$2,377	\$3,868	\$6,089
COST PER STATION:	\$1,006	\$482	\$33	\$13	\$0	\$0	\$0	n/a	\$46	\$990	\$56	\$173	\$55

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, with selected material or material approved by the Contract Administrator. Remove overhanging material from the top of cut slopes.
- Waste material from slides or other sources shall be placed and compacted in stable locations identified in the road plan or approved by the Contract Administrator, so that sediment will not deliver to any streams or wetlands.
- Slide material and debris shall not be mixed into the road surface materials, unless approved by the Contract Administrator.

Surface

- Grade, 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.

Forest Access Road Maintenance Specifications

Preventative Maintenance

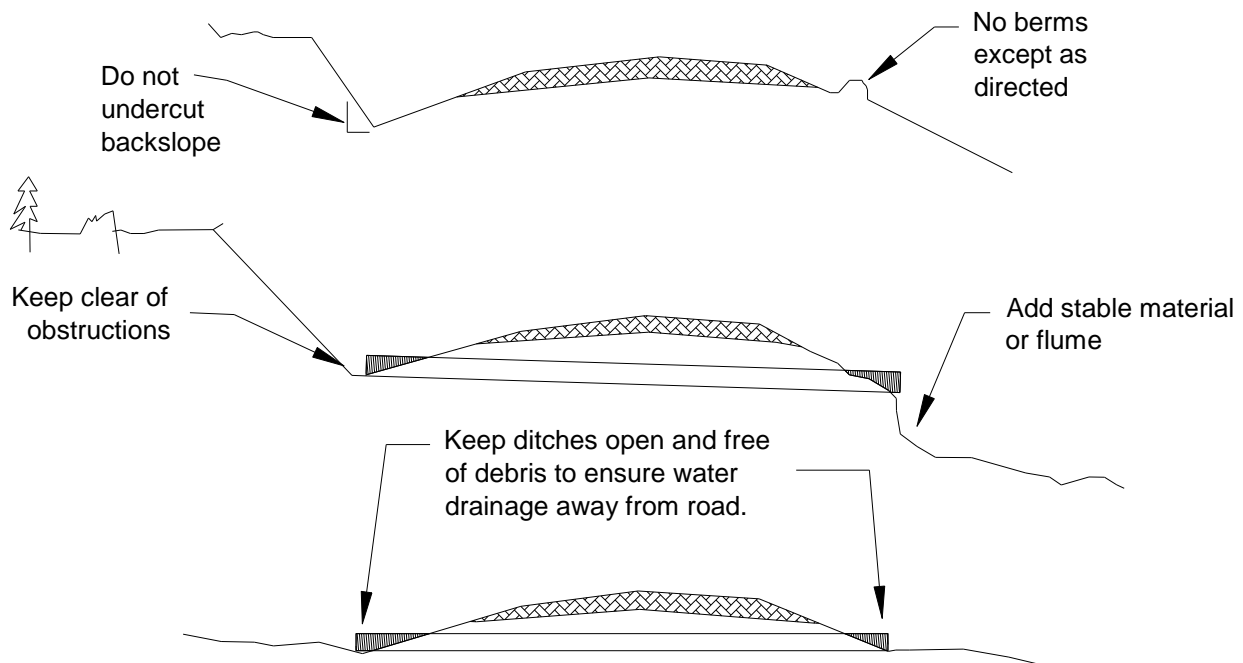
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

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

Debris

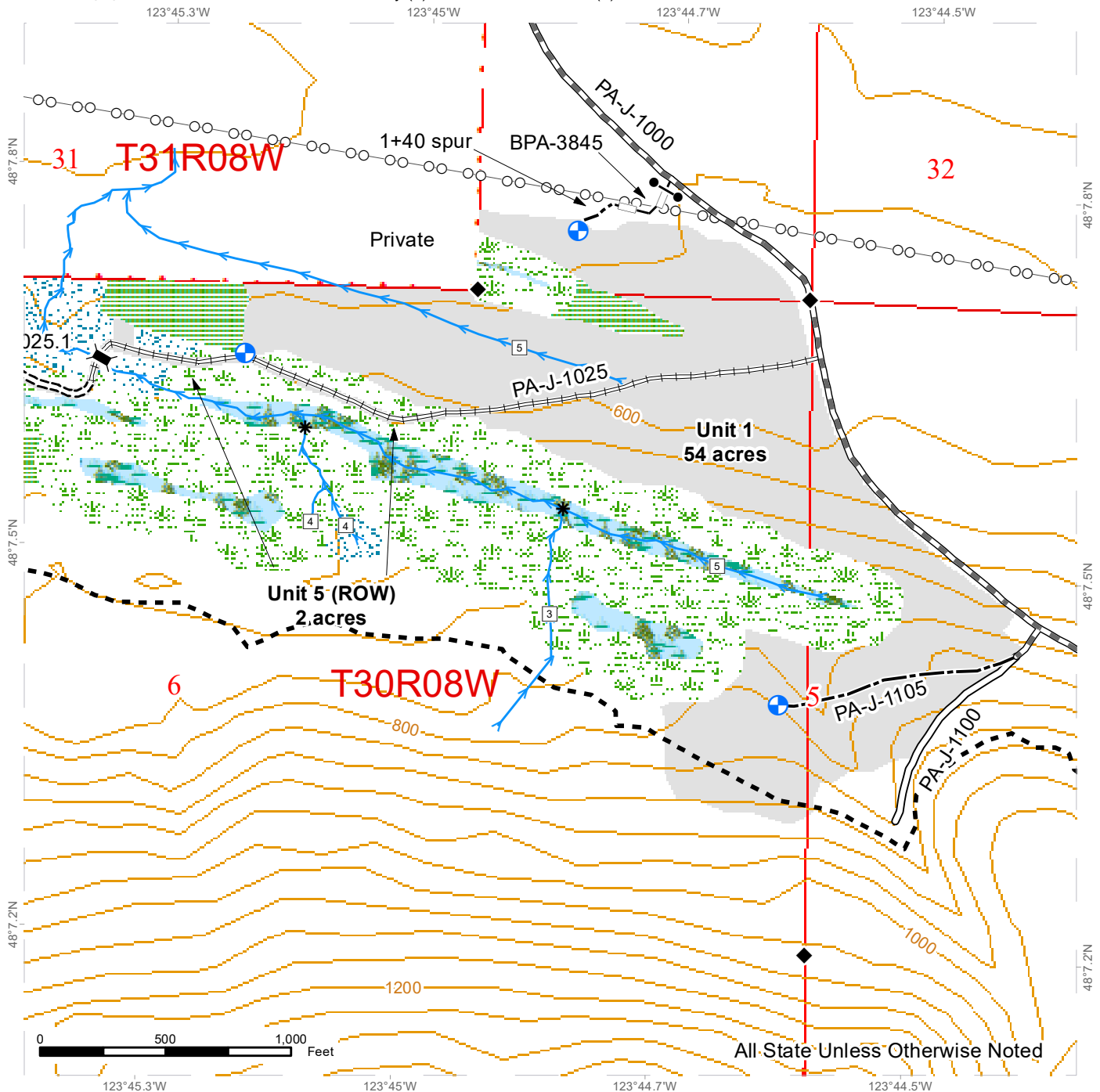
- Remove fallen timber, limbs, and stumps from the slopes, roadway, ditchlines, and culvert inlets.



LOGGING PLAN MAP

SALE NAME: ODE TO JOYCE
AGREEMENT#: 30-100666
TOWNSHIP(S): T30R8W, T31R8W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 560-2080



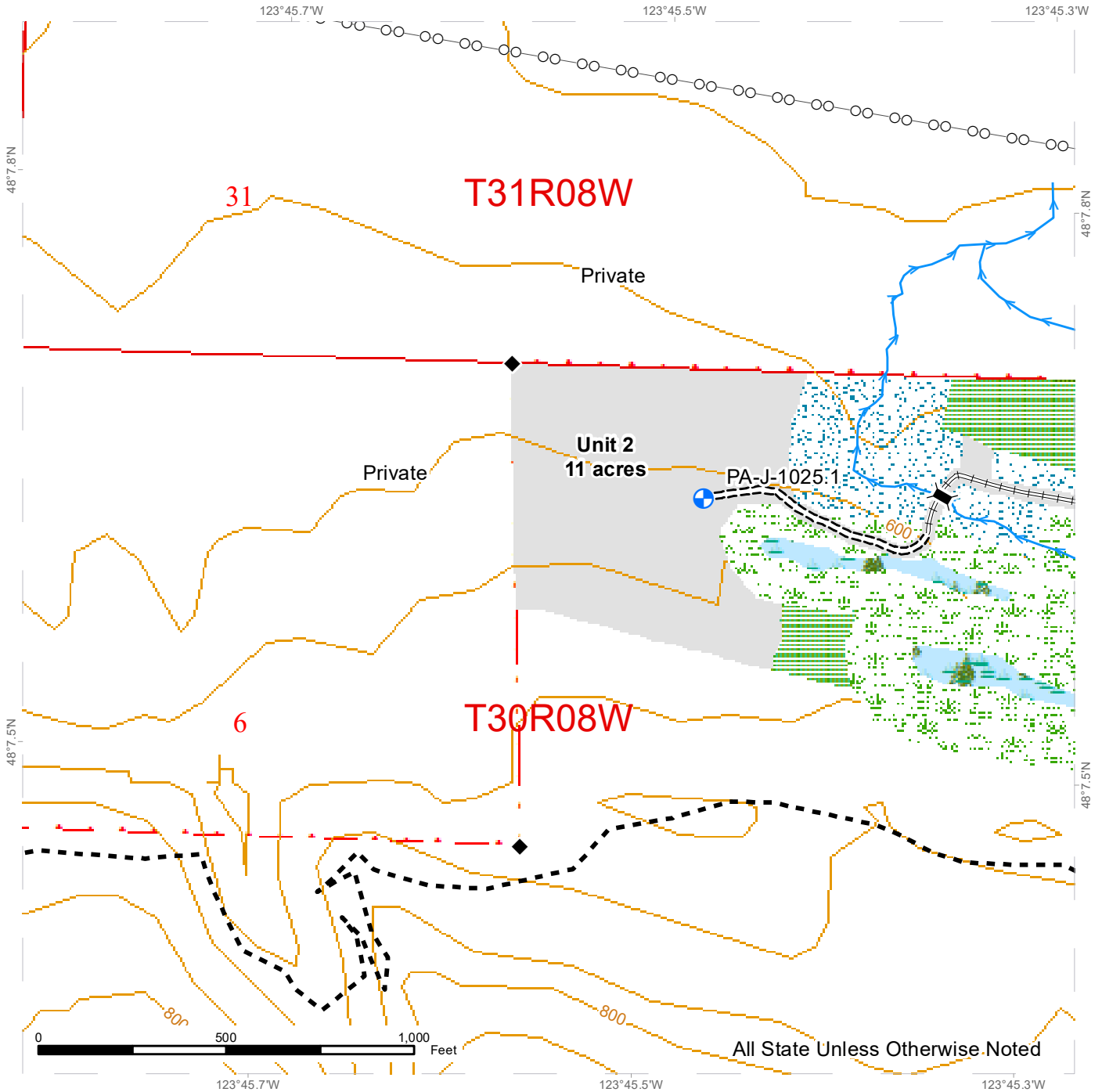
Ground	Existing Roads	Contours 40-foot	Survey Monument
Cable	Required Pre-Haul Maintenance	Streams	Bridge
Leave Tree Area	Required Construction	Stream Type	Gate
Riparian Management Zone	Required Reconstruction	Stream Type Break	Proposed Landing
Type-B Wetland	Optional Pre-Haul Maintenance	Discovery Trail	Rock Pit
Wetland Management Zone	Optional Reconstruction		
DNR Managed Lands	Optional Construction		
	BPA Power Lines		



LOGGING PLAN MAP

SALE NAME: ODE TO JOYCE
AGREEMENT#: 30-100666
TOWNSHIP(S): T30R8W, T31R8W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 560-2080



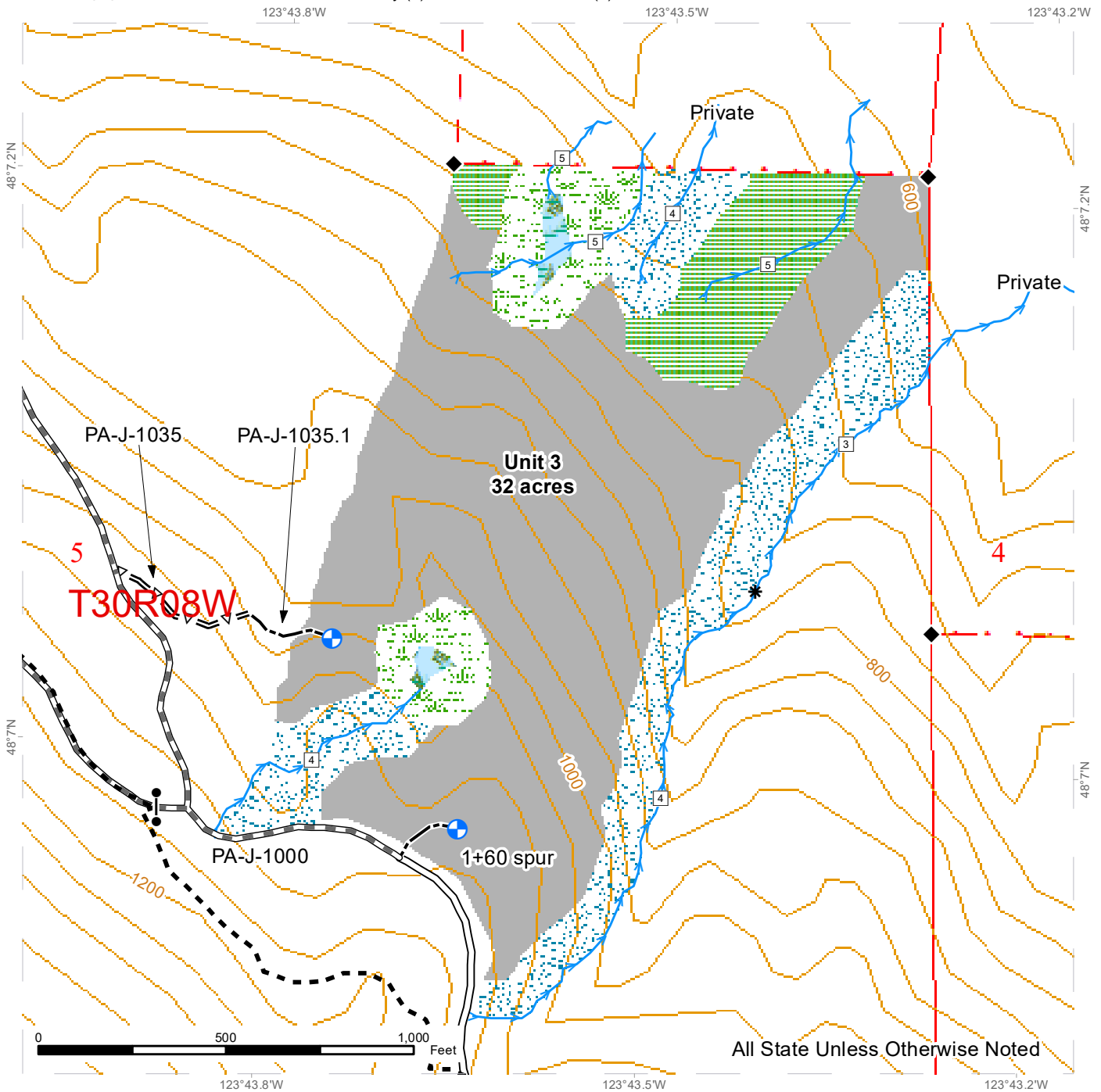
Ground	Existing Roads	Contours 40-foot	Survey Monument
Cable	Required Pre-Haul Maintenance	Streams	Bridge
Leave Tree Area	Required Construction	Stream Type	Gate
Riparian Management Zone	Required Reconstruction	Stream Type Break	Proposed Landing
Type-B Wetland	Optional Pre-Haul Maintenance	Discovery Trail	Rock Pit
Wetland Management Zone	Optional Reconstruction		
DNR Managed Lands	Optional Construction		
	BPA Power Lines		



LOGGING PLAN MAP

SALE NAME: ODE TO JOYCE
AGREEMENT#: 30-100666
TOWNSHIP(S): T30R8W, T31R8W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 560-2080

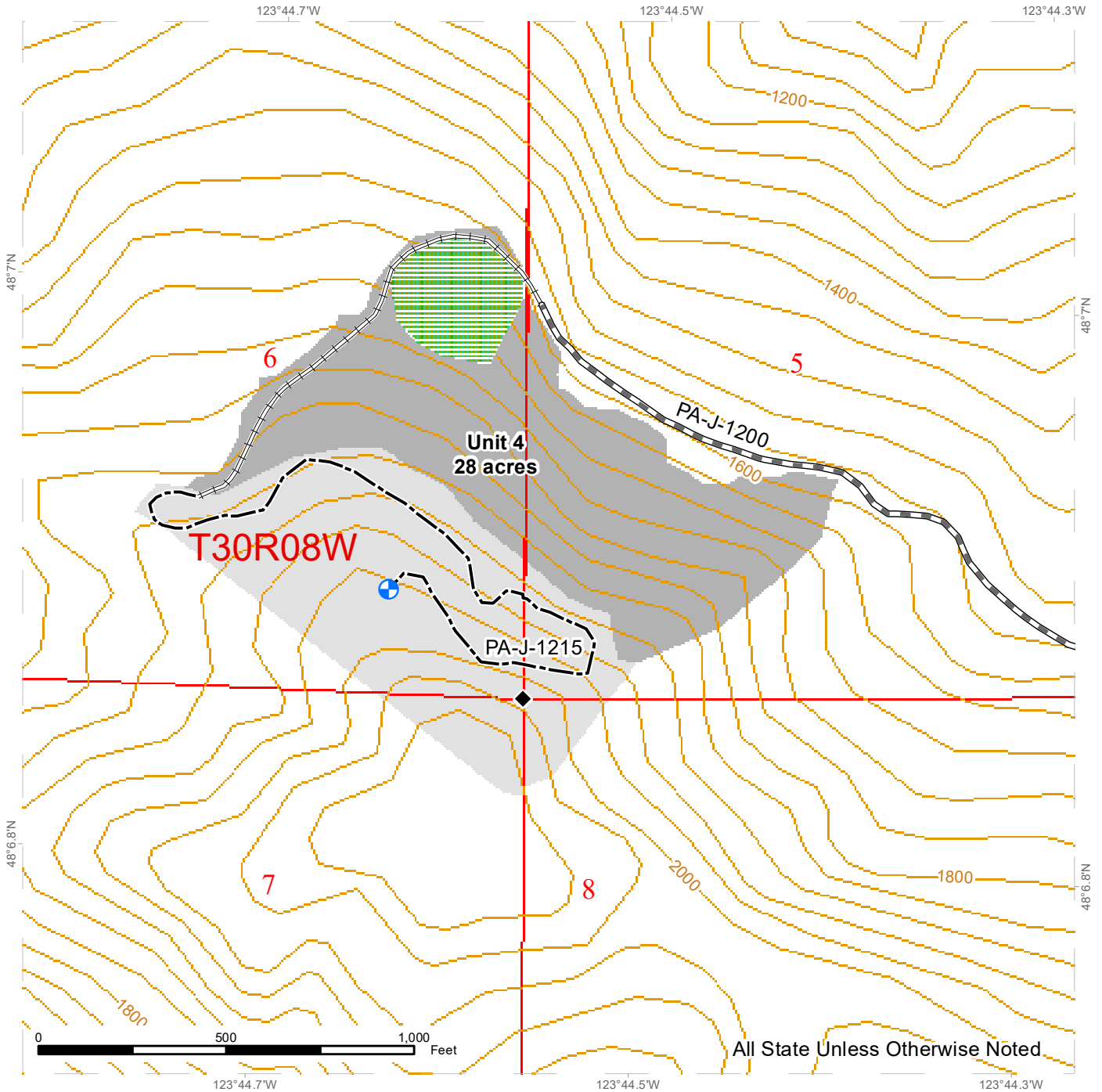


Ground	Existing Roads	Contours 40-foot	Survey Monument
Cable	Required Pre-Haul Maintenance	Streams	Bridge
Leave Tree Area	Required Construction	Stream Type	Gate
Riparian Management Zone	Required Reconstruction	Stream Type Break	Proposed Landing
Type-B Wetland	Optional Pre-Haul Maintenance	Discovery Trail	Rock Pit
Wetland Management Zone	Optional Reconstruction		
DNR Managed Lands	Optional Construction		
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LOGGING PLAN MAP

SALE NAME: ODE TO JOYCE
AGREEMENT#: 30-100666
TOWNSHIP(S): T30R8W, T31R8W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 560-2080



All State Unless Otherwise Noted

Ground	Existing Roads	Contours 40-foot	Survey Monument
Cable	Required Pre-Haul Maintenance	Streams	Bridge
Leave Tree Area	Required Construction	Stream Type	Gate
Riparian Management Zone	Required Reconstruction	Stream Type Break	Proposed Landing
Type-B Wetland	Optional Pre-Haul Maintenance	Discovery Trail	Rock Pit
Wetland Management Zone	Optional Reconstruction	BPA Power Lines	
DNR Managed Lands	Optional Construction		



When recorded return to:
Department of Natural Resource
Olympic Region
Attn: Cathy Baker
411 Tillicum Lane
Forks, WA 98331

CLALLAM COUNTY TREASURER
EXCISE TAX EXEMPT

DATE MAY 18 2018

BY: 
DEP.

DEED OF EASEMENT

GRANTOR(S): Clallam County, a political subdivision of the State of Washington

GRANTEE: The State of Washington, acting by and through the Department of Natural Resources

The above-named Grantor(s), for and in consideration of TWENTY ONE THOUSAND EIGHT HUNDRED FOUR DOLLARS and 00/cents (\$21,804.00) and other valuable consideration, the receipt of which is hereby acknowledged, does hereby grant unto the Grantee, its successors and assigns, a perpetual appurtenant easement over and upon a parcel of land located in Clallam County, legally described on the Record of Survey filed for record on December 12, 2017, under Auditor's File No. 2017-1358422.

The purpose of this easement is for constructing, operating, maintaining, repairing, and using a road to facilitate ingress to, egress from, logging of, and public access to the benefitted parcel legally described as set forth in Exhibit A, attached hereto.

Signed and entered into this 24 day of April, 2018.

**BOARD OF CLALLAM COUNTY
COMMISSIONERS**

[Signature]
Chair Darkozias

[Signature]
Member Randy Johnson

[Signature]
Member Bill Peach

**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

Dated: 4/27/18, 2018.

[Signature]
Brock Milliern
Acting Deputy Supervisor for State Uplands
P.O. Box 7000
1111 Washington Street SE
Olympia, WA 98504-7000



Approved as to form
May 9th, 2018
By Adrienne Smith
Assistant Attorney General
for the State of Washington

Approved as to form by:
[Signature]
Brian Wendt
Deputy Prosecuting Attorney
Clallam County

STATE OF)
WASHINGTON)
) ss.
COUNTY OF)
CLALLAM)

On this 24 day of April, 2018, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared mark ozias, Randy Johnson, and Bill Peach to me known to be the Clallam County Commissioners, of the corporation that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated they are authorized to execute the said instrument and that the seal affixed is the corporate seal of said corporation.

Witness my hand and official seal hereto affixed the day and year first above written.



Alanna A. Gores

Notary Public in and for the State of Washington, residing at Port Angeles.

ALANNA A. GORES

STATE ACKNOWLEDGEMENT

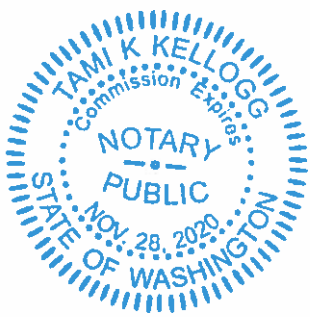
STATE OF WASHINGTON
COUNTY OF Thurston

I certify that I know or have satisfactory evidence that Brock Milligan is the person who appeared before me, and said person acknowledged that he/she signed this instrument, on oath stated that he/she was authorized to execute the instrument and acknowledged it as the Acting Deputy Supervisor of the Department of Natural Resources of the State of Washington to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: April 27, 2018

Tami K. Kellogg
(Signature)

(Seal or stamp)



Tami Kellogg
(Print Name)

Notary Public in and for the State of Washington,
residing at McCleary

My appointment expires 11/28/2020

EXHIBIT A
Benefitted Parcels

Aliquot Part	S	T	R	Dir	Parcel
LOT 3	22	31	8	W	83122310000
LOTS 1, 2	22	31	8	W	83122400000
E1/2 SW1/4 SW1/4	22	31	8	W	83122330000
SE1/4 SW1/4, SW1/4 SE1/4 and LOT 5	22	31	8	W	83122340000
ALL	23	31	8	W	83123330000
NE1/4 NW1/4, NE1/4 NW1/4 NW1/4	27	31	8	W	83127200000
NE1/4	27	31	8	W	83127100000
SW1/4 NW1/4 LY NE OF CO RD	27	31	8	W	83127230000
SE1/4 NW1/4 LY NE OF CO RD	27	31	8	W	83127240000
N1/2 NE1/4 SW1/4 LY NE OF CO RD	27	31	8	W	83127240150
NE1/4 SE1/4, NW1/4 SE1/4 EXC R/W	27	31	8	W	83127400000
NW1/4 NW1/4	26	31	8	W	83126220000
LOTS1, 2, S1/2 NE1/4	26	31	8	W	83126100000
SW1/4 NW1/4, SE1/4 NW1/4, NE1/4 SW1/4, NW1/4 SW1/4	26	31	8	W	83126230000
ALL EXCEPT W1/2 SW1/4 SW1/4	26	31	8	W	83126310000
SE1/4	26	31	8	W	83126400000
E1/2 SW1/4 SW1/4 EXC PT TX#1589, SE1/4 SW1/4 E XC PT TX#1589	26	31	8	W	83126330200
TX#1589 IN S1/2 SW1/4	26	31	8	W	83126330300
W1/2 SW1/4	25	31	8	W	83125300000

SURVEY NARRATIVE

- THIS SURVEY WAS CONDUCTED IN SECTION 27, TOWNSHIP 31 NORTH, RANGE 8 WEST, WM, IN ORDER TO OBTAIN EASEMENT OVER AND UNDER BY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES IN OCTOBER, 2017.

- THE SURVEY WAS CONDUCTED BY A SURVEYOR REGISTERED IN 2011 AND FIELD NOTES WERE KEPT IN THE SURVEYOR'S OFFICE IN PORT ANGELES, WA. SEE MAP AND INDIVIDUAL CORNER NOTES FOR FURTHER DETAILS.

LEGAL DESCRIPTION (DNR EASEMENT NO. 0918)

A STRIP OF LAND 60 FEET IN WIDTH LYING 30 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT THE SE CORNER OF THE SE 1/4 OF THE NW 1/4 OF THE NW 1/4 OF SECTION 27, TOWNSHIP 31 NORTH, RANGE 8 WEST, WM, THENCE S85°47'17" W A DISTANCE OF 415.87' ALONG THE SOUTH CENTERLINE DESCRIBED TRINCE N85°27'27" W A DISTANCE OF 101.71', THENCE N18°27'27" W A DISTANCE OF 169.28', THENCE N07°10'17" E A DISTANCE OF 137.89', THENCE N10°29'35" E A DISTANCE OF 109.85', THENCE N08°16'10" E A DISTANCE OF 681.10', THENCE S85°47'17" W A DISTANCE OF 415.87' FROM THE NE CORNER OF SAID SE 1/4, THE SOUTHWEST CORNER OF SAID STRIP TO BE ON AND END AT THE SAME BEING AS THE CENTERLINE.

CONTROL SPECIFICATIONS, METHOD OF SURVEY, EQUIPMENT USED, AND ACCURACY

- THE GPS CONTROL PORTION OF THIS SURVEY WAS PERFORMED BY A MINIMUM OF TWO SESSIONS SEPARATED BY A MINIMUM OF ONE HOUR WITH THE CONTROL POINTS MEASURED TO THE NEAREST 0.5 UNITS. CONTROL TRAPRUSES WERE RUN USING CONVENTIONAL FIELD METHODS. THESE TRAPRUSES WERE EITHER CLOSED LOOPS OR OPEN TO KNOWN POINTS. ALL MEASUREMENTS EXCEEDED THE STANDARDS ESTABLISHED IN WAC 332-130-090/090.

- CONTROL TRAPRUSES AND MEASURED DATA ANALYZED USING A QUALITY CONTROL SOFTWARE PACKAGE. THE RESULTS OF THIS ANALYSIS PASSED THE CHECKS AND TESTS AT THE 95% CONFIDENCE LEVEL. RELATIVE TO FIELD CONTROL THE MEAN STATION COORDINATE ERROR ALONG THE STRIP IS 0.0000'.

- TWO TRIMBLE R6 GNSS GLOBAL POSITIONING SYSTEM RECEIVERS (LIDAR 2003 SERIES ROBOTECH TOTAL STATION WITH CONJUGAL REDUNDANCY) WERE USED IN THIS SURVEY. THE SURVEY WAS CONDUCTED IN AUGUST, 2015 AT THE NGS BASELINE AT PORT ANGELES, WASHINGTON.

BASIS OF BEARINGS AND DISTANCES

- BEARINGS SHOWN HEREON ARE RELATED TO NAD 83/2011 EPOCH - 2010, WASHINGTON COORDINATE SYSTEM, NORTH ZONE. MEAN ELEVATION = 3150 FT.

- CORRECTION = +2° 07' 52" AT CNR 1/84 CORNER SECTION 27.

- THE AREAS AND DISTANCES SHOWN ARE GROUND DISTANCES BY THE COMBINED SCALE FACTOR OF 0.99999917 TO OBTAIN THE GROUND DISTANCE THE COMBINED SCALE FACTOR IS 0.99999917. THE COMBINED SCALE FACTOR IS 0.99999917 AND THE SCALE FACTOR OF 0.99994252 BASED ON PROJECT AIRRACE.

LEGEND



FOUND IN APRIL 2011
SEE DNR FINAL MAP 1084
10/18/2017
BY (2011-1000337)

0 CALCULATED FROM DNR FINAL MAP 263

0 FOUND ON 10/18/17
DNR MONUMENT SET IN 1976
SEE DNR FINAL MAP 263



AUDITOR'S WORKING DATA

**A SURVEY IN SECTION 27
TOWNSHIP 31 NORTH, RANGE 8 WEST, W.M.**

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
LAND SURVEY SECTION - P.O. BOX 47090
OLYMPIA, WASHINGTON 98504-7000 (360)802-1206



SURVEYOR'S CERTIFICATE

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES IN OCTOBER, 2017.

Larry D. Hertzsch
LARRY D. HERTSCH, PLS. 38032 CERTIFICATE NUMBER

AUDITOR'S CERTIFICATE

FILED FOR RECORD THIS 12th DAY OF December 2017
AT 2:35 P.M. IN BOOK 91 OF SURVEYS AT PAGE 59
AT THE REQUEST OF THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

Tommy Seibert
AUDITOR'S FILE NUMBER 2017-1558422
CLALLAM COUNTY DEPUTY AUDITOR

LINE TABLE
(DNR EASEMENT NO. 0918)

LINE NO.	LENGTH (FEET)	BEARING
1	415.87	S85°47'17" W
2	169.28	N18°27'27" W
3	137.89	N10°29'35" E
4	109.85	N08°16'10" E
5	415.87	S85°47'17" W

TOTAL LENGTH OF EASEMENT - 691.8'
TOTAL AREA - 0.95 ACRES

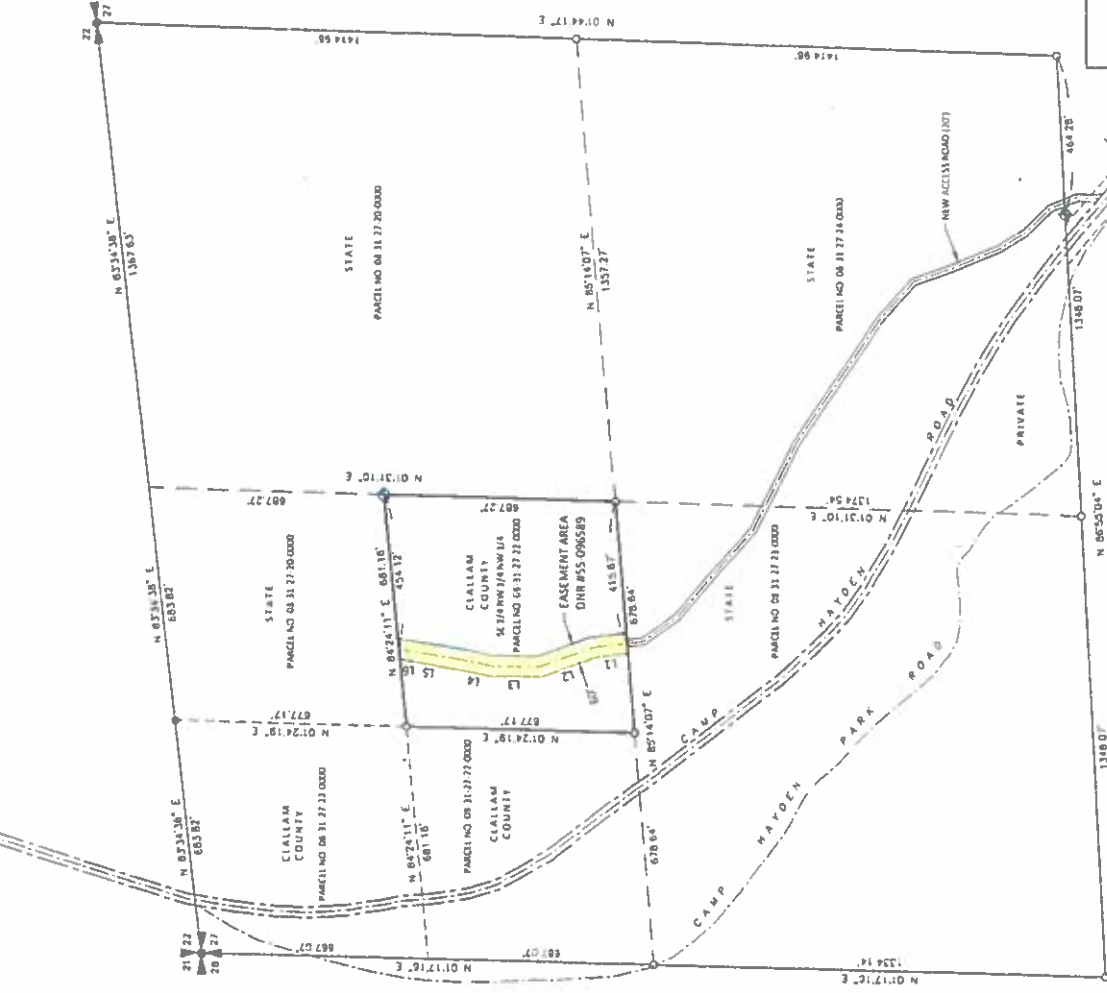
WIDTH - 60 FT.



WASHINGTON COORDINATE SYSTEM
NORTH ZONE, NAD83 (2011) EPOCH 2010

NOTE:
AREA WITHIN 80 COUNTY R/W HEADED FOR ACCESS ROAD.
700 SQ. FT.
(0.01 ACRES)

FOR USE IN R/W
(FROM BOXES 428 & 453)
LEAVING HIGHWAY
(APPROX. 30 FEET)





**RECORD SEARCH
EASEMENT RESERVATION**

Application No: 55-090881
Region: OLYMPIC
County: CLALLAM
Grantee: WA STATE DEPARTMENT OF NATURAL RESOURCES
Grantor: CRESCENT SCHOOL DISTRICT NO 313
Address: UNKNOWN
Phone: UNKNOWN

Description

Portions of:	Sec	Twp	Rge	Surface Trust #	Timber Trust #	Mineral Trust #	GIS Parcel #
N½NE¼SE¼	31	31N	08W	00	00	01	5681
W½SE¼NE¼	31	31N	08W	00	00	01	PRIVATE

Miles: +/-

Encumbrances

No encumbrances of record

Pending Applications

No pending applications of record.

Special Notations

This easement replaces file 50-028707 that was reserved by Department of Natural Resources, Quit Claim to Crescent School District No 313 Dated (October 2, 1984). Volume 11, Page 472

Title Examiner: John Graham

Date: May 14, 2014

Proof Read BH Date 5/14/2014

524492-

194

QUITCLAIM DEED

IN CONSIDERATION OF Ninety Thousand and No/100th Dollars (\$90,000.00), the receipt of which is hereby acknowledged, the STATE OF WASHINGTON does hereby quitclaim and convey unto CRESCENT SCHOOL DISTRICT NO. 313 its successors and assigns the following described Resource Management Land Bank lands, situated in Clallam County, Washington, to-wit:

The North half of the Northeast quarter of the Southeast quarter (N1/2NE1/4SE1/4); all that part of the Southeast quarter of the Northeast quarter (SE1/4NE1/4) lying South of the Chicago, Milwaukee & St. Paul Railroad right of way, and South of the Joyce-Lake Crescent County Road, EXCEPT that portion thereof lying within the East half of the Southeast quarter of the Northeast quarter (E1/2SE1/4NE1/4) and within the East 257 feet of the west half of the Southeast quarter of the Northeast quarter, (W1/2SE1/4NE1/4) Section 31, Township 31 North, Range 8 West, W.N.

Subject to the following:

1. The State of Washington, Department of Natural Resources reserves the right to sell and remove all forest products sold under Department of Natural Resources Application No. 43433.
2. A reservation unto the State Department of Natural Resources, its successors and assigns, for a permanent non-exclusive easement for road to be relocated and constructed by Crescent School District No. 313 on the westerly side of the property being conveyed and described herein above. The road to be constructed will be designed to include, at the southerly termini, two (2) corners of a road no greater than twenty (20) degrees for tying said road to abutting Department of Natural Resources property. New construction will include sufficient width, rock ballast and cross drainage to accommodate two way traffic for the hauling of forest products and heavy equipment. In addition, until said road is relocated and constructed, the Department of Natural Resources reserves to itself, its successors and assigns a non-exclusive easement for ingress and egress to remaining State lands or lands to be acquired, over and across the existing road(s) under Right of Way Application No. 28707 on file in the office of the Commissioner of Public Lands, Olympia, Washington.
3. Easement for right of way for electrical transmission line and appurtenances granted to Clallam County Public Utility District No. 1 filed in the office of the Commissioner of Public Lands, Olympia, Washington, under Application No. 41283.
4. Liability for abatement of any extreme fire hazard remaining after removal of forest products sold under Department of Natural Resources Application No. 43433 will be the responsibility of the Crescent School District No. 313, and in addition, Crescent School District No. 313 further agrees to indemnify and hold harmless, and at their expense, defend the Department of Natural Resources, its authorized agents and employees, from and against any claim, legal action, loss, cost, expense or liability on account of personal injury to or death of any person whatsoever, or damage to or destruction of property to whatsoever belonging, arising out of a partly or wholly, directly or indirectly, in connection with abatement of the extreme fire hazard.
5. Reforestation requirements under the Forest Practices Act will be the responsibility of the Crescent School District No. 313, unless lands conveyed herein are developed for school purposes within three years after forest products are removed, under Department of Natural Resources Application No. 43433.
6. As to the North half of the Northeast quarter of the Southeast quarter (N1/2NE1/4SE1/4), the State hereby expressly saves, excepts and reserves out of the grant hereby made, unto itself, its successors, and assigns forever, all oils, gases, coal, ores, minerals and fossils of every name, kind or description, and which may be in or upon said lands above described, or any part thereof, and the right to explore the same for such oils, gases, coal, ores, minerals and fossils; and it also hereby expressly saves and reserves out of the grant hereby made, unto itself, its successors and assigns forever, the right to enter by itself, its agents, attorneys and servants upon said lands, or any part or parts thereof, at any and all times, for the

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Arts

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purpose of opening, developing and working mines thereon, and taking out and removing therefrom all such oils, gases, coal, ores, minerals and fossils, and to that end it further expressly reserves out of the grant hereby made, unto itself, its successors and assigns, forever, the right by its or their agents, servants and attorneys at any and all times to erect, construct, maintain and use all such buildings, machinery, roads and railroads, sink such shafts, remove such soil, and to remain on said lands or any part thereof for the business of mining and to occupy as much of said lands as may be necessary or convenient for the successful prosecution of such mining business, hereby expressly reserving to itself, its successors and assigns, as aforesaid, generally, all rights and powers in, to, and over said land, whether herein expressed or not, reasonably necessary or convenient to render beneficial and efficient the complete enjoyment of the property and the rights hereby expressly reserved.

No rights shall be exercised under the foregoing reservation, by the State, its successors or assigns, until provision has been made by the State, its successors or assigns, to pay to the owner of the land upon which the rights herein reserved to the State, its successors or assigns, are sought to be exercised, full payment for all damages sustained by said owner, by reason of entering upon said land: PROVIDED, That if said owner from any cause whatever refuses or neglects to settle said damages, then the State, its successors or assigns, or any applicant for a lease or contract from the State for the purpose of prospecting for or mining valuable minerals, or option contract, or lease, for mining coal, or lease for extracting petroleum or natural gas, shall have the right to institute such legal proceedings in the Superior Court of the county wherein the land is situated, as may be necessary to determine the damages which said owner of said land may suffer.

WITNESS the Seal of the State, affixed
this 2nd day of October, 1981.



Approved as to form:
[Signature]
Assistant Attorney General

[Signature] Governor
Attest: [Signature] Assistant Secretary of State

Deed No. 26073
State Record of Deeds
Volume 11, Page 472
App. No. 43531

CLERK OF THE COURT
EX. 115
DATE Oct 14, 1981
BY [Signature] Deputy

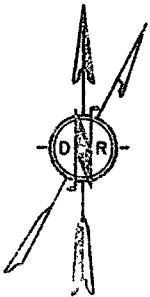
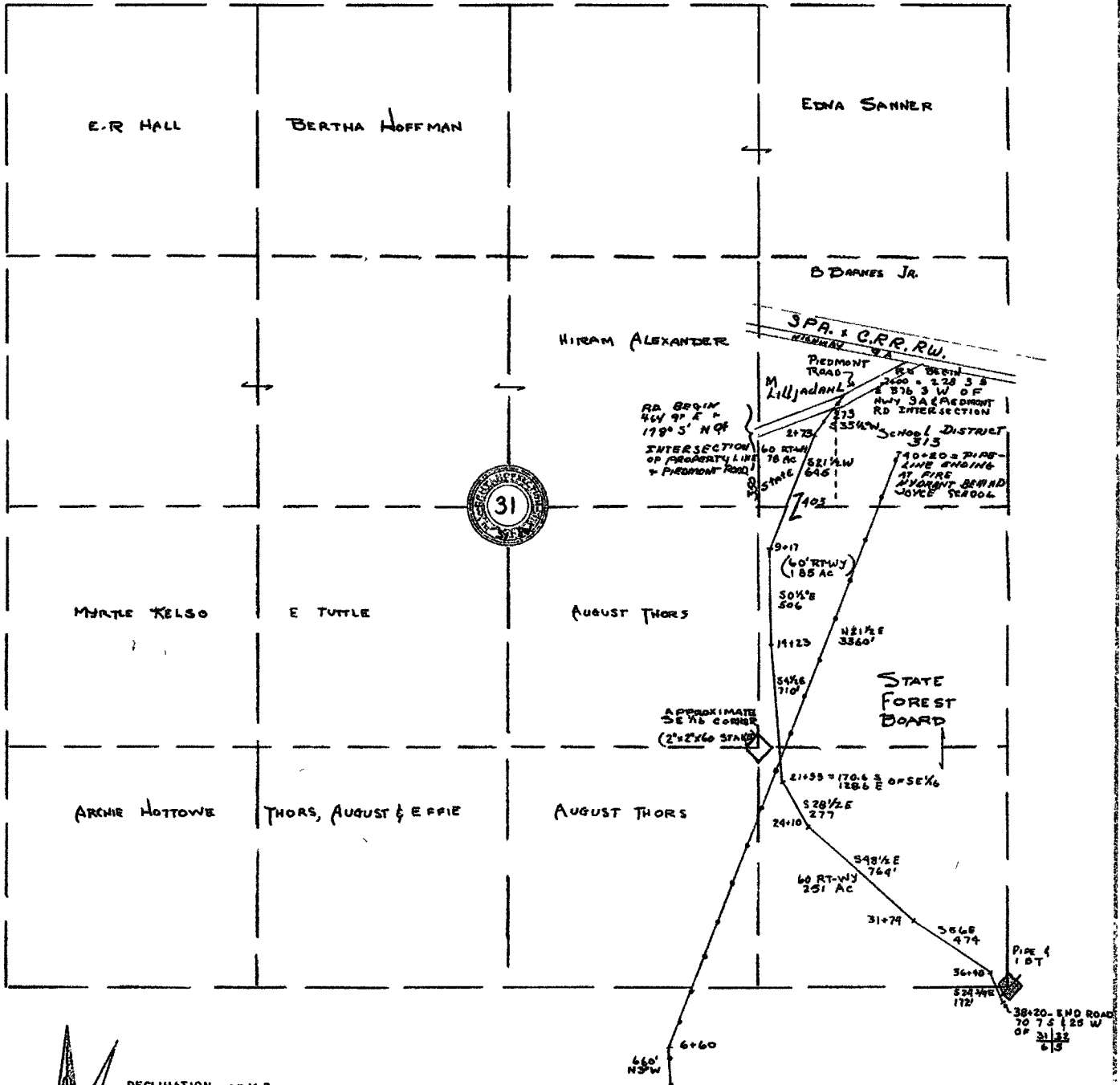
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524A92

STATE OF WASHINGTON
 DEPARTMENT OF NATURAL RESOURCES
 RIGHT OF WAY PLAT
 PA-J-1000 ROAD
 SEC. 31 T.31 N. R.8W. W.M.
 CLALLAM COUNTY WASH.
 SCALE 1 IN.=400 FT



DECLINATION $23\frac{1}{2}^{\circ}E$
 TRAVERSED BY BOURGVAULT & DOWNEN
 DRAWN BY BOURGVAULT, P.A.
 DATE 4-5-63

I WILLIAM C GROSS, SUPERVISOR OF FOREST ENGINEERING, DO HEREBY CERTIFY THAT THIS MAP ACCURATELY REPRESENTS THE LOCATION OF SAID ACCESS ROAD ACROSS SECTION 31 TOWNSHIP 31 NORTH, RANGE 8W WILLAPETTE MERIDIAN
 W.C. Gross
 SUPERVISOR OF FOREST ENGINEERING

GRAHAM, JOHN (DNR)

From: GRAHAM, JOHN (DNR)
Sent: Tuesday, December 24, 2013 11:21 AM
To: GRAHAM, JOHN (DNR)
Cc: DNR RE LR App Request; Wright, Christopher (DNR)
Subject: RE: 50-028707
Attachments: 50-028707 survey.pdf; img-Z24112315-0001.pdf

The Number assigned for this will be 55-090881.

This will work for a new 55- replacing 50-028707, also attached is the Quitclaim Deed as a reference.

Chris

From: Wright, Christopher (DNR)
Sent: Monday, December 23, 2013 1:38 PM
To: GRAHAM, JOHN (DNR)
Subject: RE: 50-028707

I'm a thinking that we need to get survey to run out the legal in 50-02877 and see how it compares to current ownership, see if the school made the new road, and make a 55- out of what we figure out. I'll get survey going.

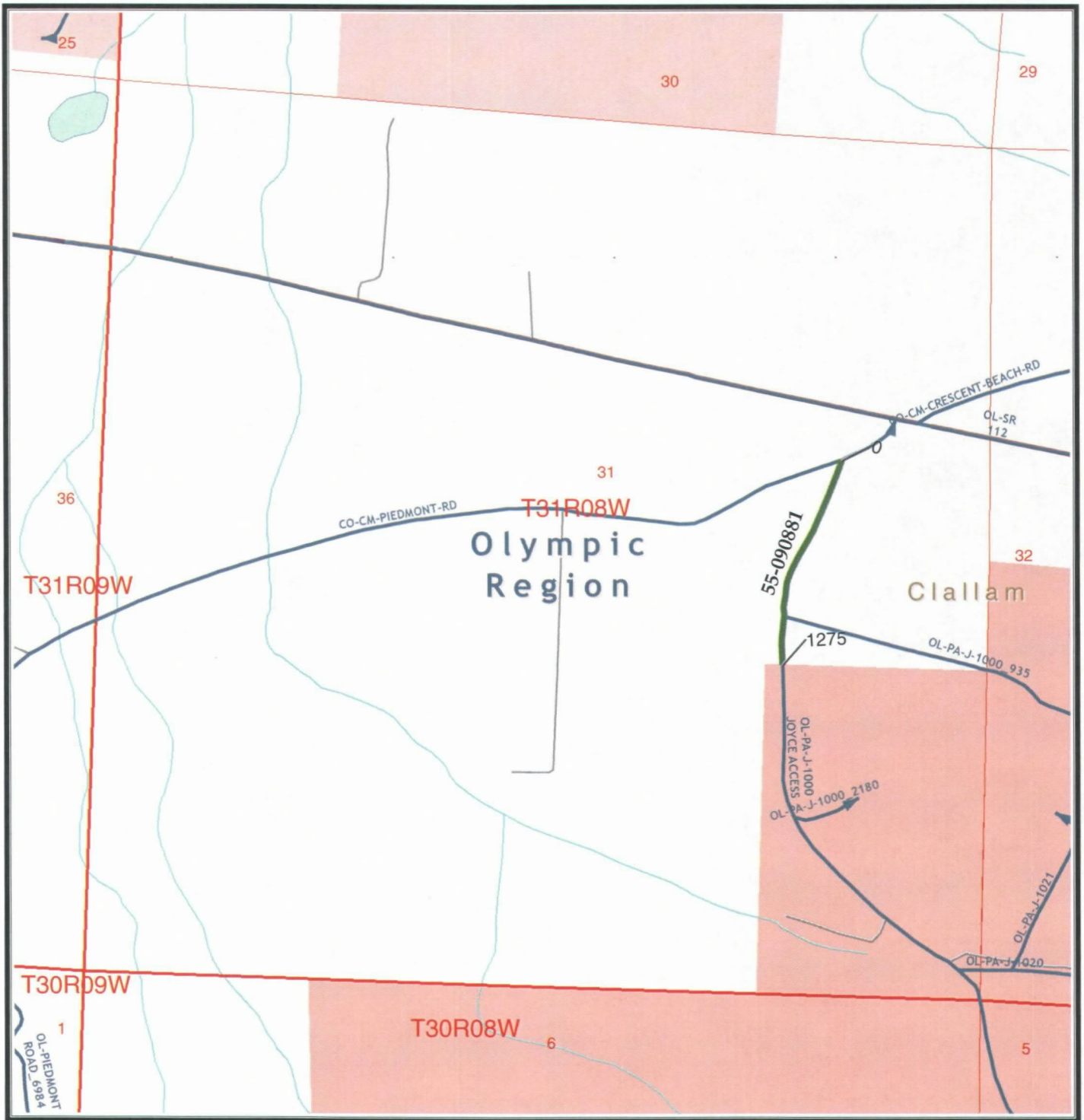
Chris Wright
Rights of Way Program
Product Sales & Leasing Division
Washington State Department of Natural Resources
360-902-1165/509-531-7638 Cell

From: GRAHAM, JOHN (DNR)
Sent: Friday, December 20, 2013 8:27 AM
To: Wright, Christopher (DNR)
Cc: GRAHAM, JOHN (DNR)
Subject: 50-028707

Hi Chris,

I had this file pulled from the record center to see if it needs to be active or if since we had a Quit Claim in this area we need to assign a new 55 number or not. For clarification purposes. Along with the file at the front counter I have a copy of the quit claim Vol. 11 Page 472 with the file. Have a happy Holiday season.

John Graham
Property Acquisition Specialist 1
Engineering Division, Title and Records Office
Washington State Department of Natural Resources (DNR)
(360) 902-1795
john.graham@dnr.wa.gov
www.dnr.wa.gov



REGIS Right of Way Events Grant Codes

- █ 1: Acquired by DNR
- █ 2: Granted to Other
- █ 3: Merged in Title

DNR Routes

- ➔ Route Direction

Roads by USGS Class

- 1: Primary Highway/All-Weather/Hard Surface
- 2: Secondary Highway/All-Weather/Hard Surface
- 3: Light-Duty Road/All-Weather/Improved
- 4: Unimproved Road/Fair or Dry Weather
- 5: 4 wheel drive
- 9: Freeway on Ramps

DNR-Managed Lands

Surface Lands

- █ Granted Trust Lands
- █ Forest Board Trust Lands
- █ NAP / NRCA
- █ Other DNR-Managed Lands