

TIMBER NOTICE OF SALE

SALE NAME: BOARD O' FEET

AGREEMENT NO: 30-091856

AUCTION: June 14, 2016 starting at 10:00 a.m., **COUNTY:** Thurston, Grays Harbor
South Puget Sound Region Office, Enumclaw, WA

SALE LOCATION: Sale located approximately 3 miles Southwest of Littlerock

**PRODUCTS SOLD
AND SALE AREA:**

All timber, except leave trees bounded out by yellow "Leave Tree Area" tags and down timber existing more than 5 years from the day of sale, bounded by the following: white "Timber Sale Boundary" tags and property line marked with white carsonite posts or PVC posts in Unit #1; white "Timber Sale Boundary" tags, property line marked with white carsonite posts or PVC posts in Unit #2; white "Timber Sale Boundary" tags in Unit #3; white "Timber Sale Boundary" tags, Vantage Quarry, and the E-Line road in Unit #4; white "Timber Sale Boundary" tags, the Scott Paper Quarry, and E-6800 road in Unit #5; all timber bounded by orange "Right-of-Way Boundary" tags, if constructed, except fifteen trees with root wads a minimum of 16 inches in diameter and 20 feet in length, from the E-6800 Reroute right of way, as described in Schedule A on part(s) of Sections 16, 21 and 22 all in Township 16 North, Range 4 West, Sections 4, 5, 7, 8, 9 and 17 all in Township 16 North, Range 3 West, W.M., containing 268 acres, more or less.

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

ESTIMATED SALE VOLUMES AND QUALITY:

Species	Avg DBH	Ring Count	Total MBF	MBF by Grade								
				1P	2P	3P	SM	1S	2S	3S	4S	UT
Douglas fir	13	7	4,397						350	2,808	1,165	74
Red alder	9.5		52								7	38
Hemlock	10.6	7	36								23	13
Red cedar	23.1		12								5	
Maple	10		2									2
Sale Total			4,499									

MINIMUM BID: \$728,000.00 **BID METHOD:** Sealed Bids

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

EXPIRATION DATE: October 31, 2018 **ALLOCATION:** Export Restricted

BID DEPOSIT: \$72,800.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Harvesting activities are estimated to be 75% ground-based and 25% cable. Forest products sold under this contract shall be harvested and removed using cable and tracked ground based equipment, with tracked ground based equipment limited to sustained slopes 45% and less. Self-leveling shovels are restricted to sustained slopes of 55% or less. Use of tracked skidders shall be allowed for pole yarding only, unless authority to use other equipment is granted in writing by the State. Yarding may be restricted during wet weather if rutting becomes excessive, per clause H-017.

TIMBER NOTICE OF SALE

Cutting, yarding and timber haul will not be permitted from November 1st to April 30th, unless authority to do so is granted in writing by the Contract Administrator. If permission is granted to operate from November 1st to April 30th, the Purchaser shall be required to operate under a Winter Operating Plan to include further protection of water, soil, roads and other forest assets at the Purchaser's expense. Preventive measures required in the Winter Operating Plan must be put in place prior to commencing any winter operations.

ROADS:

78.51 stations of required construction. 20.85 stations of required reconstruction. 89.06 stations of optional construction. 580.57 stations of required pre-haul maintenance. 5.80 stations of required abandonment. Purchaser maintenance on the E-3020 (from station 6+85 to station 21+75), E-3020 re-route, E-3021, E-3022, E-6200, E6200/E-6240 Tie, E-6240, E-6240 Ext., E-6240-1, E-6240-2, E-6240-3, E-Line/E-6800 Tie Rd, E-6800, E6800 Reroute, E-6890, E-6890 Ext., E-6891, E-6892, E-6893, E-9000, E-9020, E-9030 and E-9030A roads. Designated maintenance on all other roads used.

Rock for the proposal may be obtained at no cost to the Purchaser from the State owned Scott Paper Quarry located in Section 8, Township 16 North, Range 03 West, W.M. or from the State owned Vantage Quarry located in Section 22, Township 16 North, Range 04 West, W.M or from any commercial source at the Purchaser's expense, as approved in writing by the Contract Administrator.

Road construction will not be permitted from October 1st through April 30th, unless authority to do so is granted in writing by the Contract Administrator. If permission is granted to operate from October 1st through April 30th, the purchaser shall be required to operate under a Winter Operating Plan to include further protection of water, soil, roads and other forest assets at the Purchaser's expense. Preventive measures required in the Winter Operating Plan must be put in place prior to commencing any winter operations.

ACREAGE DETERMINATION

CRUISE METHOD: Unit acreage was determined by traversing the boundaries by GPS. Right of way acreage was determined by multiplying length times width. GPS data files are available upon request by emailing rachel.mason@dnr.wa.gov. See cruise narrative for cruise method.

FEES: \$79,857.00 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 is a designated skid trail crossing over a Type 5 stream, marked with orange ribbon, within Unit #3. This temporary crossing requires the placement of an 18 inch by 20 foot culvert that will be restricted to one season, during dry times. The culvert will be removed after the completion of yarding on that skid trail.

Road Construction of the E-6800 Reroute and Reconstruction of the E-6880 must be completed by October 15, 2016, per Road Plan Clause 1-20.

Unit #5 is a rock pit expansion and development unit.

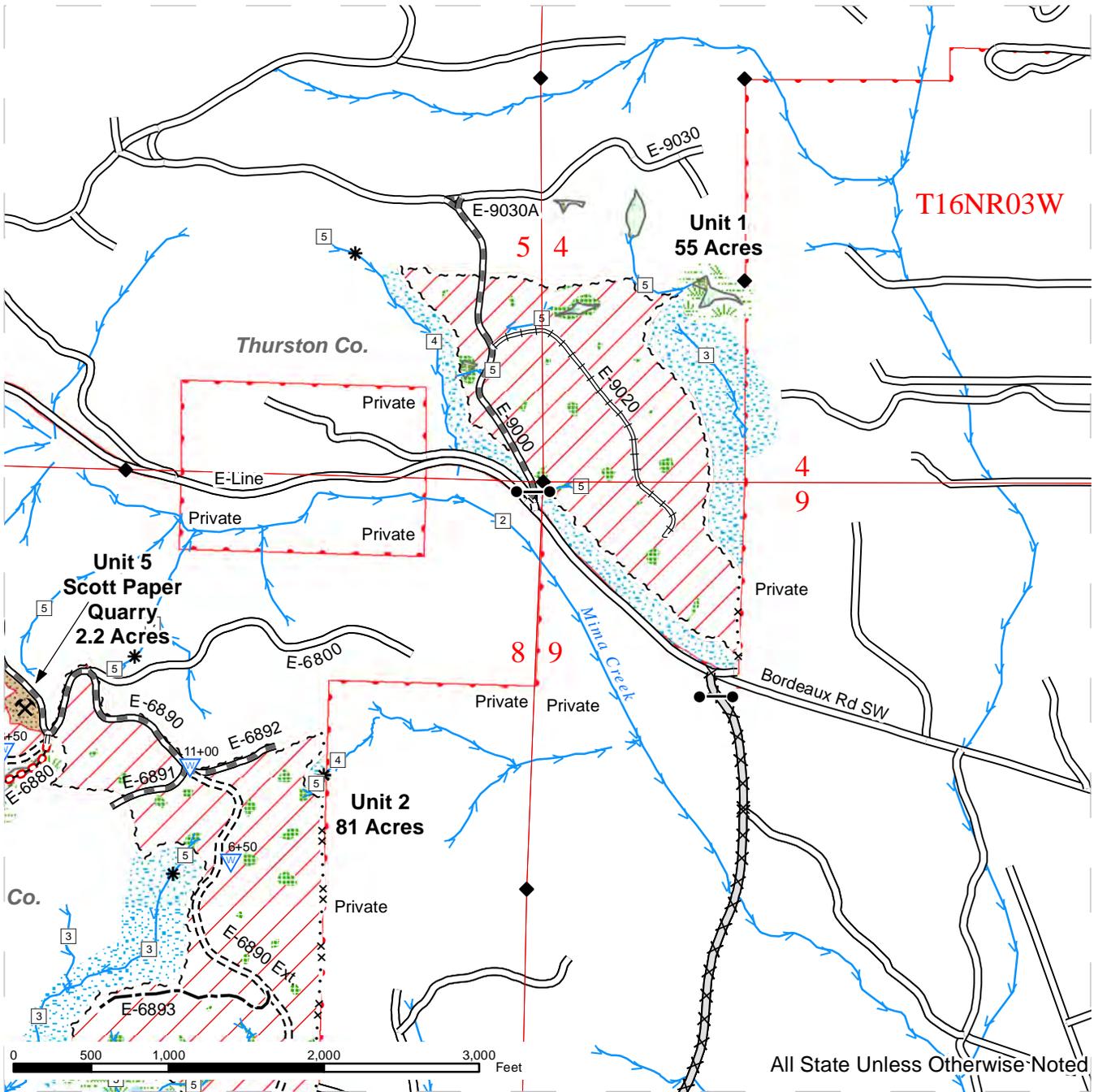
Heavy Abandonment is required on the E-6880 road, as per Road Plan Clauses 9-21 and 9-24.

See map for gate locations. The E-9000 gate must be closed and locked except for during timber haul activity per Road Plan 7-71. Gate keys may be obtained by contacting the South Puget Sound Region office at (360)825-1631 or by contacting the Tumwater work center at (360) 902-1449.

TIMBER SALE MAP

SALE NAME: Board O' Feet
AGREEMENT#: 30-091856
TOWNSHIP(S): T16R04W, T16R03W
TRUST(S): Forest Transfer(1), Forest Purchase(2), Common School and Indemnity(3), Escheat(9), Forest Board Repayment(42)

REGION: South Puget Sound Region
COUNTY(S): GRAYS HARBOR, THURSTON
ELEVATION RGE: 200-1400

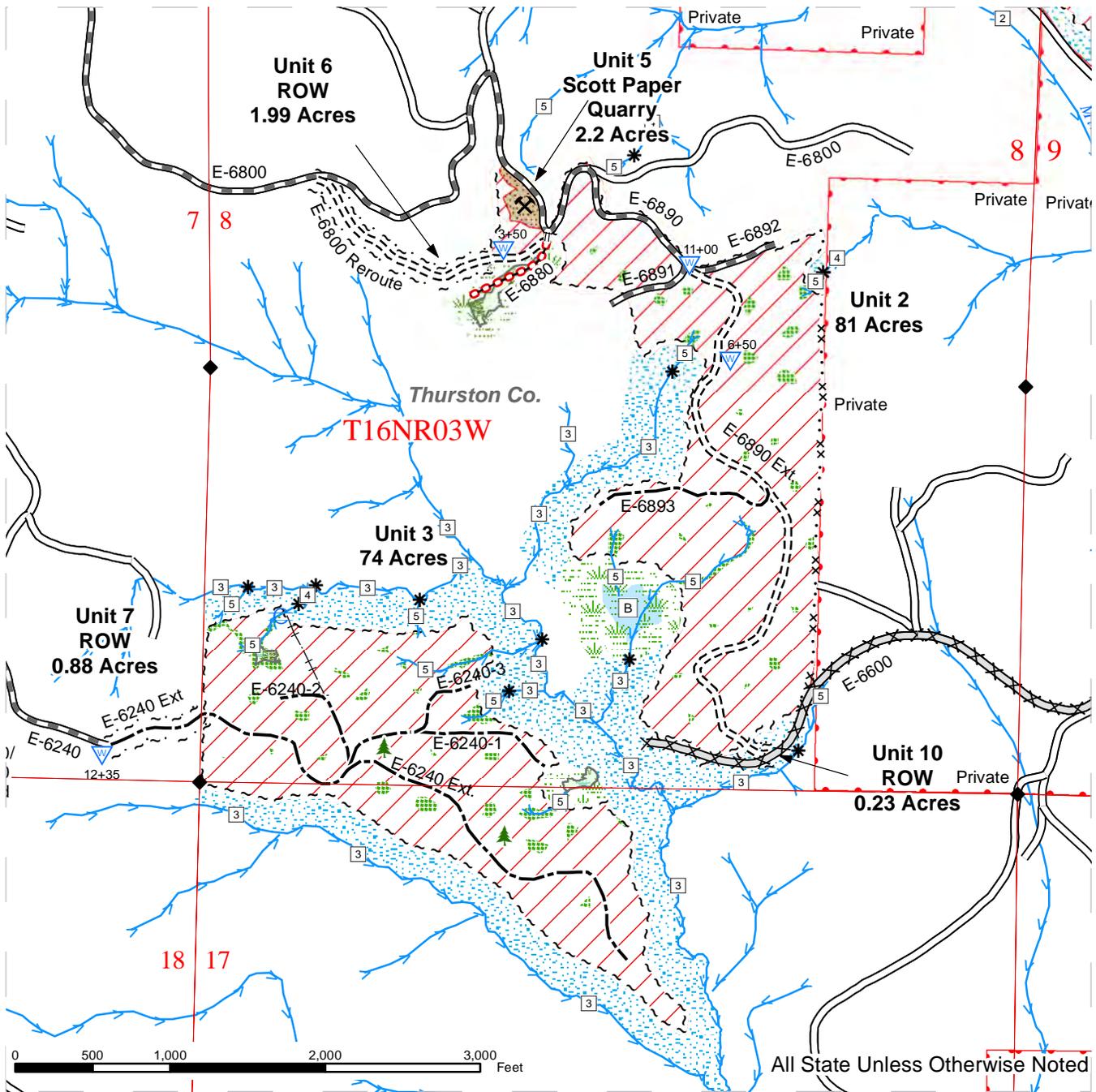


Timber Sale Area	Private Property - Marked w/ White Carsonite or PVC Posts	Required Pre-Haul Maintenance	Streams
Quarry	Orange "Right-of-Way" Tags	Required Abandonment	Stream Type
Forested Wetland	Existing Road	Decommissioned Road	Stream Type Break
Non-Forest Wetland	Required Construction	Optional Construction	Single Leave Trees - Marked w/ Yellow "Leave Tree Area" Tags
Wetland Mgt Zone	Required Reconstruction	No Access	Culvert Installation
Riparian Mgt Zone	White "Timber Sale Boundary" Tags	Designated Skid Trail	Waste Area
Leave Tree Area - Marked with Yellow "Leave Tree Area" Tags			Rockpit

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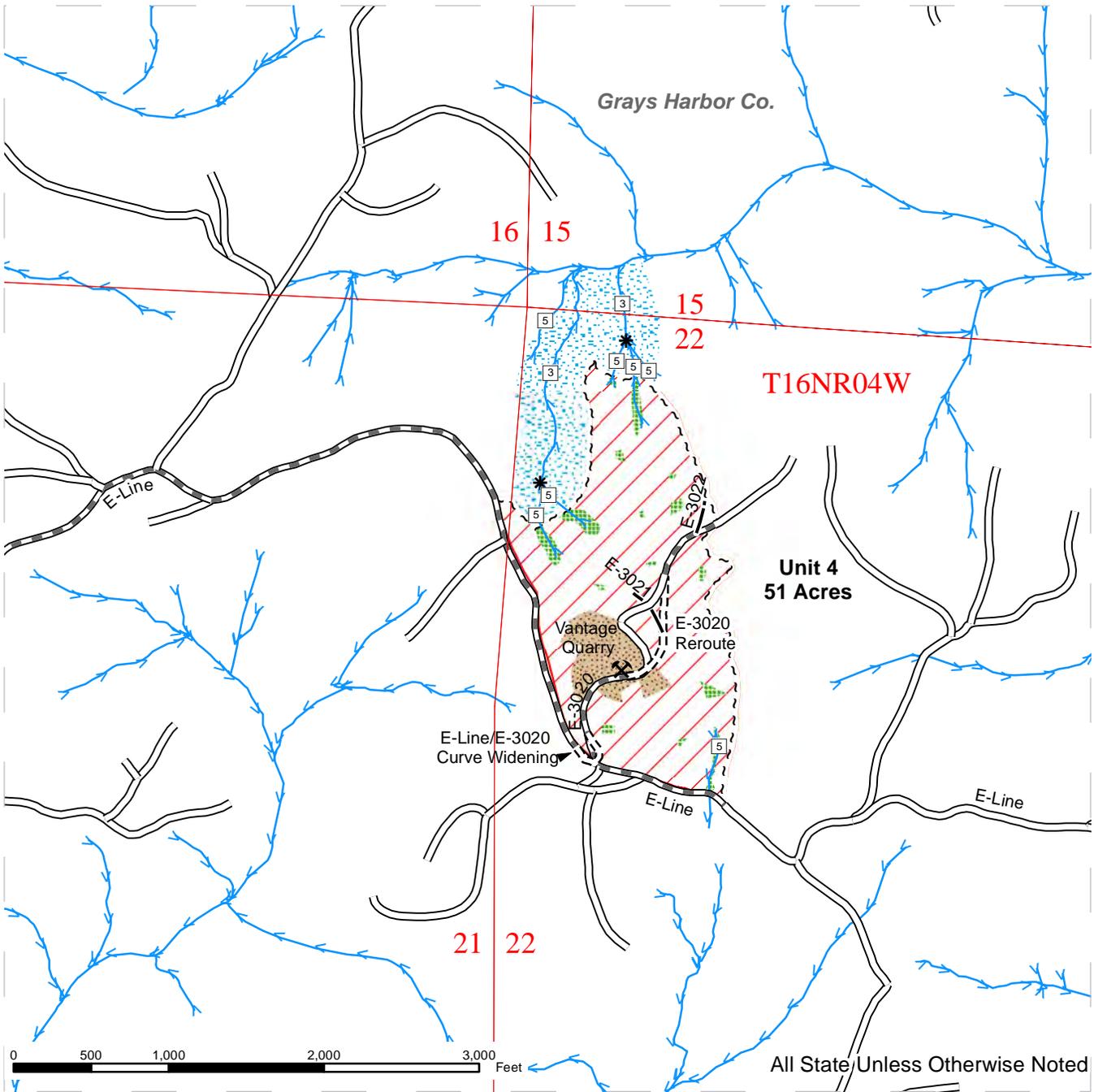
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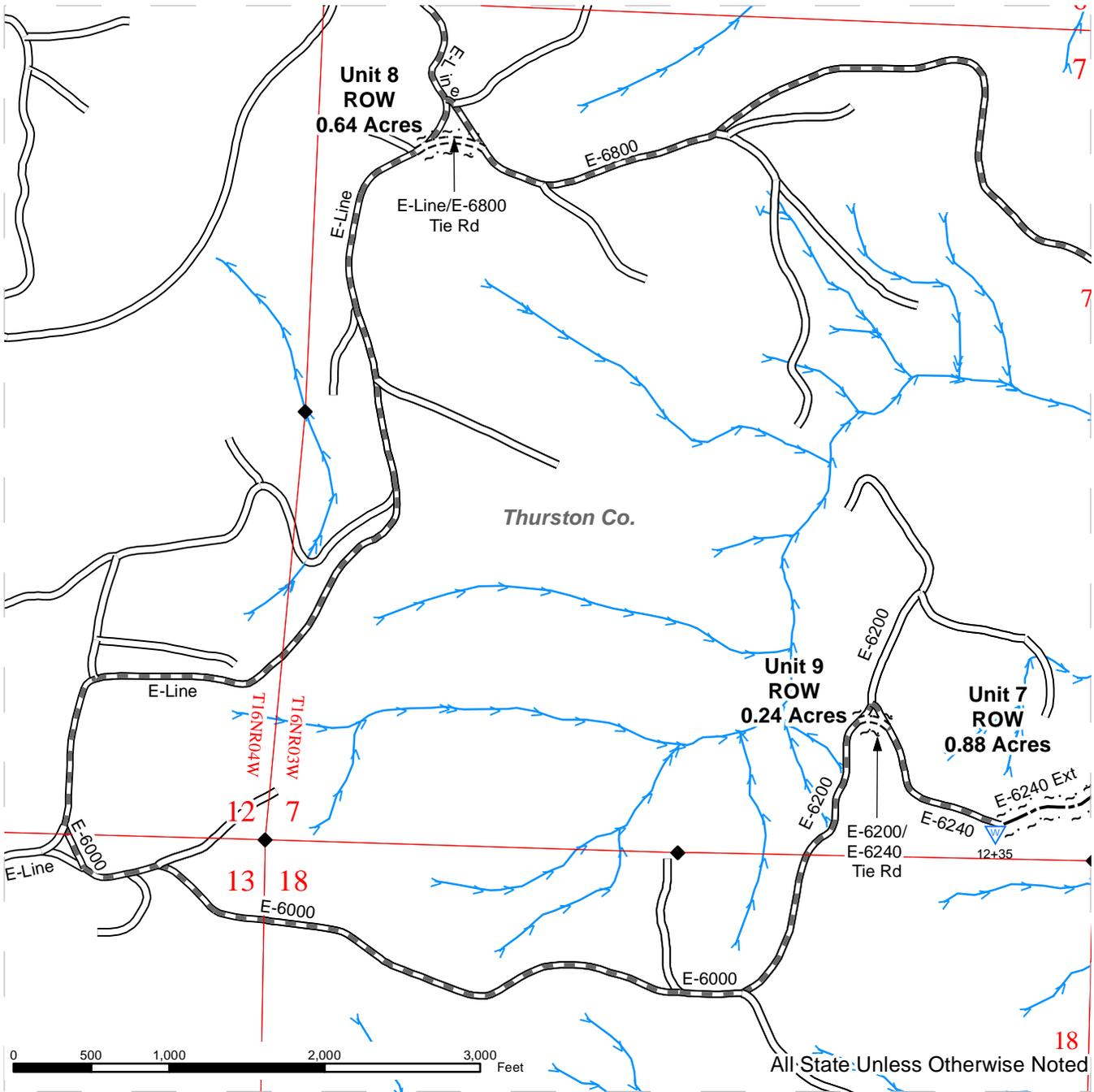
All State Unless Otherwise Noted

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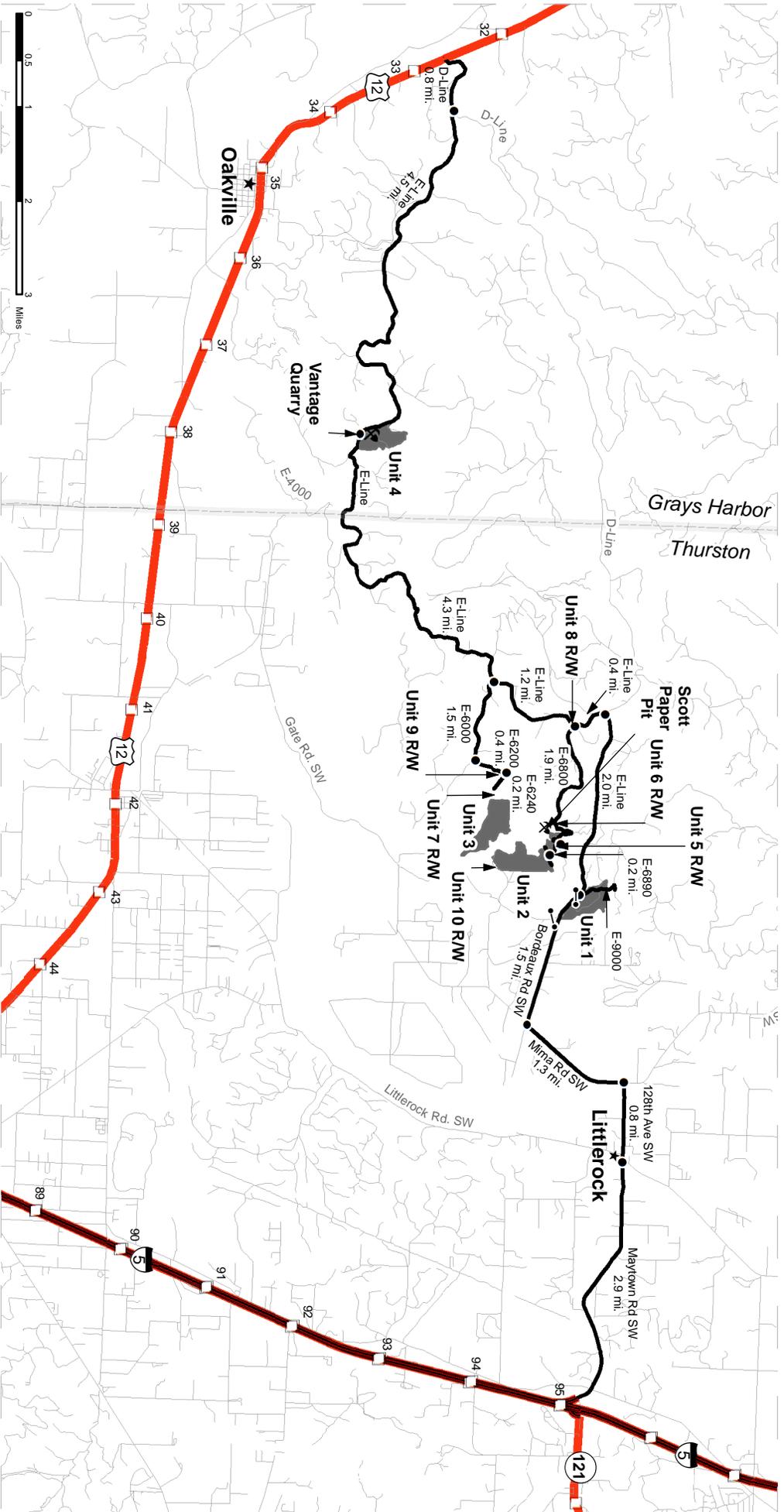


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Quarry	Orange "Right-of-Way" Tags	Required Abandonment	Stream Type
Forested Wetland	Existing Road	Decommissioned Road	Stream Type Break
Non-Forested Wetland	Required Construction	Optional Construction	Single Leave Trees - Marked w/ Yellow "Leave Tree Area" Tags
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White "Timber Sale Boundary" Tags			

DRIVING MAP

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Driving Directions:

- Unit 1: From Interstate 5, take the Maytown exit (milepost 95) onto Maytown Rd SW and follow for 2.8 miles. Continue onto 128th Ave SW for 0.8 mi. Turn left onto Mima Rd SW and follow for 1.3 mi. Turn right onto Bordeaux Rd SW and follow for 1.5 mi. Then turn right onto the E-9000. Unit 1 will be on the right.
- Unit 2 & 5 (Old Scott Paper Pit): From the E-9000 Continue onto the E-Line for 2.4 mi. Turn left onto the E-6800 and follow for 1.9 mi. to the E-6890 (at 1.76 mi. Unit 5 is on the right).
- Unit 3: From the E-Line/E-6800 junction, continue on the E-Line for another 1.2 mi. Then turn left onto the E-6200 and follow for 0.4 mi. Then turn right onto the E-6240 and follow for 0.2 miles to the end. Walk 1000 feet to reach Unit 3.
- Unit 4 & Vantage Pit: From the E-Line/E-6000 junction, continue on the E-Line for 4.3 mi. and Unit 4 will be on the right, turn right onto the E-3020 to arrive at Vantage Pit.

	Timber Sale Unit
	County Boundaries
	Highways
	Haul Route
	Other Route
	Distance Indicator
	Milepost Markers
	Rockpit
	Gate (957)

**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Lump Sum AGREEMENT NO. 30-091856

SALE NAME: BOARD O' FEET

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

G-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on June 14, 2016 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All timber, except leave trees bounded out by yellow "Leave Tree Area" tags and down timber existing more than 5 years from the day of sale, bounded by the following: white "Timber Sale Boundary" tags and property line marked with white carsonite posts or PVC posts in Unit #1; white "Timber Sale Boundary" tags, property line marked with white carsonite posts or PVC posts in Unit #2; white "Timber Sale Boundary" tags in Unit #3; white "Timber Sale Boundary" tags, Vantage Quarry, and the E-Line road in Unit #4; white "Timber Sale Boundary" tags, the Scott Paper Quarry, and E-6800 road in Unit #5; all timber bounded by orange "Right-of-Way Boundary" tags, if constructed, except fifteen trees with root wads a minimum of 16 inches in diameter and 20 feet in length, from the E-6800 Reroute right of way, as described in Schedule A, located on approximately 268 acres on part(s) of Sections 16, 21, and 22 all in Township 16 North, Range 4 West, Sections 4, 5, 7, 8, 9, and 17 all in Township 16 North, Range 3 West W.M. in Thurston, and Grays Harbor County(s) as designated on the sale area and as shown on the attached timber sale map.

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

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

G-020 Inspection By Purchaser

Purchaser hereby warrants to the State that they have had an opportunity to fully inspect the sale area and the forest products being sold. Purchaser further warrants to the State that they enter this contract based solely upon their own judgment of the value

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

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	Ecological Enhancement Sites

G-031 Contract Term

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

G-040 Contract Term Adjustment - No Payment

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

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

G-051 Contract Term Extension - Payment

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

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

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

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

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

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

- e. Payment of \$856.00 per acre per annum for the acres on which an operating release has not been issued within harvest area.
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

G-053 Surveys - Sensitive, Threatened, Endangered Species

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

G-060 Exclusion of Warranties

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

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

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

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

G-062 Habitat Conservation Plan

The State has entered into a Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services) to address state trust land management issues relating to compliance with the Federal Endangered Species Act. The activities to be carried out under this contract are located within the State's HCP area and are subject to the terms and conditions of the HCP, and the Services' Incidental Take Permit Nos. 812521 and 1168 (collectively referred to as ITP), or as amended hereafter by the Services. The ITP authorizes the incidental take of certain federally listed threatened and endangered species, as specified in the ITP conditions. All HCP materials, including the ITP, are available for review at the State's Regional Offices and the administrative headquarters in Olympia, Washington.

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

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

G-063 Incidental Take Permit Notification Requirements

- a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.
- b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, Purchaser shall immediately notify the Contract Administrator. Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchaser may be required to take certain actions to help the Contract Administrator safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.
- c. Purchaser shall refer to a specific ITP number, PRT-812521 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.
- d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP and this schedule must be presented and clearly explained by Purchaser to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

G-064 Permits

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

G-065 Regulatory Disclaimer

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

G-066 Governmental Regulatory Actions

a. Risk

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

b. Sale Area

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

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

c. Adjustment of Price

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

G-070 Limitation on Damage

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

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

G-080 Scope of State Advice

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

G-091 Sale Area Adjustment

The Parties may agree to adjustments in the sale area boundary. The cumulative changes to the sale area during the term of the contract shall not exceed more than four percent of the original sale area. If the sale area is increased, the added forest products become a part of this contract. The State shall determine the volume added and shall calculate the increase to the total contract price using the rates set forth in clause G-101, G-102, or G-103. If the sale area is reduced, the State shall determine the volume to be reduced. The State shall calculate the reduction to the total contract price using the rates set forth in clause G-101, G-102, or G-103.

G-101 Forest Products Not Designated

Any forest products not designated for removal, which must be removed in the course of operations authorized by the State, shall be approved and designated by the Contract Administrator. Added forest products become a part of this contract and the Scribner log scale volume, as defined by the Northwest Log Rules Advisory Group, shall be determined by the Contract Administrator. Added forest products shall be paid for at the following contract payment rates per Mbf Scribner log scale.

The pricing schedule has not been set for the sale.

G-106 Adding Naturally Damaged Forest Products

Any forest products not designated for removal that are seriously damaged by disease, insects or wind, or that may contribute seriously to the spread of insect or disease damage may be added to this sale by the State's Contract Administrator. Additions must be in unlogged areas of the sale and added volume shall not exceed an amount equal to 10 percent of the original advertised volume. Added forest products become a part of this contract and shall be paid for at the rate set forth in clause G-101, G-102 or G-103.

G-111 Title and Risk of Loss

Title to the forest products under this contract passes to the Purchaser after they are removed from the sale area, if adequate advance payment or payment security has been provided to the State under this contract. Purchaser bears all risk of loss of, or damage to, and has an insurable interest in, the forest products described in this contract from

the time the sale is confirmed under RCW 79.15.120. Breach of this contract shall have no effect on this provision.

G-116 Sustainable Forestry Initiative® (SFI) Certification

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

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

G-120 Responsibility for Work

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

G-121 Exceptions

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

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

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

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

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

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

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

G-140 Indemnity

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

G-150 Insurance

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

G-160 Agents

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

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

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

G-170 Assignment and Delegation

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

G-180 Modifications

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

G-190 Contract Complete

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

G-200 Notice

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

- G-210 Violation of Contract
- G-220 State Suspends Operations

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

G-210 Violation of Contract

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

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

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

G-220 State Suspends Operation

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

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

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

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

G-230 Unauthorized Activity

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

G-240 Dispute Resolution

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

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

G-250 Compliance with All Laws

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

G-260 Venue

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

G-270 Equipment Left on State Land

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

G-280 Operating Release

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

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

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; D-Line, E-Line, E-3020, E-3020 Ext., E-3021, E-3022, E-Line/E-6800 Tie, E-6000, E-6200, E-6200/E-6240 Tie, E-6240, E-6240 Ext., E-3240-1, E-6240-2, E-6240-3, E-6800, E-6800 Reroute, E-6890, E-6890 Ext., E-6891, E-6892, E-6893, E-9000, E-9020, E-9030 and E-9030A road. 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 E-Line, E-3020, E-3020 Reroute, E-6000 and E-9000 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:

Easement #55-0000753 entered into between the State of Washington Department of Natural Resources and Mason County Logging Company, dated April 13, 1942.

Easement #55-0002582 entered into between the State of Washington Department of Natural Resources and "Busby" Taylor United, Inc., dated August 15, 1995.

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:

To be determined approximately one month prior to day of sale.

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 \$120,348.00. The total contract price consists of a \$0.00 contract bid price plus \$120,348.00 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 \$100,000.00. The Security provided shall guarantee performance of all provisions of this contract and payment of any damages caused by operations under this contract or resulting from Purchaser's noncompliance with any rule or law. Acceptable performance security may be in the form of a performance bond, irrevocable letter of credit, cash, savings or certificate of deposit account assignments, and must name the State as the obligee or beneficiary. A letter of credit must comply with Title 62A RCW, Article 5. Performance security must remain in full force over the duration of the contract length. Surety bonds issued shall conform to the issuance and rating requirements in clause G-150. The State shall retain the performance security pursuant to RCW 79.15.100. Purchaser shall not operate unless the performance security has been accepted by the State. If at any time the State decides that the security document or amount has become unsatisfactory, Purchaser agrees to suspend operations and, within 30 days of notification, to replace the security with one acceptable to the State or to supplement the amount of the existing security.

P-100 Performance Security Reduction

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

Section H: Harvesting Operations

H-013 Reserve Tree Damage Definition

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

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

- a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 100 square inches.

- b. A reserve tree top is broken or the live crown ratio is reduced below 30 percent.
- c. A reserve tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.

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

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

H-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-018 Temporary Stream Crossings

A temporary stream crossing is required to access a portion of Unit 3.

Purchaser shall comply with the following during the yarding operation:

- a. Adhere to the approved Hydraulic Permit Application (HPA) or Forest Practice Application (FPA) with approved hydraulic project work, if required, amend a current FPA or obtain a new FPA prior to commencing any new stream crossing construction.
- b. Location of the temporary stream crossing must be approved by the Contract Administrator.
- c. A temporary stream crossing shall not exceed 2 feet in width, including rub trees.
- d. Purchaser shall suspend operations during periods of wet weather when a high potential for sediment delivery into typed waters may occur.
- e. Temporary stream crossings shall be removed at the time of completion of yarding as required by the Contract Administrator.

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

H-035 Fall Trees Into Sale Area

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

H-040 Purchaser Harvest Plan

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

H-051 Branding and Painting

Purchaser shall provide a State of Washington registered log brand, acceptable to the State, unless the State agrees to furnish the brand. All purchased timber shall be branded in a manner that meets the requirements of WAC 240-15-030(2)(a)(i). All timber purchased under a contract designated as export restricted shall also be painted in a manner that meets the requirements of WAC 240-15-030(2)(a)(ii).

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

H-060 Skid Trail Locations

Locations of skid trails must be marked by Purchaser and approved by the Contract Administrator prior to the felling of timber.

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 cable and ground based equipment. Ground based equipment shall be limited to tracked ground based equipment on sustained slopes of 45% and less. Self-leveling shovels are restricted to sustained slopes of 55% or less. Use of tracked skidders shall be allowed for pole yarding only. No rubber tired skidders will be authorized unless authority to use other equipment is granted in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

H-126 Tailholds on State Land

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

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

- a. Falling, yarding and timber haul will not be permitted from November 1 to April 30, unless authority to do so is granted in writing by the Contract Administrator. If permission is granted to operate from November 1 to April 30, the Purchaser shall comply with a "Winter Operating Plan" to include further protection of water, soil, roads, and other forest assets at the Purchaser's expense. All preventative measures shall be in place prior to commencing any winter operations.
- b. Purchaser shall place a 18" x 20' culvert at the Type 5 stream crossing location on the designated skid trail within Unit 3 to protect the stream bank and prevent sedimentation. All material placed in and/or over the stream at this crossing shall be removed immediately upon completion of yarding on that skid trail.
- c. Equipment limitation zones are required within 30 feet of Type 5 streams.
- d. Any and all operations associated with this sale may be temporarily suspended when, in the opinion of the Contract Administrator, there is the potential for delivery to typed water.
- e. Within shovel logging areas, the shovel operator shall break up concentrations of logging debris greater than 10.5 feet by 10.5 feet to allow exposure of natural forest soils to ensure proper reforestation.
- f. No equipment shall operate, or trees felled or damaged, outside the timber sale boundary.
- g. The Purchaser shall notify all employees and contractors working on this sale that any danger tree marked or unmarked may be felled. Any marked danger tree will be replaced with a suitable tree of similar size and species as approved by the Contract Administrator.
- h. Within shovel logging areas, and when yarding and loading operations are occurring simultaneously, an additional shovel will be required for loading to avoid extra trips to the landing. No more than one round trip per shovel road is allowed.

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

H-141 Additional Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

- a. Purchaser shall leave 2 down logs per acre in units 1 through 4. A log is defined as having a minimum diameter of 12 inches on the small end of the log and a minimum length of 20 feet or at least 100 board feet.

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

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.

H-250 Additional Falling Requirements

Within Units 1 - 5, all live stems over 2 inches in diameter, shall be felled. Trees shall be severed at a stump height not to exceed 12 inches and cut completely free of the stump. Areas of young or immature timber may be excluded from this requirement 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 12/10/2015 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on E-3020 (from station 6+85 to station 21+75), E-3020 re-route, E-3021, E-3022, E-6200, E6200/E-6240 Tie, E-6240, E-6240 Ext., E-6240-1, E-6240-2, E-6240-3, E-Line/E-6800 Tie Rd, E-6800, E6800 Reroute, E-6890, E-6890 Ext., E-6891, E-6892, E-6893, E-9000, E-9020, E-9030 and E-9030A roads. All work shall be completed to the specifications detailed in the Road Plan.

C-060 Designated Road Maintainer

If required by the State, Purchaser shall perform maintenance and replacement work as directed by the Contract Administrator on all other roads used that are not covered in clause 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 on file at the region and Olympia offices. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

C-140 Water Bars

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

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

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

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

S-010 Fire Hazardous Conditions

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

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

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

S-030 Landing Debris Clean Up

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

S-050 Cessation of Operations for Low Humidity

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

S-060 Pump Truck or Pump Trailer

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

S-100 Stream Cleanout

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

S-110 Resource Protection

No equipment may operate within the Riparian or Wetland Management Zones, except for the Right of Way in Unit #6 within a Wetland Management Zone and Right of Way within Unit #10 within a Riparian Management Zone unless authority is granted in writing by the Contract Administrator.

S-120 Stream Protection

No timber shall be felled into, across, or yarded through Type 3 or Type 4 waters, except for road construction.

S-130 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

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

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

If safe to do so, Purchaser shall take immediate action to contain and control all hazardous material spills. Purchaser shall ensure that enough quick response spill kits capable of absorbing 4 to 6 gallons of oil, coolant, solvent or contaminated water are available on site to quickly address potential spills from any piece of equipment at all times throughout active operations. If large quantities of bulk fuel/other hazardous materials are stored on site, Purchaser must be able to effectively control a container leak and contain & recover a hazmat spill equal to the largest single on site storage container volume. (HAZWOPER reg. 29CFR 1910.120 (j) (1) (vii)).

d. Hazardous Material Release Reporting

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

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

DNR Contract Administrator

ECY - Northwest Region:

1-425-649-7000

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

ECY - Southwest Region:

1-360-407-6300

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

ECY - Central Region:

1-509-575-2490

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

ECY - Eastern Region:

1-509-329-3400

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

S-131 Refuse Disposal

As required by RCW 70.93, All Purchaser generated refuse shall be removed from state lands for proper disposal prior to termination of this contract. No refuse shall be burned, buried or abandoned on state forest lands. All refuse shall be transported in a manner such that it is in compliance with RCW 70.93 and all loads or loose materials shall be covered/secured such that these waste materials are properly contained during transport.

Section D: Damages

D-013 Liquidated Damages or Failure to Perform

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

obtaining an adequate remedy. These liquidated damages provisions provide greater certainty for the Purchaser by allowing the Purchaser to better assess its responsibilities under the contract.

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

D-041 Reserve Tree Excessive Damage

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

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Art Tasker
South Puget Sound Region Manager

Date: _____
Address: _____

Date: _____

CORPORATE ACKNOWLEDGEMENT

STATE OF _____)

COUNTY OF _____)

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

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

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

Notary Public in and for the State of

My appointment expires _____

Schedule A
Ecological Enhancement Sites

In right of way Unit #6, the Purchaser shall place 15 trees from the clearing limits of the E-6800 Reroute road within the abandoned road prism of the E-6880 Road, per Road Plan clause 9-21 and 9-24, as directed by the Contract Administrator. The 15 trees must be painted by the Purchaser with a red band of paint at diameter breast height (DBH) before falling begins.

The 15 trees must have root wads attached and be evenly spaced in the abandoned road prism and must have a 16 inch DBH and 20 feet length minimum.



WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region:

Timber Sale Name:

Application Number:

EXCISE TAX APPLICABLE ACTIVITIES

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

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

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

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

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

EXCISE TAX EXEMPT ACTIVITIES

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

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

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

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

(Revised 6/13)

PRE-CRUISE NARRATIVE

Sale Name: Board O' Feet	Region: South Puget Sound
Agreement #: 30-091856	District: Black Hill
Contact Forester: Jarett Cook	Phone/ Location: (360)-280-3314
Alternate Contact: Derwood Duncan III	Phone/ Location: (360)-280-3113

Type of Sale (lump sum, mbf scale, tonnage scale or contract harvest): Lump sum
Required or Optional removal of utility as pulp: No
Evaluated for RFRS Implementation?: Yes
Percentage cable (specify downhill vs uphill): 25% Uphill
Percentage ground based: 75%
Species Onsite: <input checked="" type="checkbox"/> RC, <input checked="" type="checkbox"/> DF, <input checked="" type="checkbox"/> WH, <input checked="" type="checkbox"/> RA, <input checked="" type="checkbox"/> BC, <input checked="" type="checkbox"/> BLM, <input type="checkbox"/> NF, <input type="checkbox"/> SF, <input type="checkbox"/> SS, <input checked="" type="checkbox"/> Other: Cottonwood

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ WMZ	Legal Description Sec/Twp/Rng	Grant	Gross Traversed Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination (List method and error of closure if applicable)
				RMZ/ WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1	Secs 4, 5, 8, 9 / T16N/ R03W	2, 3	57.9	0	2.1	0.9	0	54.9	Garmin 64s
2	Sec 8 / T16N/ R03W	1, 3	85.5	0	2.8	1.2	0	81.5	Garmin 64s
3	Secs 8, 17 / T16N/ R03W	1, 3, 9	79.7	0	3.8	1.6	0	74.3	Garmin 64s
4	Secs 15, 21, 22 / T16N/ R04W	2, 42	59.6	0	2.6	0.3	5.7 (Pit)	51.0	Garmin 64s
5 (Pit Expansion)	Sec 8 / T16N/ R03W	3	2.2	0	0	0	0	2.2	Garmin 64s
6 (ROW) E-6800	Sec 7 / T16N/ R03W	2	1.99	0	0	0	0	1.99	Garmin 64s
7 (ROW) E-6240	Sec 7 / T16N/ R03W	2	0.88	0	0	0	0	0.88	Garmin 64s
8 (ROW) E/E- 6800	Sec 7 / T16N/ R03W	2	0.64	0	0	0	0	0.64	Garmin 64s
9 (ROW) E/E- 6240	Sec 7 / T16N/ R03W	2	0.24	0	0	0	0	0.24	Garmin 64s
10 (ROW)	Sec 8/ T16N/R03W	3	0.23	0	0	0	0	0.23	Garmin 64s
TOTAL ACRES			288.65	0	11.3	4.0	5.7	267.88	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Mark leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	Variable Retention Harvest: Variable Retention Harvest: Boundaries are marked with white "Timber Sale Boundary" tags and property line marked with White Carsonite posts. Clumped leave trees are marked with yellow "Leave Tree Area" tags.		464 Trees
2	Variable Retention Harvest: Boundaries are marked with white "Timber Sale Boundary" tags and property line marked with white Carsonite posts or PVC posts and pink flagging. Clumped leave trees are marked with yellow "Leave Tree Area" tags.		684 Trees
3	Variable Retention Harvest: Boundaries are marked with white		636 Trees

	"Timber Sale Boundary" tags. Clumped leave trees are marked with yellow "Leave Tree Area" tags.		
4	Variable Retention Harvest: Boundaries are marked with white "Timber Sale Boundary" tags, E-Line, and pink flagging. Clumped leave trees are marked with yellow "Leave Tree Area" tags and pink flagging.		431 Trees
5 (Pit Expansion)	Variable Retention Harvest: Boundaries are marked with white "Timber Sale Boundary" tags, E-Line, and Vantage Quarry. Clumped leave trees are marked with yellow "Leave Tree Area" tags.		0 Trees
6 (ROW)	All take trees are bound within the orange "Right-of-Way Boundary" tags		0 Trees
7 (ROW)	All take trees are bound within the orange "Right-of-Way Boundary" tags		0 Trees
8 (ROW)	All take trees are bound within the orange "Right-of-Way Boundary" tags		0 Trees
9 (ROW)	All take trees are bound within the orange "Right-of-Way Boundary" tags		0 Trees
10 (ROW)	All take trees are bound within the orange "Right-of-Way Boundary" tags		0 Trees

REMARKS:

Units 1 through 4: Units 1- 4 are regeneration harvest with 75% ground base and 25% cable base. Root rot scattered throughout the units. The timber consists of high quality Douglas-fir. There is scattered broken tops from storm damage. Other species are western red-cedar, red alder, and big leaf maple.

Unit 5: Pit expansion of Scott Paper Quarry. All timber within white "Timber Sale Boundary" tags and the E-6800 road is take trees.

Units 6 through 10: (ROW): Right-of-Way. All timber between orange "Right-of-Way" tags is take timber.

Prepared By: Derwood D. Duncan III
Date: 11/23/2015

Title: Unit Manager

CC: Derwood Duncan III

Cruise Narrative

Sale Name: Board O' Feet	Region: South Puget Sound
App. #: 30-091856	District: Black Hills
Lead Cruiser: Aaron Coleman	Completion Date: 12-23-2015 *Revised: 1/28/16
Other Cruisers: n/a	

Unit acreage specifications:

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
1	54.9	Yes	
2	81.5	Yes	
3	74.3	Yes	
4	51.0	Yes	
5	2.2	Yes	
6	1.99	Yes	
7	.88	Yes	
8	.64	Yes	
9	.24	Yes	
10	.23	Yes	
Total	267.88	Yes	

Unit cruise specifications:

Unit #	Sample type (VP, FP, ITS, 100%)	Expansion factor (BAF, full/half)	Sighting height (4.5 ft, 16 ft.)	Grid size (Plot spacing or % of area)	Plot ratio (Cru./Tally)	Total number of plots
1	VP	33.61 - ALL	4.5 ft	300' x 300'	1:1	27
2	VP	27.78 - ALL	4.5 ft	300' x 300'	1:1	39
3	VP	33.61 - ALL	4.5 ft	300' x 300'	1:1	35
4	VP	33.61 - ALL	4.5 ft	300' x 300'	1:1	25
5	VP	33.61 - ALL	4.5 ft	n/a	Cruise All	2
6	VP	33.61 - ALL	4.5 ft	n/a	Cruise All	6
7	VP	40.00 - ALL	4.5 ft	n/a	Cruise All	3
8	VP	33.61 - ALL	4.5 ft	n/a	Cruise All	3
9	VP	33.61 - ALL	4.5 ft	n/a	Cruise All	1
10	VP	33.61 - ALL	4.5 ft	n/a	Cruise All	2

Sale/Cruise Description:

Minor species cruise intensity:	n/a				
Minimum cruise spec:	40% Of Form- Factor at 16 feet D.O.B or 5 inch Top, and merchantable top.				
Avg. ring count by sp:	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">DF =</td> <td style="width: 35%; text-align: center;">7</td> <td style="width: 15%;">WH =</td> <td style="width: 35%; text-align: center;">7</td> </tr> </table>	DF =	7	WH =	7
DF =	7	WH =	7		
Leave/take tree description:	Unit contains leave tree areas and single trees bounded with yellow "Leave Tree Area" tags and pink flashers/flagging.				

<p>Sort Description:</p>	<p>HA - Logs meeting the following criteria: Surface characteristics for a high quality A sort will have sound tight knots not to exceed 1 1/2" in diameter, numbering not more than an average of one per foot of log length. May include logs with not more than two larger knots. Knots and knot indicators 1/2" in diameter and smaller shall not be a determining factor. Logs will have a growth ring count of 6 or more rings per inch in the outer third top end of the log. (High Quality sort. Grades SM, 2S, 3S. Lengths 16ft-40ft, 2ft multiples min TDIB 8". Max butt 27")</p> <p>HB - Logs meeting the following criteria: Surface characteristics for an Intermediate B sort will have sound tight knots not to exceed 1 1/2" in diameter. May include logs with not more than two larger knots up to 2 1/2" in diameter. Logs will have a growth ring count of 6 or more rings per inch in the outer third to end of the log. (Intermediate sort. Grades 2S, 3S. Lengths 16ft-40ft, 2ft multiples min TDIB 8". Max butt 27").</p> <p>D - Domestic quality logs that do not meet high quality or intermediate definitions. (Domestic sort. Grades 2S, 3S, 4S and utility. Lengths 16ft-40ft, min TDIB 5".)</p> <p>O - Logs exceeding 27" on the large end. (Oversize sort. Grade 2S. Lengths 16ft-40ft, 2ft multiples butt diameter min dia. 27 in. +)</p> <p>R - Logs meeting the following criteria: Surface characteristics for a rough log sort will not meet the requirements for a domestic 2S, but still be in limitations for a domestic 3S. Meaning logs will contain excessive knots in excess of 2 1/2" and not exceeding 3" with a recovery of less than 65% of the net scale and greater than 33% of the gross scale. (Rough oversize sort. Grade 3S. Lengths 16ft-40ft, 2ft multiples TDIB 12"+)</p>
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Field observations:

This sale consists of 5 variable retention harvest (VRH) units and 5 right-of-ways (ROWS) and one pit expansion located off of the E-Line and Bordeaux Road in Capitol State Forest.

The primary species in this sale is Douglas-fir (DF) at 98%. There is a small amount of Western redcedar (WRC), and Red Alder also present, but they do not make up a significant percentage of the volume.

The DF throughout this sale averages 13" diameter with 66' bole height. Domestic sorts make up the entire sale and with the exception of a small pocket of WRC in unit 3, the stand structure is very uniform.

Defect present throughout the sale consists primarily of forked/broken tops, sweep, and spike knots. Very little hardwood was seen within the units and minimal defect was observed on the few trees which were cruised.

The recommended harvest system for the sale is 25% uphill cable yarding and 75% ground-based yarding.

All roads to this sale are in good condition and there are plenty of good access points into all units. A 957 key is needed to access units 1, 2 and 3.

Grant(s): 1, 2, 3, 9, 42

Prepared by: Aaron Coleman

Title: Timber Cruiser

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
<div style="border: 1px solid black; padding: 5px;"> T16N R03W S08 Ty00U1 THRU T16N R03W S08 Ty0U10 </div>				Project: BOARDOFE										Page 1							
				Acres 267.88										Date 1/28/2016			Time 12:05:23PM				
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99					
DF	CU	CU			100.0	54											6	6		0.00	62.9
DF	D	2S		7	4.0	1,309	1,257	337			100			8	3	89	38	12	193	1.42	6.5
DF	D	3S		64	3.1	10,819	10,483	2,808	24	76			0	4	3	94	39	8	96	0.70	108.9
DF	D	4S		27	.6	4,378	4,350	1,165	93	7			11	39	19	31	28	5	32	0.29	134.6
DF	D	UT		1		276	276	74	57	42	1		9	16		75	32	6	48	0.42	5.8
DF	OS	2S		1	10.5	56	50	13			100					100	40	21	680	4.55	.1
DF	Totals			98	2.8	16,892	16,415	4,397	41	51	8	0	3	14	7	76	28	7	52	0.51	318.7
RA	CU	CU															5	6		0.00	3.2
RA	D	UT		13		25	25	7	100				100				18	6	24	0.34	1.1
RA	D	3S		14	13.3	31	27	7		100			46	54			20	10	65	0.92	.4
RA	D	4S		73	4.1	146	140	38	100				23	37	8	32	27	5	27	0.29	5.1
RA	Totals			1	5.0	203	192	52	86	14			36	34	6	23	19	6	20	0.30	9.8
RC	CU	CU															8	16		0.00	.1
RC	D	3S		42	23.9	26	20	5		69	31					100	36	10	108	1.45	.2
RC	D	UT		6		3	3	1	100				100				17	5	20	0.29	.1
RC	OS	UT		52		24	24	6			100			100			24	22	500	4.47	.0
RC	Totals			0	11.8	52	46	12	6	29	13	52	6	52		43	23	11	100	1.42	.5
WH	CU	CU															10	7		0.00	.5
WH	D	3S		62	6.2	90	85	23		100					100		38	8	80	0.68	1.1
WH	D	4S		36		49	49	13	100					91	5	4	26	5	30	0.25	1.6
WH	D	UT		2	.0	2	2	0	100					100			32	5	30	0.29	.1
WH	Totals			1	3.9	141	135	36	37	63				33	3	64	28	6	42	0.43	3.2
BM	D	4S		100		8	8	2	100					100			29	5	30	0.34	.3
BM	Totals			0		8	8	2	100					100			29	5	30	0.34	.3
Totals					2.9	17,295	16,796	4,499	41	51	8	0	4	14	7	75	28	7	51	0.50	332.4

PROJECT STATISTICS
PROJECT BOARD OF E

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
16N	03	08	BOARD OF FEET	00U1	THR	267.88	143	726	S	W
16N	03W	08	BOARD OF FEET	0U10						

CL	68.1	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH	5	7	10
DOUG FIR		54.5	4.6	15,667	16,415	17,162			
WHEMLOCK		696.9	58.2	56	135	214			
R ALDER		408.4	34.1	127	192	258			
BL MAPLE		1195.8	99.9	0	8	15			
WR CEDAR		879.8	73.5	12	46	80			
TOTAL		<i>52.1</i>	<i>4.4</i>	<i>16,065</i>	<i>16,796</i>	<i>17,527</i>	<i>108</i>	<i>55</i>	<i>27</i>

CL	68.1	COEFF	NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH	5	7	10
DOUG FIR		54.6	4.6	4,312	4,518	4,724			
WHEMLOCK		686.8	57.4	16	38	60			
R ALDER		411.5	34.4	36	54	73			
BL MAPLE		1195.8	99.9	0	3	5			
WR CEDAR		845.5	70.6	5	15	26			
TOTAL		<i>52.2</i>	<i>4.4</i>	<i>4,427</i>	<i>4,629</i>	<i>4,831</i>	<i>109</i>	<i>55</i>	<i>27</i>

T16N R03W S08 T00U2										T16N R03W S08 T00U2			
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
16N	03W	08	BOARDOFEET	00U2	81.50	39	110	S	W				

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/	
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf	
DF		CU	CU														6	6		0.00	80.9
DF		DM	2S	2	5.0	338	321	26			100						40	12	190	1.28	1.7
DF		DM	3S	65	3.4	10,467	10,116	824	37	63			3	3	94		39	8	86	0.62	117.2
DF		DM	4S	31	.6	4,772	4,743	387	92	8			13	34	21	33	29	5	32	0.28	149.6
DF		DM	UT	2		304	304	25	72	28					89		35	5	41	0.34	7.3
DF	Totals			98	2.5	15,881	15,484	1,262	54	44	2		4	12	8	75	27	6	43	0.43	356.7
RA		CU	CU														6	6		0.00	4.7
RA		DM	UT	21		71	71	6	100						100		18	6	24	0.36	2.9
RA		DM	4S	79	4.8	274	261	21	100				33	16	15	37	26	5	26	0.28	10.0
RA	Totals			2	3.8	345	332	27	100				47	12	12	29	19	5	19	0.27	17.6
Type Totals					2.5	16,226	15,816	1,289	55	43	2		5	12	8	74	27	6	42	0.43	374.3

T16N R03W S08 T00U3										T16N R03W S08 T00U3				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
16N	03W	08	BOARDOFEET	00U3	74.30	35	93	S	W					

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99						
DF		CU	CU		100.0	130												5	6		0.00	77.3
DF		DM	2S	12	3.3	2,048	1,980	147			100				8	92		39	12	199	1.43	9.9
DF		DM	3S	60	1.9	10,011	9,817	729	20	80				4	2	94		39	8	98	0.69	100.2
DF		DM	4S	26	1.2	4,171	4,119	306	100					11	27	16	47	30	5	32	0.28	130.4
DF		DM	UT			78	78	6		100					100			22	9	50	0.68	1.6
DF		OS	2S	2	10.5	202	181	13			100					100		40	21	680	4.55	.3
DF	Totals			99	2.8	16,640	16,175	1,202	38	49	12	1		3	10	6	82	27	7	51	0.51	319.7
RC		CU	CU															8	16		0.00	.3
RC		DM	3S	42	23.9	93	71	5		69	31					100		36	10	108	1.45	.7
RC		DM	UT	6		10	10	1	100					100				17	5	20	0.29	.5
RC		OS	UT	52		86	86	6			100			100				24	22	500	4.47	.2
RC	Totals			1	11.8	189	167	12	6	29	13	52		6	52	43		23	11	100	1.42	1.7
Type Totals					2.9	16,829	16,342	1,214	37	49	12	2		3	10	6	81	27	7	51	0.52	321.4

T16N R03W S08 T00U4										T16N R03W S08 T00U4				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
16N	03W	08	BOARDOFEET	00U4	51.00	25	70	S	W					

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99						
DF		CU	CU		100.0	93												8	8		0.00	47.4
DF		DM	2S	13	4.9	2,841	2,702	138			100				18		82	37	12	184	1.41	14.7
DF		DM	3S	63	4.7	13,082	12,468	636	9	91				4	4	91	39	9	113	0.84	110.5	
DF		DM	4S	22		4,316	4,316	220	82	18				9	64	17	10	26	6	33	0.33	130.7
DF		DM	UT	2		282	282	14		100						100	40	10	150	1.06	1.9	
DF	Totals			96	4.1	20,614	19,768	1,008	23	63	14			2	19	6	72	28	8	65	0.64	305.2
WH		CU	CU															10	7		0.00	2.5
WH		DM	3S	65	6.3	460	431	22		100						100	38	8	79	0.67	5.4	
WH		DM	4S	35		231	231	12	100					100			25	5	30	0.24	7.7	
WH	Totals			3	4.2	691	662	34	35	65				35		65	27	6	42	0.44	15.7	
RA		CU	CU															0	7		0.00	3.1
RA		DM	3S	57	13.3	164	142	7		100				46	54		20	10	65	0.92	2.2	
RA		DM	4S	43	9.6	114	103	5	100					21		79	34	5	33	0.38	3.1	
RA	Totals			1	11.8	279	246	13	42	58				27	40	33	18	7	29	0.54	8.5	
Type Totals					4.2	21,583	20,676	1,054	24	63	13			2	20	6	72	28	8	63	0.63	329.3

T16N R03W S08 T00U9										T16N R03W S08 T00U9				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
16N	03W	08	BOARDOFEET	00U9	.24	1	7	S	W					

S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre		
								Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/			
								5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf			
DF	CU	CU																				
DF	DM	3S	78	4.4	16,592	15,864	4	32	68			14	9	78	36	8	75	0.62				210.9
DF	DM	4S	11		2,341	2,341	1	100				27		73	31	5	32	0.37				74.2
DF	DM	UT	11		2,132	2,132	1		100			100			16	13	100	1.25				21.3
DF	Totals		100	3.5	21,064	20,337	5	37	53	10		24	7	69	22	7	41	0.53				501.3
Type Totals				3.5	21,064	20,337	5	37	53	10		24	7	69	22	7	41	0.53				501.3

T16N R03W S08 T0U10										T16N R03W S08 T0U10			
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
16N	03W	08	BOARDOFEET	0U10	.23	2	8	S	W				

Spp	So	Gr	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre			
								Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/				
								5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf				
DF	CU	CU																					
DF	DM	3S	11		1,276	1,276	0	100							100			40	7	70	0.53		18.2
DF	DM	4S	89		9,590	9,590	2	100			14	16	70				35	5	35	0.25		272.9	
DF	Totals		100	.0	10,866	10,866	2	100			12	14	74				24	5	25	0.27		431.7	
Type	Totals			.0	10,866	10,866	2	100			12	14	74				24	5	25	0.27		431.7	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BOARDOFE		DATE	1/28/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
16N	03W	08	BOARDOFEET	00U1	54.90	27	108	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		27	108	4.0						
CRUISE		13	58	4.5	8,483		.7			
DBH COUNT										
REFOREST										
COUNT		12	50	4.2						
BLANKS		2								
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	56	148.9	12.7	64	37.0	132.0	15,160	14,886	4,085	4,085
R ALDER	2	5.6	9.0	62	0.8	2.5	169	169	44	44
TOTAL	58	154.5	12.6	64	37.8	134.4	15,329	15,055	4,128	4,128
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		53.8	7.2	115	124	133				
R ALDER				30	30	30				
TOTAL		56.2	7.4	112	121	129	126	64	31	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		49.7	6.6	32	34	36				
R ALDER		17.2	16.1	6	8	9				
TOTAL		52.2	6.9	31	33	35	109	56	27	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		51.5	10.1	134	149	164				
R ALDER		519.6	101.9		6	11				
TOTAL		56.8	11.1	137	155	172	134	68	34	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		45.7	9.0	120	132	144				
R ALDER		519.6	101.9		2	5				
TOTAL		46.0	9.0	122	134	147	88	45	22	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		43.9	8.6	13,605	14,886	16,167				
R ALDER		519.6	101.9		169	341				
TOTAL		43.9	8.6	13,760	15,055	16,350	80	41	20	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		43.9	8.6	3,733	4,085	4,436				
R ALDER		519.6	101.9		44	88				
TOTAL		43.7	8.6	3,774	4,128	4,482	79	40	20	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BOARDFOE		DATE	1/28/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
16N	03W	08	BOARDFOEET	00U2	81.50	39	223	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		39	223	5.7						
CRUISE		20	110	5.5	16,919		.7			
DBH COUNT										
REFOREST										
COUNT		18	106	5.9						
BLANKS		1								
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	103	196.3	12.0	66	44.4	153.9	15,881	15,484	4,189	4,188
R ALDER	7	11.3	9.0	51	1.7	5.0	345	332	92	92
TOTAL	110	207.6	11.8	65	46.2	158.8	16,226	15,816	4,281	4,281
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	58.9	5.8		95	101	107				
R ALDER	28.6	11.6		28	31	35				
TOTAL	62.2	5.9		91	96	102	155	79	39	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	58.3	5.7		26	28	29				
R ALDER	46.3	18.9		7	9	11				
TOTAL	61.5	5.9		25	26	28	151	77	38	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	47.4	7.6		181	196	211				
R ALDER	270.7	43.3		6	11	16				
TOTAL	41.6	6.7		194	208	221	69	35	17	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	45.5	7.3		143	154	165				
R ALDER	251.5	40.2		3	5	7				
TOTAL	40.9	6.5		148	159	169	67	34	17	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	46.9	7.5		14,322	15,484	16,646				
R ALDER	260.7	41.7		194	332	471				
TOTAL	43.7	7.0		14,712	15,816	16,921	76	39	19	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	47.3	7.6		3,871	4,188	4,505				
R ALDER	246.8	39.5		56	92	129				
TOTAL	44.1	7.1		3,979	4,281	4,583	78	40	19	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BOARDFOE		DATE	1/28/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
16N	03W	08	BOARDFOEET	00U3	74.30	35	161	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
		PLOTS	TREES	PER PLOT	TREES	TREES				
TOTAL		35	161	4.6						
CRUISE		19	93	4.9	12,238	.8				
DBH COUNT										
REFOREST										
COUNT		16	64	4.0						
BLANKS										
100 %										
STAND SUMMARY										
SAMPLE		TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
TREES		/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR		91	164.1	13.1	68	42.2	152.7	16,640	16,175	4,474
WR CEDAR		2	.7	23.1	70	0.4	1.9	189	167	55
TOTAL		93	164.7	13.1	68	42.7	154.6	16,829	16,342	4,530
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		72.9	7.8	136	147	158				
WR CEDAR		96.2	90.0	37	375	713				
TOTAL		77.3	8.1	140	152	164	239	122	60	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		74.4	7.9	38	41	44				
WR CEDAR		76.3	71.5	32	113	194				
TOTAL		78.2	8.2	39	43	46	244	124	61	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		51.5	8.7	150	164	178				
WR CEDAR		459.5	77.6	0	1	1				
TOTAL		51.0	8.6	151	165	179	104	53	26	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		37.9	6.4	143	153	162				
WR CEDAR		412.1	69.6	1	2	3				
TOTAL		38.1	6.4	145	155	165	58	30	14	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		38.9	6.6	15,113	16,175	17,236				
WR CEDAR		431.2	72.8	45	167	288				
TOTAL		39.2	6.6	15,259	16,342	17,425	61	31	15	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		38.4	6.5	4,157	4,445	4,734				
WR CEDAR		413.6	69.9	17	55	94				
TOTAL		39.1	6.6	4,204	4,501	4,798	61	31	15	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BOARDOFE		DATE	1/28/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
16N	03W	08	BOARDOFEET	00U4	51.00	25	150	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		25	150	6.0						
CRUISE		13	70	5.4	8,987		.8			
DBH COUNT										
REFOREST										
COUNT		12	74	6.2						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	64	158.8	14.8	64	49.3	189.6	20,614	19,768	5,593	5,576
WHEMLOCK	3	13.1	10.6	45	2.5	8.1	691	662	187	187
R ALDER	3	4.2	13.2	45	1.1	4.0	279	246	82	82
TOTAL	70	176.2	14.5	62	53.0	201.7	21,583	20,676	5,862	5,844
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	43.9	5.5		143	151	159				
WHEMLOCK	48.2	33.4		42	63	84				
R ALDER	32.9	22.7		49	63	78				
TOTAL	47.6	5.7		135	143	152	91	46	23	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	43.7	5.5		41	43	45				
WHEMLOCK	60.7	42.0		11	19	27				
R ALDER	19.6	13.6		18	20	23				
TOTAL	46.9	5.6		39	41	43	88	45	22	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	38.8	7.9		146	159	171				
WHEMLOCK	311.9	63.6		5	13	21				
R ALDER	387.3	79.0		1	4	8				
TOTAL	24.3	5.0		167	176	185	25	13	6	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	37.9	7.7		175	190	204				
WHEMLOCK	301.4	61.5		3	8	13				
R ALDER	366.4	74.7		1	4	7				
TOTAL	25.5	5.2		191	202	212	27	14	7	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	40.7	8.3		18,128	19,768	21,409				
WHEMLOCK	303.3	61.9		252	662	1,071				
R ALDER	371.8	75.8		59	246	432				
TOTAL	32.5	6.6		19,307	20,676	22,044	44	22	11	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	40.1	8.2		5,120	5,576	6,032				
WHEMLOCK	299.2	61.0		73	187	301				
R ALDER	379.3	77.3		19	82	145				
TOTAL	31.1	6.3		5,474	5,844	6,214	40	20	10	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BOARDOFE		DATE	1/28/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
16N	03W	08	BOARDOFEET	00U5	2.20	2	15	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		2	15	7.5						
CRUISE		2	15	7.5	608	2.5				
DBH COUNT										
REFOREST COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	14	245.5	13.3	57	64.6	235.3	24,345	23,558	6,522	6,526
BL MAPLE	1	30.8	10.0	31	5.3	16.8	924	924	305	305
TOTAL	<i>15</i>	<i>276.3</i>	<i>12.9</i>	<i>54</i>	<i>70.1</i>	<i>252.1</i>	<i>25,269</i>	<i>24,482</i>	<i>6,826</i>	<i>6,831</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	41.8	11.6		100	113	126				
BL MAPLE										
TOTAL	<i>46.8</i>	<i>12.5</i>		<i>94</i>	<i>107</i>	<i>121</i>		<i>94</i>	<i>48</i>	<i>23</i>
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	41.0	11.3		28	31	35				
BL MAPLE										
TOTAL	<i>45.3</i>	<i>12.1</i>		<i>26</i>	<i>30</i>	<i>33</i>		<i>88</i>	<i>45</i>	<i>22</i>
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	12.5	11.7		217	246	274				
BL MAPLE	141.4	132.4			31	72				
TOTAL	<i>4.7</i>	<i>4.4</i>		<i>264</i>	<i>276</i>	<i>288</i>		<i>2</i>	<i>1</i>	<i>0</i>
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	20.2	18.9		191	235	280				
BL MAPLE	141.4	132.4			17	39				
TOTAL	<i>9.4</i>	<i>8.8</i>		<i>230</i>	<i>252</i>	<i>274</i>		<i>6</i>	<i>3</i>	<i>2</i>
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	28.3	26.5		17,316	23,558	29,800				
BL MAPLE	141.4	132.4			924	2,148				
TOTAL	<i>21.9</i>	<i>20.5</i>		<i>19,464</i>	<i>24,482</i>	<i>29,500</i>		<i>34</i>	<i>17</i>	<i>8</i>
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	27.5	25.8		4,844	6,526	8,209				
BL MAPLE	141.4	132.4			305	708				
TOTAL	<i>20.0</i>	<i>18.7</i>		<i>5,551</i>	<i>6,831</i>	<i>8,110</i>		<i>28</i>	<i>14</i>	<i>7</i>

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BOARDOFE		DATE	1/28/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
16N	03W	08	BOARDOFEET	00U6	1.99	6	32	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
PLOTS		TREES			TREES	TREES				
TOTAL	6	32	5.3							
CRUISE	5	29	5.8	439		6.6				
DBH COUNT										
REFOREST										
COUNT	1	3	3.0							
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	29	220.6	12.2	61	51.3	179.3	19,796	19,384	5,235	5,233
TOTAL	29	220.6	12.2	61	51.3	179.3	19,796	19,384	5,235	5,233
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	51.3	9.7		96	107	117				
TOTAL	51.3	9.7		96	107	117	109	56	27	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	50.3	9.5		26	29	32				
TOTAL	50.3	9.5		26	29	32	105	53	26	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	26.3	11.7		195	221	246				
TOTAL	26.3	11.7		195	221	246	33	17	8	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	28.2	12.6		157	179	202				
TOTAL	28.2	12.6		157	179	202	38	19	9	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	34.9	15.5		16,372	19,384	22,397				
TOTAL	34.9	15.5		16,372	19,384	22,397	58	30	14	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	35.6	15.9		4,404	5,233	6,063				
TOTAL	35.6	15.9		4,404	5,233	6,063	60	31	15	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BOARDFOE		DATE	1/28/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
16N	03W	08	BOARDFOEET	00U7	0.88	3	12	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		3	12	4.0						
CRUISE		3	12	4.0	256		4.7			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	9	141.3	12.5	50	34.0	120.0	8,037	7,961	2,678	2,678
R ALDER	3	149.7	7.0	37	15.1	40.0	2,993	2,993	503	503
TOTAL	12	290.9	10.0	43	50.5	160.0	11,030	10,955	3,181	3,181
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	49.7	17.6		53	64	76				
R ALDER				20	20	20				
TOTAL	63.6	19.2		43	53	64	176	90	44	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	49.4	17.4		18	22	26				
R ALDER	3.5	2.4		3	3	3				
TOTAL	72.2	21.7		13	17	21	227	116	57	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	82.2	56.9		61	141	222				
R ALDER	173.2	119.8			150	329				
TOTAL	77.1	53.3		136	291	446	341	174	85	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	57.7	39.9		72	120	168				
R ALDER	173.2	119.8			40	88				
TOTAL	43.3	30.0		112	160	208	108	55	27	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	59.6	41.2		4,679	7,961	11,244				
R ALDER	173.2	119.8			2,993	6,580				
TOTAL	45.3	31.4		7,520	10,955	14,389	118	60	29	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	45.8	31.7		1,829	2,678	3,527				
R ALDER	173.2	119.8			503	1,107				
TOTAL	33.7	23.3		2,439	3,181	3,924	65	33	16	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BOARDFOE		DATE	1/28/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
16N	03W	08	BOARDFOEET	00U8	0.64	3	10	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		3	10	3.3						
CRUISE		3	10	3.3	122		8.2			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	6	105.0	10.8	62	20.4	67.2	5,020	5,020	1,469	1,469
WHEMLOCK	4	85.1	9.8	60	14.3	44.8	3,825	3,825	1,117	1,117
TOTAL	<i>10</i>	<i>190.1</i>	<i>10.4</i>	<i>61</i>	<i>34.7</i>	<i>112.0</i>	<i>8,845</i>	<i>8,845</i>	<i>2,586</i>	<i>2,586</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	25.3	11.3		44	50	56				
WHEMLOCK	105.0	60.0		28	70	112				
TOTAL	<i>77.0</i>	<i>25.6</i>		<i>43</i>	<i>58</i>	<i>73</i>	<i>263</i>	<i>134</i>	<i>66</i>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	25.9	11.5		13	15	16				
WHEMLOCK	100.8	57.6		9	20	32				
TOTAL	<i>73.9</i>	<i>24.6</i>		<i>13</i>	<i>17</i>	<i>21</i>	<i>242</i>	<i>123</i>	<i>60</i>	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	62.8	43.5		59	105	151				
WHEMLOCK	87.4	60.5		34	85	137				
TOTAL	<i>57.8</i>	<i>40.0</i>		<i>114</i>	<i>190</i>	<i>266</i>	<i>192</i>	<i>98</i>	<i>48</i>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	50.0	34.6		44	67	90				
WHEMLOCK	86.6	59.9		18	45	72				
TOTAL	<i>45.8</i>	<i>31.7</i>		<i>77</i>	<i>112</i>	<i>148</i>	<i>121</i>	<i>62</i>	<i>30</i>	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	48.9	33.8		3,322	5,020	6,718				
WHEMLOCK	90.4	62.5		1,433	3,825	6,216				
TOTAL	<i>41.0</i>	<i>28.3</i>		<i>6,338</i>	<i>8,845</i>	<i>11,352</i>	<i>96</i>	<i>49</i>	<i>24</i>	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	49.8	34.4		964	1,469	1,975				
WHEMLOCK	87.7	60.7		439	1,117	1,794				
TOTAL	<i>43.3</i>	<i>29.9</i>		<i>1,812</i>	<i>2,586</i>	<i>3,360</i>	<i>108</i>	<i>55</i>	<i>27</i>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BOARDOFE			DATE	1/28/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
16N	03W	08	BOARDOFEET	00U9	0.24	1	7	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		1	7	7.0						
CRUISE		1	7	7.0	54		12.9			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	7	226.3	13.8	54	63.3	235.3	21,064	20,337	5,951	5,957
TOTAL	7	226.3	13.8	54	63.3	235.3	21,064	20,337	5,951	5,957
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	47.6	19.4		81	100	119				
TOTAL	47.6	19.4		81	100	119	105	54	26	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	36.5	14.8		24	29	33				
TOTAL	36.5	14.8		24	29	33	62	31	15	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BOARDOFE		DATE	1/28/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
16N	03W	08	BOARDOFEET	0U10	0.23	2	8	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		2	8	4.0						
CRUISE		2	8	4.0	63	12.7				
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	8	272.9	9.5	66	43.6	134.4	10,866	10,866	2,787	2,787
TOTAL	8	272.9	9.5	66	43.6	134.4	10,866	10,866	2,787	2,787
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	45.6	17.2		36	44	51				
TOTAL	45.6	17.2		36	44	51	95	48	24	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	52.7	19.9		9	11	14				
TOTAL	52.7	19.9		9	11	14	126	64	32	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	70.1	65.6		94	273	452				
TOTAL	70.1	65.6		94	273	452	344	176	86	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	70.7	66.2		45	134	223				
TOTAL	70.7	66.2		45	134	223	351	179	88	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	69.7	65.3		3,771	10,866	17,961				
TOTAL	69.7	65.3		3,771	10,866	17,961	341	174	85	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	72.5	67.9		896	2,787	4,679				
TOTAL	72.5	67.9		896	2,787	4,679	369	188	92	

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

T16N R03W S08 Ty00U	54.9
T16N R03W S08 Ty00U	81.5
T16N R03W S08 Ty0U1	.2

Project BOARDOFE
Acres 267.88

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Date: 1/28/2016
Time 12:05:23PM

Species	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
DOUG FIR	45,749	69,807	34,584	26.46	17.34	0.53	12,135	12,104	4,525	4,397
R ALDER	1,579	1,873	399	9.19	7.75	0.33	145	145	54	52
WHEMLOCK	724	729	327	14.13	14.04	0.45	102	102	38	36
WR CEDAR	49	98	97	83.99	41.99	1.56	41	41	14	12
BL MAPLE	68	68	18	9.89	9.89	0.34	7	7	2	2
Totals	48,169	72,575	35,425	25.74	17.09	0.53	12,430	12,399	4,633	4,499

Wood Type Species	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
C	46,522	70,634	35,008	26.33	17.34	0.53	12,278	12,248	4,577	4,446
H	1,647	1,940	417	9.22	7.83	0.33	152	152	56	54
Totals	48,169	72,575	35,425	25.74	17.09	0.53	12,430	12,399	4,633	4,499



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

FPA/N No: 2418457

Effective Date: 3/16/2016

Expiration Date: 3/16/2019

Shut Down Zone: 651N

EARR Tax Credit: Eligible Non-eligible

Reference: Board O' Feet

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

Decision

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

FPA/N Classification

Number of Years Granted on Multi-Year Request

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

Conditions on Approval / Reasons for Disapproval

Issued By: Josh Meek

Region: South Puget Sound

Title: Resource Protection Forester

Date: 3/16/2016

Copies to: Landowner, Timber Owner and Operator.

Issued in person: Landowner Timber Owner Operator By: _____

AFM 3-16-16

Appeal Information

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

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

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

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

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

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

And

Department Of Natural Resources
South Puget Sound Region
950 Farman Ave. N
Enumclaw, WA 98022

Other Applicable Laws

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

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

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

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

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

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

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

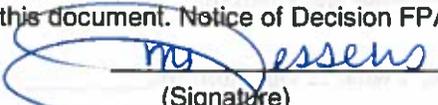
Obligations include reforestation, road maintenance and abandonment plans, conversions of forest land to non-forestry use and/or harvest strategies on perennial non-fish habitat (Type Np) waters in Eastern Washington.

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

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

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

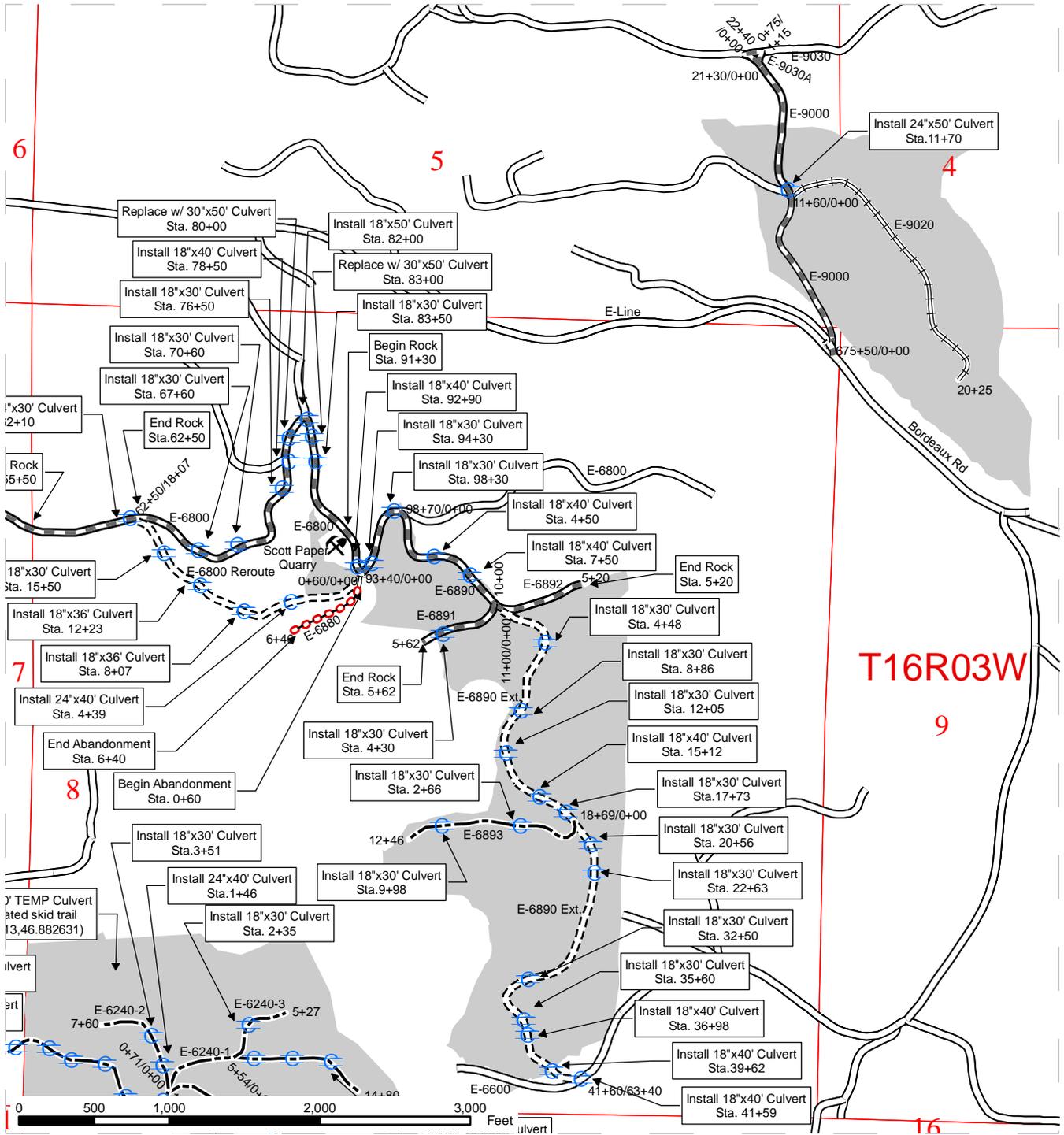
DNR affidavit of mailing:

On this day <u>3/16/2016</u>	, I placed in the United States mail at <u>Enumclaw</u>	, WA,
(date mm/dd/yyyy)	(post office location)	
postage paid, a true and accurate copy of this document. Notice of Decision FPA # <u>2418457</u>		
<u>Meredith Dessens</u>	<u></u>	
(Printed name)	(Signature)	

ROAD WORK MAP

SALE NAME: BOARD O FEET
AGREEMENT#: 30-091856
TOWNSHIP(S): T16R03W
TRUST(S): State Forest Transfer(1), Common School and Indemnity(3), Escheat(9)

REGION: South Puget Sound Region
COUNTY(S): THURSTON
ELEVATION RGE: 211-594



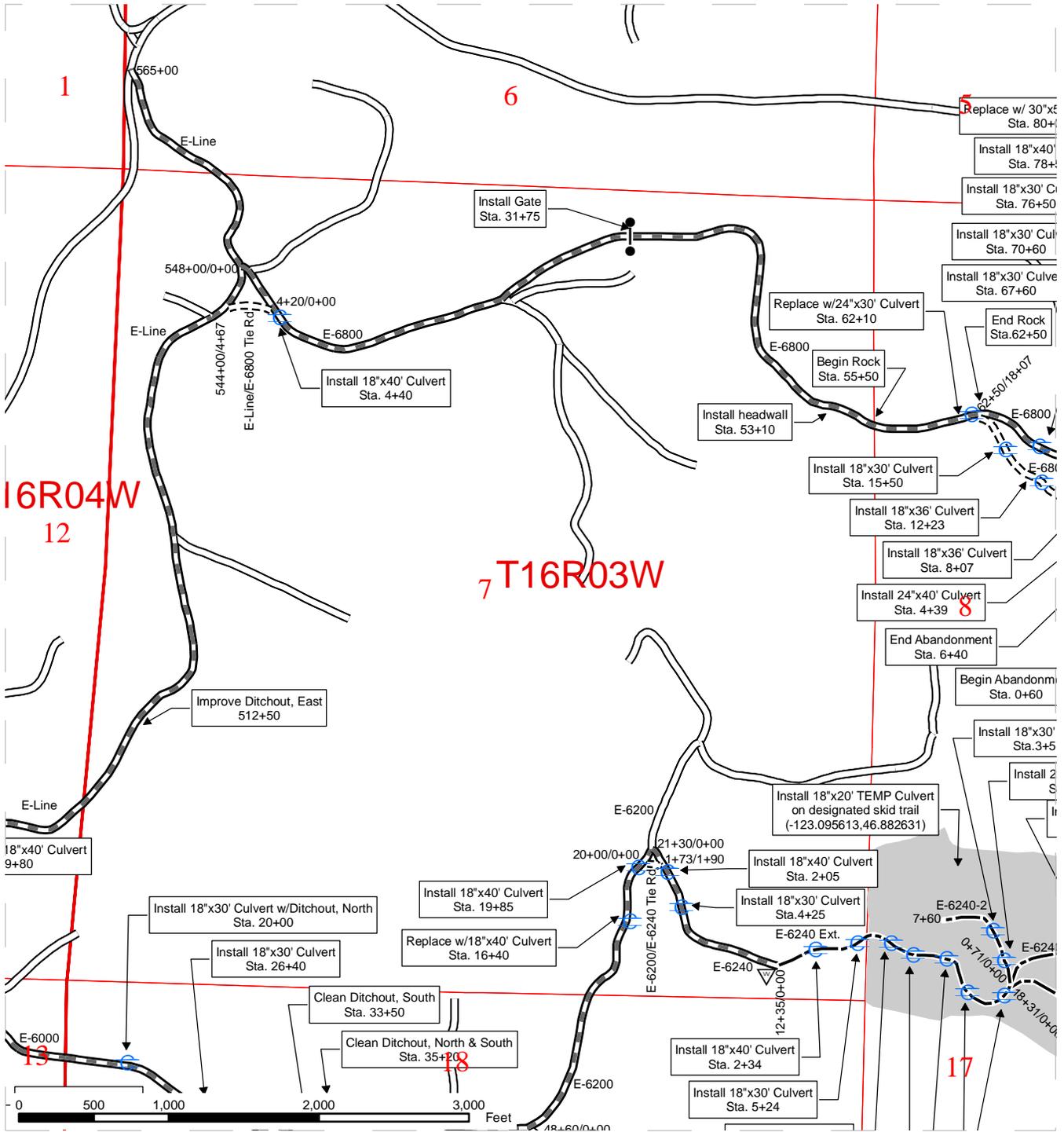
Harvest Area	Existing Road	Required Construction
Gate	Required Reconstruction	Optional Construction
Culvert Installation	Required Pre-Haul Maintenance	Required Abandonment
Waste Area		
Existing Rock Pit		



ROAD WORK MAP

SALE NAME: BOARD O FEET
AGREEMENT#: 30-091856
TOWNSHIP(S): T16R03W
TRUST(S): State Forest Transfer(1), Common School and Indemnity(3), Escheat(9)

REGION: South Puget Sound Region
COUNTY(S): THURSTON
ELEVATION RGE: 211-594



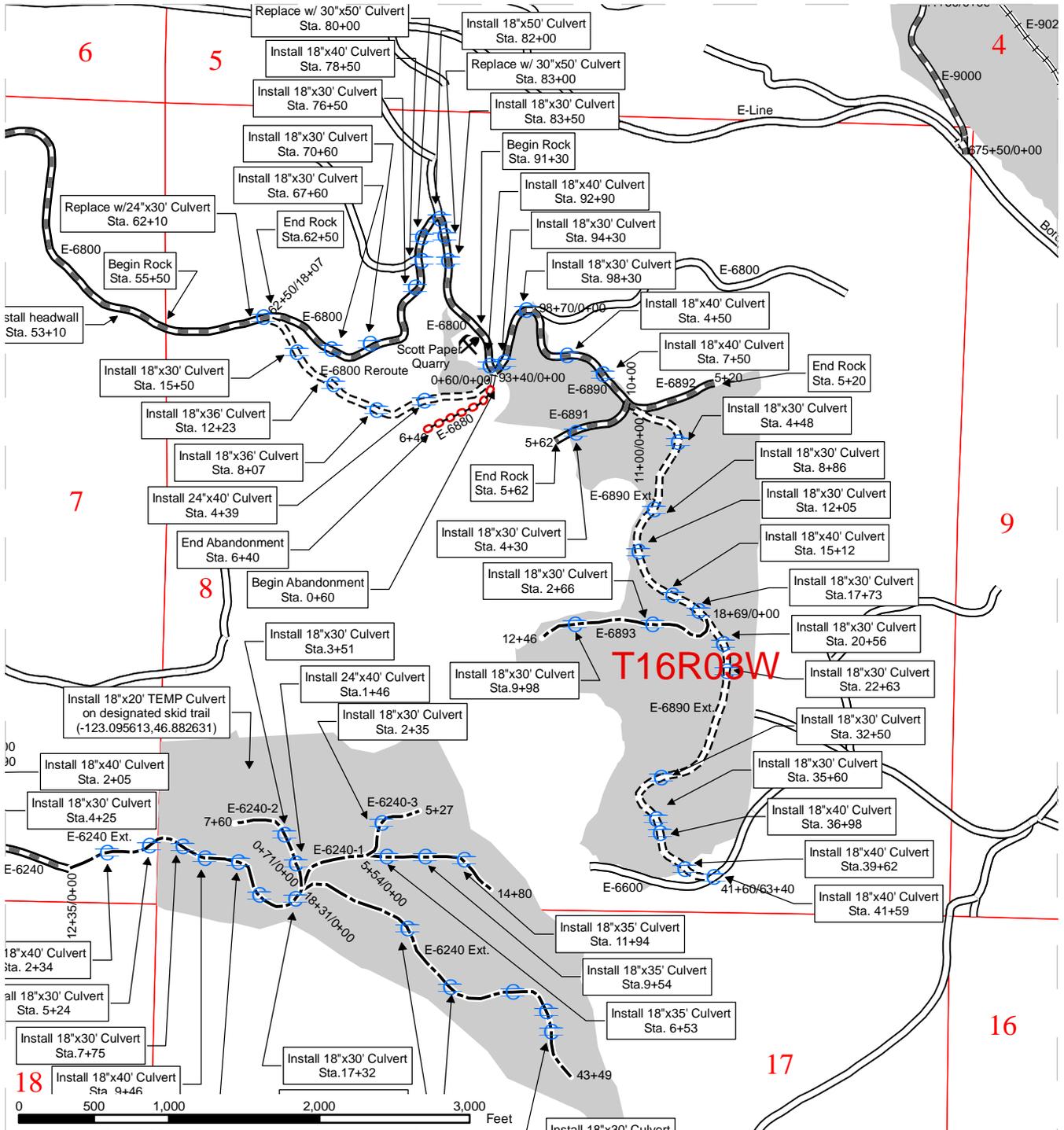
	Harvest Area		Existing Road		Optional Construction
	Gate		Required Reconstruction		Required Abandonment
	Culvert Installation		Required Pre-Haul Maintenance		
	Waste Area		Required Construction		
	Existing Rock Pit				



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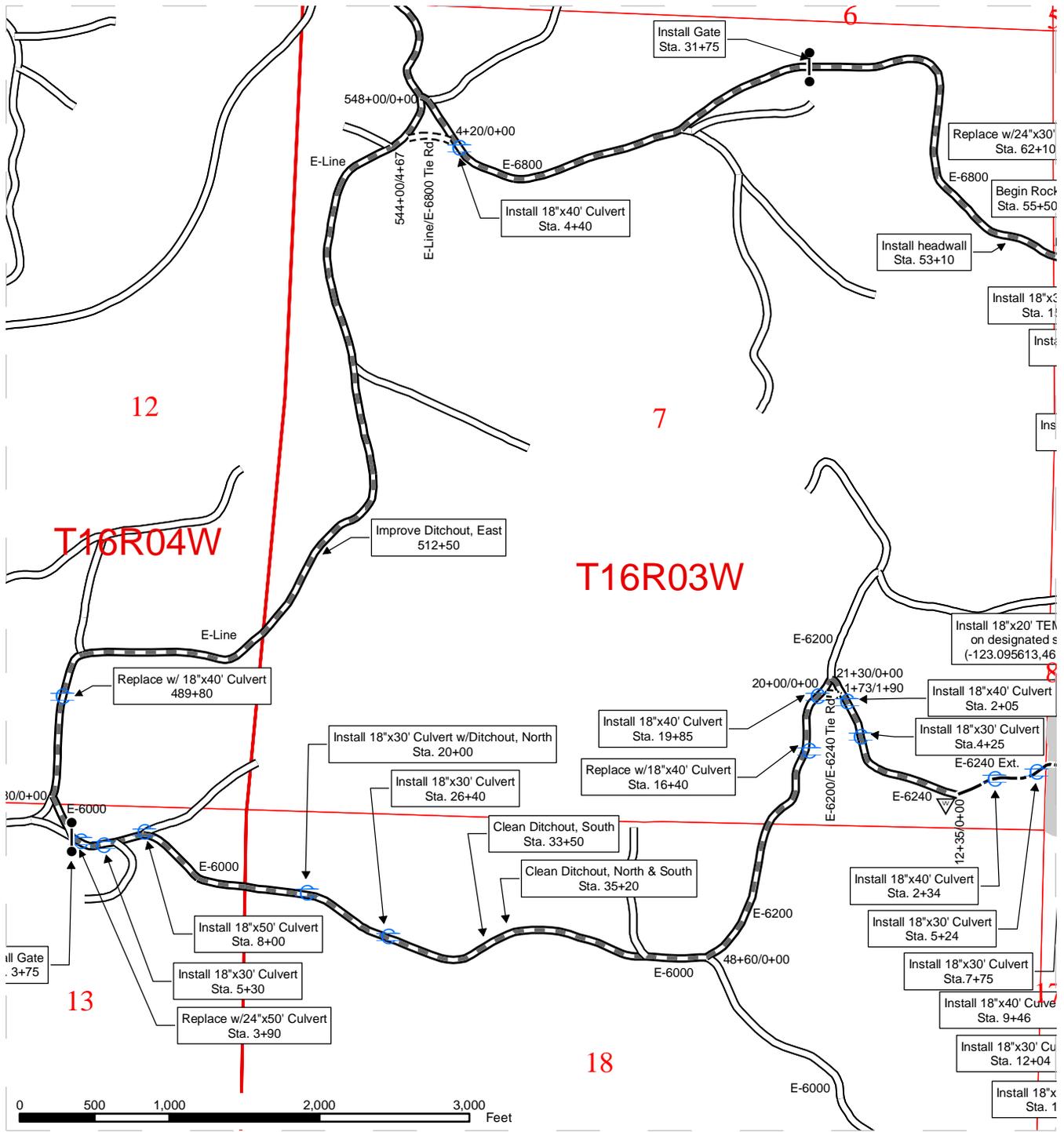
Harvest Area	Existing Road	Required Construction
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Culvert Installation	Required Pre-Haul Maintenance	Required Abandonment
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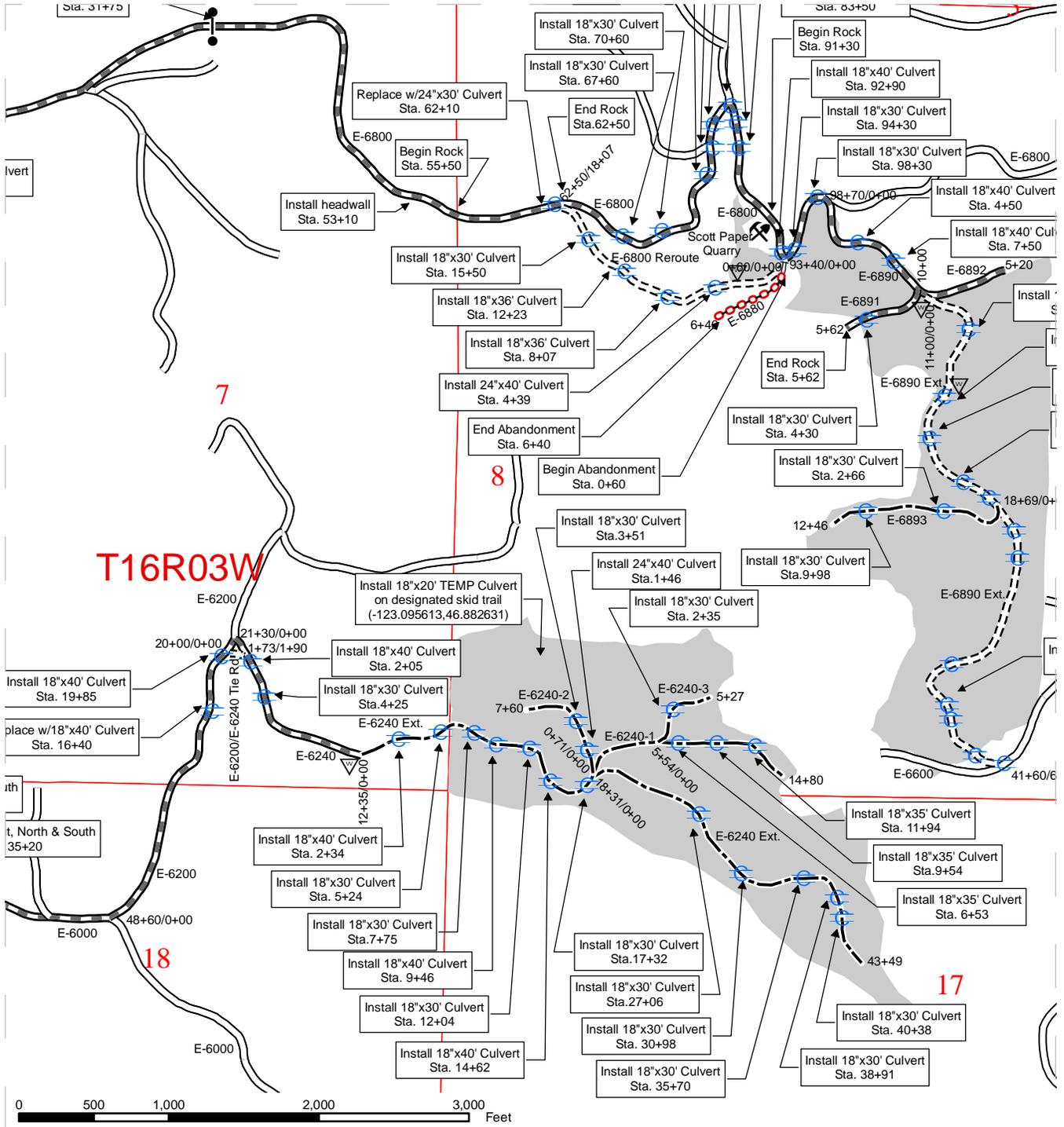


Harvest Area	Existing Road	Optional Construction
Gate	Required Reconstruction	Required Abandonment
Culvert Installation	Required Pre-Haul Maintenance	
Waste Area	Required Construction	
Existing Rock Pit		

ROAD WORK MAP

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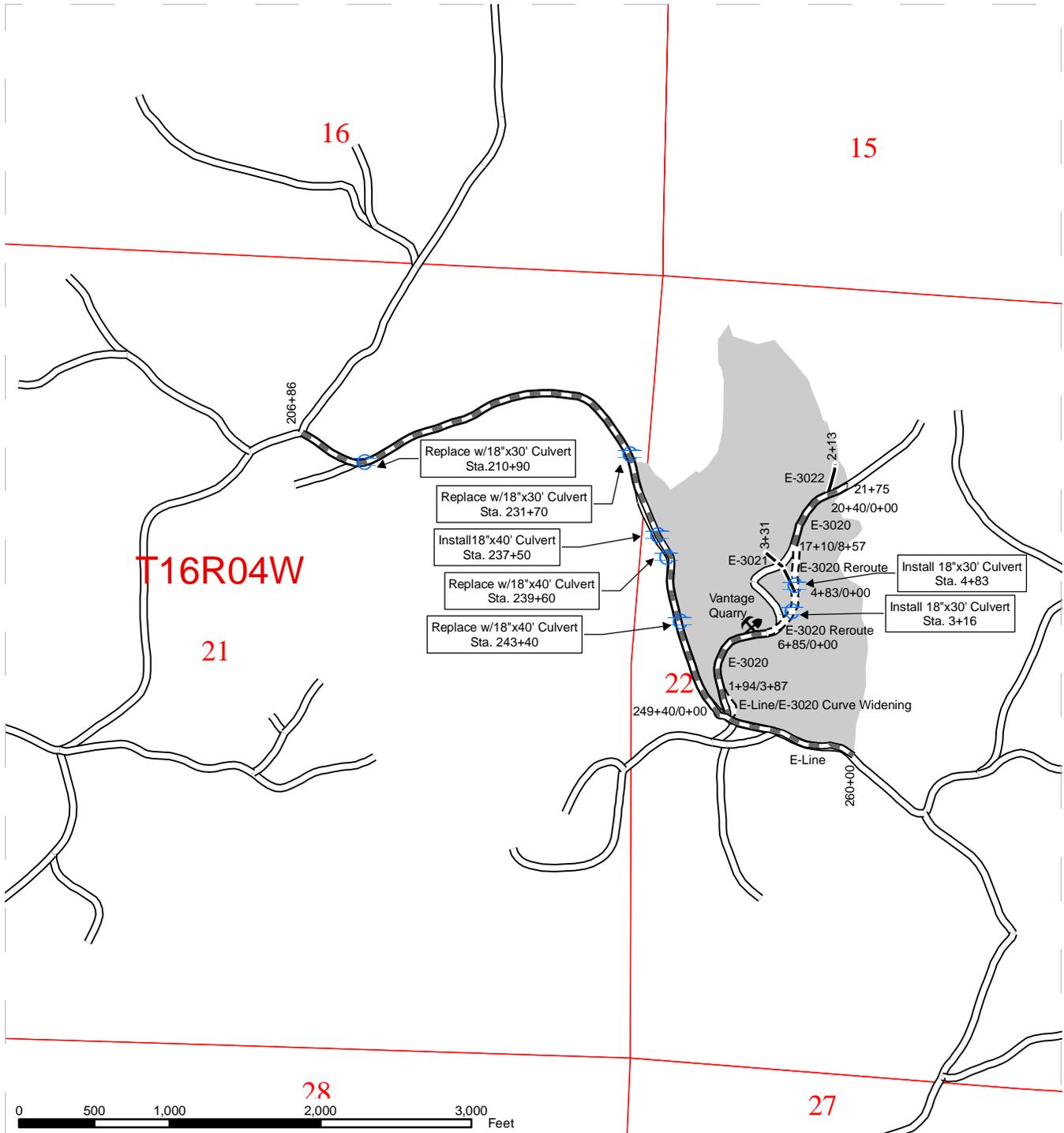
Harvest Area	Existing Road	Optional Construction
Gate	Required Reconstruction	Required Abandonment
Culvert Installation	Required Pre-Haul Maintenance	Optional Reconstruction
Waste Area	Required Construction	
Existing Rock Pit		



ROAD WORK MAP

SALE NAME: BOARD O FEET
AGREEMENT#: 30-091856
TOWNSHIP(S): T16R03W
TRUST(S): State Forest Transfer(1), Common School and Indemnity(3), Escheat(9)

REGION: South Puget Sound Region
COUNTY(S): THURSTON
ELEVATION RGE: 211-594



Harvest Area	Existing Road	Optional Construction
Gate	Required Reconstruction	Required Abandonment
Culvert Installation	Required Pre-Haul Maintenance	
Waste Area	Required Construction	
Existing Rock Pit		



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

BOARD O' FEET TIMBER SALE ROAD PLAN
THURSTON AND GRAYS HARBOR COUNTY
BLACK HILLS DISTRICT

AGREEMENT NO.: 30-91856

STAFF ENGINEER: C. VANDEHEY

DATE: DECEMBER 10, 2015

DRAWN & COMPILED BY: J. GARDNER

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>
E-Line	0+00 to 260+00, 483+00 to 565+00	Pre-haul Maintenance
E-3020	0+00 to 6+85, 17+10 to 21+75	Pre-haul Maintenance
E-3020 Reroute	0+00 to 8+57	Construction
E-Line/E-3020 Curve Widening	0+00 to 3+87	Construction
E-6000	000 to 48+60	Pre-haul Maintenance
E-6200	0+00 to 21+30	Pre-haul Maintenance
E-6200/E-6240 Tie Road	0+00 to 1+73	Construction
E-6240	0+00 to 12+35	Pre-haul Maintenance
E-Line/E-6800 Tie Road	0+00 to 4+67	Construction
E-6800	0+00 to 98+70	Pre-haul Maintenance
E-6890	0+00 to 11+00	Pre-haul Maintenance
E-6891	0+00 to 5+62	Pre-haul Maintenance
E-6892	0+00 to 5+20	Pre-haul Maintenance
E-6890 Extension	0+00 to 41+60	Construction

E-6800 Reroute	0+00 to 18+07	Construction
E-6880	0+00 to 0+60	Reconstruction
E-6880	0+60 to 6+40	Abandonment
E-9000	0+00 to 22+40	Pre-haul Maintenance
E-9020	0+00 to 20+25	Reconstruction
E-9030	0+00 to 1+15	Pre-haul Maintenance
E-9030A	0+00 to 0+75	Pre-haul 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>
E-3021	0+00 to 3+31	Construction
E-3022	0+00 to 2+13	Construction
E-6240 Extension	0+00 to 43+49	Construction
E-6240-1	0+00 to 14+80	Construction
E-6240-2	0+00 to 7+60	Construction
E-6240-3	0+00 to 5+27	Construction
E-6893	0+00 to 12+46	Construction

0-4 CONSTRUCTION

Construction includes, but is not limited to:

- Clearing;
- Grubbing;
- Right-of-way debris disposal;
- Excavation and/or embankment to subgrade;
- Turnout and turnaround construction;
- Landing construction;
- Acquisition and installation of drainage structures;
- Acquisition, manufacture, and application of rock.

0-5 RECONSTRUCTION

Reconstruction includes, but is not limited to:

- Clearing;
- Grubbing;
- Right-of-way debris disposal;
- Excavation and/or embankment to subgrade;
- Ditch construction;
- Acquisition and installation of drainage structures;

- Acquisition, manufacture, and application of rock.

0-6 PRE-HAUL MAINTENANCE

Pre-haul maintenance includes, but is not limited to.

- Grading existing roads;
- Cleaning ditches;
- Cleaning culverts, and catchbasins;
- Reconstructing headwalls;
- Constructing catchbasin and headwall;
- Acquisition and application of rock.
- Acquisition and installation of additional drainage structures.
- Acquisition and installation of gates w/ hold open device.

0-7 POST-HAUL MAINTENANCE

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

0-10 ABANDONMENT

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

0-12 DEVELOP ROCK SOURCE

Purchaser may develop existing rock sources. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

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

1-2 UNFORESEEN CONDITIONS

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

1-3 ROAD DIMENSIONS

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

1-6 ORDER OF PRECEDENCE

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

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

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

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

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

1-9 DAMAGED METALLIC COATING

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

1-15 ROAD MARKING

Purchaser shall perform road work in accordance with the state’s marked location. All road work is marked as follows:

- Pre-haul activities: 2 in. x 48 in. wooden lath with station and activity
- Construction: Orange ribbon tied eye-height along centerline, w/orange pin flags marking centerline

1-16 CONSTRUCTION STAKES SET BY STATE

Purchaser shall perform work in accordance with the reference points set in the field for grade and alignment. Reconstruction of existing road grades must conform to the original location except where construction staked or designed.

1-18 REFERENCE POINT DAMAGE

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

1-20 COMPLETE BY DATE

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

1-21 HAUL APPROVAL

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

1-22 WORK NOTIFICATIONS

Purchaser shall notify the Contract Administrator a minimum of 3 calendar 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
- Rock application

1-25 ACTIVITY TIMING RESTRICTION

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

<u>Road</u>	<u>Stations</u>	<u>Activity</u>	<u>Closure Period</u>
All	All	Operation of Road Construction Equipment	October 1 to April 30

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION, Purchaser shall comply with a maintenance plan developed between Purchaser and state 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 roads.
- Wheel track rutting exceeds 4 inches on crushed rock roads.
- Surface or base stability problems persist.

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

1-32 BRIDGE AND ASPHALT SURFACE RESTRICTION

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

If tracked equipment is used on bridge or 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 bridge or asphalt surface(s) and have surface(s) evaluated 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

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

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.

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

<u>Road</u>	<u>Stations</u>
E-Line	0+00 to 676+05

2-5 MAINTENANCE GRADING – EXISTING ROAD

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
E-3020	17+10 to 21+75	Desod, grade, apply rock per ROCK LIST, grade and shape rock lift, compact per COMPACTION LIST
E-6240	0+00 to 12+35	Desod, grade, apply rock per ROCK LIST, grade and shape rock lift, compact per COMPACTION LIST
E-6800	55+50 to 98+70	Desod, grade, apply rock per ROCK LIST, grade and shape rock lift, compact per COMPACTION LIST
E-6890	0+00 to 11+00	Desod, grade, apply rock per ROCK LIST, grade and shape rock lift, compact per COMPACTION LIST
E-6891	0+00 to 5+20	Desod, grade, apply rock per ROCK LIST, grade and shape rock lift, compact per COMPACTION LIST
E-6892	0+00 to 5+62	Desod, grade, apply rock per ROCK LIST, grade and shape rock lift, compact per COMPACTION LIST
E-9020	0+00 to 20+25	Desod, grade, apply rock per ROCK LIST, grade and shape rock lift, compact per COMPACTION LIST

2-6 CLEANING CULVERTS

On the following road(s), Purchaser shall clean the inlets and outlets of all culverts

<u>Road</u>	<u>Stations</u>
E-Line	206+86 to 260+00, 483+00 to 565+00
E-3020	0+00 to 6+85, 17+10 to 21+75
E-6000	0+00 to 48+60
E-6200	0+00 to 21+30
E-6240	0+00 to 12+35
E-6800	0+00 to 98+70
E-6890	0+00 to 11+00
E-6891	0+00 to 5+62

E-6892	0+00 to 4+67
E-9000	0+00 to 16+60

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

On the following roads, Purchaser shall clean ditches, headwalls, and catchbasins. Work must be completed before rock application, if required, and must be done in accordance with the Forest Access Road Maintenance Specifications. Pulling ditch material across the road or mixing in with the road surface is not allowed.

<u>Road</u>	<u>Stations</u>
E-Line	206+86 to 260+00, 483+00 to 565+00
E-3020	0+00 to 6+85, 17+10 to 21+75
E-6000	0+00 to 48+60
E-6200	0+00 to 21+30
E-6240	0+00 to 12+35
E-6800	0+00 to 98+70
E-6890	0+00 to 11+00
E-6891	0+00 to 5+62
E-6892	0+00 to 5+20
E-9000	0+00 to 22+40

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-5 CLEARING

Purchaser shall fall all vegetative material larger than 2 inches DBH or over 5 feet high between the marked right-of-way boundaries and within waste and debris areas, or if not marked in the field, between the clearing limits specified on the TYPICAL SECTION SHEET. Clearing must be completed before starting excavation and embankment.

3-8 PROHIBITED DECKING AREAS

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

- Within the grubbing limits.
- Within 50 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Against State Owned standing trees unless approved by the Contract Administrator.

3-10 GRUBBING

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

3-20 ORGANIC DEBRIS DEFINITION

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

3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS

Waste areas for organic debris are located within the cleared right-of-way or in natural openings.

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 55%.
- 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 State owned standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-25 SCATTERING ORGANIC DEBRIS

Purchaser shall scatter organic debris outside of the clearing limits in natural openings. Where natural openings are unavailable or restrictive, alternate debris disposal methods are subject to the written approval of the Contract Administrator.

SECTION 4 – EXCAVATION

4-2 PIONEERING

Pioneering may not extend past construction that will be completed during the current construction season. In addition, the following actions must be taken as pioneering progresses:

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

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Purchaser shall follow these standards for road grade and alignment except as designed:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 12 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 5% in 100 feet.

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

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

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

4-12 FULL BENCH CONSTRUCTION

Where side slopes exceed 45%, Purchaser shall use full bench construction for the entire subgrade width except as construction staked or designed. If designated, Purchaser shall end haul waste material to the location specified in Clause 4-37 WASTE AREA LOCATION.

4-21 TURNOUTS

Purchaser shall construct turnouts as designated on the TURNOUT LIST. Locations may be adjusted to fit the final subgrade alignment and sight distances. Minimum dimensions are shown on the TURNOUT LIST.

4-22 TURNAROUNDS

Purchaser shall construct turnarounds as designated on the TURNAROUND LIST. Turnarounds must be no larger than 30 feet long and 30 feet wide. Additional or alternate locations are subject to written approval by the Contract Administrator.

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

On the following road(s), Purchaser shall not pull ditch material across the road or mix in with the road surface. Excavated material must be disposed of as specified in Clause 4-36 DISPOSAL OF WASTE MATERIAL.

<u>Road</u>	<u>Stations</u>
E-Line	206+86 to 260+00, & 483+00 to 565+00
E-3020	0+00 to 6+85, & 17+10 to 21+75
E-6000	0+00 to 48+60
E-6200	0+00 to 21+30
E-6240	0+00 to 12+35
E-6800	0+00 to 98+70
E-6890	0+00 to 11+00
E-6891	0+00 to 5+62
E-6892	0+00 to 5+20
E-9000	0+00 to 22+40

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

Purchaser shall construct and maintain ditchouts as identified in maps, in field, and as directed by the Contract Administrator. 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.

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 55% if the waste material is compacted and free of organic debris. On side slopes greater than 55%, 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. Exemption areas are identified in Clause 4-39 SIDECAST EXEMPTION.

4-37 WASTE AREA LOCATION

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

<u>Road</u>	<u>Waste Area Location</u>	<u>Comments</u>
E-6800 Reroute	Sta. 3+50	Approx. 75' north of road
E-6890	Sta. 6+50	East of road
E-6890/E6891 Intersection		South of intersection
E-6240	Sta. 12+35	South of road

4-38 PROHIBITED WASTE DISPOSAL AREAS

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

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- 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 State owned standing timber.

4-39 SIDECAST EXEMPTION

On the following roads, Purchaser may sidecast waste material on side slopes greater than 55%.

<u>Road</u>	<u>Waste Area Location</u>
E-6240 Ext.	0+00 to 13+00

4-47 NATIVE MATERIAL

Native material consists of naturally occurring material that is free of organic debris, trash, and rocks greater than 6 inches in any dimension.

4-48 BORROW MATERIAL

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

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

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

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. Waste material may be placed by end-dumping or sidecasting until sufficiently wide enough to support the equipment.

4-61 SUBGRADE COMPACTION

Purchaser shall compact constructed subgrades in accordance with the COMPACTION LIST by routing equipment over the entire width except ditch. On fills deeper than 5 feet at the road shoulder Purchaser shall compact fill material in lifts no greater than 18 inches. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before rock application.

4-62 DRY WEATHER COMPACTION

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

SECTION 5 – DRAINAGE

5-1 REMOVAL OF SHOULDER BERMS

Purchaser shall remove berms from road shoulders.

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 meet the specifications in Clauses 10-15 through 10-23.

5-6 USED CULVERT MATERIAL

Purchaser may install used culverts in the following location. All other roads must have new culverts installed.

<u>Road</u>	<u>Lat./Long.</u>
Designated Skid Trail	-123.095613, 46.882631

5-9 CULVERT MARKER INSTALLATION

Purchaser shall install culvert markers in accordance with the CULVERT MARKER DETAIL at all newly installed culverts.

5-10 CONTINGENCY CULVERTS

The following culverts will be supplied by the Purchaser and are available for installation as directed by the Contract Administrator.

<u>Road</u>	<u>Size</u>
On any portion of road used for timber or rock haul	<ul style="list-style-type: none">• 18"x30' culvert• 18"x30' culvert• 18"x30' culvert• 18"x30' culvert• 18"x30' culvert• 18"x30' culvert• 18" culvert band• 18" culvert band

5-11 UNUSED MATERIALS STATE PROPERTY

On required roads or listed in Clause 5-10, any materials listed on the CULVERT LIST that are not installed will become the property of the state. Purchaser shall stockpile materials at Mima Mound Pit (SW ¼ NW ¼ Section 10, T16R03W).

5-15 CULVERT INSTALLATION

Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL and the National Corrugated Metal Pipe Association's "Installation Manual for Corrugated Steel Drainage Structures" and the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings", as applicable.

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 12%.

5-18 CULVERT DEPTH OF COVER

Cross drain culverts must be installed with a depth of cover of not less than 1 foot of compacted subgrade over the top of the culvert at the shallowest point.

5-20 ENERGY DISSIPATERS

Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts on the CULVERT LIST that specify the placement of rock. Energy dissipater installation is subject to approval by the Contract Administrator.

The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT LIST. Placement must be by zero-drop-height method only. No placement by end dumping or dropping of rock is allowed. Quarry Spalls shall meet the specifications in Clause 6-43.

5-25 CATCH BASINS

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

5-26 HEADWALLS FOR CULVERTS

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts on the CULVERT LIST that specify the placement of rock.

SECTION 6 – ROCK AND SURFACING

6-2 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following source(s) on state land at no charge to the Purchaser. 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 3 calendar days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Scott Paper Quarry	SE ¼ NW ¼ Sect. 8 T16NR03W	4 Inch Jaw, Quarry Spalls
Vantage Quarry	SW ¼ NW ¼ Sect. 22 T16R04W	6 Inch Jaw, 4 Inch Jaw, 3 Inch Minus, Quarry Spalls

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 listed type and quantity of rock. Purchaser shall not remove additional yardage without prior written approval from the Contract Administrator.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>	<u>Quantity</u>
Vantage Quarry	SW ¼ NW ¼ Sect. 22 T16R04W	6 Inch Jaw Run	600
		4 Inch Jaw Run	200
		3 Inch Minus	1000

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.

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

Purchaser shall conduct rock source development and use at the following sources, in accordance with the written ROCK SOURCE DEVELOPMENT PLAN prepared by the state and included in this road plan. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN, and approved in writing by the Contract Administrator. Purchaser shall notify the Contract Administrator a minimum of 3 calendar days before starting any operations in the rock source.

<u>Source</u>	<u>Rock Type</u>
Scott Paper Quarry	4 Inch Jaw, Quarry Spalls, Barricade 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 10% of the total volume mined in that source.
- Oversize material is defined as rock fragments too large to be converted by the Purchaser to a size that will meet specifications used for the roads in this sale.
- Purchaser shall notify the Contract Administrator a minimum of 5 working days before blasting operations.
- Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator 5 working days before any drilling. The drilling and shooting plan must include, at a minimum, the mapped location and spacing of all holes to be loaded, the type of blasting agent used, the powder factor calculated and the units of same, stem amount held per hole. After drilling, the type of rock encountered while drilling e.g. hard black, soft brown, etc shall be amended to submitted plan.

- 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.

6-20 ROCK GRADATION TYPES

Purchaser shall manufacture rock in accordance with the types and amounts listed in the ROCK LIST. Rock must meet the following specifications for gradation and uniform quality. The exact point of evaluation for conformance to specifications will be determined by the Contract Administrator. Purchaser shall provide a sieve analysis upon request from the Contract Administrator.

6-22 FRACTURE REQUIREMENT FOR ROCK

A minimum of 50% by visual inspection of coarse aggregate must have at least one fractured face. Coarse aggregate is the material greater than 1/4-inch in size.

6-23 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.

6-33 3-INCH MINUS CRUSHED ROCK

% Passing 3" square sieve	100%
% Passing 2" square sieve	65 - 95%
% Passing 3/4" square sieve	28 - 70%
% Passing U.S. #4 sieve	10 - 35%
% Passing U.S. #200 sieve	0 - 10%

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.

6-37 4-INCH JAW RUN ROCK

% Passing 4" square sieve	95%
% Passing U.S. #40 sieve	16% maximum
% Passing U.S. #200 sieve	5% maximum

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.

6-39 6-INCH JAW RUN ROCK

% Passing 6" in one dimension	100%
% Passing U.S. #40 sieve	16% maximum
% Passing U.S. #200 sieve	5% maximum

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

6-43 QUARRY SPALLS

% Passing 8" square sieve	100%
% Passing 3" square sieve	40% maximum
% Passing 3/4" square sieve	10% maximum

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

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 compacted yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements and are not subject to reduction.

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for drainage installations and subgrade 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.

6-73 ROCK FOR WIDENED PORTIONS

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

SECTION 7 – STRUCTURES

7-71 GATE CLOSURE DURING HAUL

On the following road(s), Purchaser shall keep gates closed and locked except for during timber haul activity.

<u>Road</u>	<u>Station</u>
E-6000	3+75
E-6800	31+75
E-9000	1+30

7-76 GATE INSTALLATION

On the following roads, Purchaser shall furnish and install a 16-foot wide or longer steel gate on posts, in accordance with the LIGHT DUTY STEEL GATE DETAIL.

<u>Road</u>	<u>Station</u>
E-6000	3+75
E-6800	31+75

The gate and lock open device shall be installed plumb and aligned to ensure all mating components match with precision. Each post shall be filled with concrete and set in a minimum of 0.9 cubic yards of poured-in-place or pre-cast concrete. The gate shall be installed with a post and locking device to allow the gate to be locked in an open position. The Contract Administrator will supply the Purchaser with a padlock. If the Purchaser wishes to install an alternate design, detailed plans for the construction of the gate shall be submitted to the Contract Administrator, or their designee, for approval, in writing, before gate installation. The gate shall be primed and painted in accordance with the LIGHT DUTY STEEL GATE DETAIL. The gates shall be primed and painted Rodda Safety Yellow.

7-78 GATE SUPPLIED BY PURCHASER

The gate structure to be installed by the Purchaser, as specified in Clause 7-76 GATE INSTALLATION, shall be supplied by the Purchaser and accepted, in writing, by the Contract Administrator, before installation.

SECTION 8 – EROSION CONTROL

8-1 SEDIMENT CONTROL STRUCTURES

Purchaser shall control sediment as approved, in writing, by Contract Administrator. Sediment control methods may include but not limited to; sediment traps, silt fence,

and settling ponds. Sediment traps and silt fence shall be installed in accordance with the SEDIMENT TRAP DETAIL and SILT FENCE DETAIL.

8-15 REVEGETATION

On the following road(s), Purchaser shall spread grass seed on all exposed soils resulting from road work activities. Cover all exposed soils using manual dispersion. Other methods of covering must be approved in writing by the Contract Administrator. Required seed not spread by the termination of this contract will become the property of the state.

<u>Road</u>	<u>Location</u>	<u>Qty (lbs)*</u>	<u>Type</u>
E-6880	0+00 to 6+40	50	Grass Seed
E-6800 Reroute	0+00 to 3+20	50	Grass Seed

*Quantities are estimates only. Actual quantities may vary and are the responsibility of the Purchaser.

8-16 REVEGETATION SUPPLY

The Purchaser shall provide the grass seed.

8-17 REVEGETATION TIMING

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

8-18 PROTECTION FOR SEED

Purchaser shall provide a protective cover for seed if revegetation occurs between July 1 and March 31. The protective cover may consist of an even layer of straw or Contract Administrator approved alternate. Seed may not be allowed to sit exposed during any rain 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 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 at no addition cost to the state.

8-25 GRASS SEED

Purchaser shall evenly spread the seed mixtures listed below on all exposed soil at a rate of 50 pounds per acre of exposed soil. Grass seed must meet the following specifications:

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

<u>Elevation</u>	<u>Moisture Regime</u>	<u>Kind and Variety of Seed Mixture</u>	<u>% by Weight</u>
< 2500'	Droughty to moist	Annual Rye grass	50
		Oats	30
		Perennial Ryegrass	10
		Austrian Winter Pea (inoculated)	10

< 2500'	Saturated in midsummer	Annual Rye grass	50
		Oats	30
		Barley	15
		Austrian Winter pea (inoculated)	5
>2500'	Droughty to moist	Annual ryegrass	40
		Winter triticale	40
		Perennial ryegrass	10
		Austrian winter pea (inoculated)	10
	Saturated in midsummer	Annual Rye grass	50
		Oats	30
		Barley	20

SECTION 9 – POST-HAUL ROAD WORK

9-1 BARRICADES

Purchaser shall place barricades consisting of 4’x4’x4’ rocks at the following location. Barricade shall prevent 4 wheeled highway traffic past the specified location.

<u>Road</u>	<u>Stations</u>
E-6880	0+65
Designated Unit 3 Skid Trail (approx. @ -123.095613, 46.882631	50 feet south of removed temporary culvert

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND

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

9-5 POST-HAUL MAINTENANCE

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

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface.

9-21 ROAD ABANDONMENT

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

<u>Road</u>	<u>Location</u>	<u>Type</u>
E-6880	0+60 to 6+40	Heavy Abandonment
Designated Skid Trail	-123.095613, 46.882631	Light Abandonment

9-23 LIGHT ABANDONMENT

- Remove culvert and leave resulting trench open.
- Remove culvert from state land.
- Block roads as specified in 9-1 BARRICADES.

9-24 HEAVY ABANDONMENT

- Remove embankments, and end-haul to waste area. All imported road material shall be removed.
- Apply grass seed concurrently with abandonment and in accordance with Section 8 EROSION CONTROL.

- Cover, concurrently with abandonment, all exposed soils with a layer of straw.
- Place 15 pieces of Large Woody Debris (LWD) on location of abandoned prism, evenly spaced. LWD shall consist of conifer trees a minimum of 16 inch DBH, a minimum of 20 feet long with root wads attached.
- Block roads as specified in 9-1 BARRICADES.

SECTION 10 MATERIALS

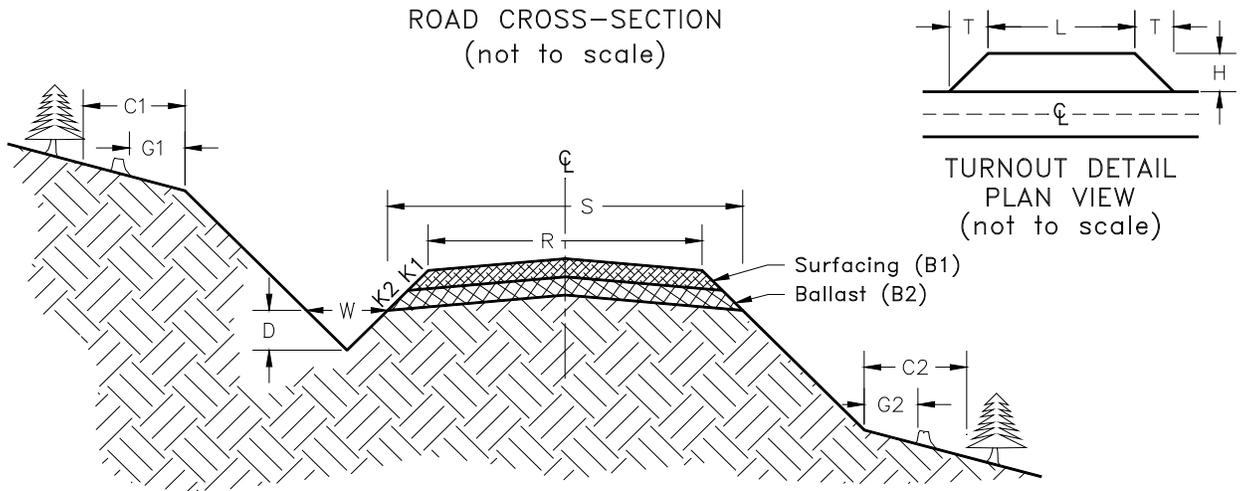
10-17 CORRUGATED PLASTIC CULVERT

Polyethylene culverts must meet AASHTO M-294 specifications, or ASTM F-2648 specifications for recycled polyethylene. Culvert segments not specifically labeled as downspouts must be Type S – double walled with a corrugated exterior and smooth interior.

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.

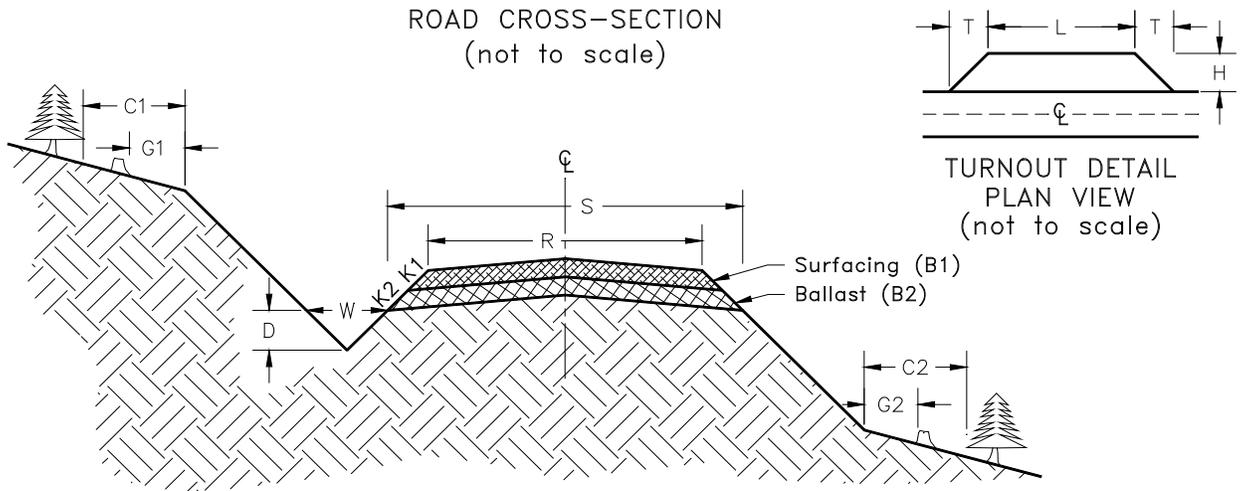
TYPICAL SECTION SHEET (pg 1 of 3)



Road Number	From Station	To Station	Tolerance Class	Subgrade Width (feet)	Road Width (feet)	Ditch		Crown in. @ CL	Grubbing Limits (feet)		Clearing Limits (feet)		Cut Slope Ratio	Fill Slope Ratio
						Width (feet)	Depth (feet)		G1	G2	C1	C2		
				S	R	W	D		G1	G2	C1	C2	Clause	Clause
E-line	0+00	260+00			14	3	1	4					4-5	4-6
E-line	483+00	565+00			14	3	1	4					4-5	4-6
E-3020	0+00	6+85			12	3	1	4					4-5	4-6
E-3020	17+10	21+75			12	3	1	4					4-5	4-6
E-3020 Reroute	0+00	8+57	C	16	12	3	1	4	2	2	5	5	4-5	4-6
E-3021	0+00	3+31	C	16	12	3	1	4	2	2	5	5	4-5	4-6
E-3022	0+00	2+13	C	16	12	3	1	4	2	2	5	5	4-5	4-6
E-Line/E-3020 Curve Widening	0+00	3+87	C	18	14	3	1	4	2	2	5	5	4-5	4-6
E-6000	0+00	48+60			12	3	1	4					4-5	4-6
E-6200	0+00	21+30			12	3	1	4					4-5	4-6
E-6200/E-6240 Tie Rd	0+00	1+73	C	19	15	3	1	4			tags	tags	4-5	4-6
E-6240	0+00	12+35			12	3	1	4					4-5	4-6

Road Number	From Station	To Station	Tolerance Class	Subgrade Width (feet)	Road Width (feet)	Ditch		Crown in. @ CL	Grubbing Limits (feet)		Clearing Limits (feet)		Cut Slope Ratio	Fill Slope Ratio
						Width (feet)	Depth (feet)							
E-6240 Ext.	0+00	6+60	C	17	13	3	1	4	2	2	tags	tags	4-5	4-6

TYPICAL SECTION SHEET (pg 3 of 3)



Road Number	From Station	To Station	Tolerance Class	Subgrade Width (feet)	Road Width (feet)	Ditch		Crown in. @ CL	Grubbing Limits (feet)		Clearing Limits (feet)		Cut Slope Ratio	Fill Slope Ratio
						Width (feet)	Depth (feet)		G1	G2	C1	C2		
				S	R	W	D						Clause	Clause
E-6800 Reroute	4+40	18+07		19	15	3	1	4	2	2	tags	tags	4-5	4-6
E-6880	0+00	0+60	C	19	15	3	1	4	2	2	5	5	4-5	4-6
E-6880	0+60	6+40			12	3	1	4	2	2	5	5	4-5	4-6
E-9000	0+00	22+40			12	3	1	4	2	2	5	5	4-5	4-6
E-9020	0+00	20+25			12	3	1	4	2	2	5	5	4-5	4-6
E-9030	0+00	1+15			12	3	1	4	2	2	5	5	4-5	4-6
E-9030A	0+00	0+75			12	3	1	4	2	2	5	5	4-5	4-6

TURNOUT LIST

Road Number	Begin L- Station	End L- Station	Turnout Width (H)	Full Width Length (L)	Taper Length (T)	Comments
E-6240 Ext.	5+85	6+85	12'	50'	25'	Turnout Left
E-6240 Ext.	17+30	18+30	12'	50'	25'	Turnout Left
E-6240 Ext.	31+00	32+00	12'	50'	25'	Turnout Right
E-6240-1	4+50	5+50	12'	50'	25'	Turnout Left
E-6800 Reroute	3+10	4+10	12'	50'	25'	Turnout Right
E-6800 Reroute	9+30	10+30	12'	50'	25'	Turnout Right
E-6800 Reroute	16+00	17+00	12'	50'	25'	Turnout Right
E-6890 Ext.	0+00	1+00	12'	50'	25'	Turnout Right
E-6890 Ext.	6+79	7+79	12'	50'	25'	Turnout Left
E-6890 Ext.	17+74	18+74	12'	50'	25'	Turnout Left
E-6890 Ext.	24+75	25+74	12'	50'	25'	Turnout Left
E-6890 Ext.	35+78	36+78	12' Left & 12' Right	50'	25'	Turnout Left & Right
E-6893	7+50	8+50	12'	50'	25'	Turnout Left

TURNAROUND LIST

Road Number	Begin L- Station	End L- Station	Length (feet)	Width (feet)	Taper Length (T)	Comments
E-6240 Ext.	43+19	43+49	30'	30'	15'	
E-6240-1	14+50	14+80	30'	30'	15'	
E-6240-2	7+30	7+60	30'	30'	15'	
E-6240-3	4+97	5+27	30'	30'	15'	
E-6890 Ext	41+35	41+55	20'	20'	10'	
E-6893	12+16	12+46	30'	30'	15'	

ROCK LIST

BALLAST

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length	Width	Taper
			K2	B2	6-Inch or 4-Inch Jaw Run				L	H	T
E-3020 Reroute	0+00	8+57	1½ : 1	12"	54	8.57	463	Vantage Quarry			
E-Line/E-3020 Curve Widening	0+00	3+87	1½ : 1	12"	61	3.87	236	Vantage Quarry			
					4-Inch Jaw Run						
E-6200/E-6240 Tie Rd	0+00	1+73	1½ : 1	16"	84	1.73	145	Scott Paper Quarry			
E-6240	0+00	12+35	1½ : 1	12"	50	12.35	618	Scott Paper Quarry			
E-6240 Ext.	0+00	43+49	1½ : 1	16"	74	43.49	3218	Scott Paper Quarry			
E-6240-1	0+00	14+80	1½ : 1	16"	67	14.80	992	Scott Paper Quarry			
E-6240-2	0+00	7+60	1½ : 1	16"	67	7.60	509	Scott Paper Quarry			
E-6240-3	0+00	5+27	1½ : 1	16"	67	5.27	353	Scott Paper Quarry			
E-line/E-6800 Tie Rd	0+00	4+67	1½ : 1	16"	84	4.67	392	Scott Paper Quarry			
E-6800	55+50	62+50	1½ : 1	12"	50	7.00	350	Scott Paper Quarry			
E-6800	91+30	98+70	1½ : 1	12"	50	7.40	370	Scott Paper Quarry			
E-6890	0+00	11+00	1½ : 1	12"	50	11.00	550	Scott Paper Quarry			
E-6891	0+00	5+62	1½ : 1	12"	50	5.62	281	Scott Paper Quarry			
E-6892	0+00	5+20	1½ : 1	12"	50	5.20	260	Scott Paper Quarry			
E-6890 Ext.	0+00	41+60	1½ : 1	16"	74	41.60	3078	Scott Paper Quarry			
E-6893	0+00	12+46	1½ : 1	16"	67	12.46	835	Scott Paper Quarry			
E-6800 Reroute	0+00	18+07	1½ : 1	16"	84	18.07	1518	Scott Paper Quarry			
E-6880	0+00	0+60	1½ : 1	16"	84	0.60	50	Scott Paper Quarry			
E-9020	0+00	20+25	1½ : 1	12"	50	20.25	1013	Scott Paper Quarry			
Existing Road Culvert Installation: 6800(62+50 to 91+50)					20 per culvert	7 culverts	140	Scott Paper Quarry			
Turnouts & Turnarounds							900				
					Quarry Spalls						
Culvert Headwalls and Dissipaters							198				

BALLAST TOTAL 16,469 Cubic Yards

SURFACE

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y./ Station	# of Stations	C.Y. Total	Rock Source
			K1	B1	3- Inch Minus			
E-3020	17+10	21+75	1½ : 1	16"	69	4.65	321	Vantage Quarry
E-3020 Reroute	0+00	8+57	1½ : 1	4"	15	8.57	129	Vantage Quarry
E-3021	0+00	3+31	1½ : 1	12"	50	3.31	166	Vantage Quarry
E-3022	0+00	2+13	1½ : 1	12"	50	2.13	107	Vantage Quarry
E-Line/E-3020 Curve Widening	0+00	3+87	1½ : 1	4"	18	3.87	70	Vantage Quarry
Existing Road Culvert Installation: E-Line, E-3020, E-6000, E-6200, E-6800(0+00 to 55+50)					10 per culvert	16 culverts	160	Commercial Or Vantage Quarry

SURFACE TOTAL _953_ Cubic Yards

*Optional Rock: If Purchaser elects to haul on optional rock roads in wet weather, the depth listed above is recommended but not required.

NOTE: Yardages are estimated on a compacted (In-Place) basis. Compliance of required rock will be based on compacted depth measurement.

CULVERT AND DRAINAGE LIST, pg 1 of 3

Road Number	Location	Culvert		Length (ft)			Riprap (C.Y.)			Backfill Material*	Placement Method*	Const. Staked*	Remarks
		Dia. (in)	Type	Culvert	Downspt	Flume	Inlet	Outlet	Type				
E-Line	210+90	18	PD	30			1	1.5	QS	NT			Replace existing
E-Line	231+70	18	PD	30			1	1.5	QS	NT			Replace existing
E-Line	237+50	18	PD	40			1	1.5	QS	NT			
E-Line	239+60	18	PD	40			1	1.5	QS	NT			Replace existing
E-Line	243+40	18	PD	40			1	1.5	QS	NT			Replace existing
E-Line	489+90	18	PD	40			1	1.5	QS	NT			Replace existing
E-Line	512+50												Clean eastside ditchout
E-3020 Reroute	3+16	18	PD	30			1	1.5	QS	NT			
E-3020 Reroute	4+83	18	PD	30			1	1.5	QS	NT			
E-6000	3+90	24	PD	40			2	2	QS	NT			Replace existing
E-6000	5+30	18	PD	30			1	1.5	QS	NT			
E-6000	8+00	18	PD	50			1	1.5	QS	NT			
E-6000	20+00	18	PD	30			1	1.5	QS	NT			Ditchout north
E-6000	26+40	18	PD	30			1	1.5	QS	NT			
E-6000	33+50												Clean south ditchout
E-6000	35+20												Clean north and south ditchout
E-6200	16+40	18	PD	40			1	1.5	QS	NT			Replace existing
E-6200	19+85	18	PD	40			1	1.5	QS	NT			
E-6240	2+05	18	PD	40			1	1.5	QS	NT			
E-6240	4+25	18	PD	30			1	1.5	QS	NT			
E-6240 Ext	2+34	18	PD	40			1	1.5	QS	NT			
E-6240 Ext	5+24	18	PD	30			1	1.5	QS	NT			
E-6240 Ext	7+75	18	PD	30			1	1.5	QS	NT			
E-6240 Ext	9+46	18	PD	40			1	1.5	QS	NT			
E-6240 Ext	12+04	18	PD	30			1	1.5	QS	NT			
E-6240 Ext	14+62	18	PD	40			1	1.5	QS	NT			
E-6240 Ext	17+32	18	PD	30			1	1.5	QS	NT			
E-6240 Ext	27+06	18	PD	30			1	1.5	QS	NT			
E-6240 Ext	30+98	18	PD	30			1	1.5	QS	NT			
E-6240 Ext	35+70	18	PD	30			1	1.5	QS	NT			
E-6240 Ext	38+91	18	PD	30			1	1.5	QS	NT			
E-6240 Ext	40+38	18	PD	30			1	1.5	QS	NT			
E-6240-1	6+53	18	PD	35			1	1.5	QS	NT			
E-6240-1	9+54	18	PD	35			1	1.5	QS	NT			
E-6240-1	11+94	18	PD	35			1	1.5	QS	NT			
E-6240-2	1+46	24	PD	40			2	2	QS	NT			

CULVERT AND DRAINAGE LIST, pg 2 of 3

Road Number	Location	Culvert		Length (ft)			Riprap (C.Y.)			Backfill Material*	Placement Method*	Const. Staked*	Remarks
		Dia. (in)	Type	Culvert	Downspt	Flume	Inlet	Outlet	Type				
E-6240-2	3+51	18	PD	30			1	1.5	QS	NT			
E-6240-3	2+35	18	PD	30			1	1.5	QS	NT			
E-6800	4+40	18	PD	40			1	1.5	QS	NT			
E-6800	53+10	18					1		QS	NT			Install headwall
E-6800	62+10	24	PD	30			2	2	QS	NT			Replace existing
E-6800	67+60	18	PD	30			1	1.5	QS	NT			
E-6800	70+60	18	PD	30			1	1.5	QS	NT			
E-6800	76+50	18	PD	30			1	1.5	QS	NT			
E-6800	78+50	18	PD	40			1	1.5	QS	NT			
E-6800	80+00	30	PD	50			3	3	QS	NT			Replace existing
E-6800	82+00	18	PD	50			1	1.5	QS	NT			
E-6800	83+00	30	PD	50			3	3	QS	NT			Replace existing
E-6800	83+50	18	PD	30			1	1.5	QS	NT			
E-6800	92+90	18	PD	40			1	1.5	QS	NT			
E-6800	94+30	18	PD	30			1	1.5	QS	NT			
E-6800	98+30	18	PD	30			1	1.5	QS	NT			
E-6800 Reroute	4+39	24	PD	40			2	2	QS	NT			
E-6800 Reroute	8+07	18	PD	36			1	1.5	QS	NT			
E-6800 Reroute	12+23	18	PD	36			1	1.5	QS	NT			
E-6800 Reroute	15+50	18	PD	30			1	1.5	QS	NT			
E-6890	4+50	18	PD	40			1	1.5	QS	NT			
E-6890	7+50	18	PD	40			1	1.5	QS	NT			
E-6891	4+30	18	PD	30			1	1.5	QS	NT			
E-6890 Ext	4+48	18	PD	30			1	1.5	QS	NT			
E-6890 Ext	8+86	18	PD	30			1	1.5	QS	NT			
E-6890 Ext	12+05	18	PD	30			1	1.5	QS	NT			
E-6890 Ext	15+12	18	PD	40			1	1.5	QS	NT			
E-6890 Ext	17+73	18	PD	30			1	1.5	QS	NT			
E-6890 Ext	20+56	18	PD	30			1	1.5	QS	NT			
E-6890 Ext	22+63	18	PD	30			1	1.5	QS	NT			
E-6890 Ext	32+50	18	PD	30			1	1.5	QS	NT			
E-6890 Ext	35+60	18	PD	30			1	1.5	QS	NT			
E-6890 Ext	36+98	18	PD	40			1	1.5	QS	NT			
E-6890 Ext	39+62	18	PD	40			1	1.5	QS	NT			
E-6890 Ext	41+59	18	PD	40			1	1.5	QS	NT			

CULVERT AND DRAINAGE LIST, pg 3 of 3

Road Number	Location	Culvert		Length (ft)			Riprap (C.Y.)			Backfill Material*	Placement Method*	Const. Staked*	Remarks
		Dia. (in)	Type	Culvert	Downspt	Flume	Inlet	Outlet	Type				
E-6893	2+66	18	PD	30			1	1.5	QS	NT			
E-6893	9+98	18	PD	30			1	1.5	QS	NT			
E-9000	11+70	24	PD	50			2	2	QS	NT			
		18	TEMP	20						NT		Used on Designated Skid trail @ approx. -123.095613, 46.882631	
As Directed By C.A.		18	PD	30			1	1.5	QS	NT		Contingency	
		18	PD	30			1	1.5	QS	NT		Contingency	
		18	PD	30			1	1.5	QS	NT		Contingency	
		18	PD	30			1	1.5	QS	NT		Contingency	
		18	PD	30			1	1.5	QS	NT		Contingency	
		18	PD	30			1	1.5	QS	NT		Contingency	
		18	Poly	Band									Contingency
	18	Poly	Band									Contingency	

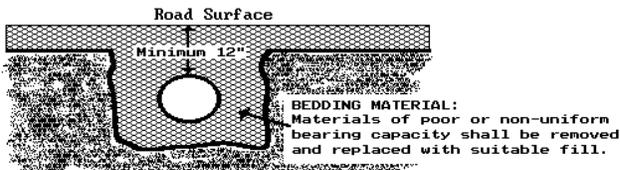
* SEE CULVERT AND DRAINAGE SPECIFICATION DETAIL

PD = Polyethylene Pipe Dual Wall AASHTO No. M294 Type S or ASTM F2648
 TEMP = Temporary Culvert

Key:

- QS - Quarry Spalls or Light Loose Riprap
- SR - Shot Rock
- NT - Native (bank run)
- SL - Select Fill
- HL - Heavy Loose Riprap
- Flume - Half round pipe
- Downsput - Full round pipe

CULVERT BACKFILL AND BASE PREPARATION
 (For culverts less than 36")

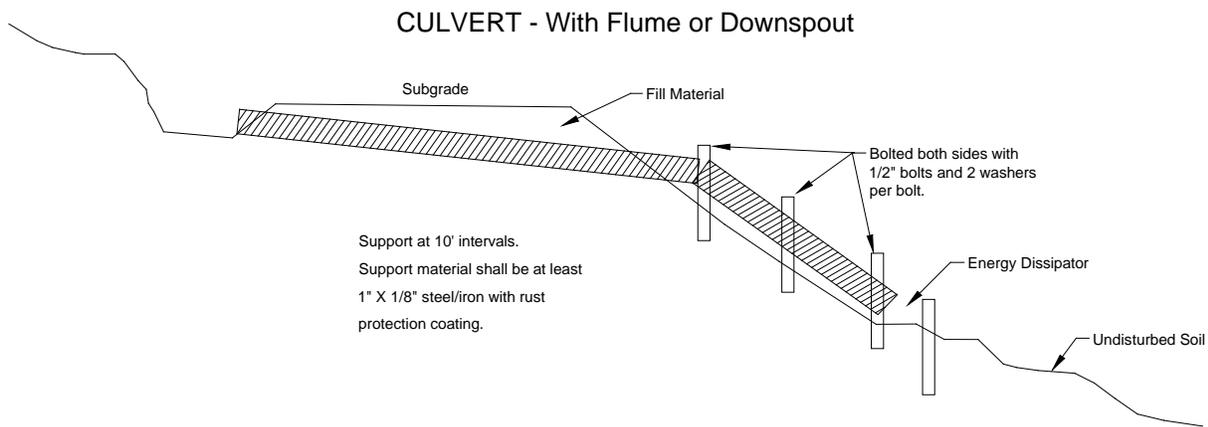
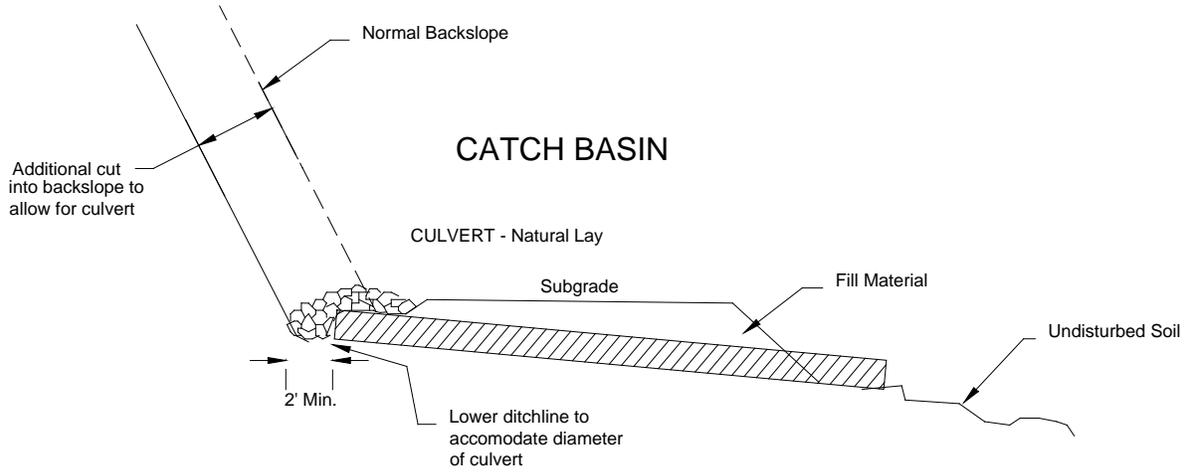


COMPACTION LIST

Road	From Station	To Station	Type	Max Depth Per Lift (inches)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
E-Line,E-3020,E-6000,E-6200,E-9000			Pre-Haul Culvert Install	4"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-6800	0+00	55+50	Pre-Haul Culvert Install	4"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-6800	55+50	98+70	Pre-haul Culvert Install, Surfacing	8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-6890,E-6891,E-6892			Pre-haul Culvert Install, Surfacing	8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-Line/E-2030 Curve Widening	0+00	3+87	Subgrade, Surfacing	- 8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-3020 Reroute	0+00	8+57	Subgrade, Surfacing	- 8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-3021	0+00	3+31	Subgrade, Surfacing	- 8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-3022	0+00	2+13	Subgrade, Surfacing	- 8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-6240	0+00	12+35	Pre-haul Culvert Install, Surfacing	8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-6240 Ext	0+00	43+49	Subgrade, Surfacing	- 8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-6240-1	0+00	14+80	Subgrade, Surfacing	- 8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-6240-2	0+00	7+60	Subgrade, Surfacing	- 8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-6240-3	0+00	5+27	Subgrade, Surfacing	- 8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-6800 Reroute	0+00	18+07	Subgrade, Surfacing	- 8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-6890 Ext	0+00	41+60	Subgrade, Surfacing	- 8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-6893	0+00	12+46	Subgrade, Surfacing	- 8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5
E-9020	0+00	20+25	Subgrade, Surfacing	- 8"	Smooth Drum Vibratory Roller	14,000	2 low freq. vibe on	3.5

CULVERT AND DRAINAGE SPECIFICATION DETAIL

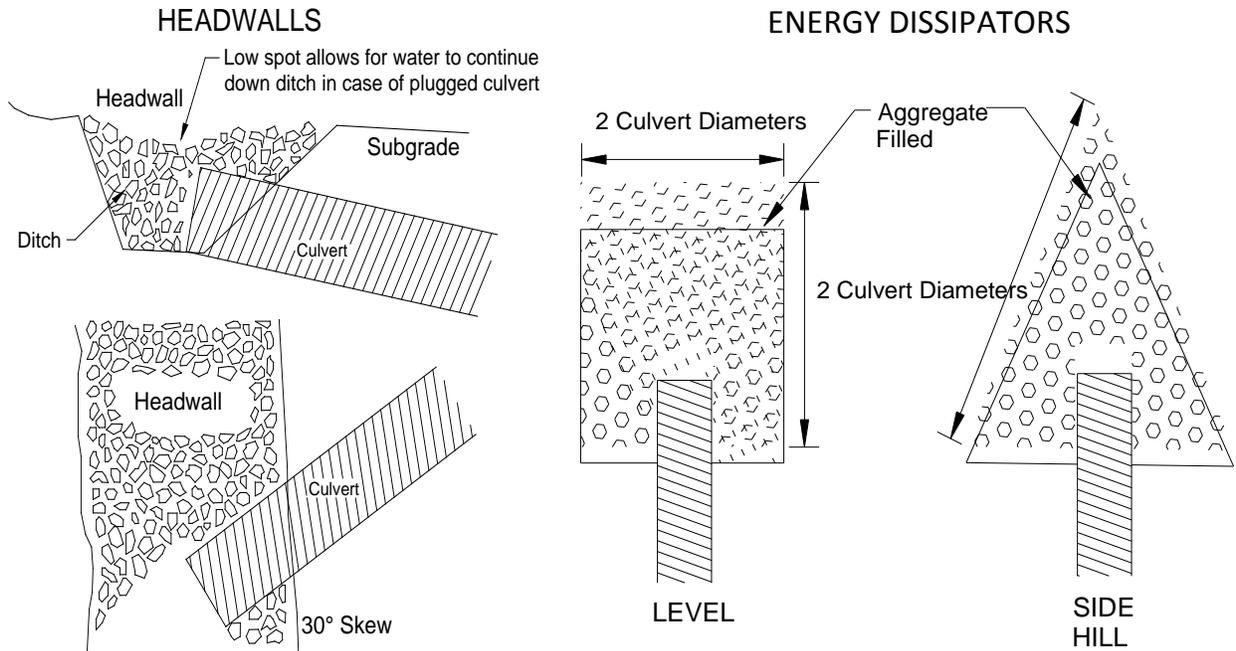
(Page 1 of 3)



CULVERT AND DRAINAGE SPECIFICATION DETAIL

(Page 2 of 3)

Proper preparation of foundation and placement of bedding material shall precede the installation of all culvert pipe. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform dense unyielding base. The backfill material shall be placed so that the pipe is uniformly supported along the barrel.



Headwalls to be constructed of material that will resist erosion.

Dissipator Specifications:
Depth: 1 culvert diameter
Aggregate: as specified in the CULVERT LIST.

CULVERT AND DRAINAGE SPECIFICATION DETAIL

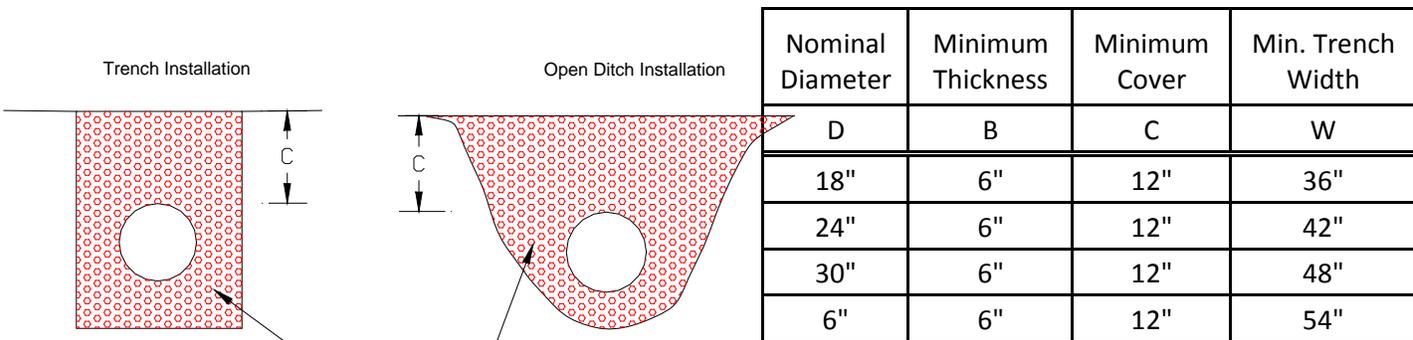
(Page 3 of 3)

POLYETHYLENE PIPE INSTALLATION

INSTALLATION REQUIREMENTS:

1. Crushed stone, gravel, or compacted soil backfill material shall be used as the bedding and envelope material around the culvert. The aggregate size shall not exceed 1/6 pipe diameter or 4" diameter, whichever is smaller.
2. The corrugated pipe shall be laid on grade, on a layer of bedding material as shown for the two types of installations. If native soil is used as the bedding and backfill material, it shall be well compacted in six inch layers under the haunches, around the sides and above the pipe to the recommended minimum height of cover.
3. Either crushed aggregate or flexible (asphalt) pavement may be laid as part of the minimum cover requirements.
4. Site conditions and availability of bedding materials often dictate the type of installation method used.
5. The load bearing capability of flexible conduits is dependent on the type of backfill material used and the degree of compaction achieved. Crushed stone and gravel backfill materials typically reach a compaction level of 90-95% AASHTO standard density without compaction. When native soils are used as backfill material, a compaction level of 85% is required. This minimum compaction can be achieved by either hand or mechanical tamping.

MINIMUM DIMENSIONS Trench or Open Ditch Installation



FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Page 1 of 2

Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the construction materials. Remove slides up to 100 cubic yards in volume from ditches and the roadway. Repair fill-failures with selected material or material approved by the Contract Administrator. Remove overhanging material from the top of cut slopes.
- Waste material from slides or other sources shall be placed and compacted in stable locations identified in the road plan or approved by the Contract Administrator, so that sediment will not deliver to any streams or wetlands.
- Slide material and debris shall not be mixed into the road surface materials, unless approved by the Contract Administrator.

Surface

- Grade and shape the road surface, turnouts, and shoulders to the original shape on the TYPICAL SECTION SHEET 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

Page 2 of 2

Preventative Maintenance

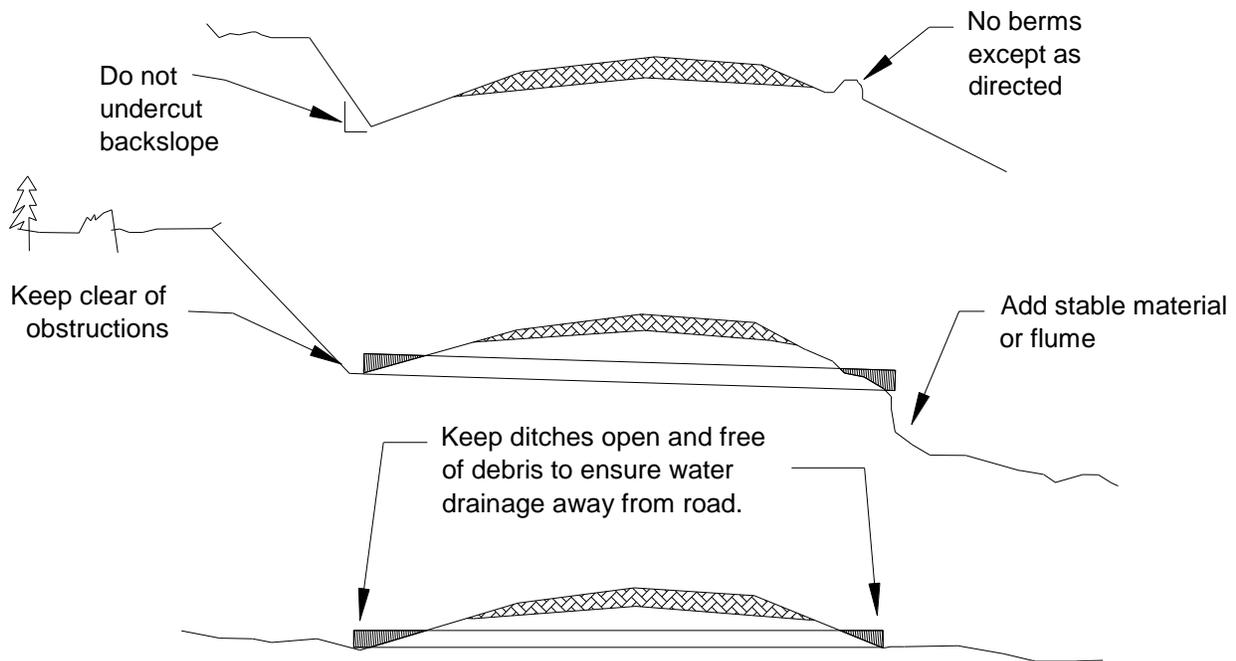
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

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

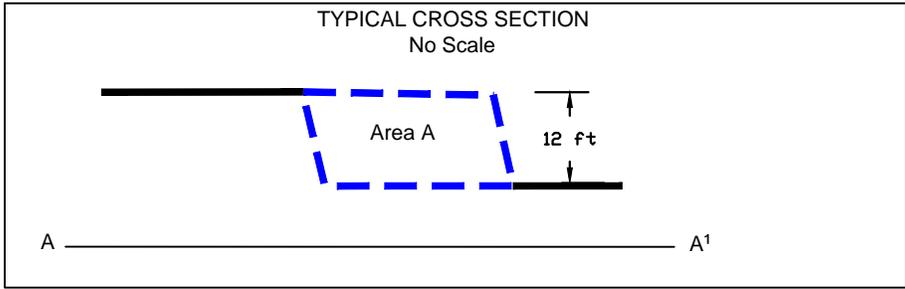
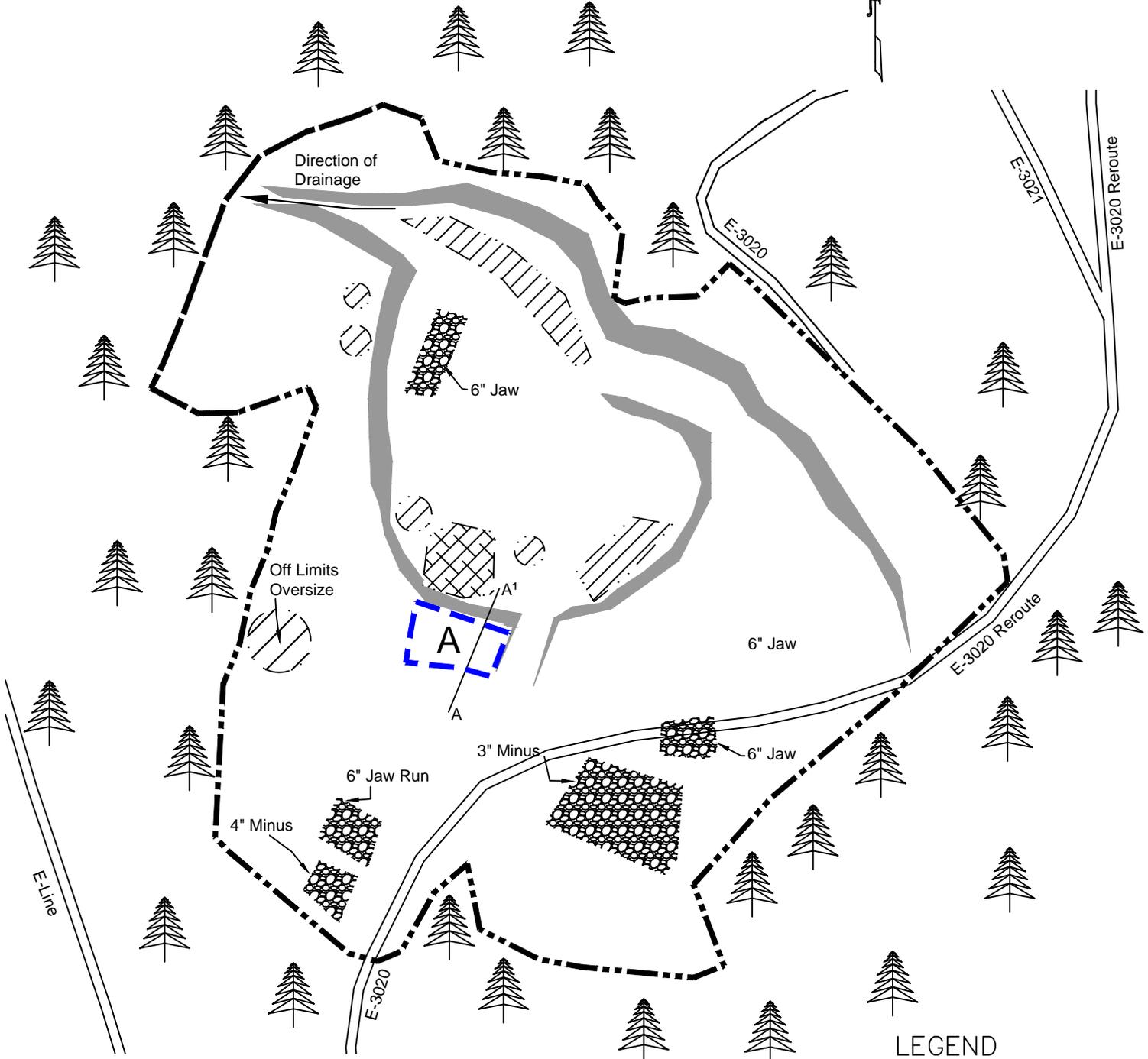
Debris

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



VANTAGE QUARRY PLAN VIEW

SEC. 22, T16N, R04W, W.M.



LEGEND

Existing Pit Boundary	
Existing Road	
Oversize Shot Rock	
Shot Rock	
Stockpile Areas Available to Purchaser	
Quarry Face	

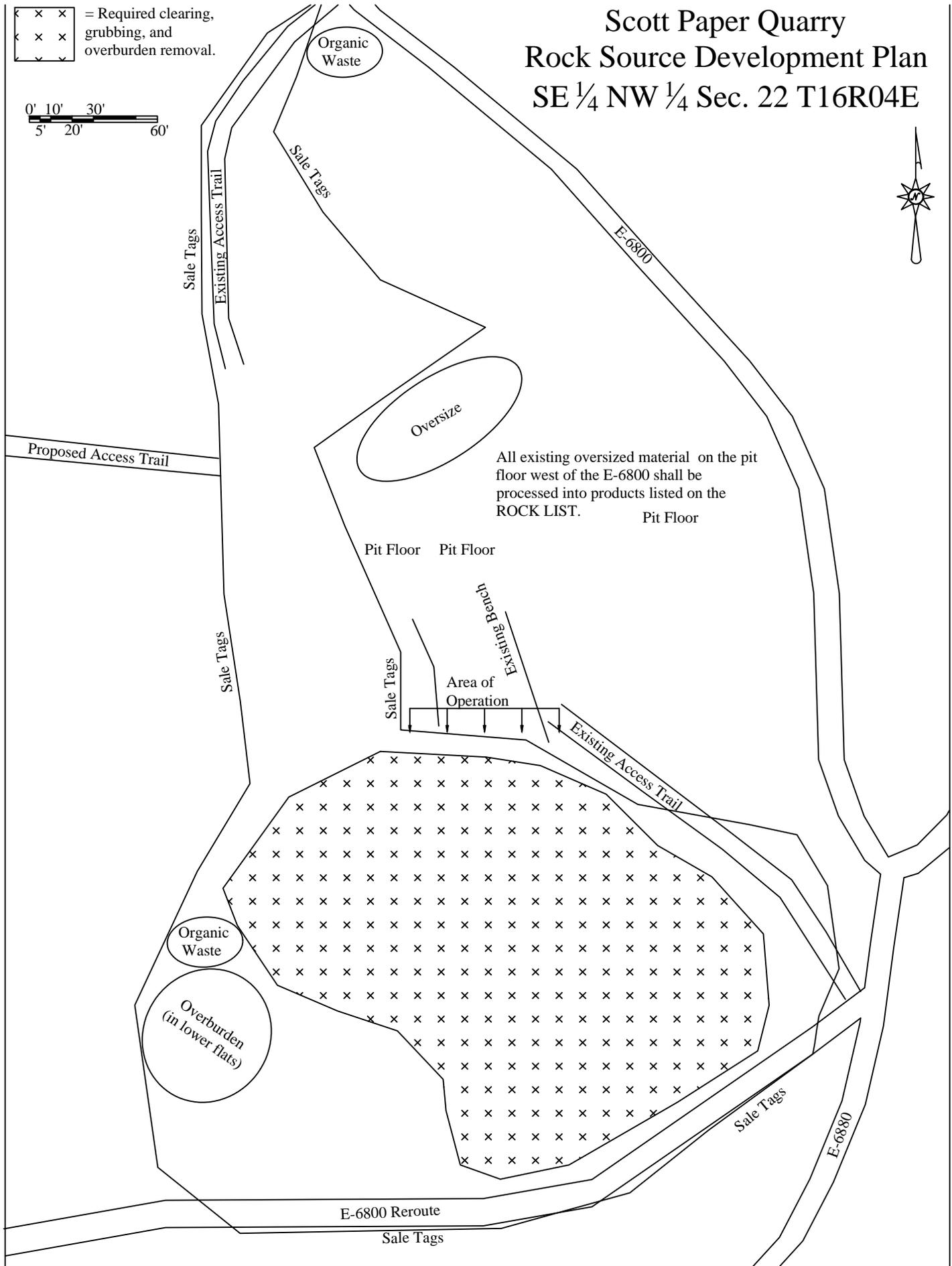
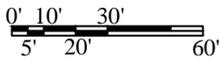
NOT TO SCALE

SCOTT PAPER QUARRY PIT DEVELOPMENT PLAN
SE ¼, NW ¼, Section 22, TOWNSHIP 16 North, Range 04 East, W.M.

1. All vegetation including stumps shall be cleared a minimum of 10 feet beyond the top of all working faces and piled as shown on drawing.
2. Overburden shall be end hauled or end pushed to the designated waste area and compacted. Minimal acceptable compaction is achieved by placing waste material in 2 foot or shallower lifts and routing excavation equipment over entire width of the lifts. Final placement of waste material shall be approved in writing by the Contract Administrator.
3. Root wads and organic debris larger than one cubic foot in volume shall be separated from overburden material and piled in the designated waste area.
4. Quarry faces shall not exceed 20 feet in height and shall have a slope no steeper than ½ (H):1 (V).
5. The width of pit benches shall be a minimum of 1.5 times the maximum length of the largest machine used.
6. The surface of pit floors and benches shall be uniform and free-draining at a minimum 2% outslope gradient. No ponding will be allowed
7. Oversize material remaining in the rock source at the conclusion of the timber sale may not exceed 10% of the total volume mined in that source. Oversize material is defined as rock fragments larger than two feet in any direction.
8. 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 and access blocked to highway vehicles.
9. All operations shall be carried out in compliance with all regulations 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.
 - b. "Safety Standards for Construction Work" (296-155 WAC) Washington Department of Labor and Industries.
10. The Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator 5 working days prior to any drilling (Form #M-126PAC). This form is available at the South Puget Sound Region office.
11. At the completion of rock source operations, Purchaser shall ask Contract Administrator for written approval of final rock source condition and compliance with the terms of this plan.
12. Quantity and Quality of rock is not guaranteed by the State.

Scott Paper Quarry Rock Source Development Plan SE 1/4 NW 1/4 Sec. 22 T16R04E

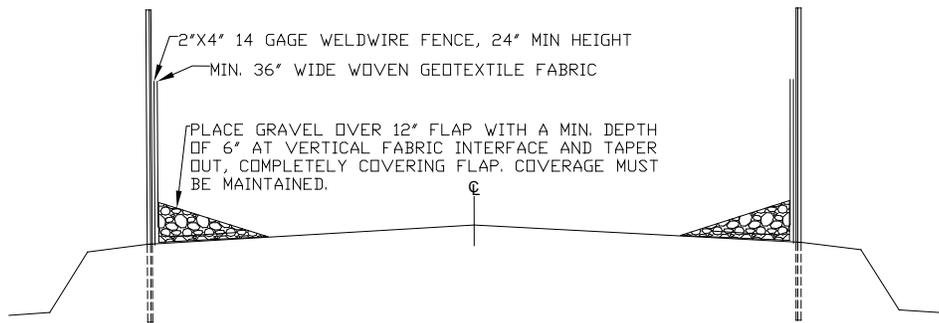
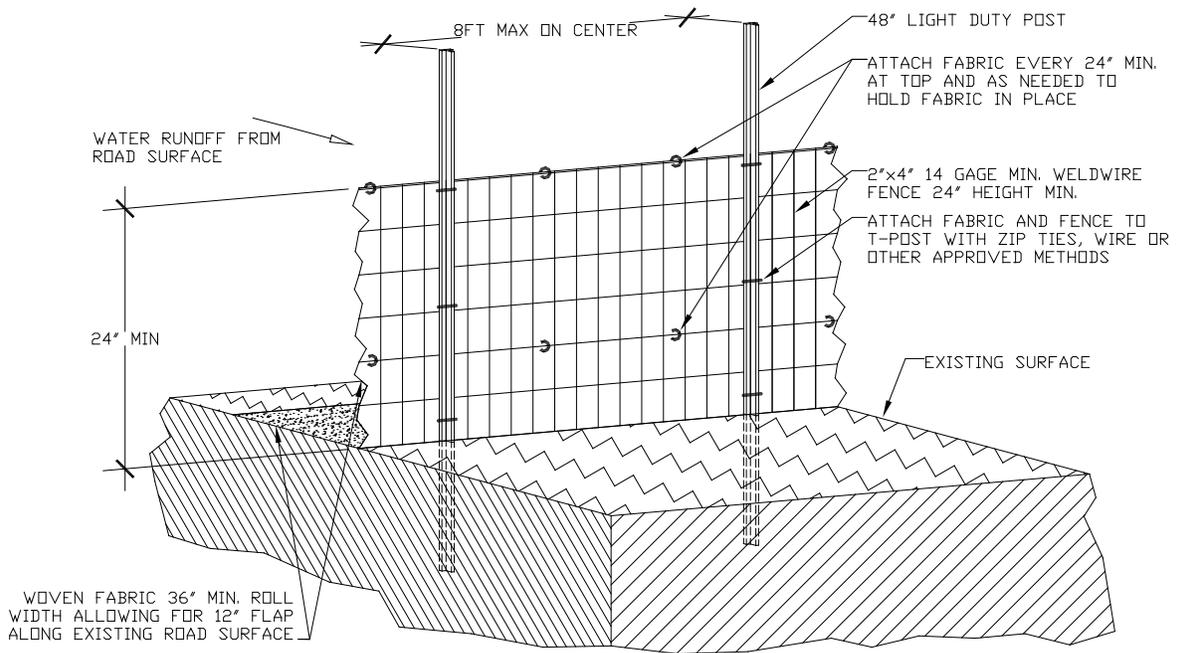
 = Required clearing, grubbing, and overburden removal.



All existing oversized material on the pit floor west of the E-6800 shall be processed into products listed on the ROCK LIST.
Pit Floor

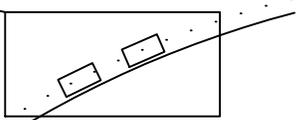
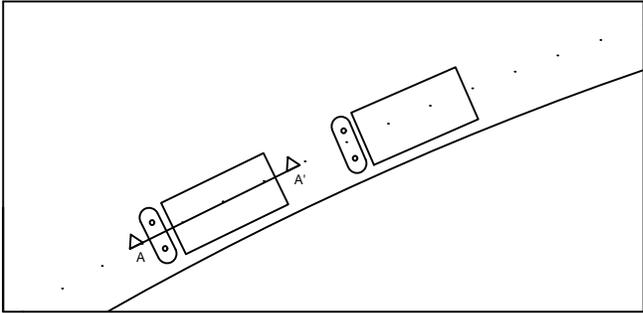
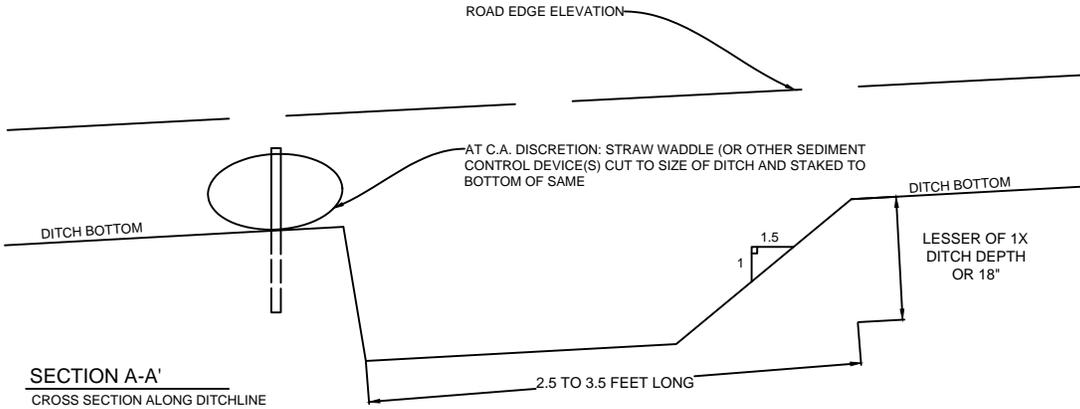
Organic Waste
Overburden (in lower flats)

SILT FENCE DETAIL



1. Silt fence shall be installed with Contract Administrator approval prior to haul.
2. Silt fence shall be installed with a minimum of 6" of cover starting at fabric/weldwire and tapering toward road centerline. Coverage of fabric shall be maintained.
3. Light Duty T-Posts shall be placed on the down slope side of the fabric/weldwire. If conditions exist that a taller silt fence is required, such as splash, longer T-Posts, wider fabric rolls and taller fence maybe necessary or other methods as approved by the Contract Administrator.
4. When a silt fence is continued from another run, the end T-Posts shall be connected together and not overlapped.
5. If runoff of silt laden water flows around the sides and additional fence may be used, realignment of the fence, removal of built up sediment and/or other BMP's such as ditch filters shall be used until controlled. Until under control haul shall be suspended.
6. FABRIC SPECS - min tensile strength: 120lbs, min puncture strength: 50lbs, min tear strength: 40lbs, min burst strength: 200lbs, min permittivity: 0.1 sec-1, UV resistance: 70%.

SEDIMENT TRAP DETAIL



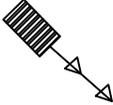
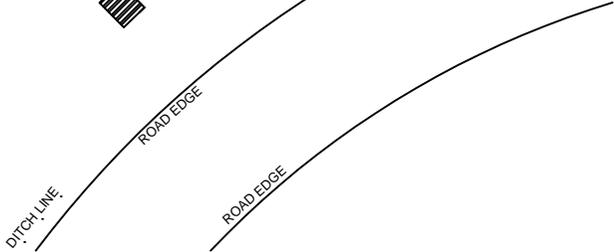
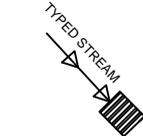
NOTES:

CONSTRUCT SEDIMENT TRAPS IN SETS GREATER THAN ONE, WHENEVER POSSIBLE.

SEDIMENT TRAPS SHOULD BE PLACED AS CLOSE AS PRACTICABLE TO STREAM CROSSING.

IF SEDIMENT TRAPS FILL WITH SEDIMENT DURING HAUL OPERATIONS, REMOVING SEDIMENT FROM TRAPS IS CONSIDERED ROUTINE MAINTENANCE.

ADDITIONAL SEDIMENT CONTROL DEVICES, SUCH AS HAY BALES, STRAW WADDLES OR OTHERS MAY BE REQUIRED AS SHOWN IF IN THE OPINION OF THE CONTRACT ADMINISTRATOR, SEDIMENT TRAP ALONE DOES NOT APPEAR TO BE EFFECTIVE.



Date: 09/16/2014
 Scale : NTS
 App#
 Drawn by: WPH
 Sheet 1 of 1

SEDIMENT TRAP DETAIL

WASHINGTON STATE DEPARTMENT OF
Natural Resources

SPS Region

Place inlet marker
on right side of
inlet, in culvert
corrugation if
possible

Edge of fill

Edge of road

Typical Plan

Culvert Barrel

Typical Section

Inlet marker: 1 inch I.D.
Schedule 40
PVC Pipe, white

24 inches min.

Road Surface

Catch Basin

Culvert Barrel

6 inches min.

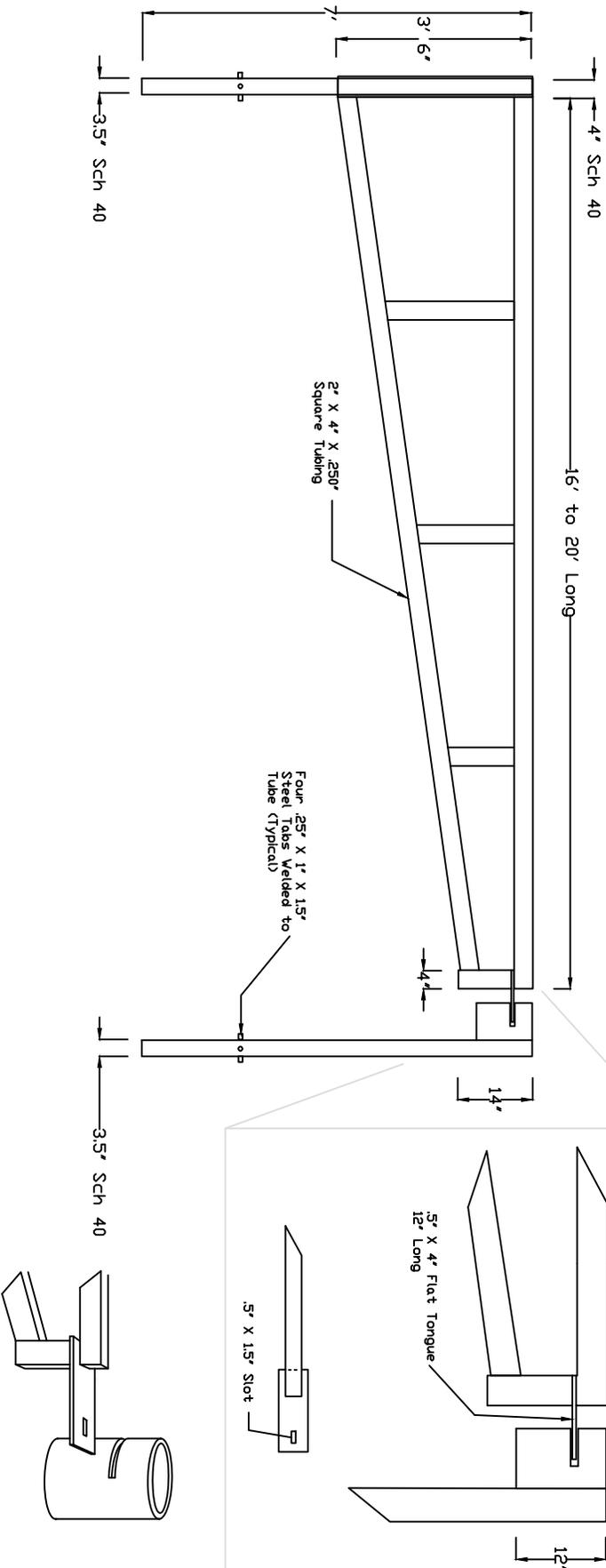
CULVERT MARKER DETAIL (INLET SHOWN)



WASHINGTON STATE DEPARTMENT OF
Natural Resources

Drawn by: WP Hoskins

Light Duty Steel Gate



Date: 6/25/2002
 Scale: None
 Page: 1 of 1
 App #: None
 Drawn by: M.T.S.

 <p>WASHINGTON STATE DEPARTMENT OF Natural Resources</p> <p><small>WSN Logo</small></p>	<p>Gate Plan with Details</p>
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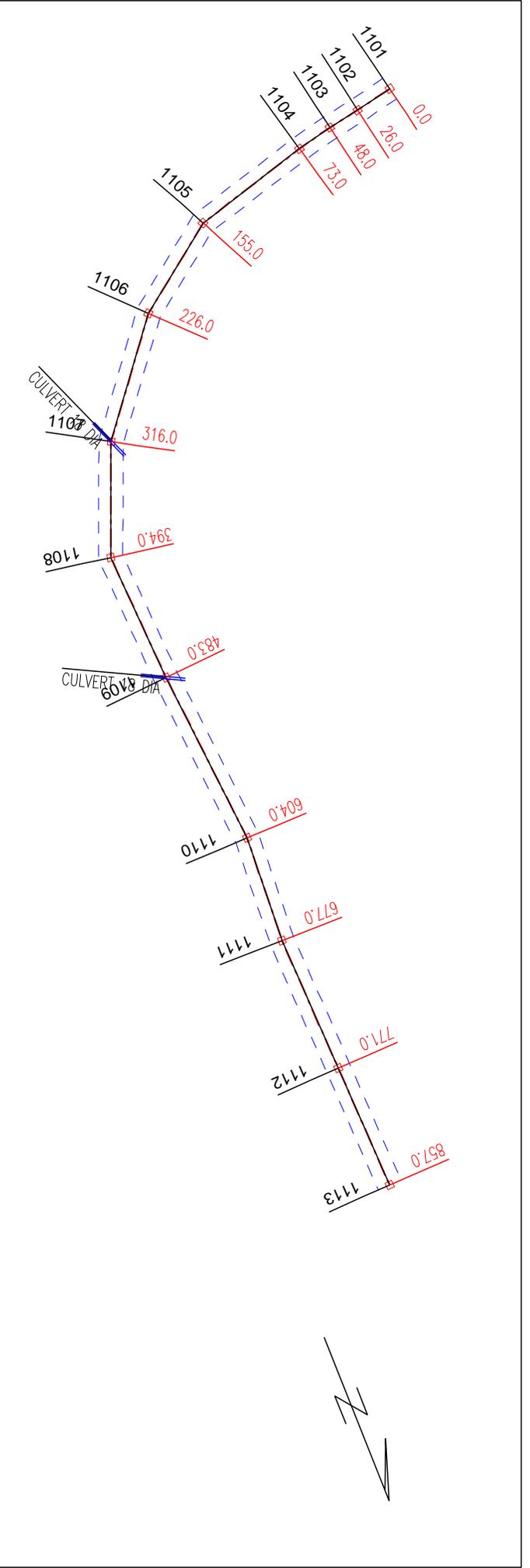
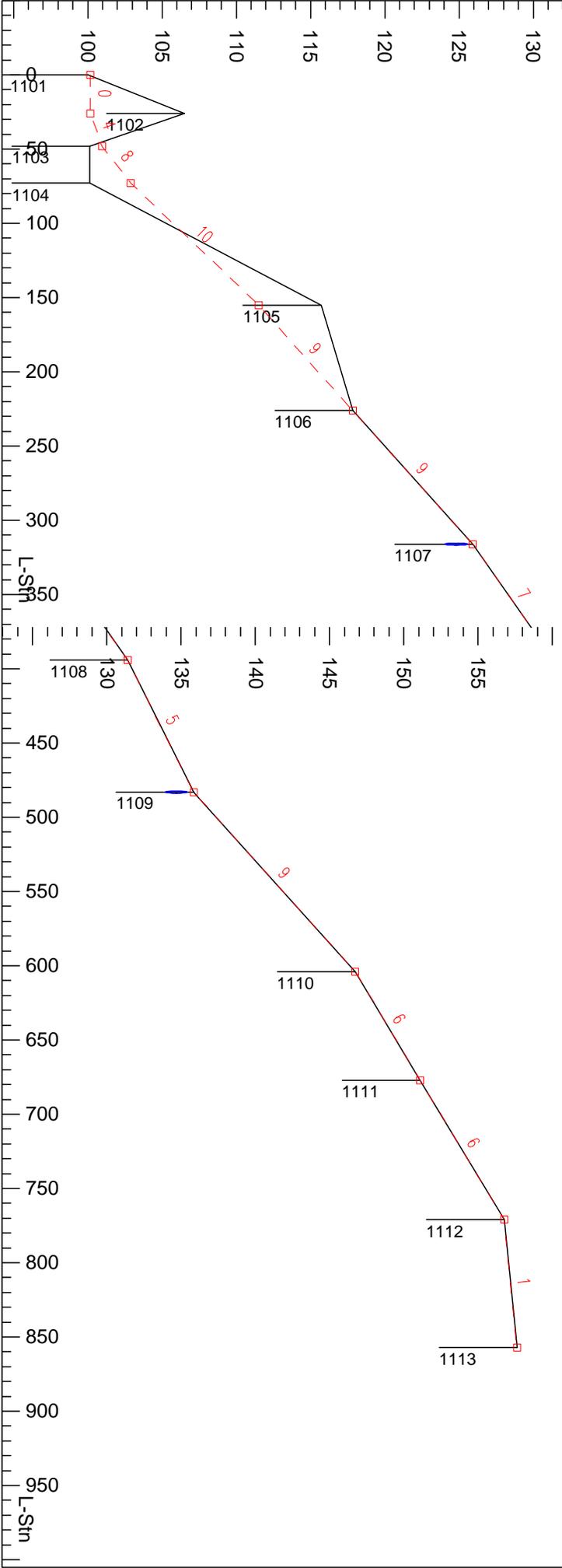
Board O' Feet Timber Sale
 E-3020 ReRoute
 Contract #: 30-91856

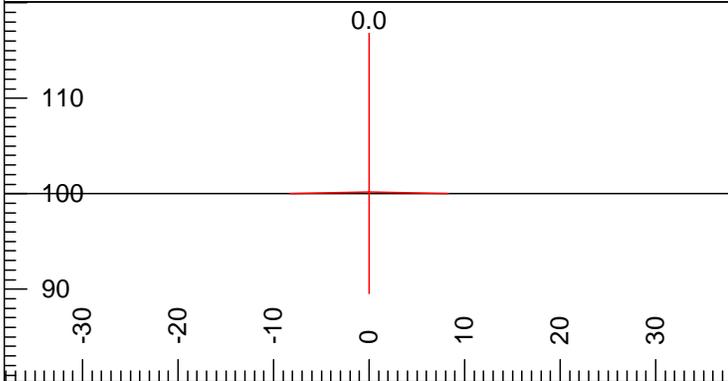
Washington State Department of Natural Resources
 South Puget Sound Region

Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

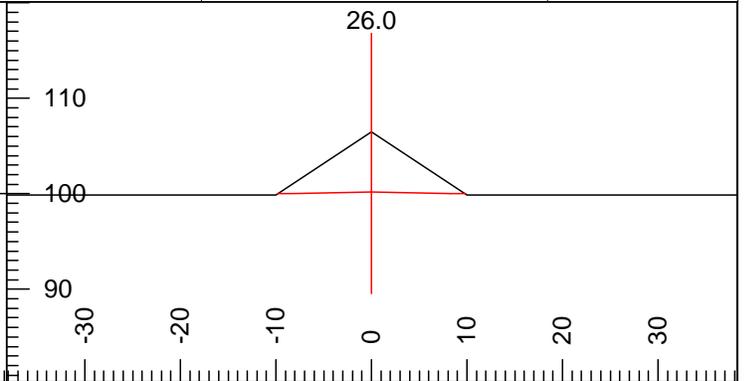
Engineer: J Gardner
 15/12/11

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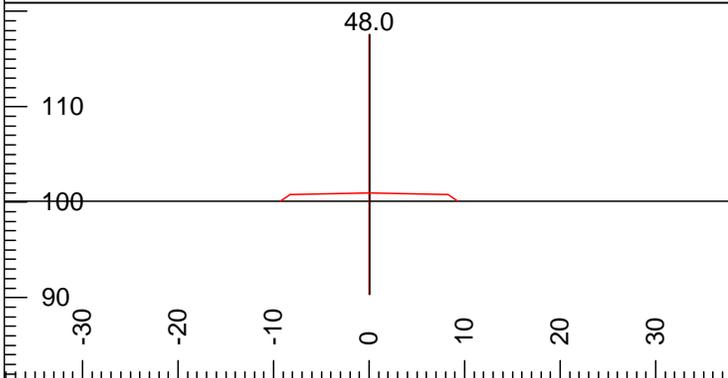




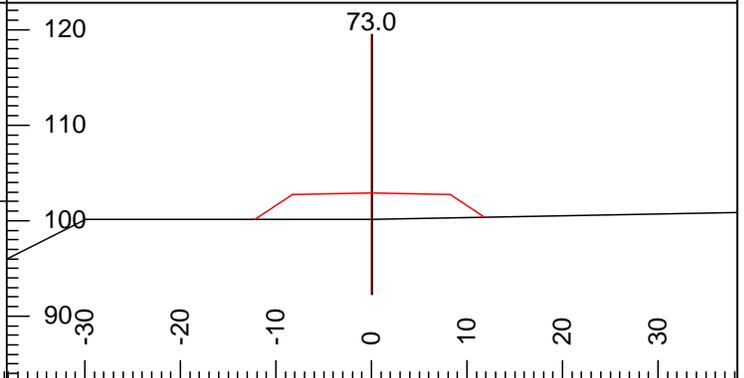
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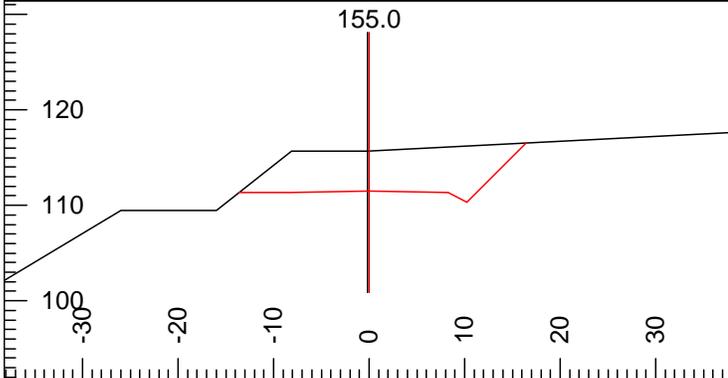
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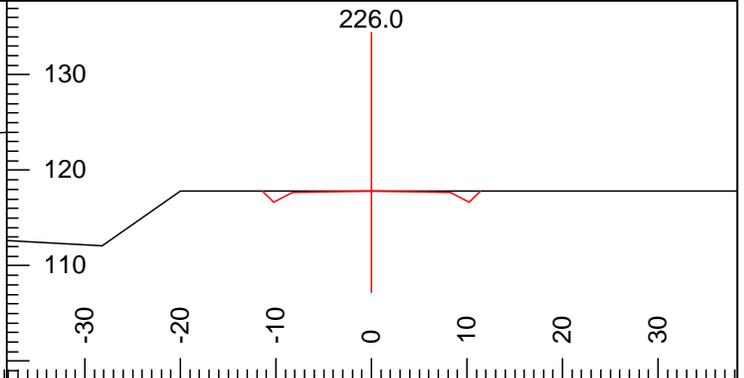
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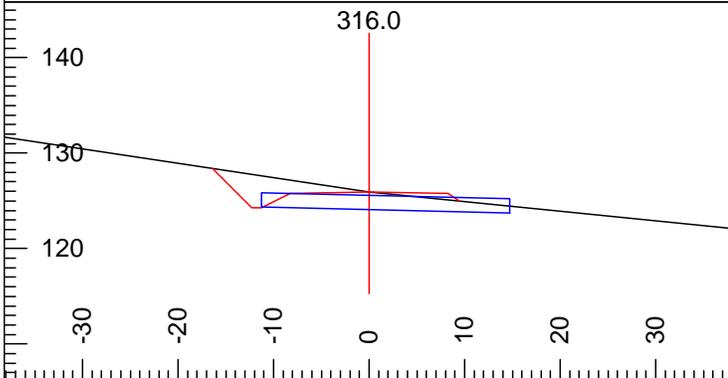
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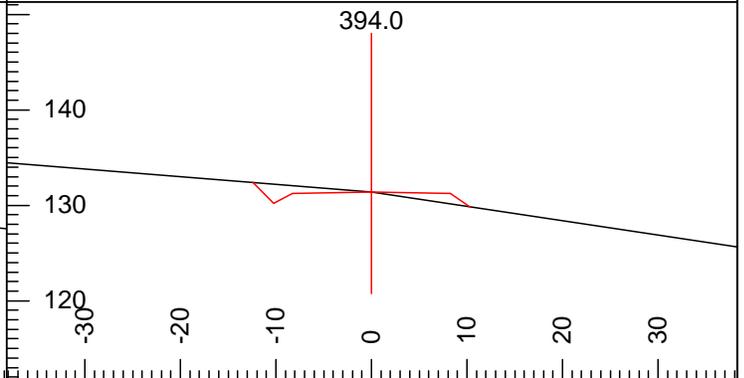
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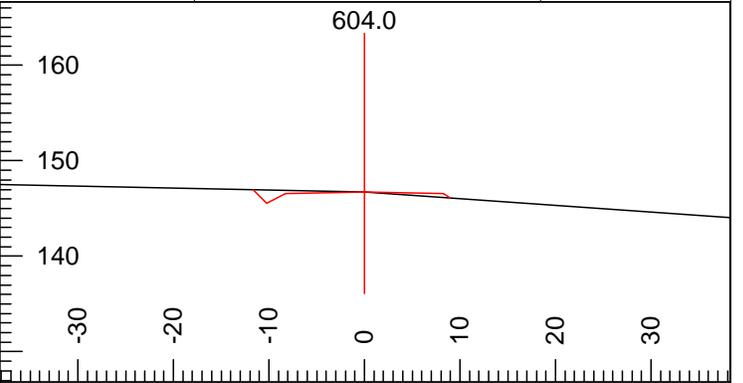
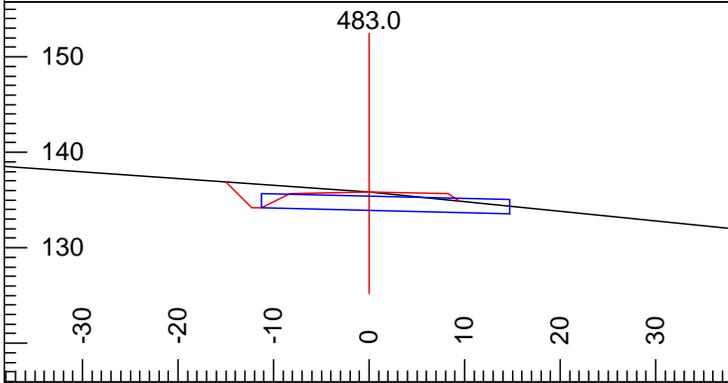
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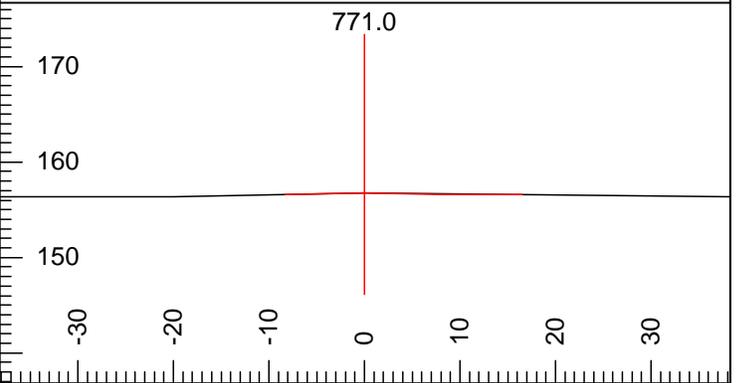
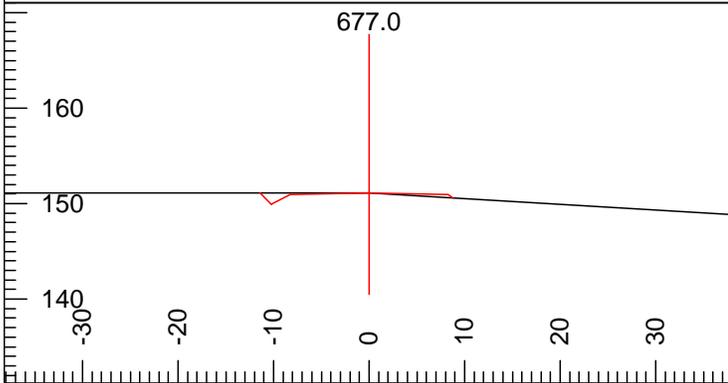


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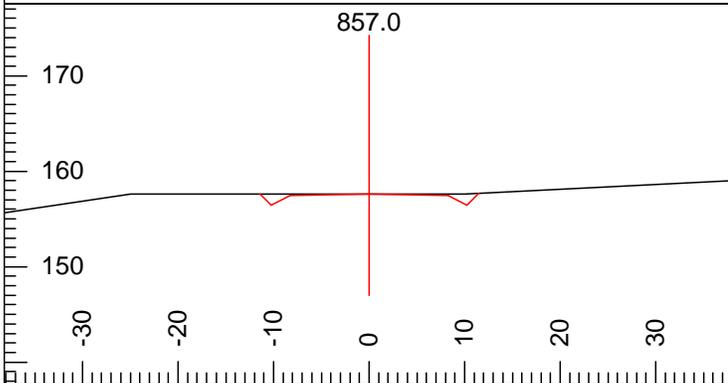
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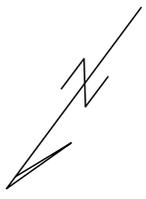
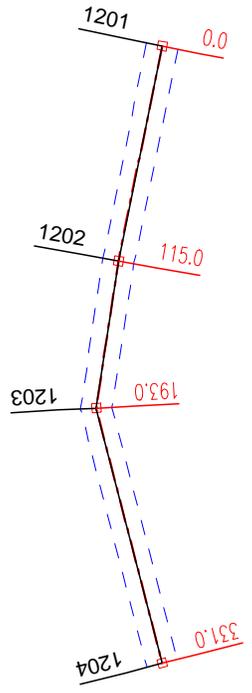
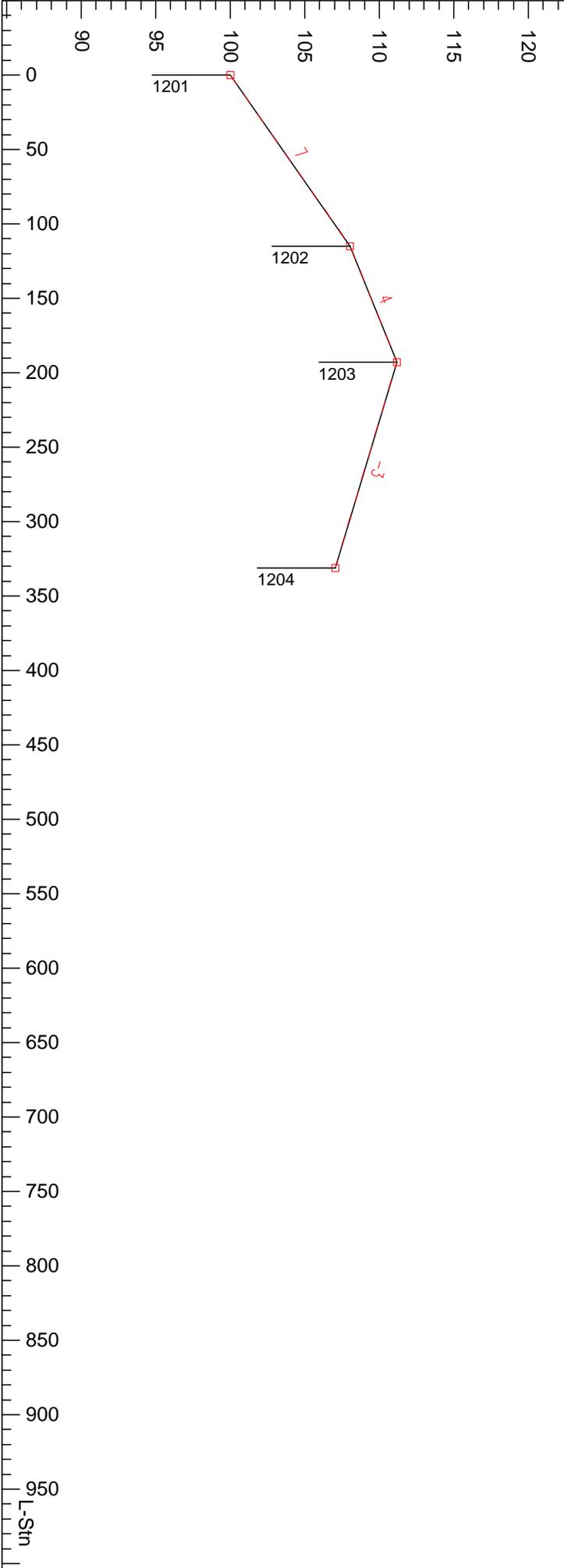
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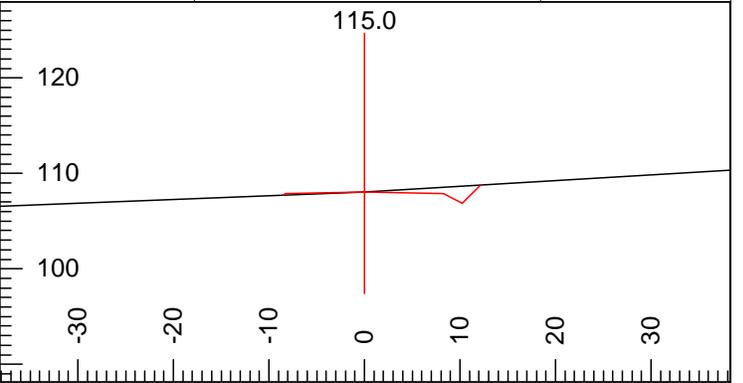
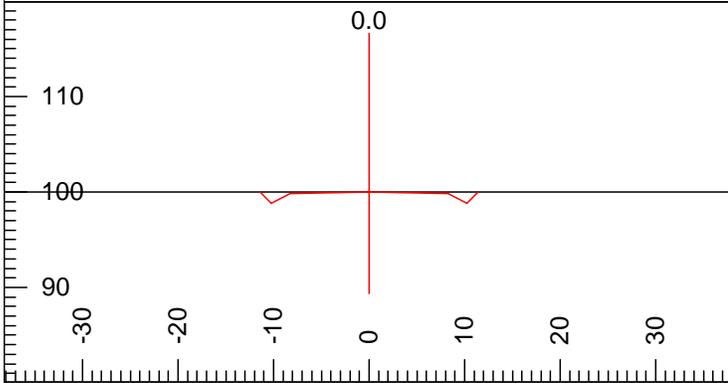
Board O' Feet Timber Sale
E-3021
Contract #: 30-91856

Washington State Department of Natural Resources
South Puget Sound Region

Plan Scale 1:1200
Profile Vert Scale 1:120
Profile Horz Scale 1:1200

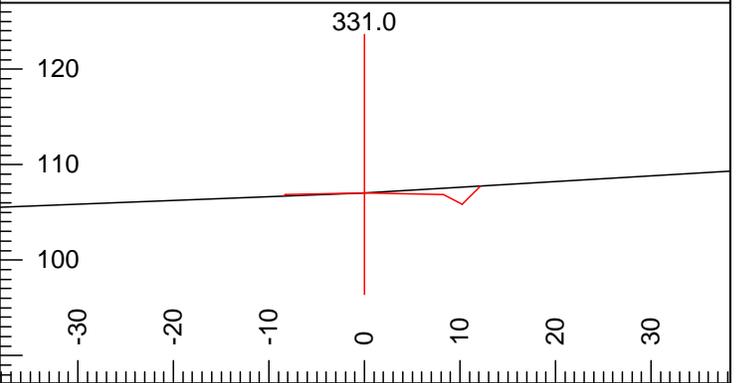
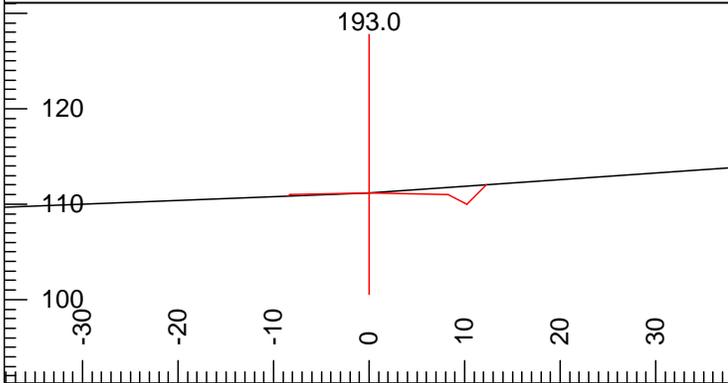
Engineer: J Gardner
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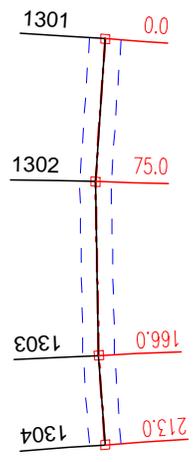
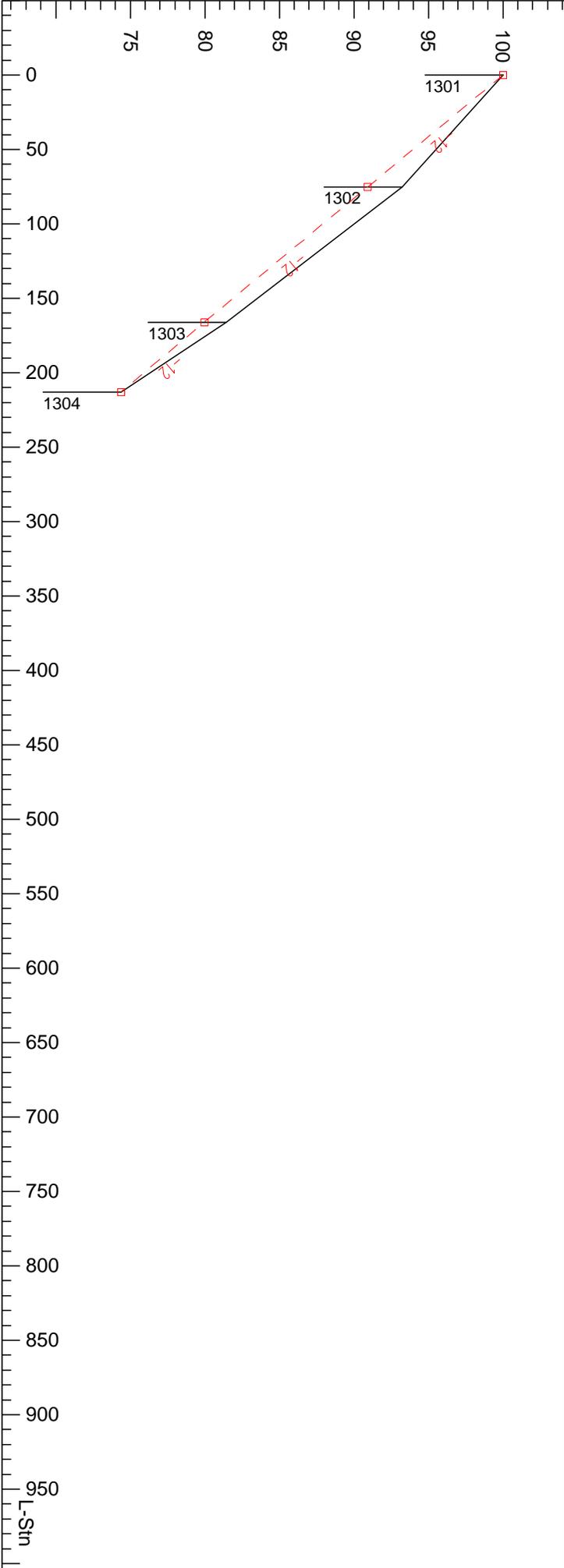
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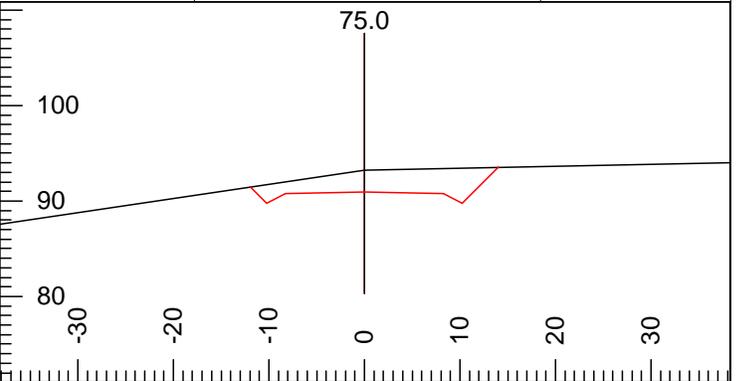
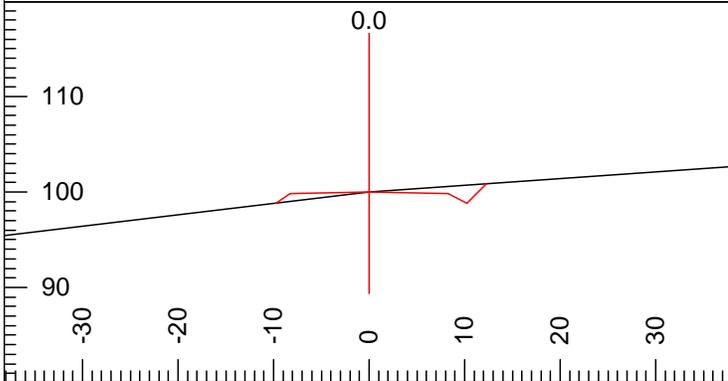
Board O' Feet Timber Sale
 E-30222
 Contract #: 30-91856

Washington State Department of Natural Resources
 South Puget Sound Region

Plan Scale 1:1200
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 Profile Horz Scale 1:1200

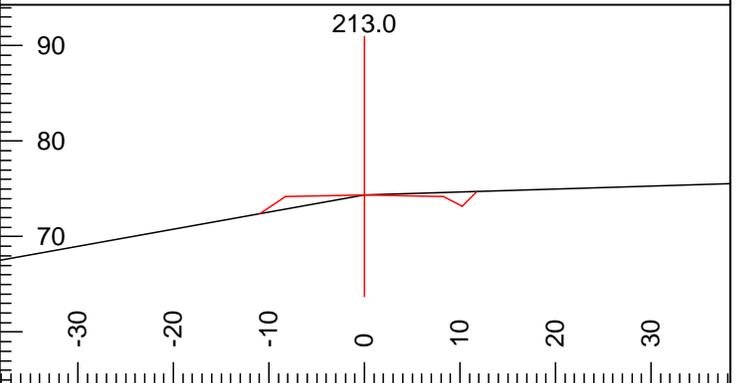
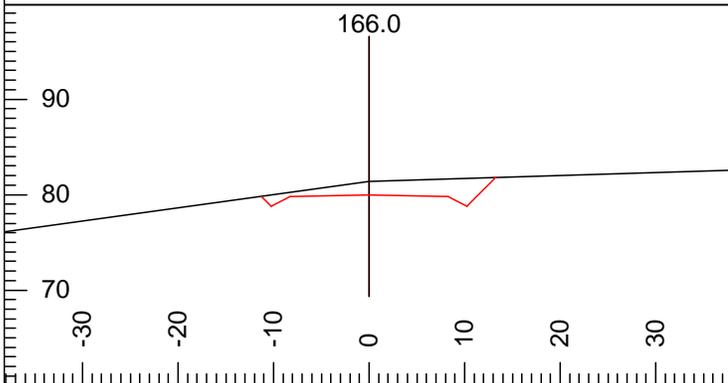
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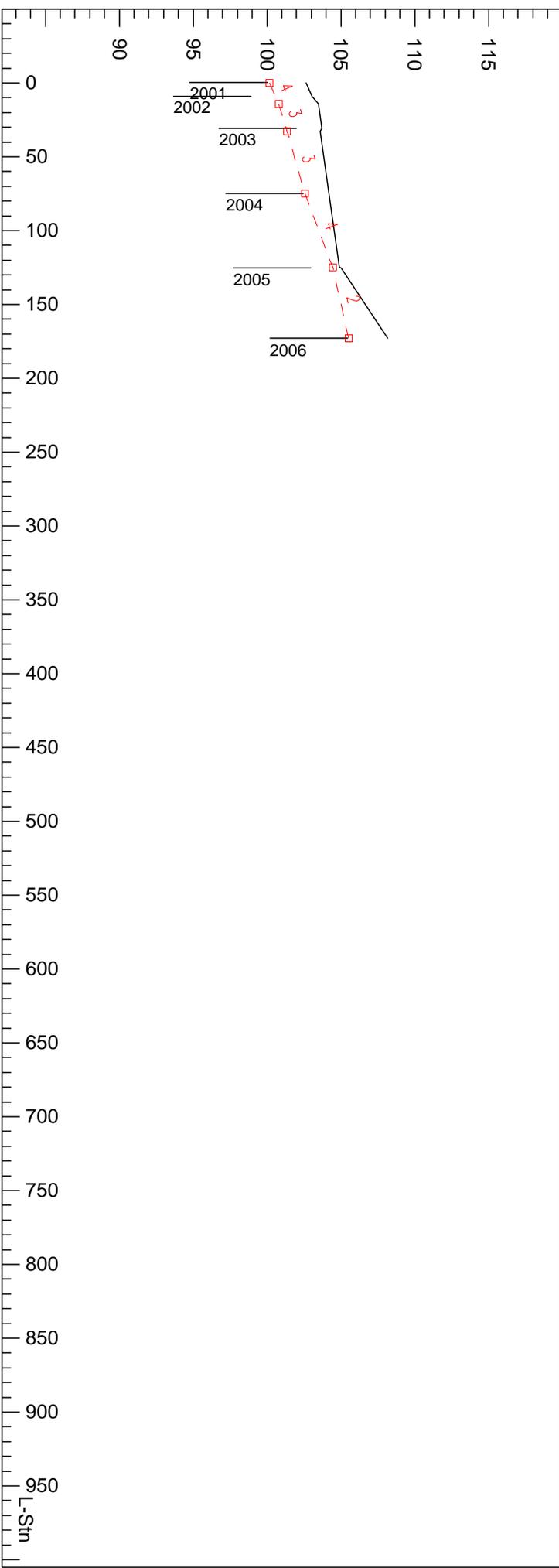
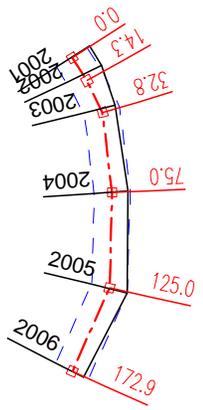
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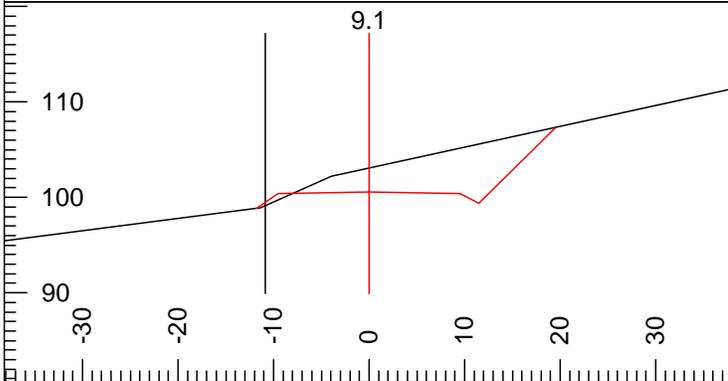


Board O' Feet Timber Sale
 E6200/E6240 Tie Rd
 Contract #: 30-91856

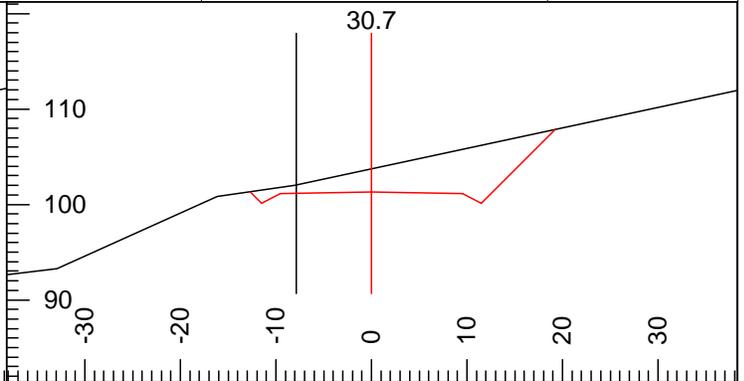
Washington State Department of Natural Resources
 South Puget Sound Region

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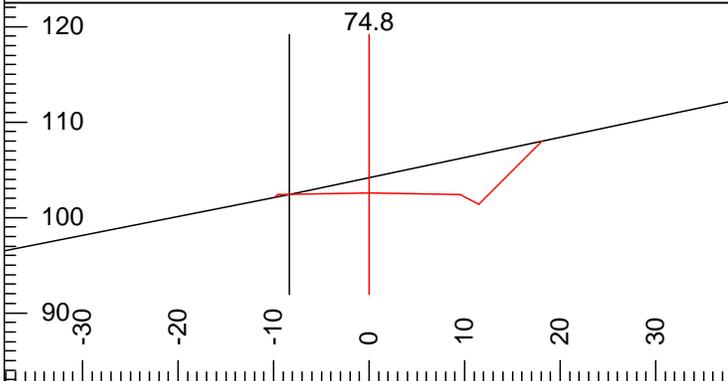
Engineer: J Gardner
 15/12/11
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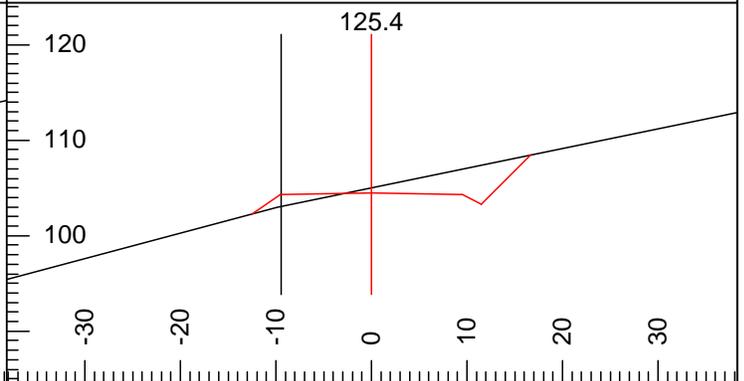
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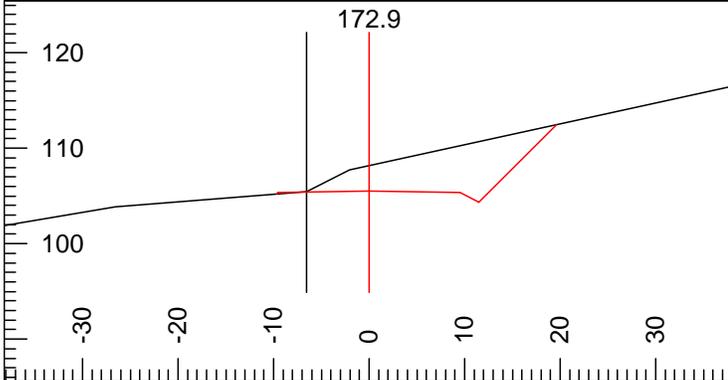
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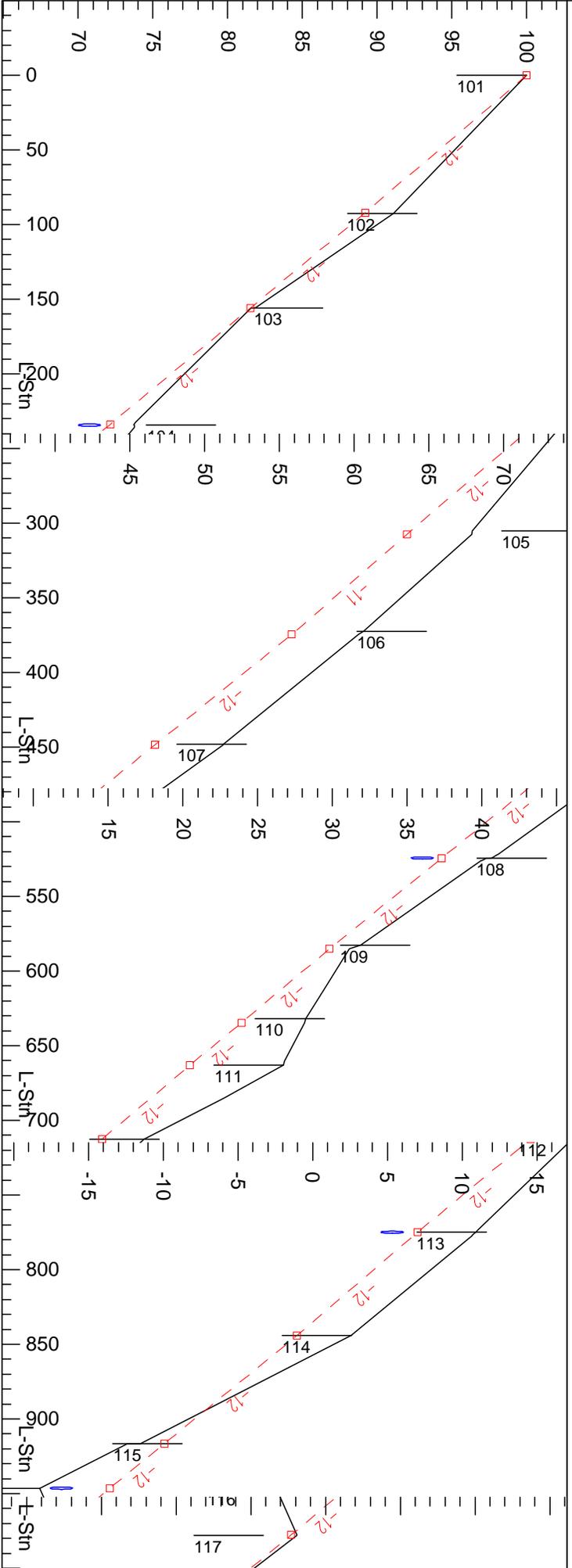
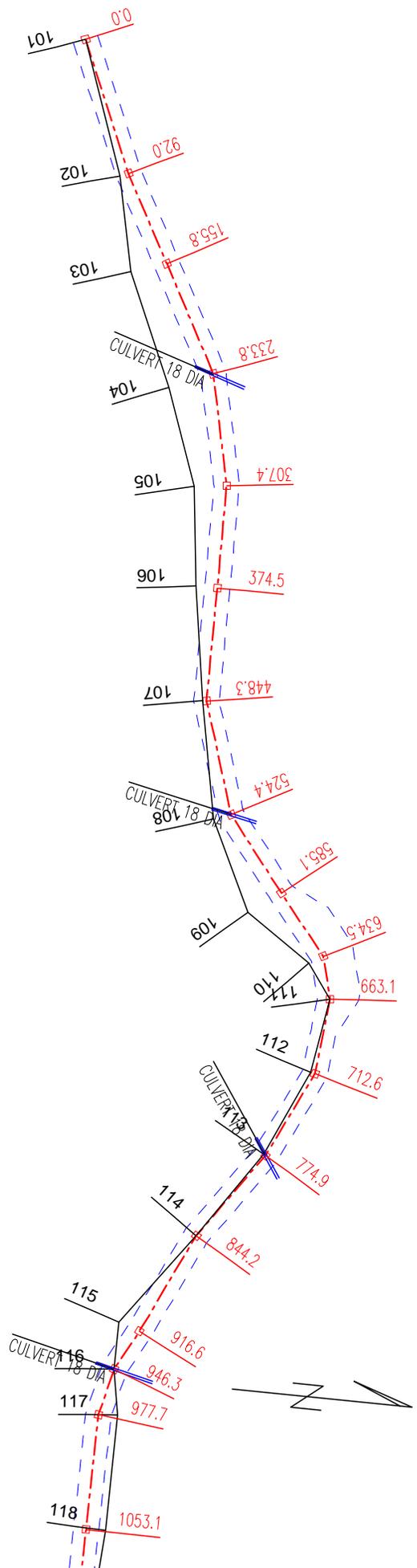
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Board O' Feet Timber Sale
 E-6240 Extension
 Contract #: 30-91856

Washington State Department of Natural Resources
 South Puget Sound Region

Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

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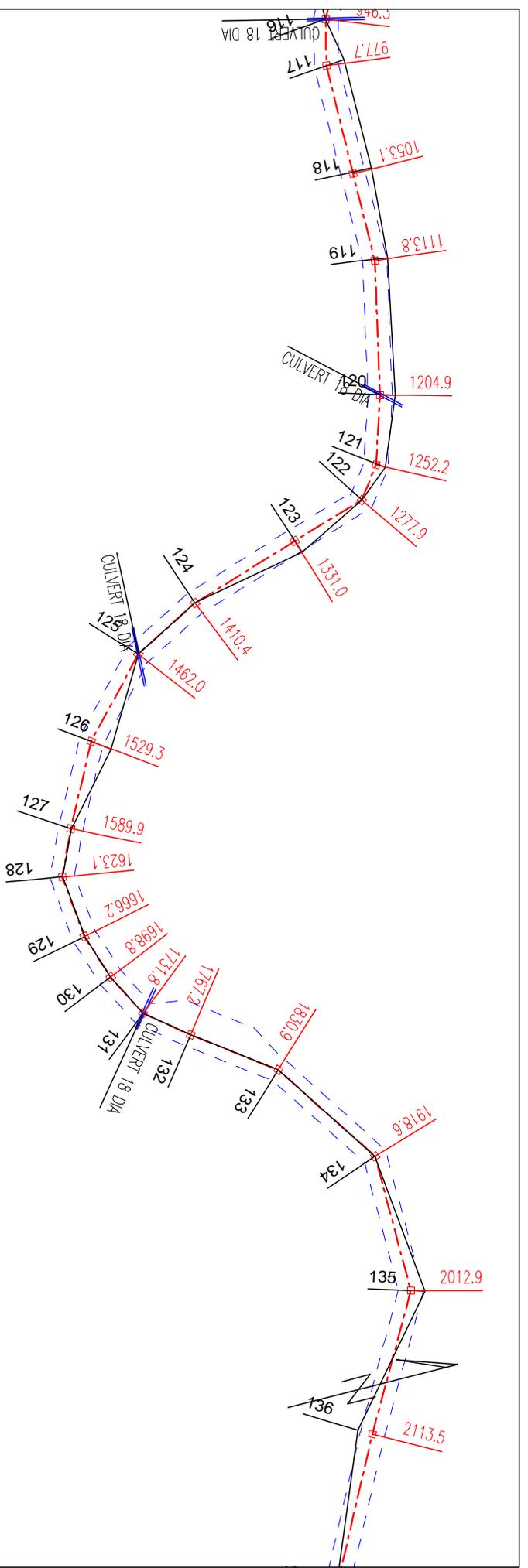
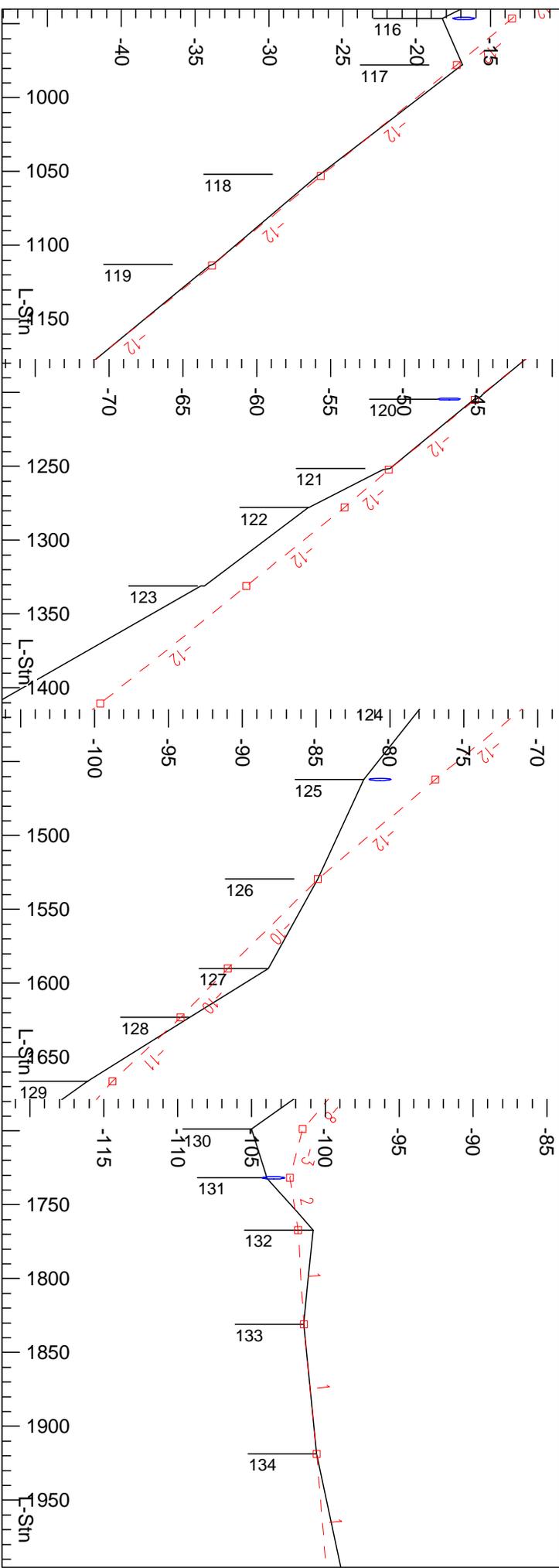
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Board O' Feet Timber Sale
 E-6240 Extension
 Contract #: 30-91856

Washington State Department of Natural Resources
 South Puget Sound Region

Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horiz Scale 1:1200

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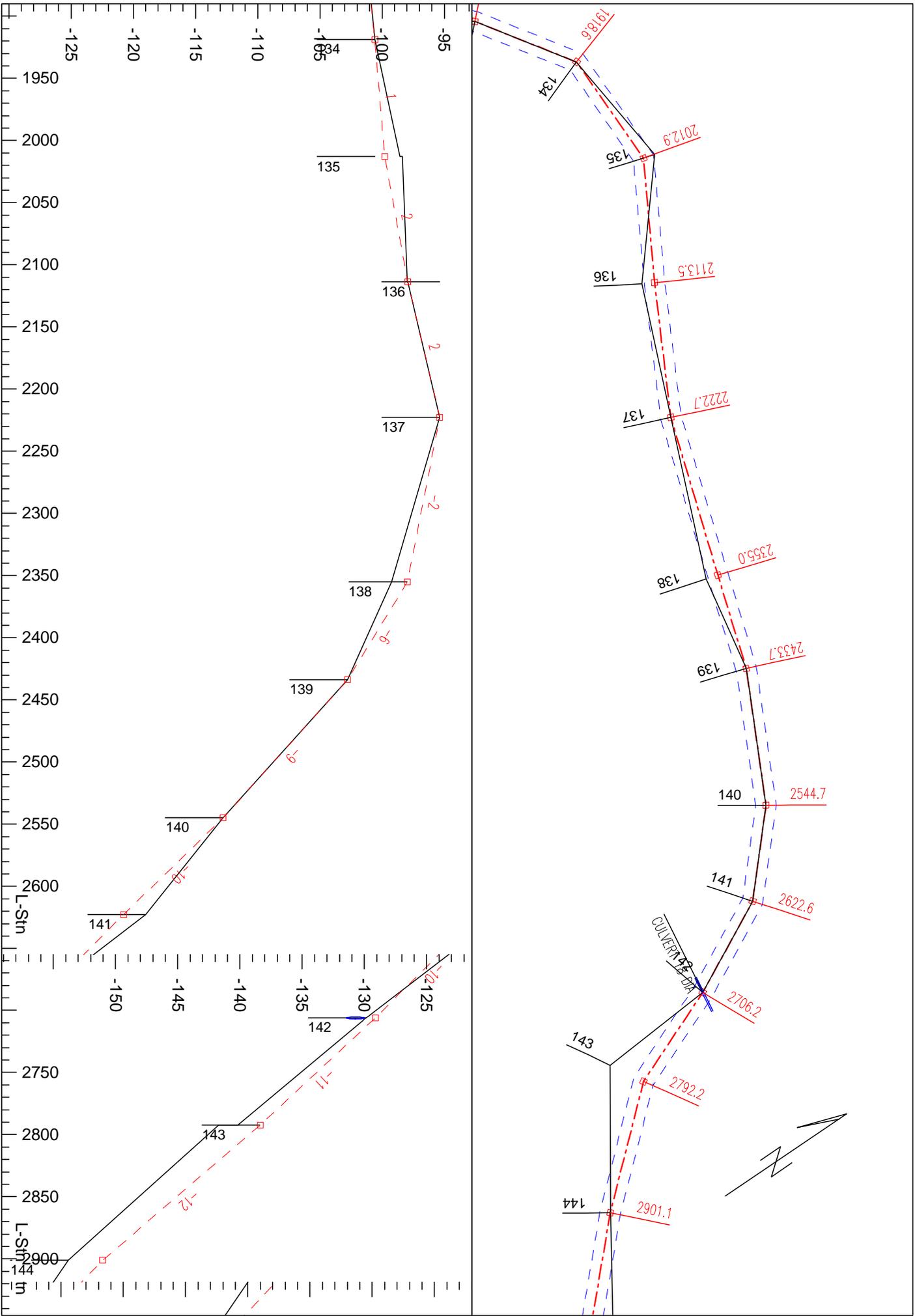


Board O' Feet Timber Sale
 E-6240 Extension
 Contract #: 30-91856

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 South Puget Sound Region

Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

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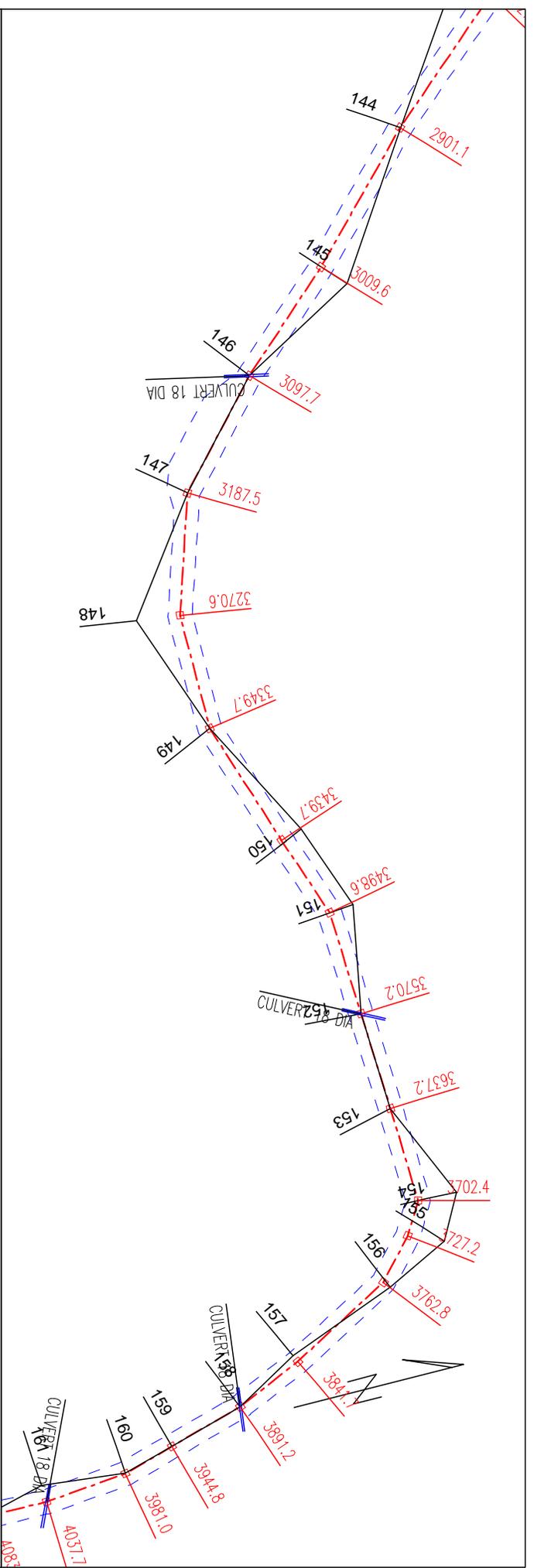
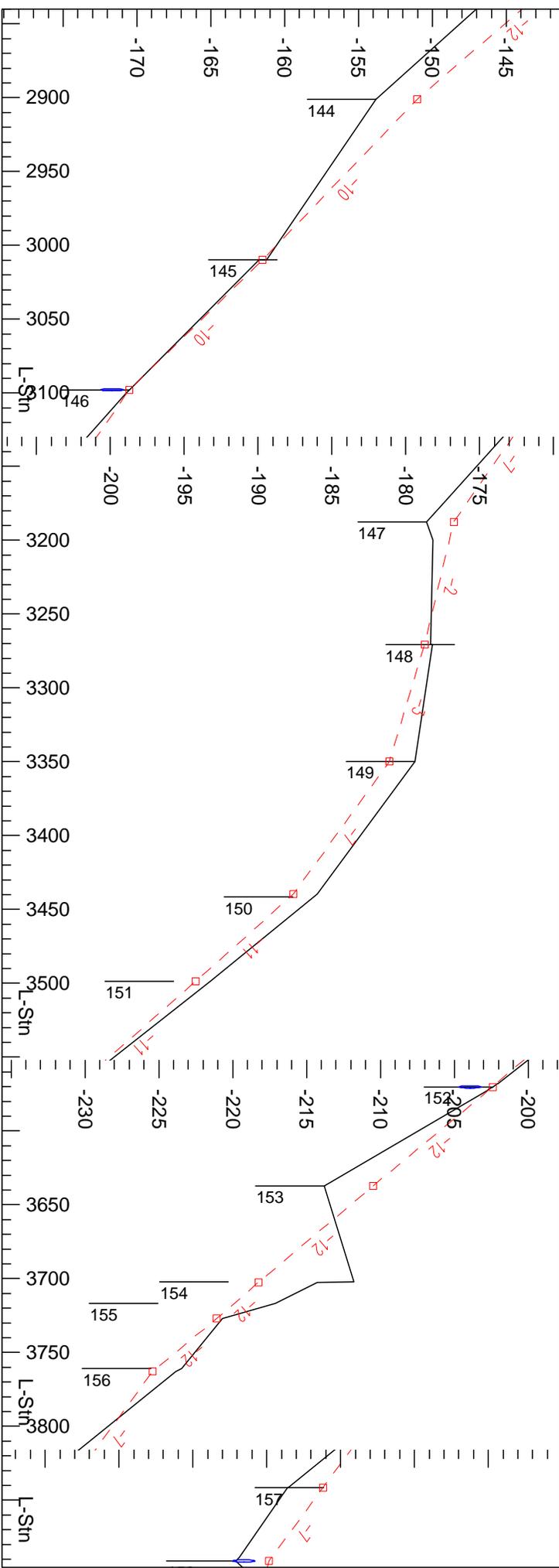


Board O' Feet Timber Sale
 E-6240 Extension
 Contract #: 30-91856

Washington State Department of Natural Resources
 South Puget Sound Region

Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

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 15/12/11
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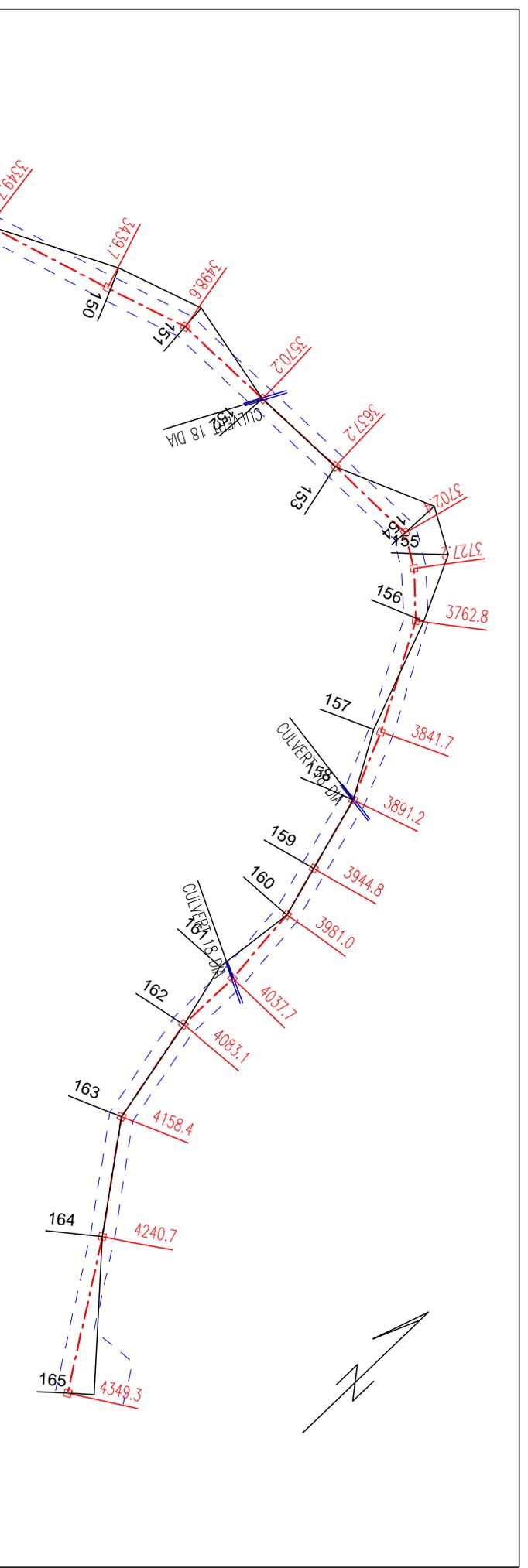
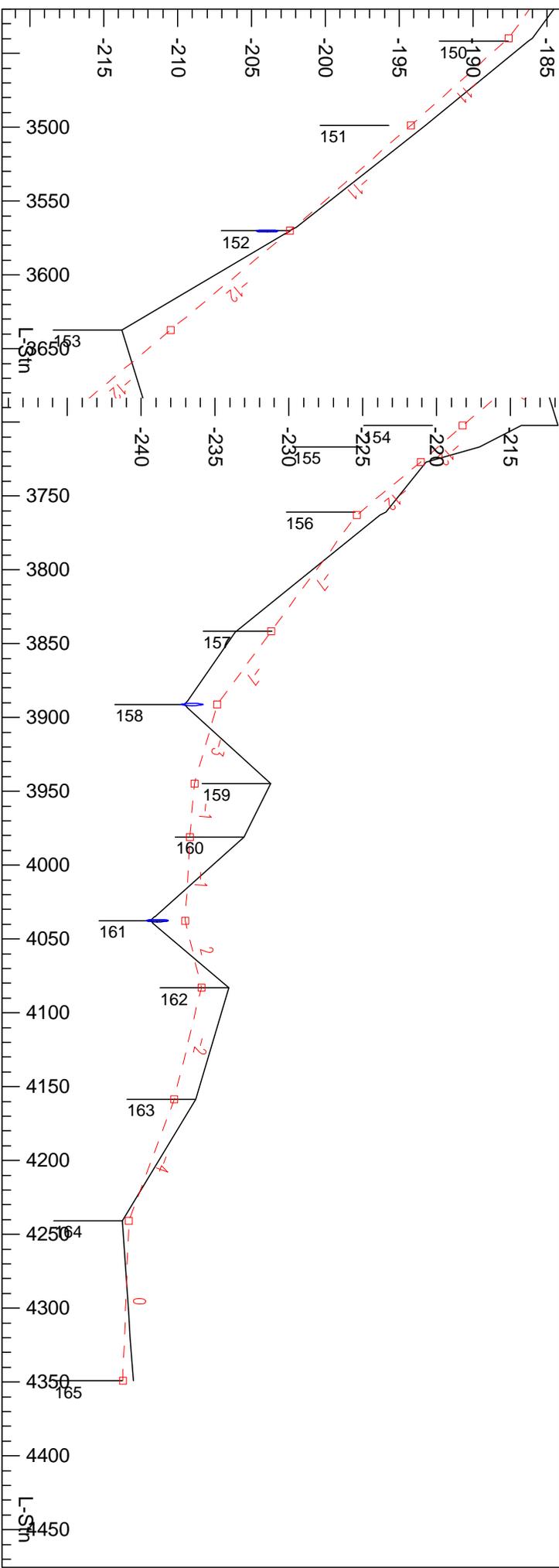


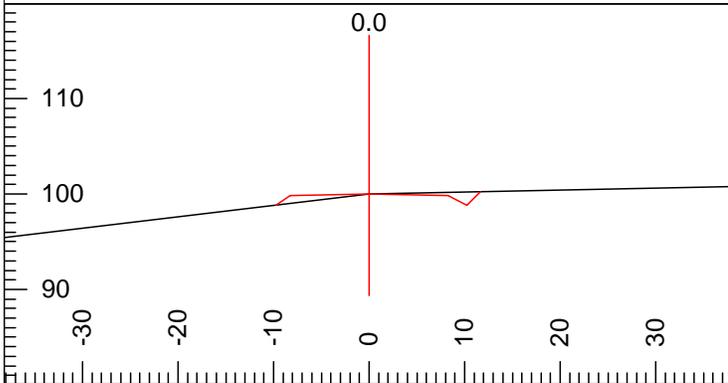
Board O' Feet Timber Sale
 E-6240 Extension
 Contract #: 30-91856

Washington State Department of Natural Resources
 South Puget Sound Region

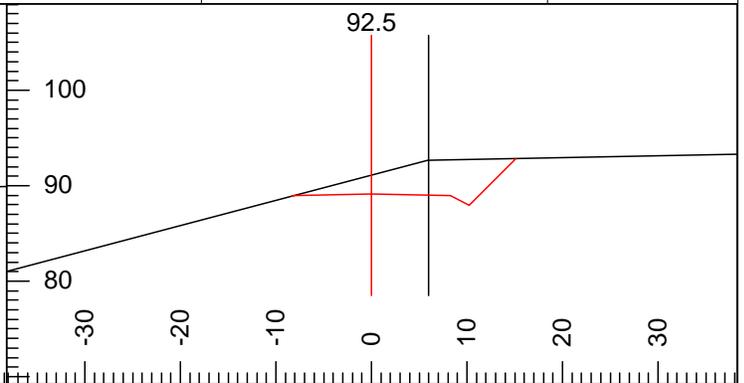
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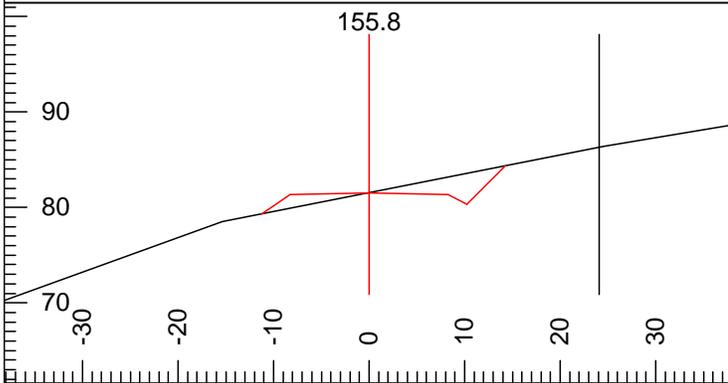




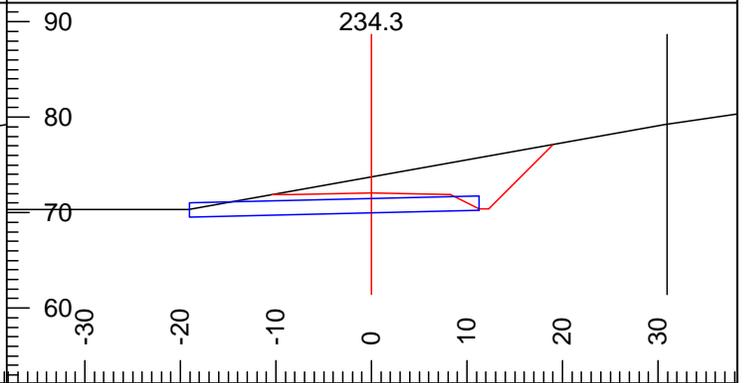
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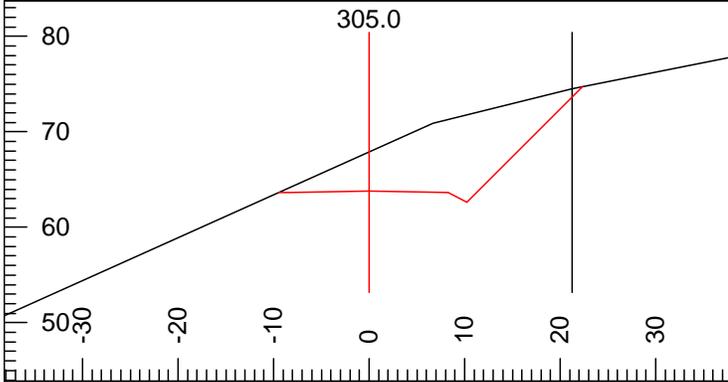
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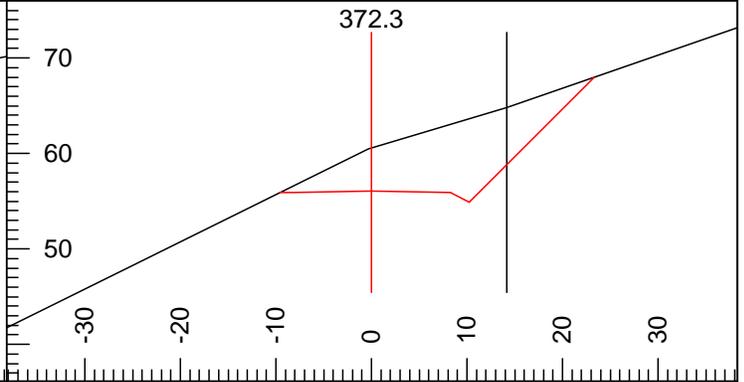
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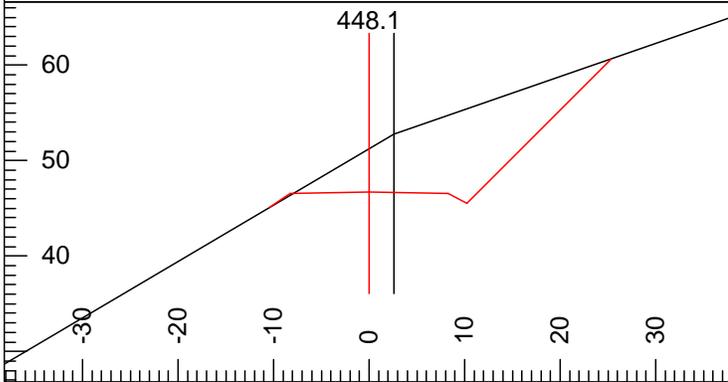
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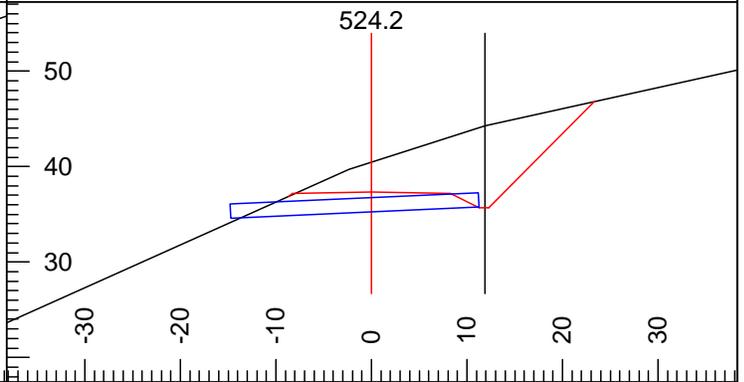
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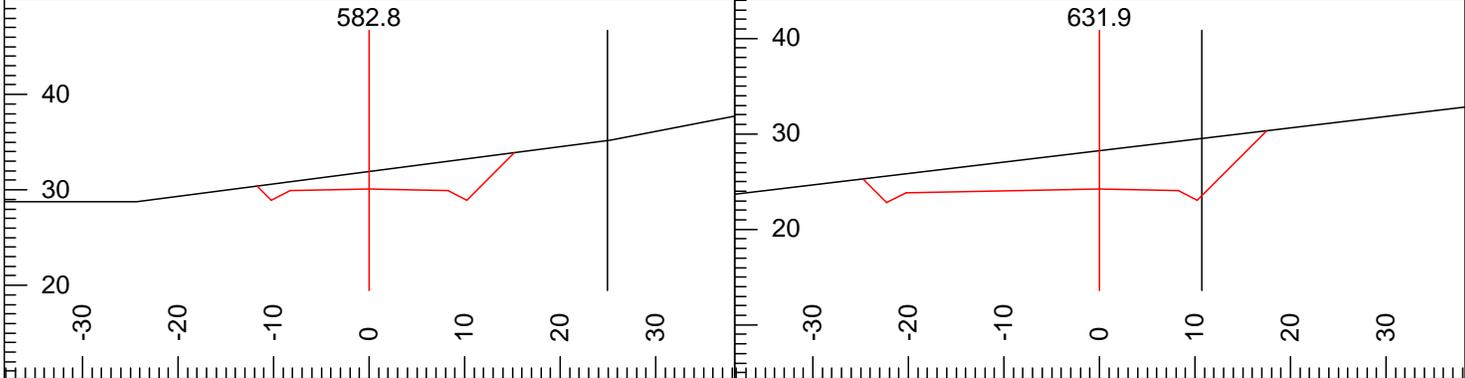
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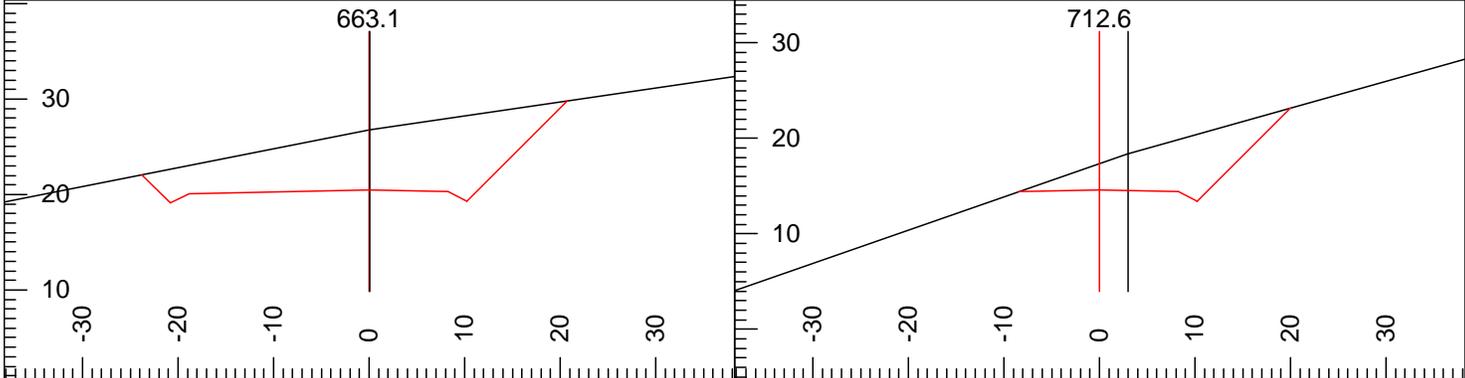
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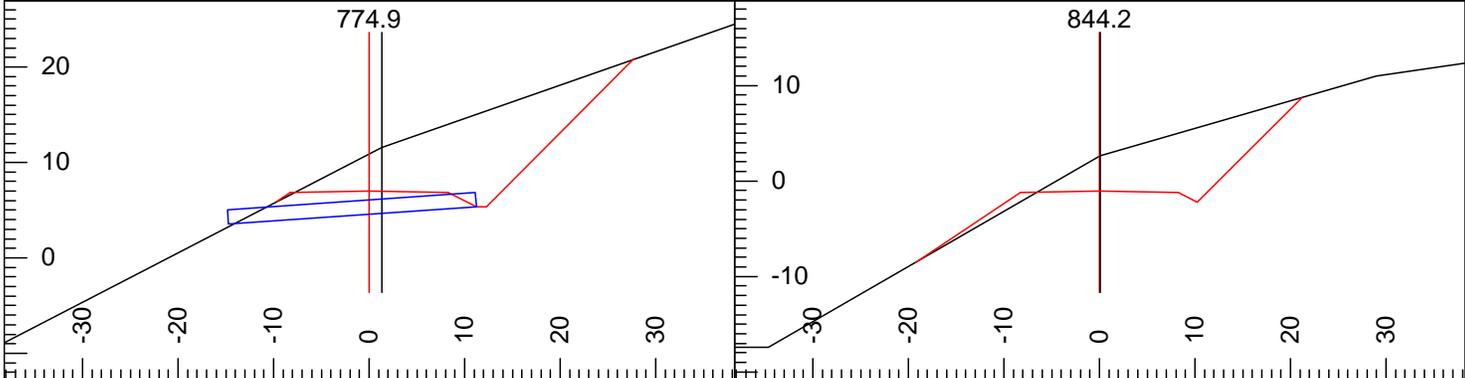
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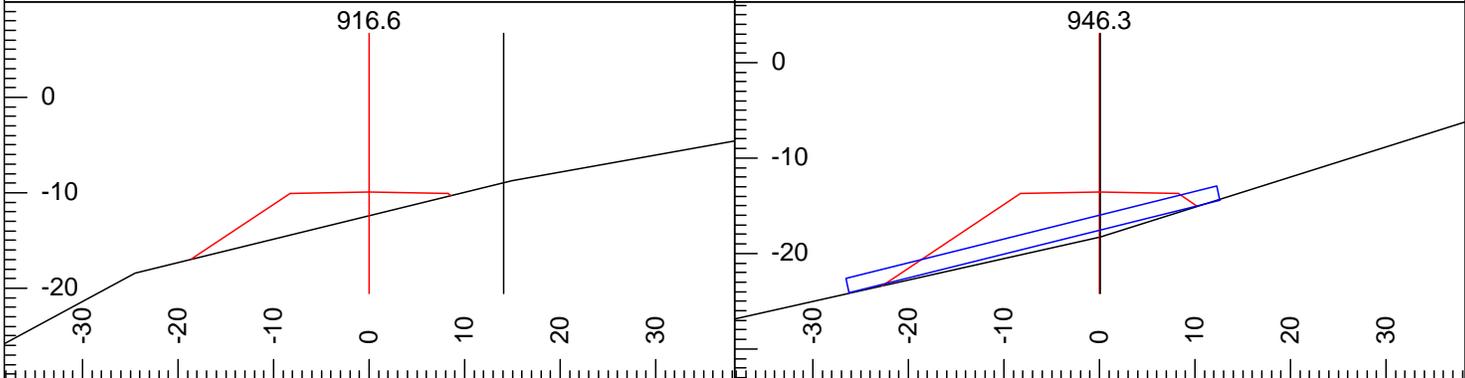
P-Stn: 583.3 V.Offset: -5.1 Cut Dp: 1.8 L-Stn: 582.8 H. Offset: -25.3 Index: 109	P-Stn: 635.1 V.Offset: -5.2 Cut Dp: 4.0 L-Stn: 631.9 H. Offset: -10.5 Index: 110
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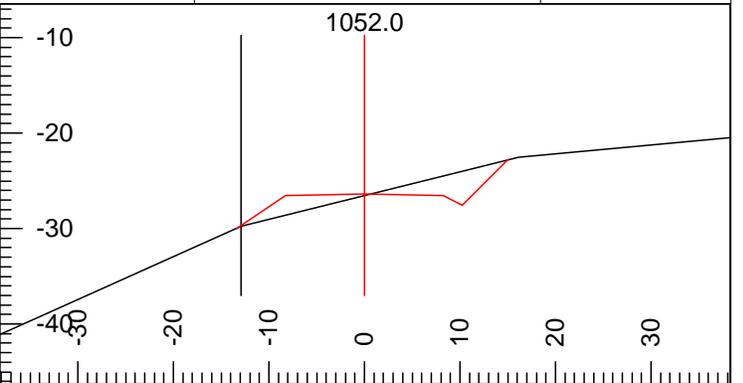
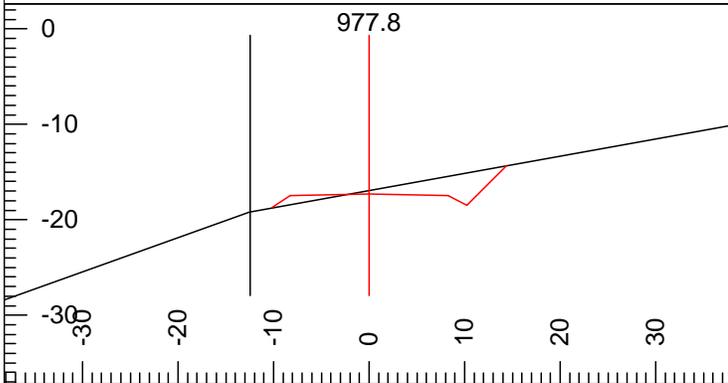
P-Stn: 662.5 V.Offset: -6.3 Cut Dp: 6.3 L-Stn: 663.1 H. Offset: -0.1 Index: 111	P-Stn: 711.5 V.Offset: -3.8 Cut Dp: 2.8 L-Stn: 712.6 H. Offset: -3.0 Index: 112
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P-Stn: 773.3 V.Offset: -4.6 Cut Dp: 3.9 L-Stn: 774.9 H. Offset: -1.3 Index: 113	P-Stn: 842.4 V.Offset: -3.7 Cut Dp: 3.6 L-Stn: 844.2 H. Offset: -0.1 Index: 114
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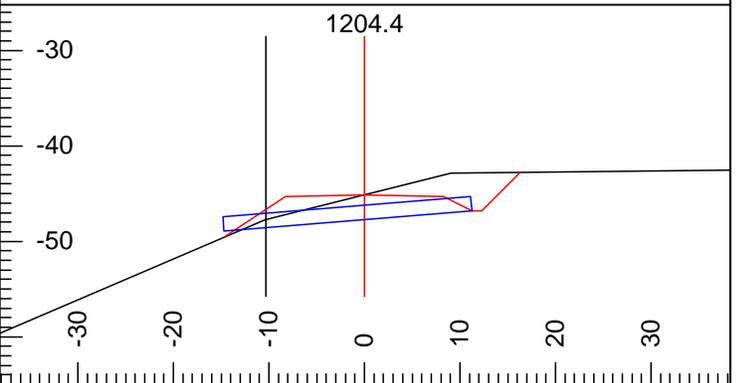
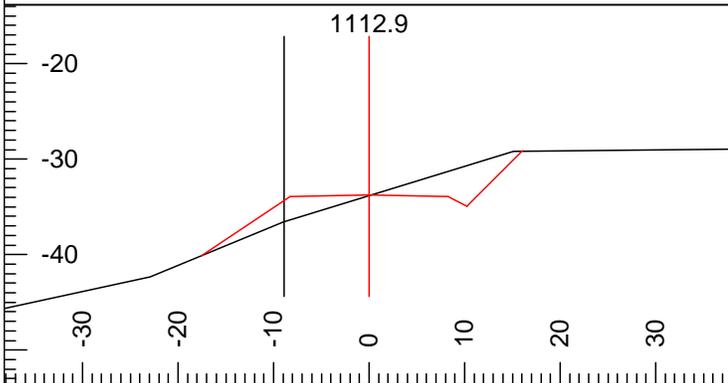


P-Stn: 918.1 V.Offset: -1.2 Cut Dp: -2.5 L-Stn: 916.6 H. Offset: -14.7 Index: 115	P-Stn: 948.8 V.Offset: 4.7 Cut Dp: -4.7 L-Stn: 946.3 H. Offset: -0.1 Index: 116
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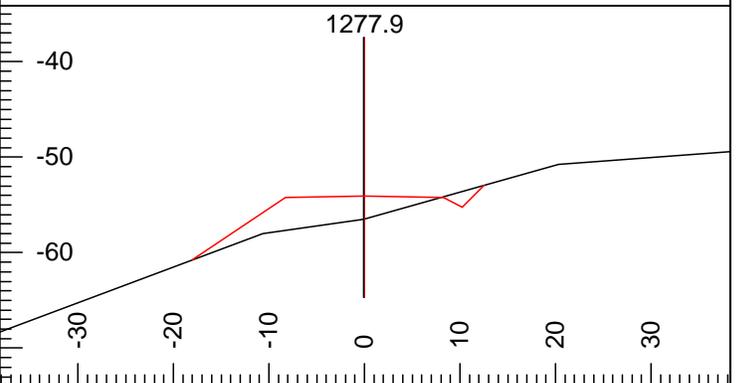
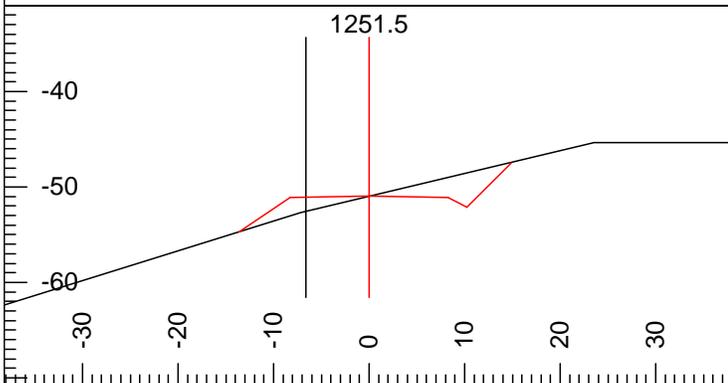
P-Stn: 978.8 V.Offset: 1.9 Cut Dp: 0.4
L-Stn: 977.8 H. Offset: 12.5 Index: 117

P-Stn: 1054.6 V.Offset: 3.4 Cut Dp: -0.2
L-Stn: 1052.0 H. Offset: 12.9 Index: 118



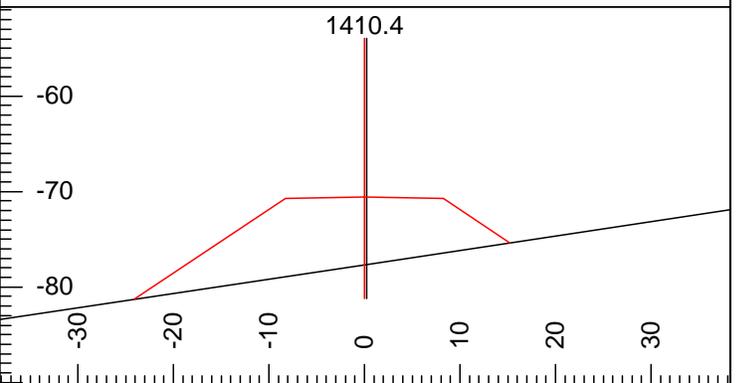
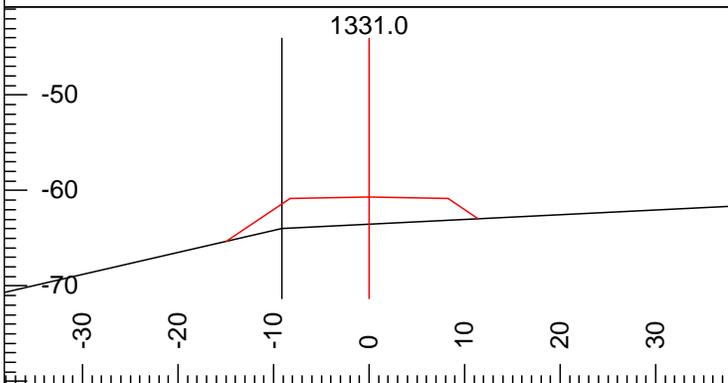
P-Stn: 1116.3 V.Offset: 2.8 Cut Dp: 0.0
L-Stn: 1112.9 H. Offset: 8.9 Index: 119

P-Stn: 1209.3 V.Offset: 2.6 Cut Dp: 0.0
L-Stn: 1204.4 H. Offset: 10.3 Index: 120



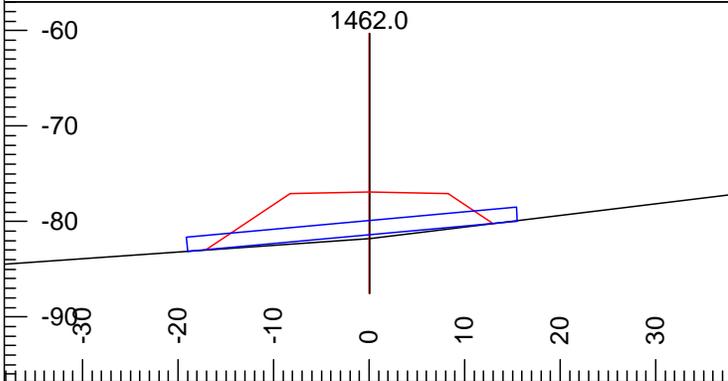
P-Stn: 1258.9 V.Offset: 1.7 Cut Dp: 0.0
L-Stn: 1251.5 H. Offset: 6.8 Index: 121

P-Stn: 1286.1 V.Offset: 2.4 Cut Dp: -2.4
L-Stn: 1277.9 H. Offset: 0.1 Index: 122

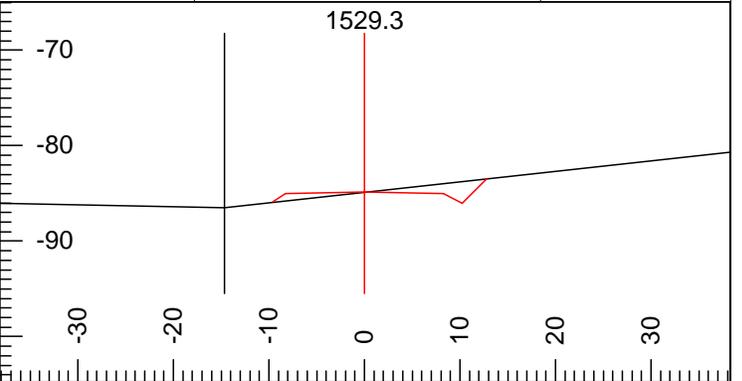


P-Stn: 1339.7 V.Offset: 3.3 Cut Dp: -2.9
L-Stn: 1331.0 H. Offset: 9.1 Index: 123

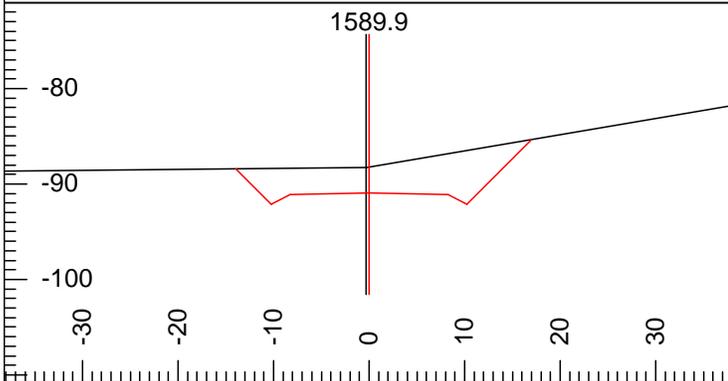
P-Stn: 1420.0 V.Offset: 7.1 Cut Dp: -7.1
L-Stn: 1410.4 H. Offset: -0.3 Index: 124



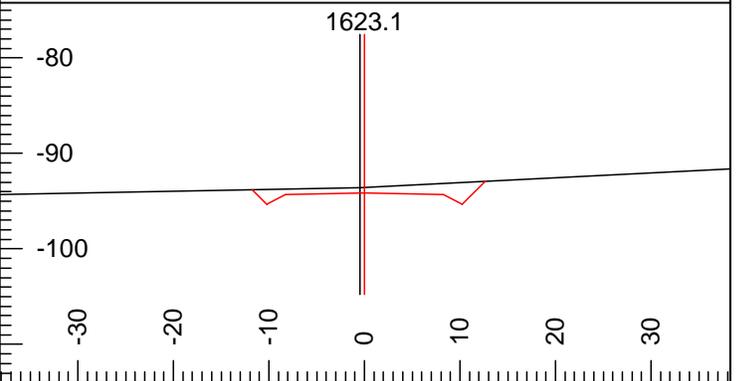
P-Stn: 1471.6 V.Offset: 4.9 Cut Dp: -4.9
L-Stn: 1462.0 H. Offset: 0.0 Index: 125



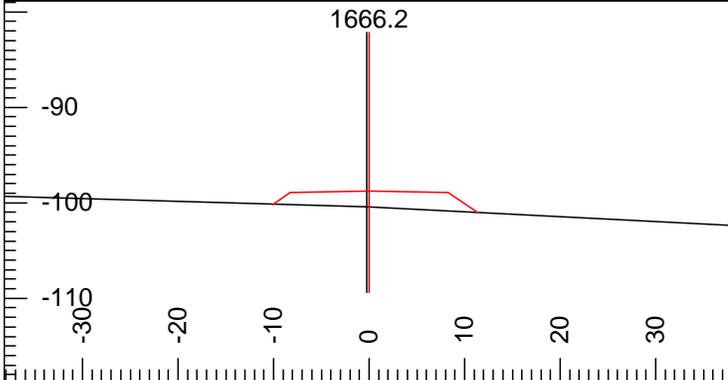
P-Stn: 1538.7 V.Offset: 1.6 Cut Dp: 0.0
L-Stn: 1529.3 H. Offset: 14.6 Index: 126



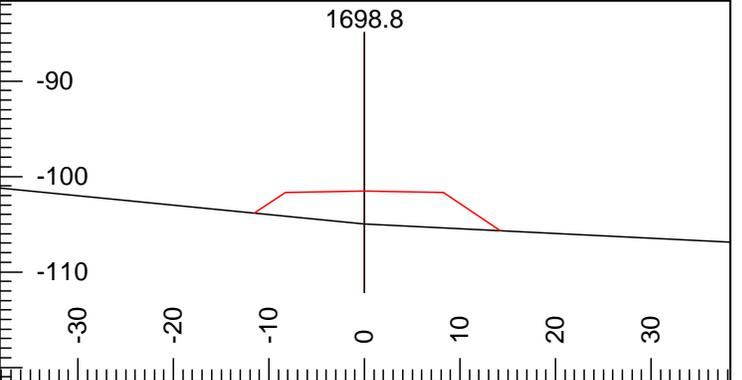
P-Stn: 1598.9 V.Offset: -2.7 Cut Dp: 2.7
L-Stn: 1589.9 H. Offset: 0.3 Index: 127



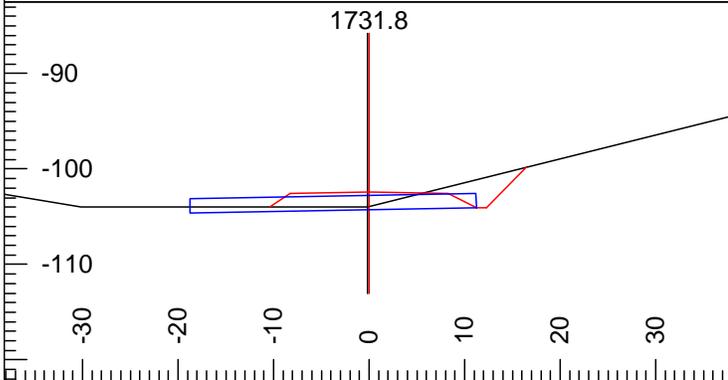
P-Stn: 1632.0 V.Offset: -0.6 Cut Dp: 0.6
L-Stn: 1623.1 H. Offset: 0.5 Index: 128



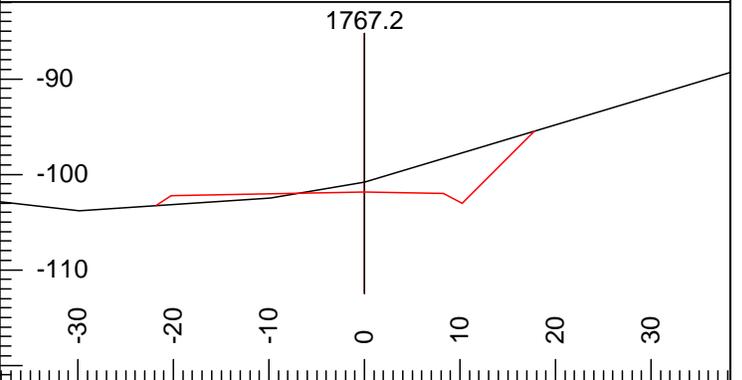
P-Stn: 1674.9 V.Offset: 1.7 Cut Dp: -1.7
L-Stn: 1666.2 H. Offset: 0.3 Index: 129



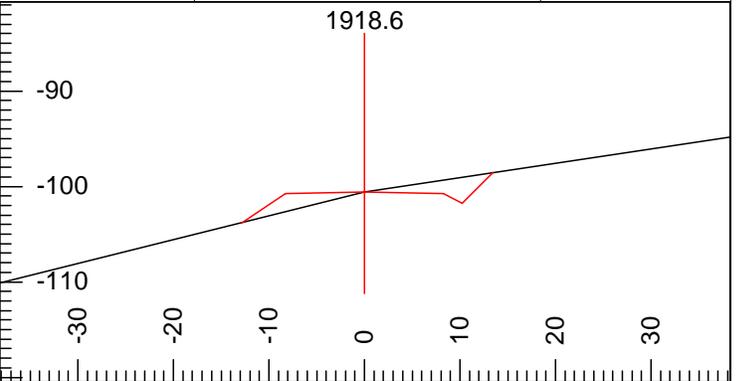
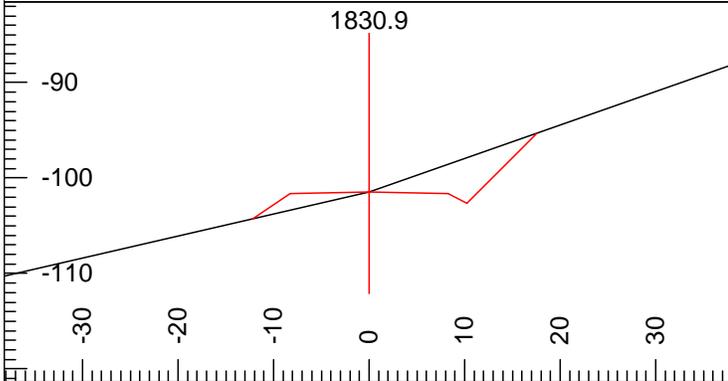
P-Stn: 1707.5 V.Offset: 3.5 Cut Dp: -3.5
L-Stn: 1698.8 H. Offset: 0.0 Index: 130



P-Stn: 1740.4 V.Offset: 1.6 Cut Dp: -1.6
L-Stn: 1731.8 H. Offset: 0.2 Index: 131

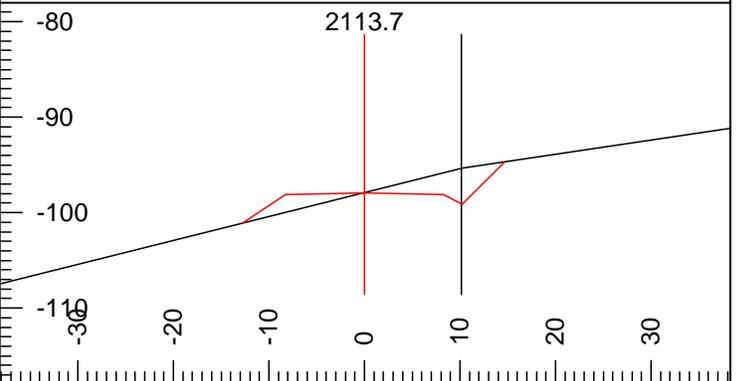
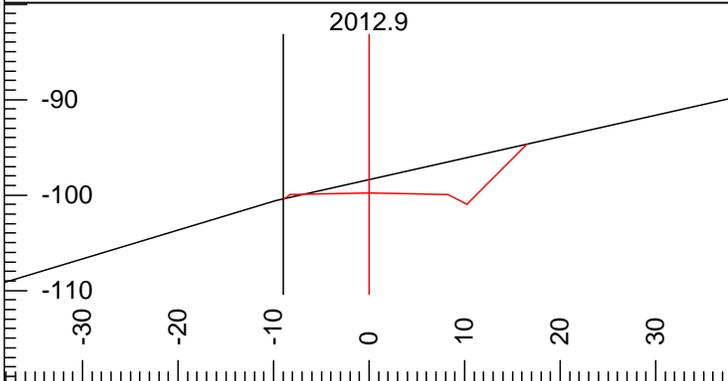


P-Stn: 1775.8 V.Offset: -1.0 Cut Dp: 1.0
L-Stn: 1767.2 H. Offset: 0.0 Index: 132



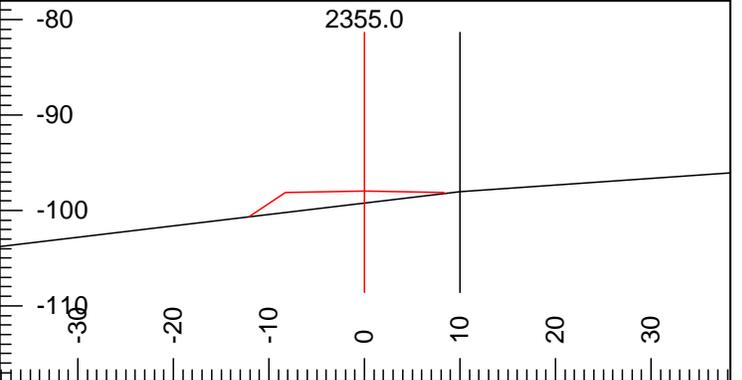
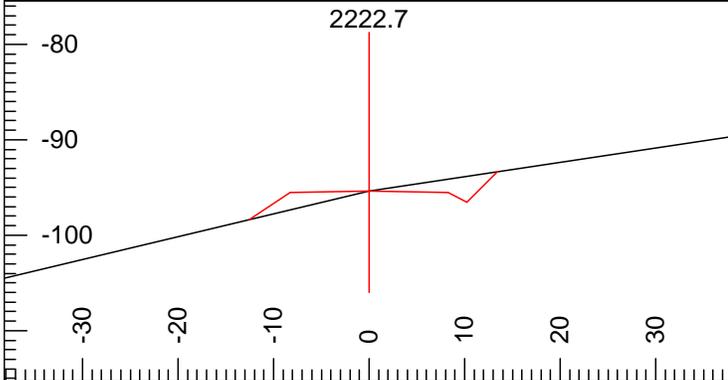
P-Stn: 1839.4 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 1830.9 H. Offset: 0.0 Index: 133

P-Stn: 1927.2 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 1918.6 H. Offset: 0.0 Index: 134



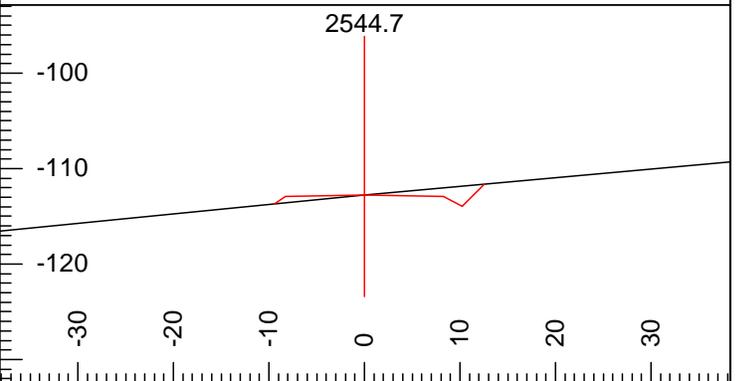
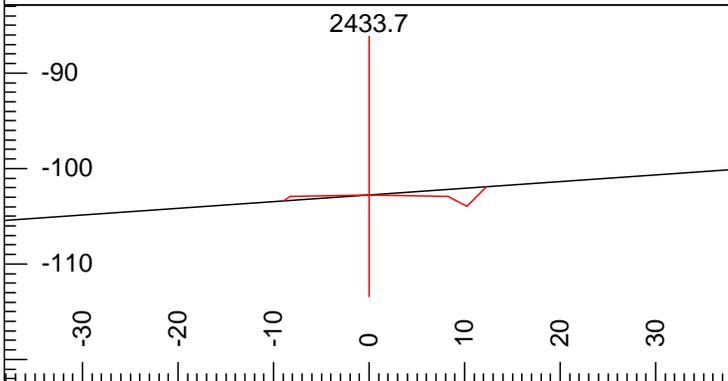
P-Stn: 2024.8 V.Offset: 0.8 Cut Dp: 1.4
 L-Stn: 2012.9 H. Offset: 9.6 Index: 135

P-Stn: 2129.2 V.Offset: -2.6 Cut Dp: 0.0
 L-Stn: 2113.7 H. Offset: -10.2 Index: 136



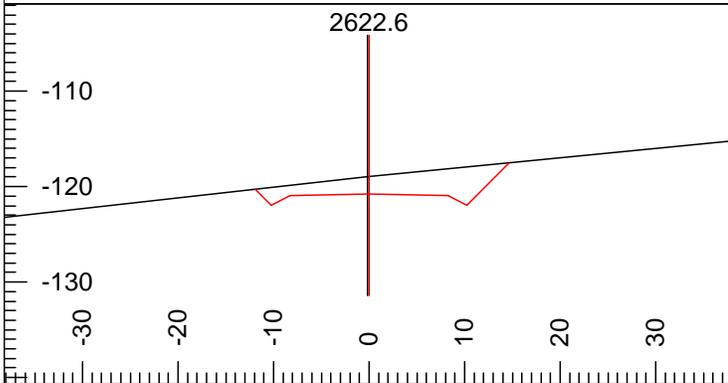
P-Stn: 2239.3 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 2222.7 H. Offset: 0.0 Index: 137

P-Stn: 2372.3 V.Offset: 0.1 Cut Dp: -1.3
 L-Stn: 2355.0 H. Offset: -10.0 Index: 138

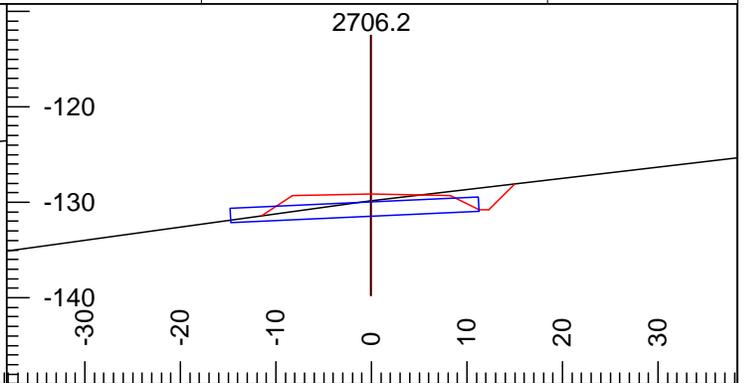


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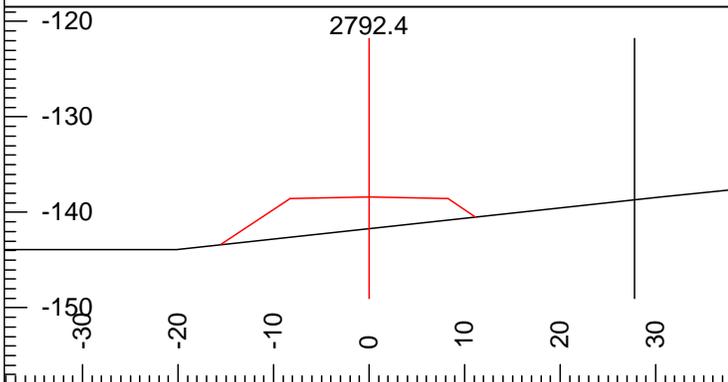
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 L-Stn: 2544.7 H. Offset: 0.0 Index: 140



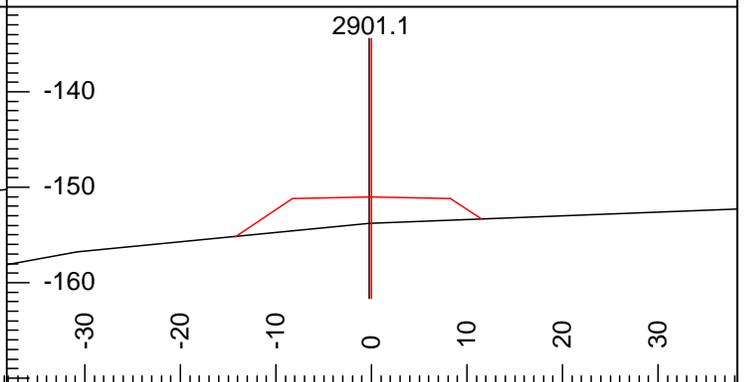
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 L-Stn: 2622.6 H. Offset: 0.2 Index: 141



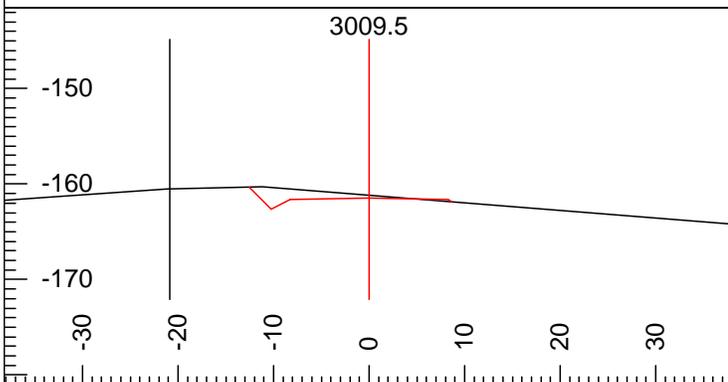
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 L-Stn: 2706.2 H. Offset: 0.1 Index: 142



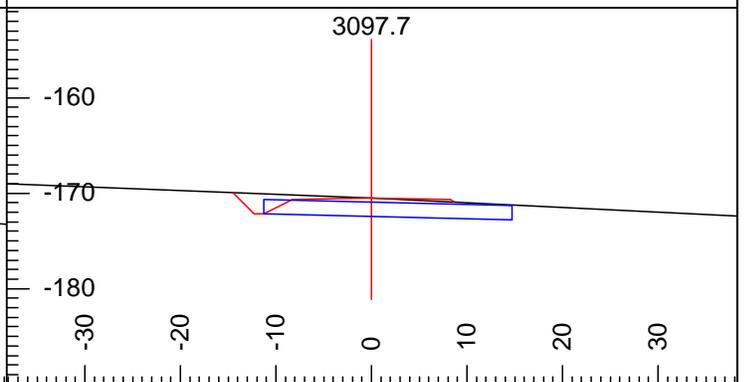
P-Stn: 2819.0 V.Offset: 0.0 Cut Dp: -3.3
 L-Stn: 2792.4 H. Offset: -29.9 Index: 143



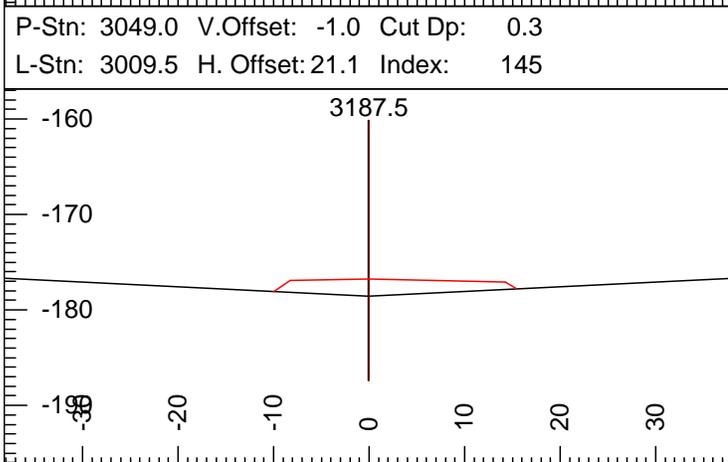
P-Stn: 2937.4 V.Offset: 2.8 Cut Dp: -2.8
 L-Stn: 2901.1 H. Offset: 0.2 Index: 144



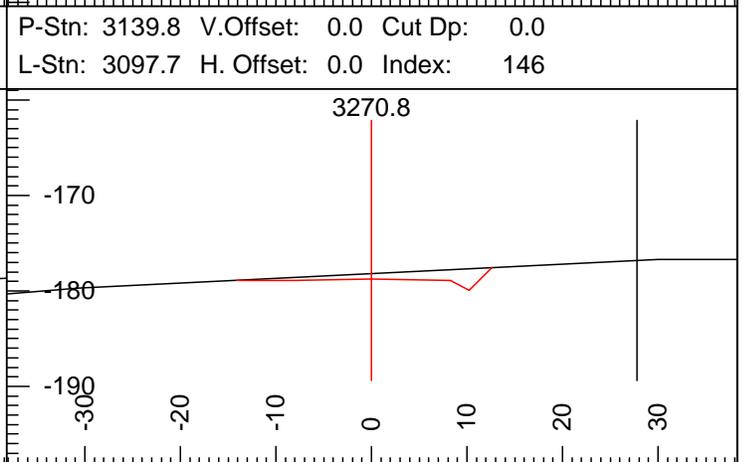
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 L-Stn: 3009.5 H. Offset: 21.1 Index: 145



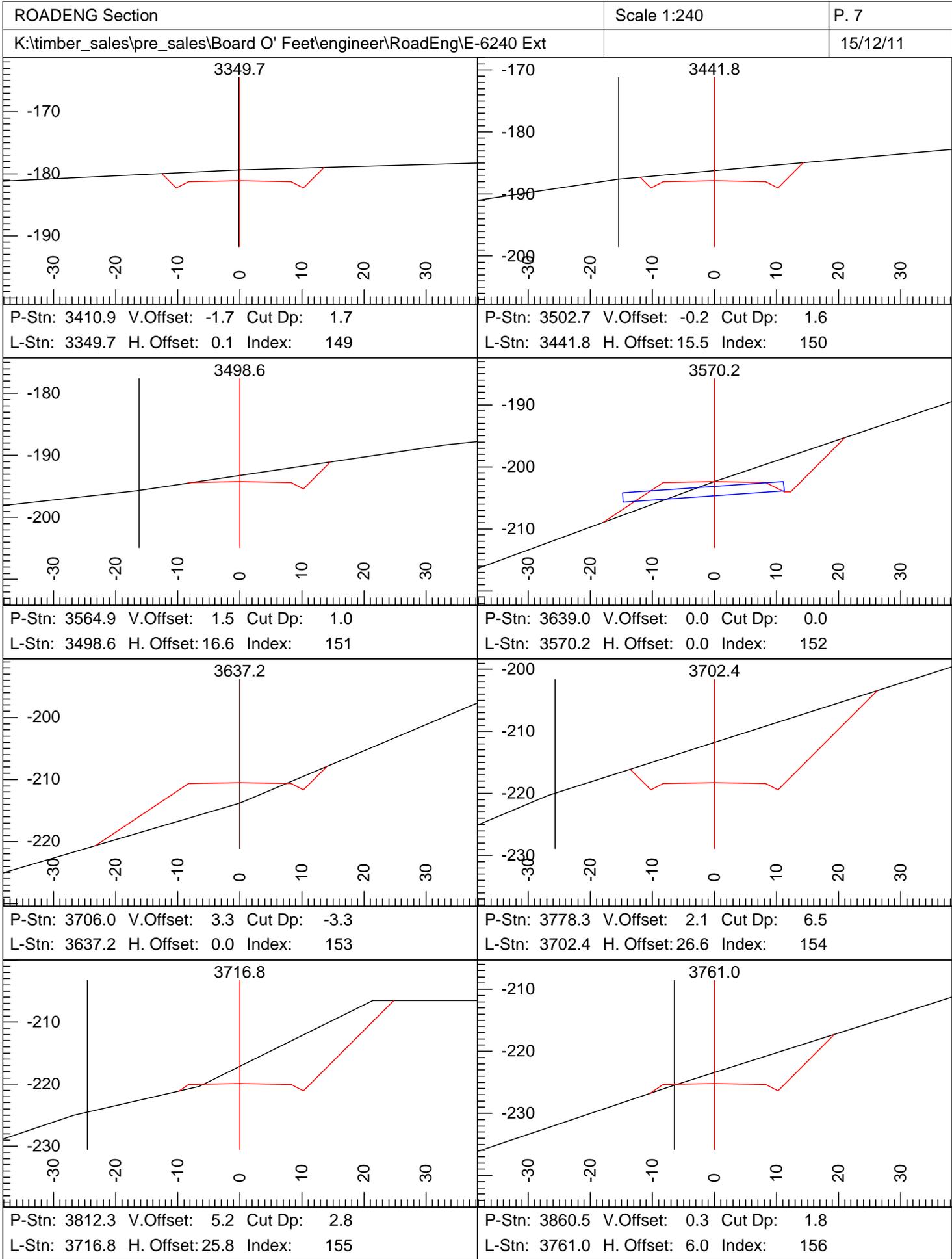
P-Stn: 3139.8 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 3097.7 H. Offset: 0.0 Index: 146

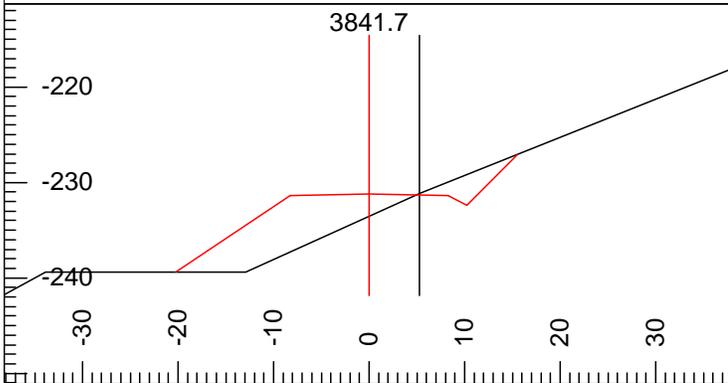


P-Stn: 3229.7 V.Offset: 1.8 Cut Dp: -1.8
 L-Stn: 3187.5 H. Offset: 0.1 Index: 147

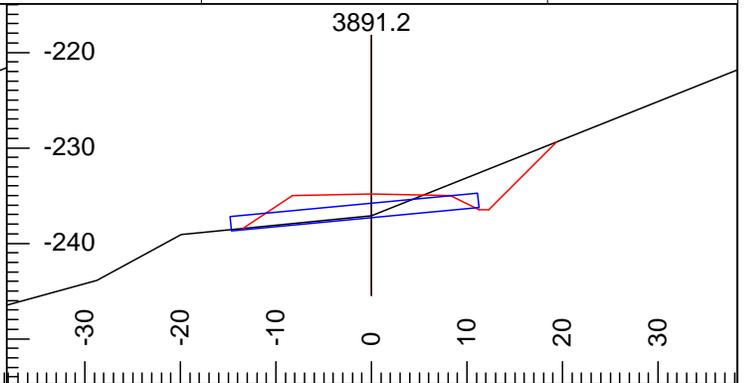


P-Stn: 3322.6 V.Offset: -2.0 Cut Dp: 0.5
 L-Stn: 3270.8 H. Offset: -29.6 Index: 148

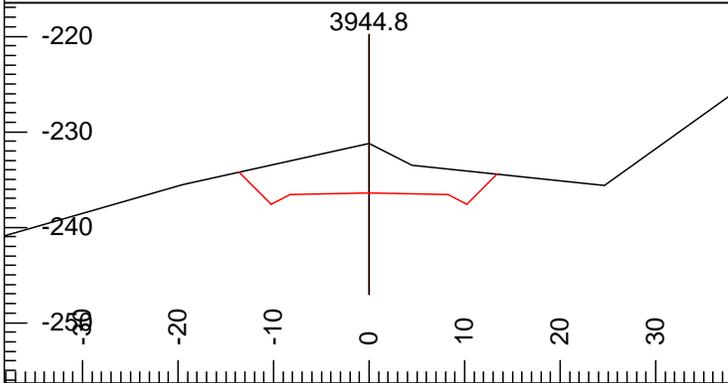




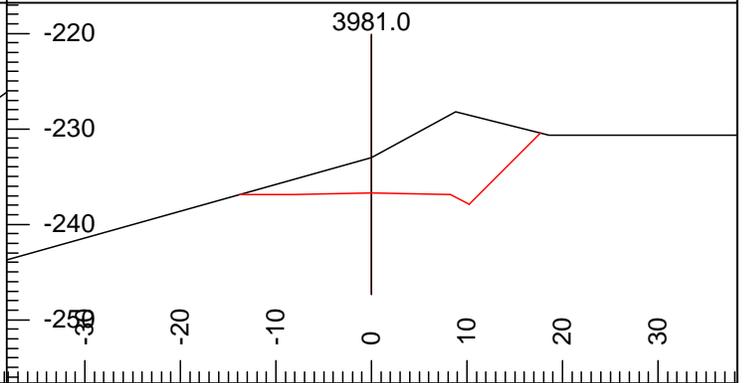
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 L-Stn: 3841.7 H. Offset: -5.3 Index: 157



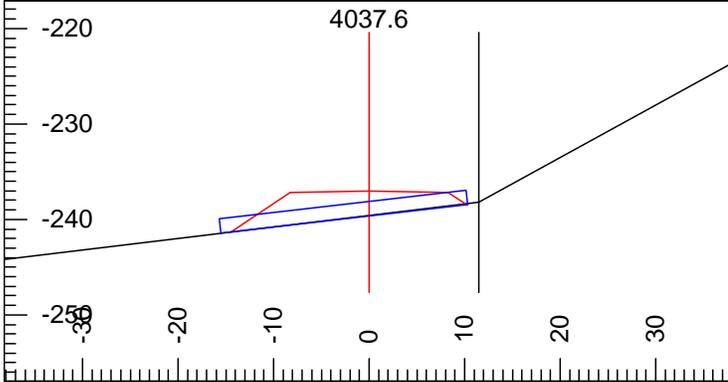
P-Stn: 3990.7 V.Offset: 2.3 Cut Dp: -2.3
 L-Stn: 3891.2 H. Offset: 0.0 Index: 158



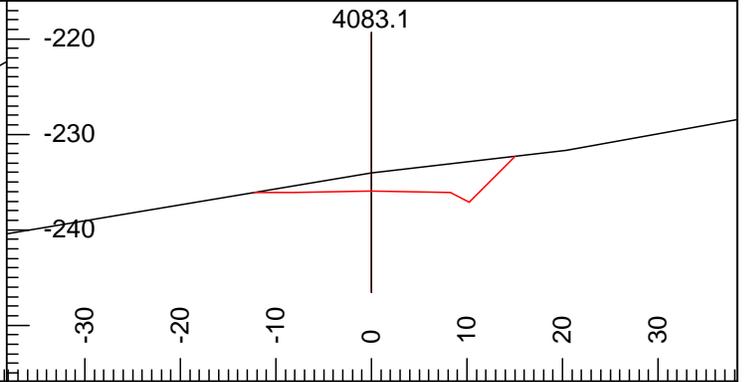
P-Stn: 4044.2 V.Offset: -5.2 Cut Dp: 5.2
 L-Stn: 3944.8 H. Offset: 0.0 Index: 159



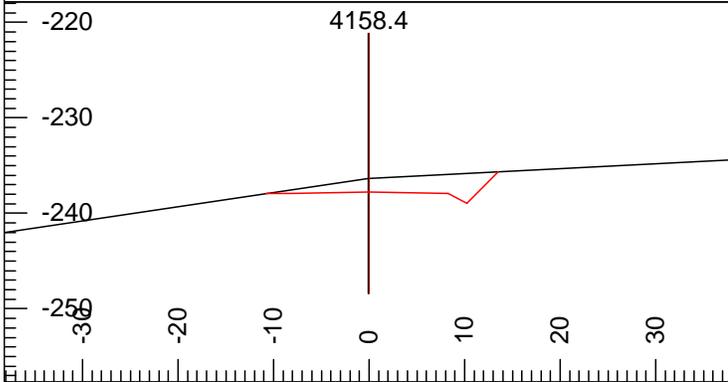
P-Stn: 4080.5 V.Offset: -3.7 Cut Dp: 3.7
 L-Stn: 3981.0 H. Offset: 0.0 Index: 160



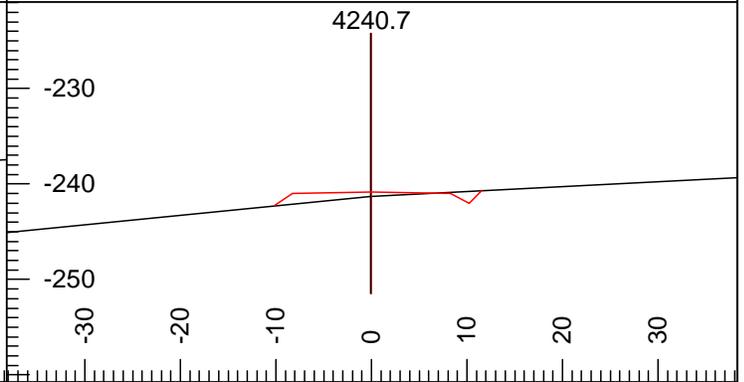
P-Stn: 4138.0 V.Offset: 1.2 Cut Dp: -2.6
 L-Stn: 4037.6 H. Offset: -11.5 Index: 161



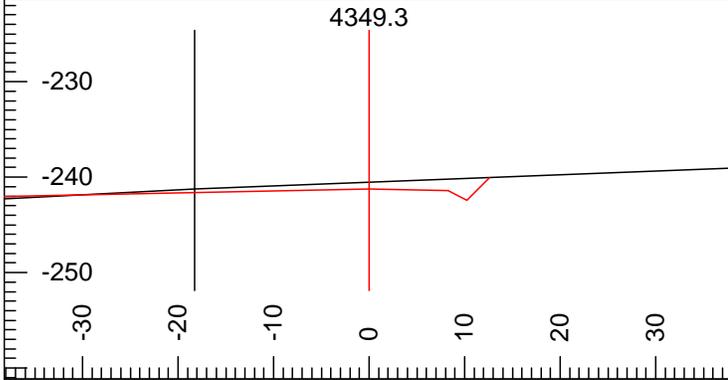
P-Stn: 4184.0 V.Offset: -1.9 Cut Dp: 1.9
 L-Stn: 4083.1 H. Offset: 0.0 Index: 162



P-Stn: 4259.2 V.Offset: -1.4 Cut Dp: 1.4
 L-Stn: 4158.4 H. Offset: 0.1 Index: 163

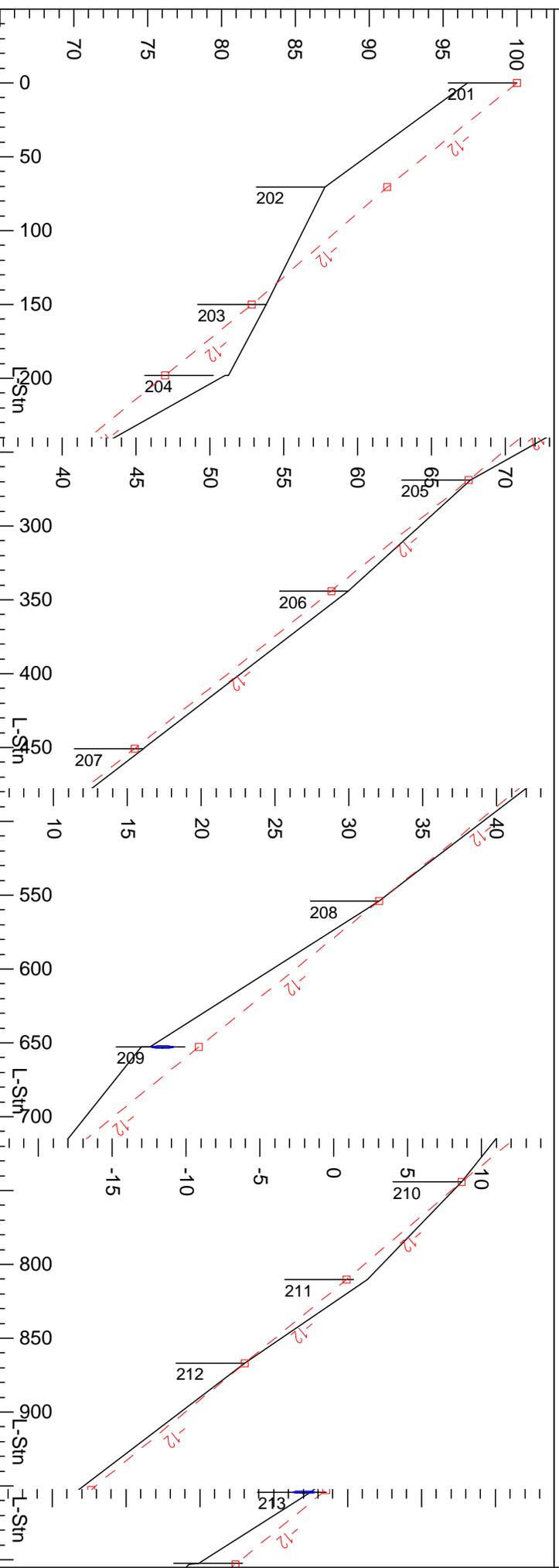
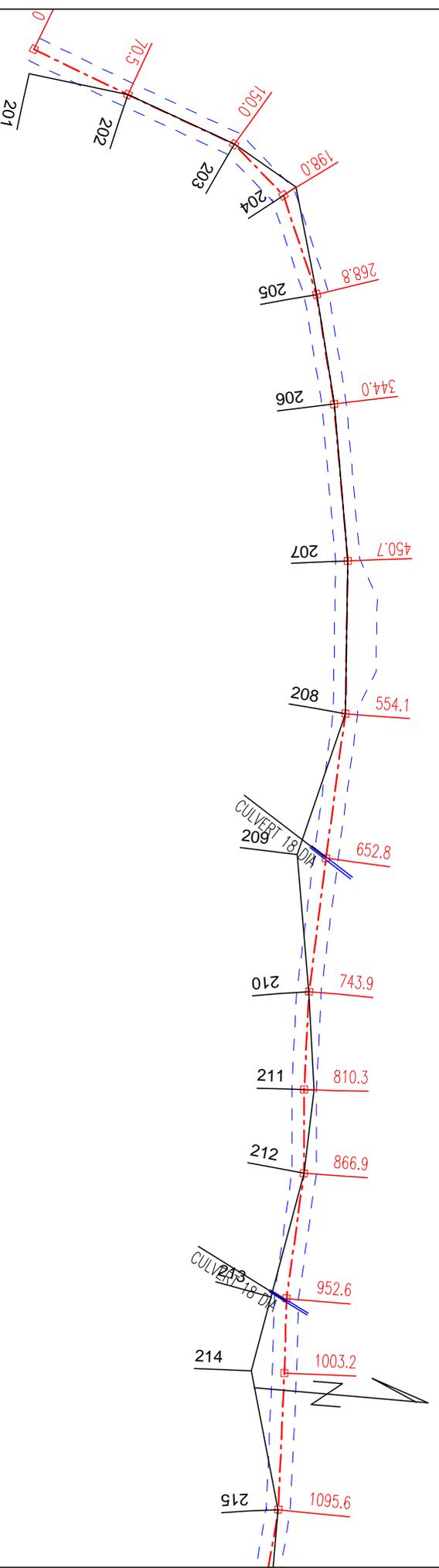


P-Stn: 4341.5 V.Offset: 0.4 Cut Dp: -0.4
 L-Stn: 4240.7 H. Offset: 0.1 Index: 164



P-Stn: 4448.6 V.Offset: 0.0 Cut Dp: 0.7

L-Stn: 4349.3 H. Offset: 18.0 Index: 165



Board O' Feet Timber Sale
E-6240-1
Contract #: 30-91856

Washington State Department of Natural Resources
South Puget Sound Region

Plan Scale 1:1200
Profile Vert Scale 1:120
Profile Horz Scale 1:1200

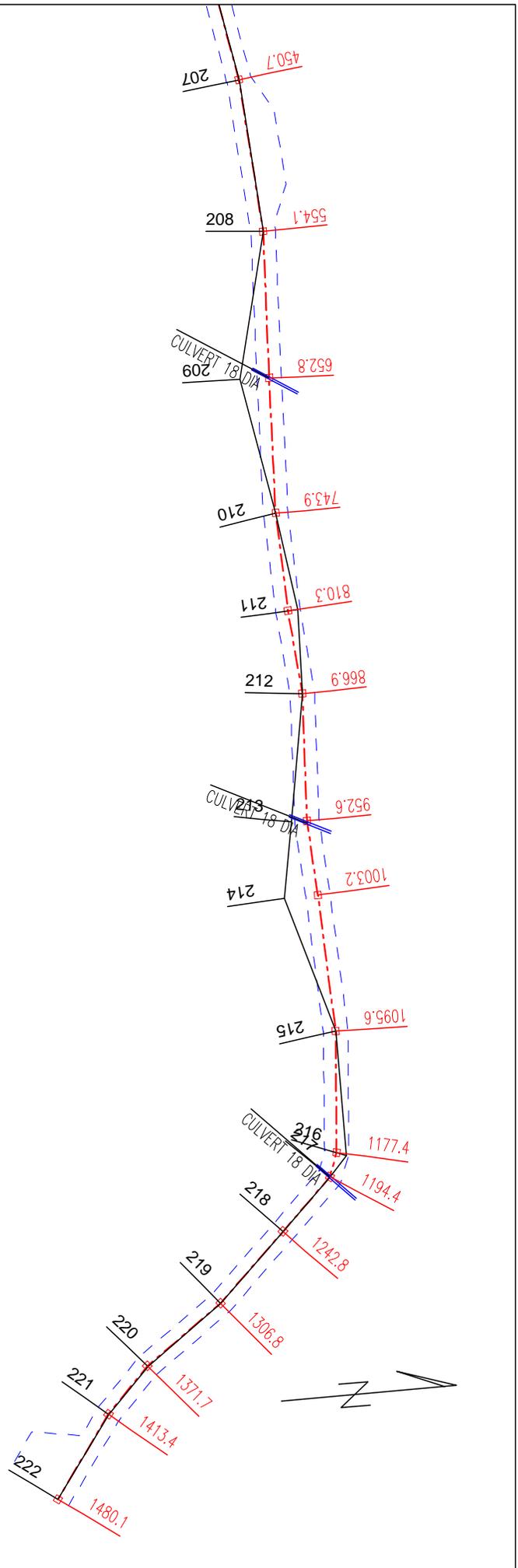
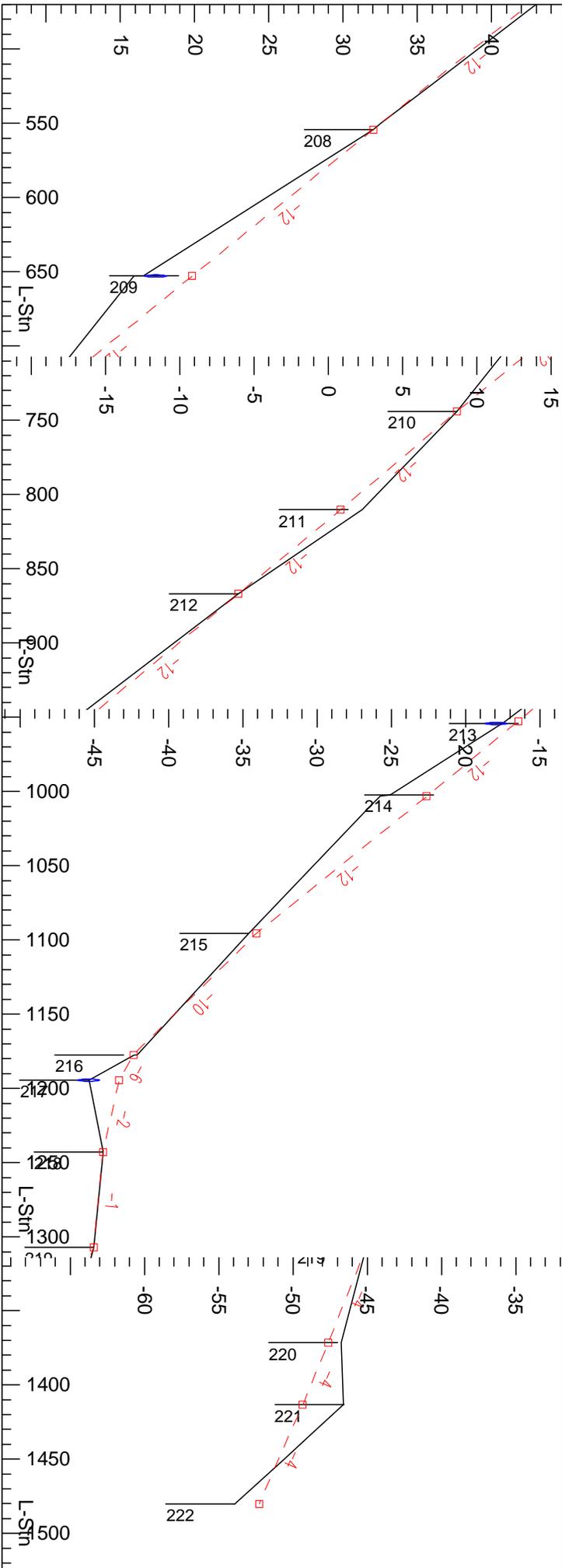
Engineer: J Gardner
15/12/11
Page 1 of 2

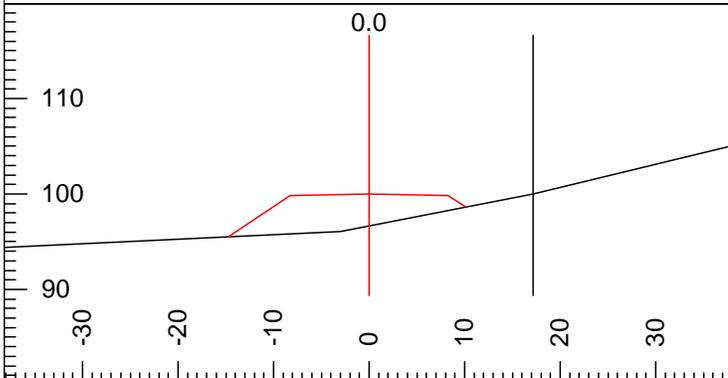
Board O' Feet Timber Sale
 E-6240-1
 Contract #: 30-91856

Washington State Department of Natural Resources
 South Puget Sound Region

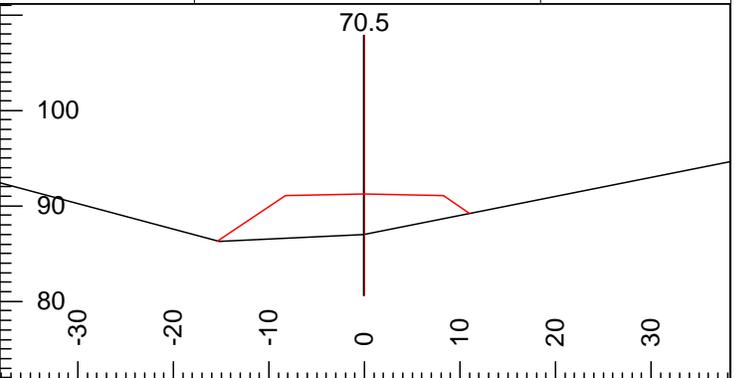
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 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

Engineer: J Gardner
 15/12/11
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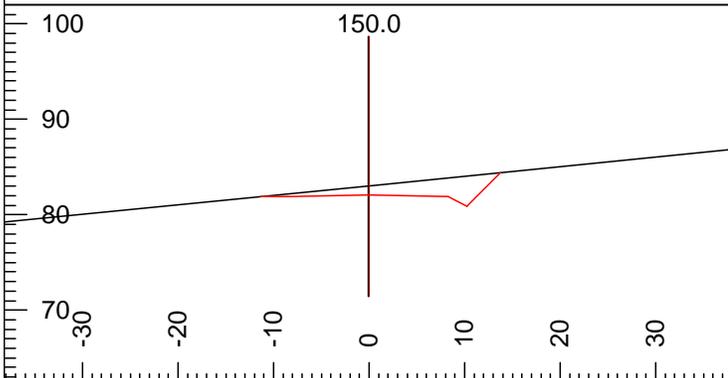




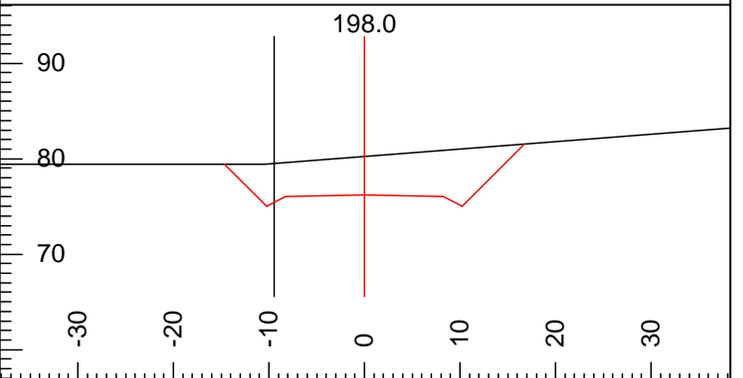
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 L-Stn: 0.0 H. Offset: -16.7 Index: 201



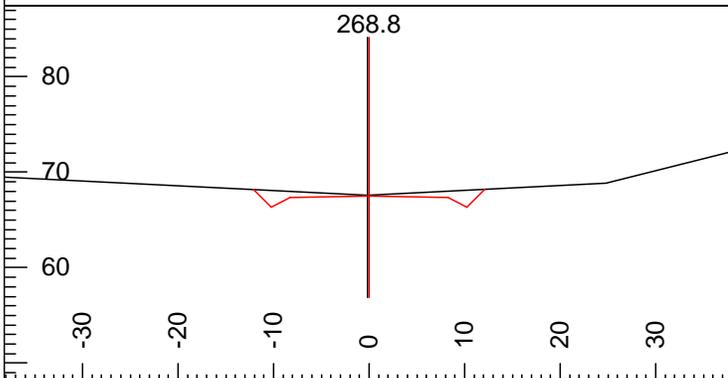
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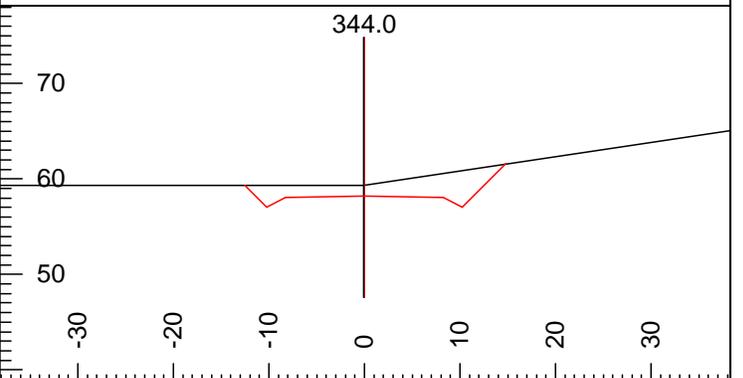
P-Stn: 148.0 V.Offset: -1.0 Cut Dp: 1.0
 L-Stn: 150.0 H. Offset: 0.1 Index: 203



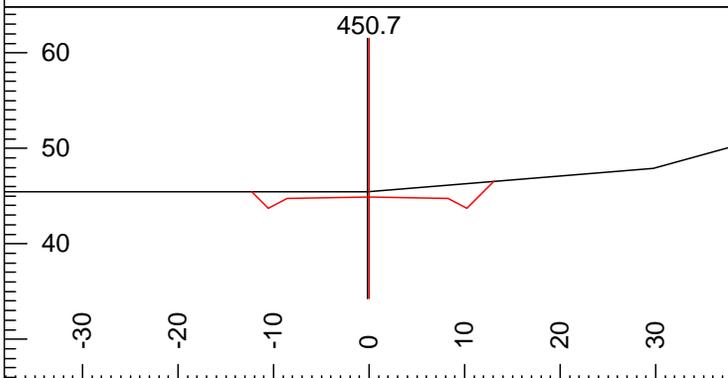
P-Stn: 199.0 V.Offset: -3.3 Cut Dp: 4.1
 L-Stn: 198.0 H. Offset: 10.1 Index: 204



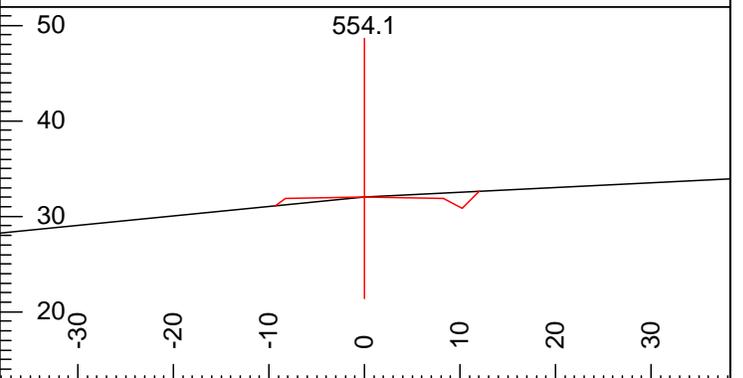
P-Stn: 272.9 V.Offset: -0.1 Cut Dp: 0.1
 L-Stn: 268.8 H. Offset: 0.2 Index: 205



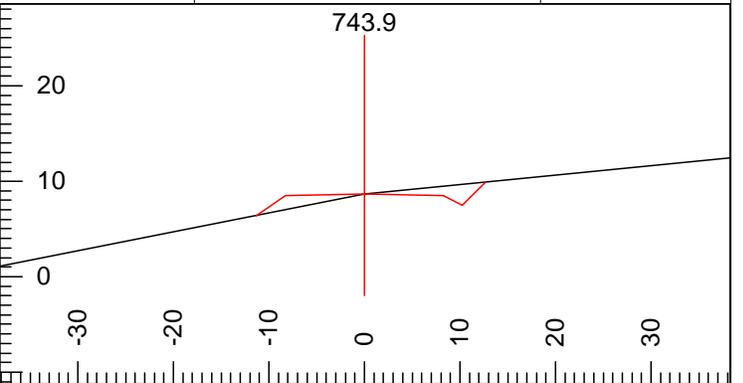
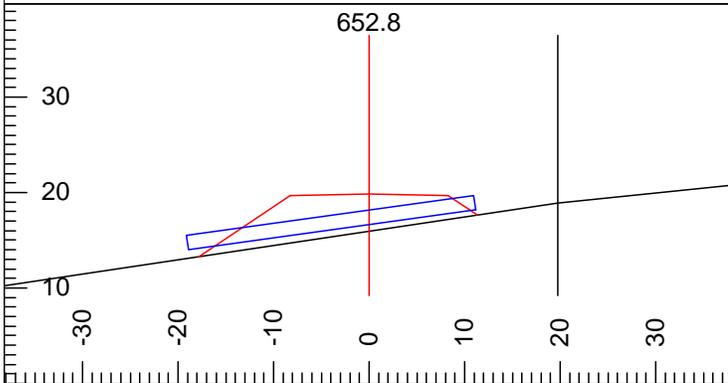
P-Stn: 348.1 V.Offset: -1.1 Cut Dp: 1.1
 L-Stn: 344.0 H. Offset: 0.1 Index: 206



P-Stn: 454.8 V.Offset: -0.6 Cut Dp: 0.6
 L-Stn: 450.7 H. Offset: 0.1 Index: 207

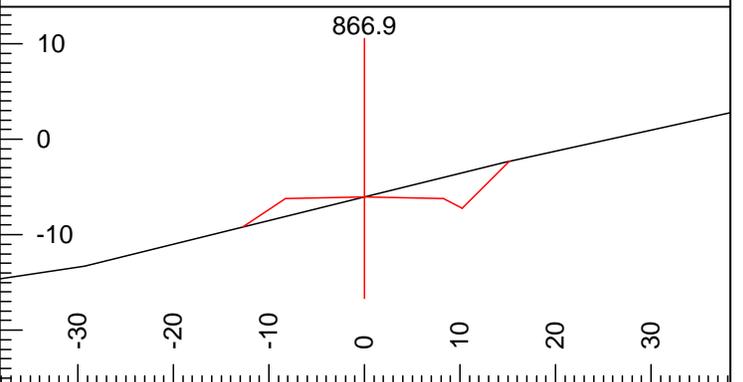
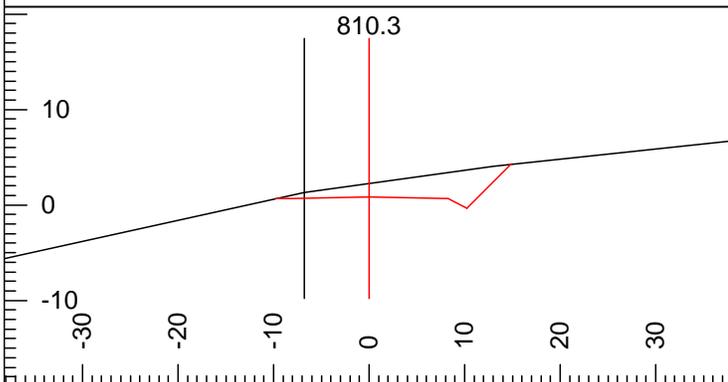


P-Stn: 558.2 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 554.1 H. Offset: 0.0 Index: 208



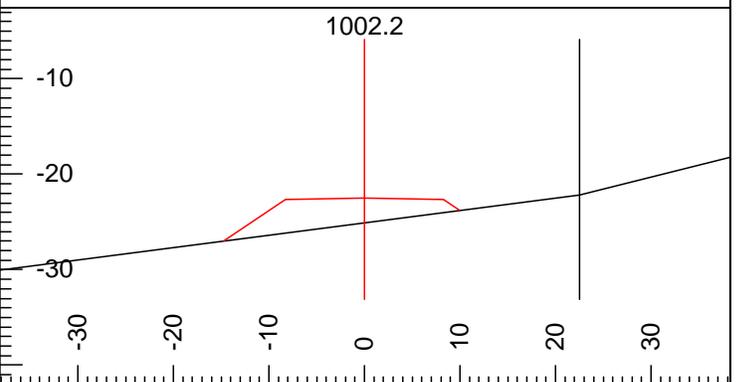
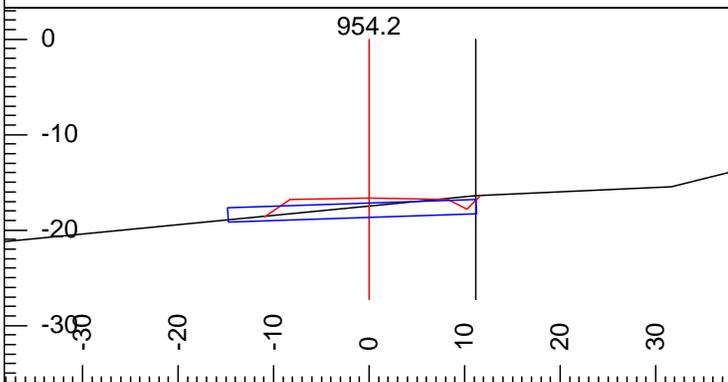
P-Stn: 659.1 V.Offset: 0.9 Cut Dp: -3.9
 L-Stn: 652.8 H. Offset: -19.8 Index: 209

P-Stn: 752.3 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 743.9 H. Offset: 0.0 Index: 210



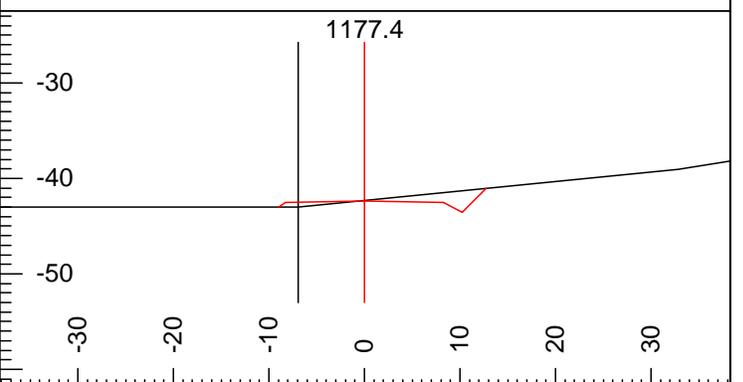
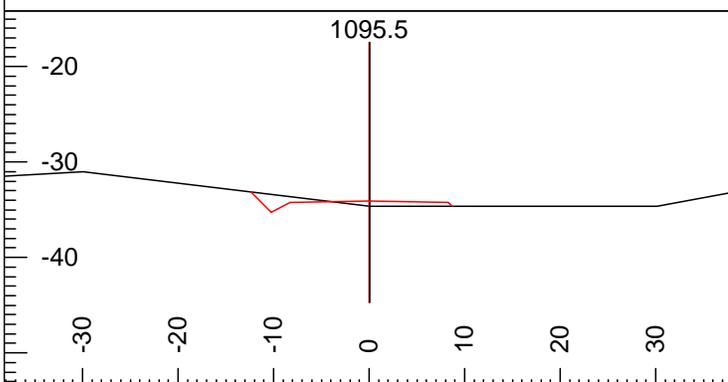
P-Stn: 818.9 V.Offset: -0.5 Cut Dp: 1.4
 L-Stn: 810.3 H. Offset: 6.8 Index: 211

P-Stn: 875.7 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 866.9 H. Offset: 0.0 Index: 212



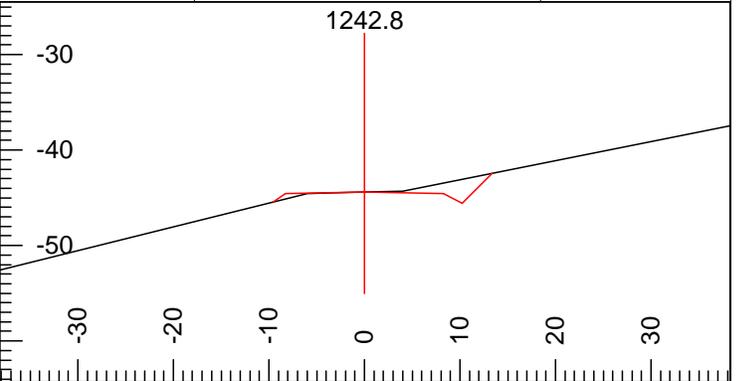
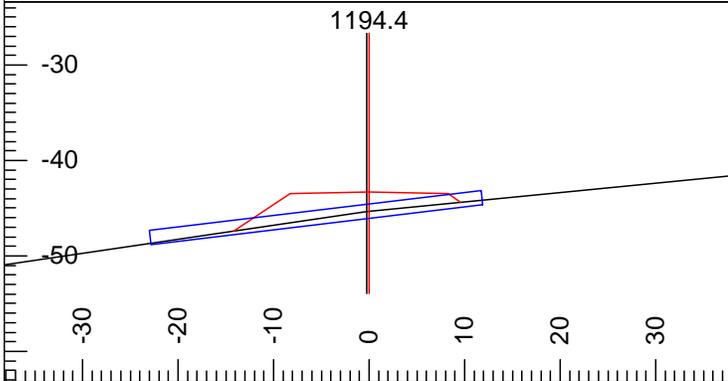
P-Stn: 962.3 V.Offset: -0.2 Cut Dp: -0.9
 L-Stn: 954.2 H. Offset: -10.8 Index: 213

P-Stn: 1014.1 V.Offset: -0.3 Cut Dp: -2.6
 L-Stn: 1002.2 H. Offset: -22.5 Index: 214



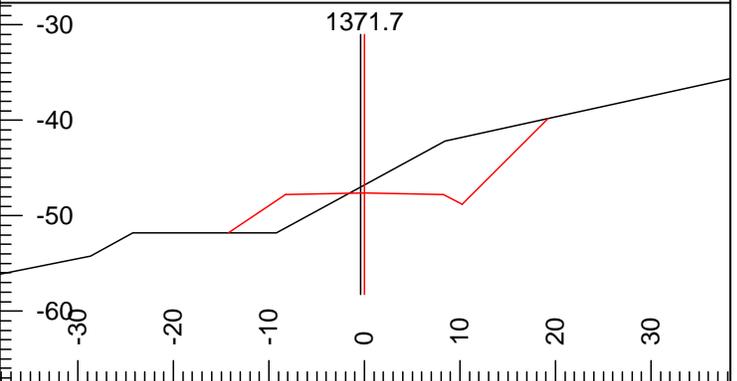
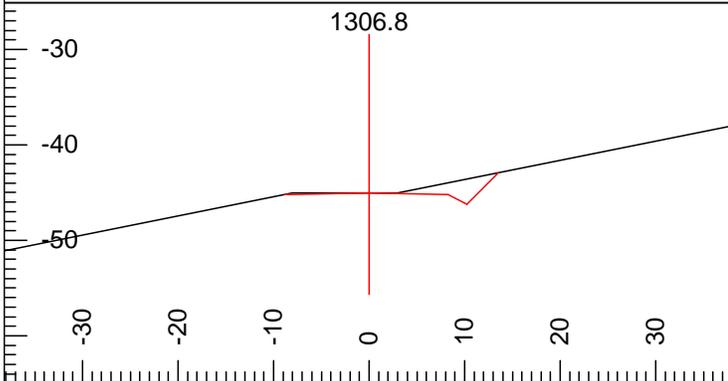
P-Stn: 1109.9 V.Offset: 0.5 Cut Dp: -0.5
 L-Stn: 1095.5 H. Offset: 0.0 Index: 215

P-Stn: 1193.9 V.Offset: 0.6 Cut Dp: 0.1
 L-Stn: 1177.4 H. Offset: 7.0 Index: 216



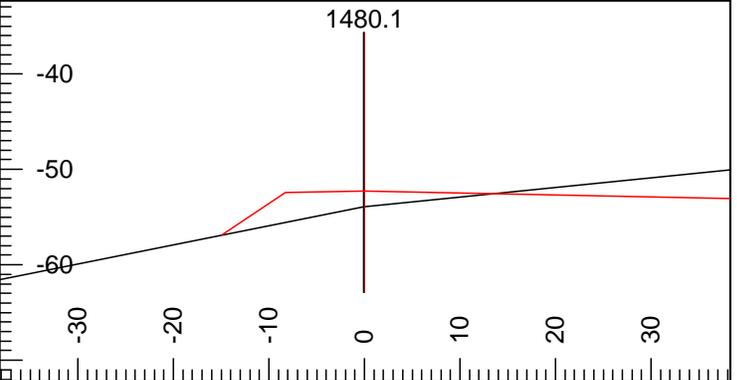
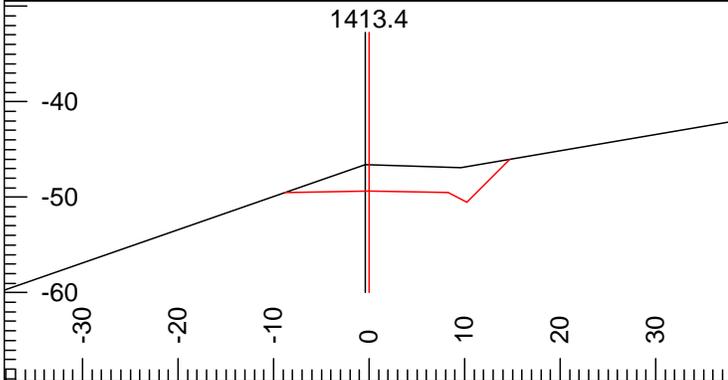
P-Stn: 1212.2 V.Offset: 2.1 Cut Dp: -2.0
L-Stn: 1194.4 H. Offset: 0.2 Index: 217

P-Stn: 1260.7 V.Offset: 0.0 Cut Dp: 0.0
L-Stn: 1242.8 H. Offset: 0.0 Index: 218



P-Stn: 1324.7 V.Offset: 0.0 Cut Dp: 0.0
L-Stn: 1306.8 H. Offset: 0.0 Index: 219

P-Stn: 1389.5 V.Offset: -0.6 Cut Dp: 0.9
L-Stn: 1371.7 H. Offset: 0.4 Index: 220



P-Stn: 1431.1 V.Offset: -2.8 Cut Dp: 2.8
L-Stn: 1413.4 H. Offset: 0.4 Index: 221

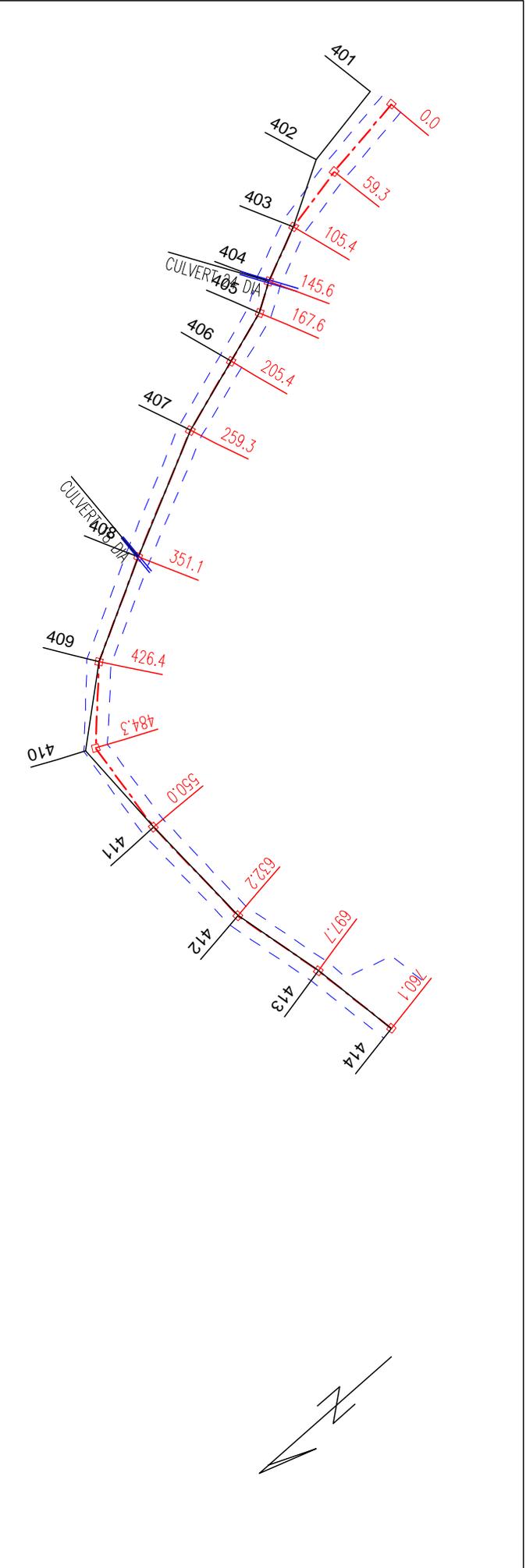
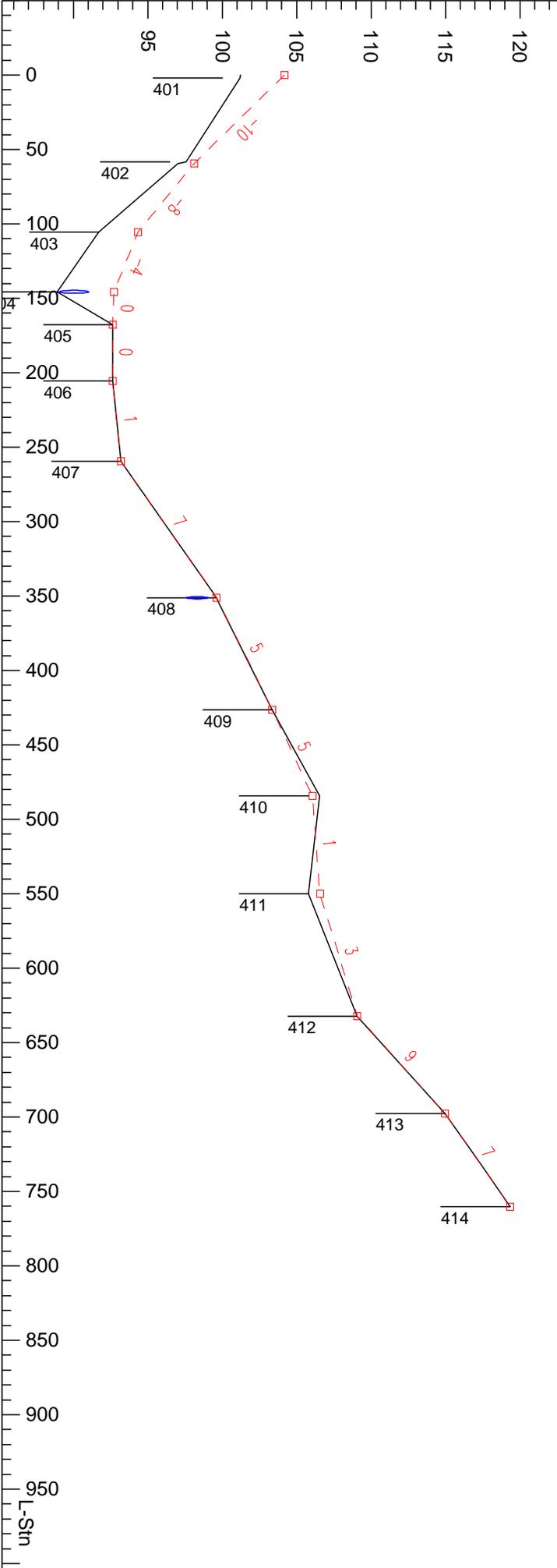
P-Stn: 1497.8 V.Offset: 1.6 Cut Dp: -1.6
L-Stn: 1480.1 H. Offset: 0.1 Index: 222

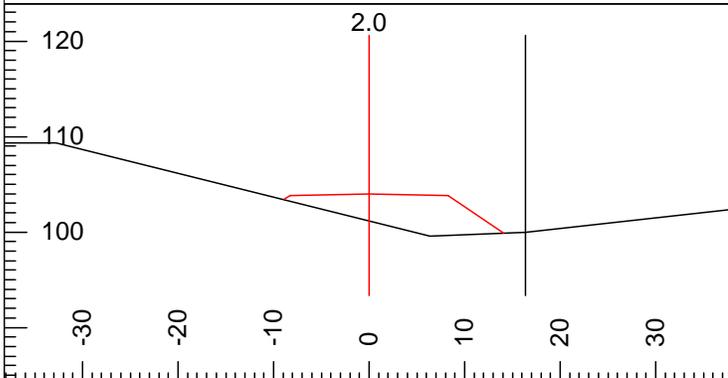
Board O' Feet Timber Sale
 E-6240-2
 Contract #: 30-091856

Washington State Department of Natural Resources
 South Puget Sound Region

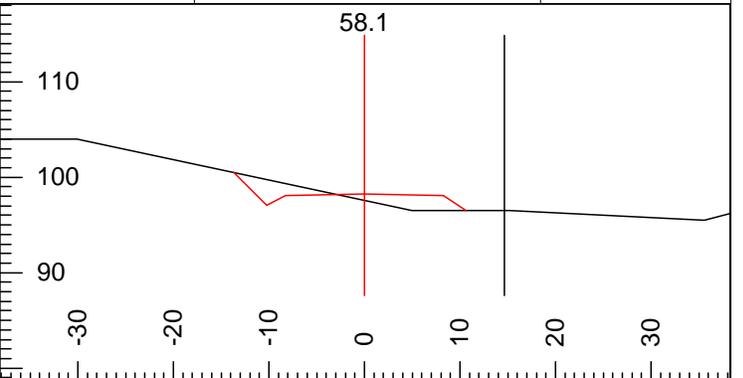
Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

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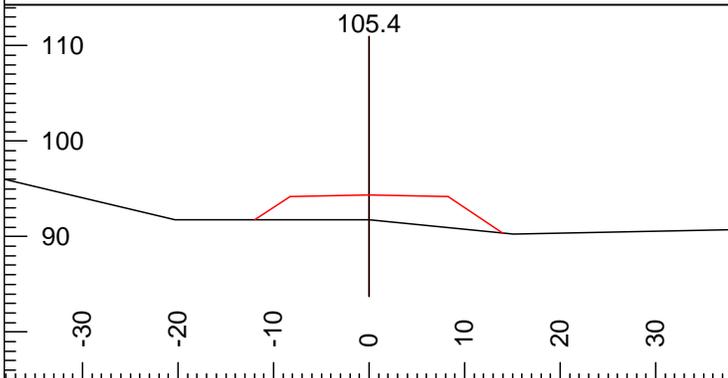




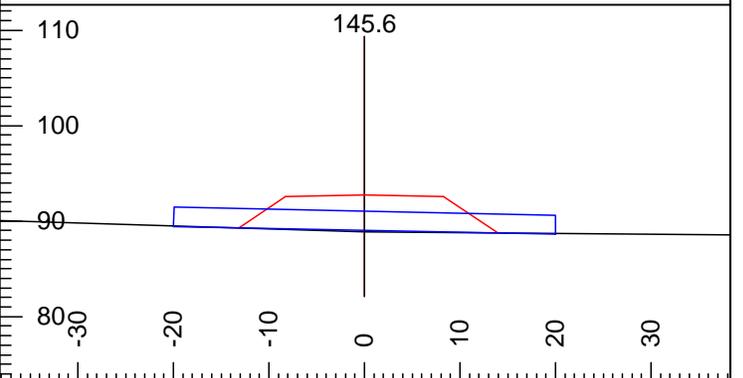
P-Stn: 0.0 V.Offset: 4.0 Cut Dp: -2.8
 L-Stn: 2.0 H. Offset: -16.4 Index: 401



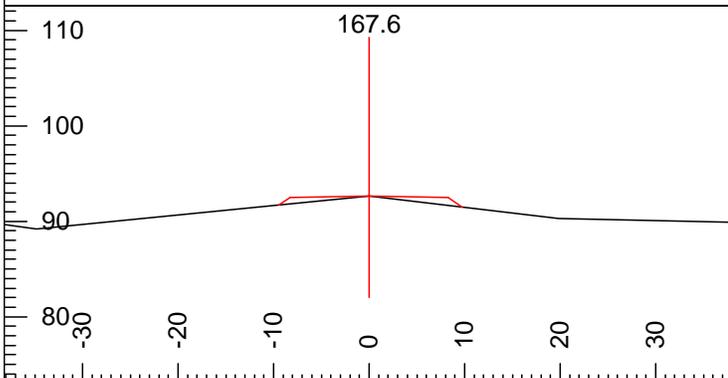
P-Stn: 58.6 V.Offset: 1.8 Cut Dp: -0.7
 L-Stn: 58.1 H. Offset: -14.9 Index: 402



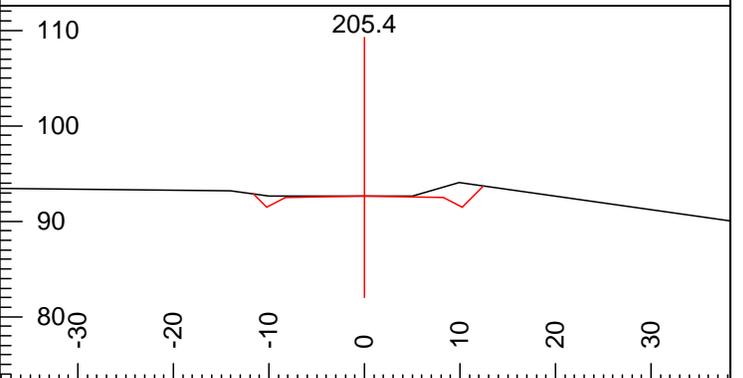
P-Stn: 106.2 V.Offset: 2.6 Cut Dp: -2.6
 L-Stn: 105.4 H. Offset: 0.0 Index: 403



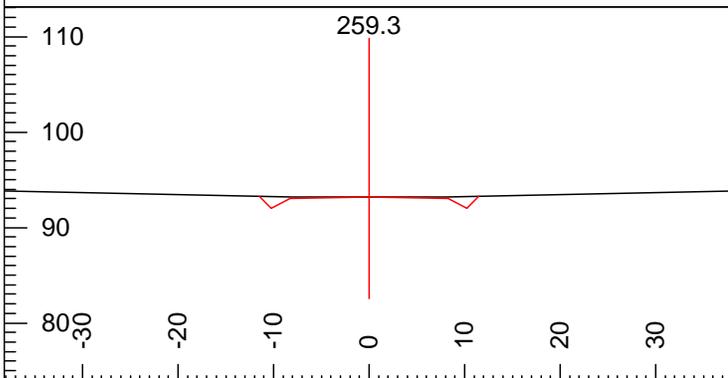
P-Stn: 146.4 V.Offset: 3.8 Cut Dp: -3.8
 L-Stn: 145.6 H. Offset: 0.0 Index: 404



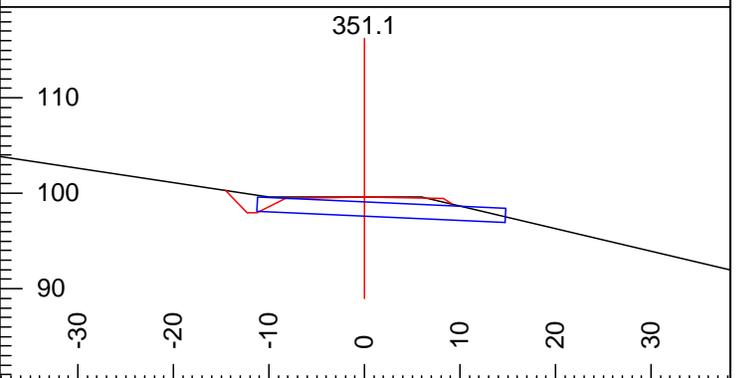
P-Stn: 168.3 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 167.6 H. Offset: 0.0 Index: 405



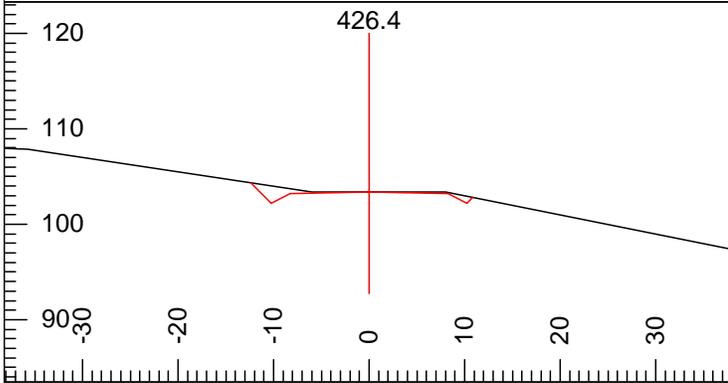
P-Stn: 206.1 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 205.4 H. Offset: 0.0 Index: 406



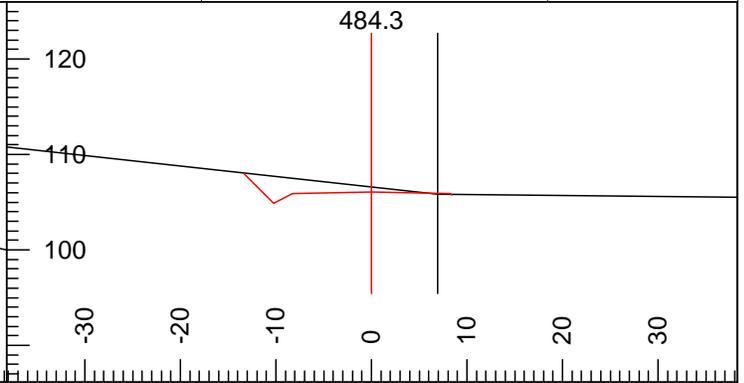
P-Stn: 260.0 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 259.3 H. Offset: 0.0 Index: 407



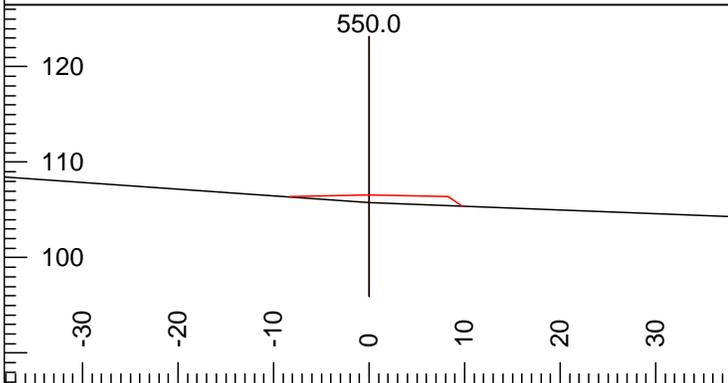
P-Stn: 351.8 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 351.1 H. Offset: 0.0 Index: 408



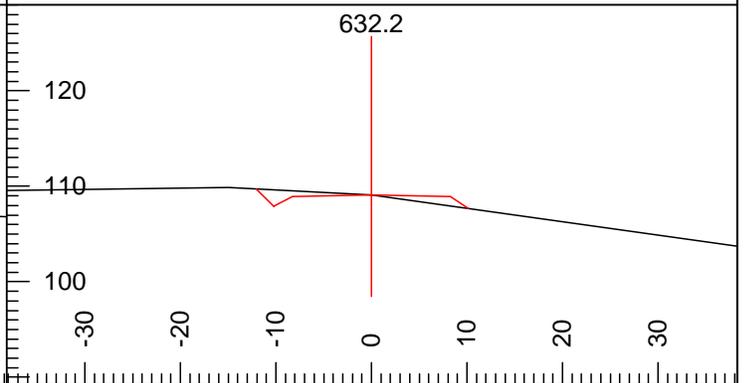
P-Stn: 427.1 V.Offset: 0.0 Cut Dp: 0.0
L-Stn: 426.4 H. Offset: 0.0 Index: 409



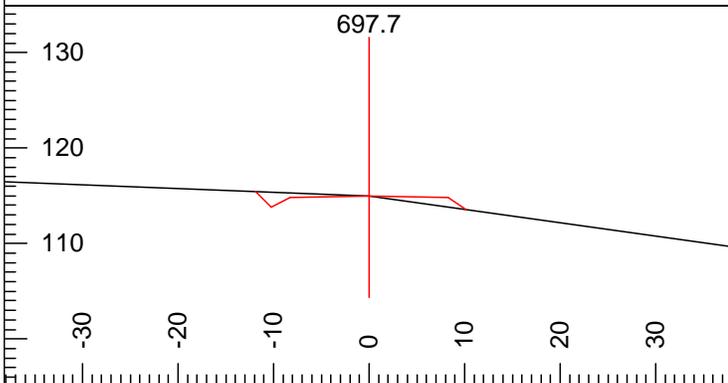
P-Stn: 487.7 V.Offset: 0.3 Cut Dp: 0.5
L-Stn: 484.3 H. Offset: -7.0 Index: 410



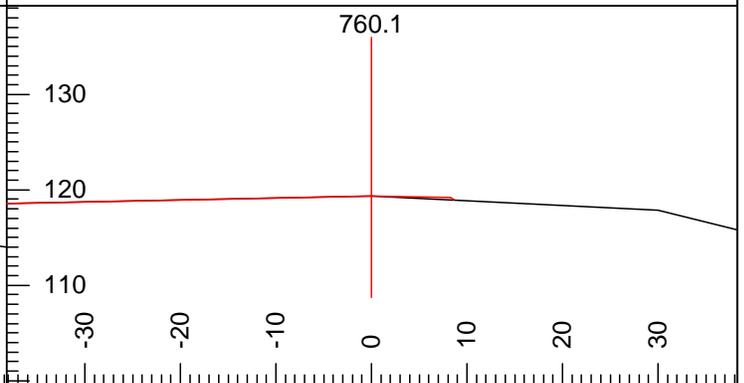
P-Stn: 556.0 V.Offset: 0.8 Cut Dp: -0.8
L-Stn: 550.0 H. Offset: 0.0 Index: 411



P-Stn: 638.2 V.Offset: 0.0 Cut Dp: 0.0
L-Stn: 632.2 H. Offset: 0.0 Index: 412



P-Stn: 703.6 V.Offset: 0.0 Cut Dp: 0.0
L-Stn: 697.7 H. Offset: 0.0 Index: 413



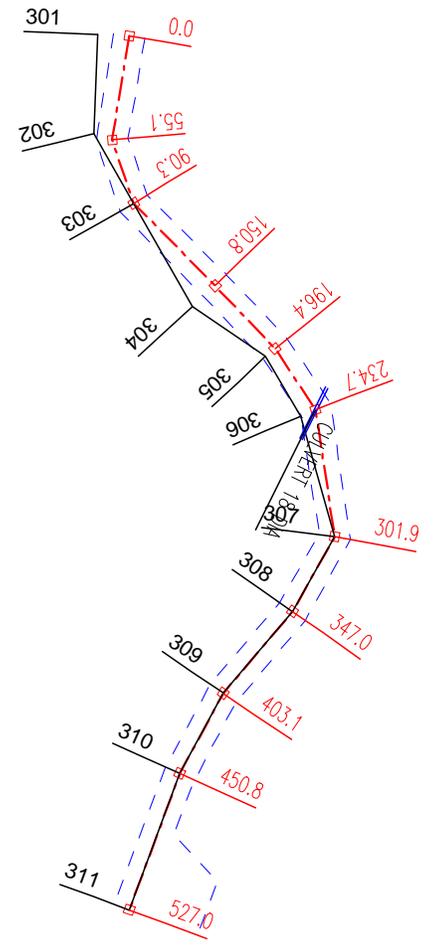
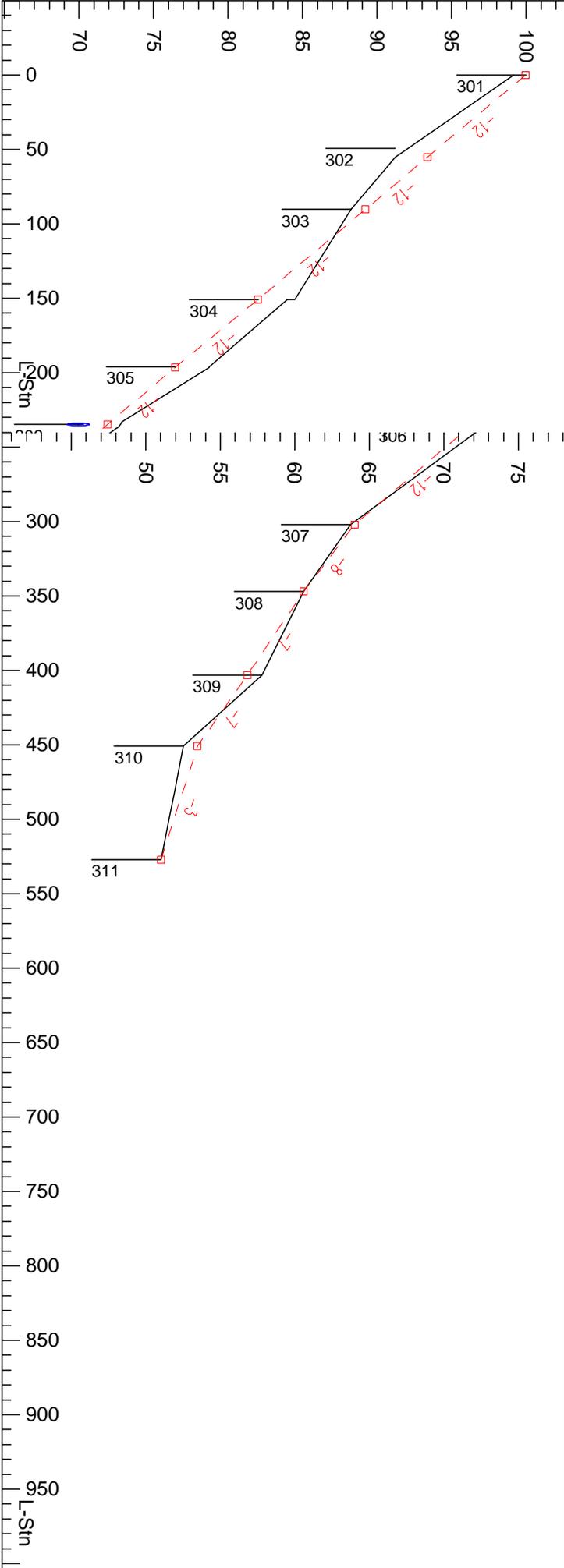
P-Stn: 766.1 V.Offset: 0.0 Cut Dp: 0.0
L-Stn: 760.1 H. Offset: 0.0 Index: 414

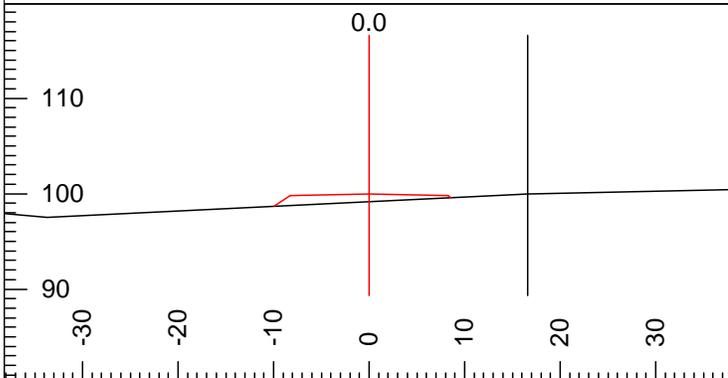
Board O' Feet Timber Sale
 E-6240-3
 Contract #: 30-91856

Washington State Department of Natural Resources
 South Puget Sound Region

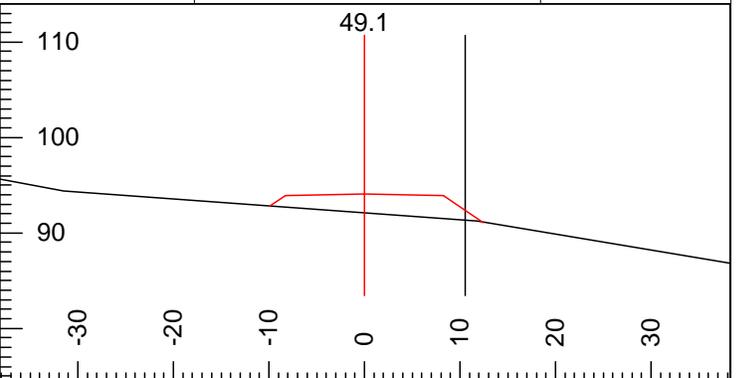
Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

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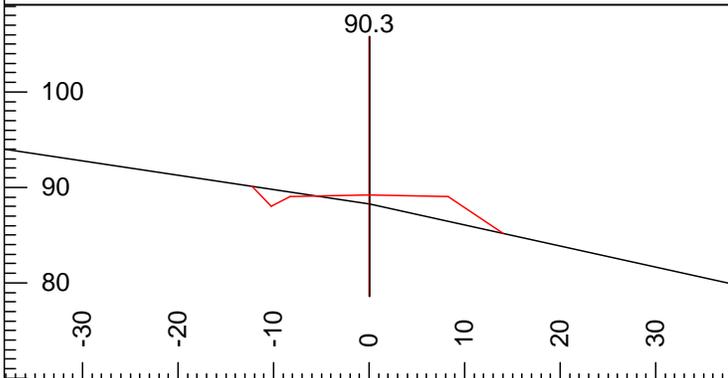




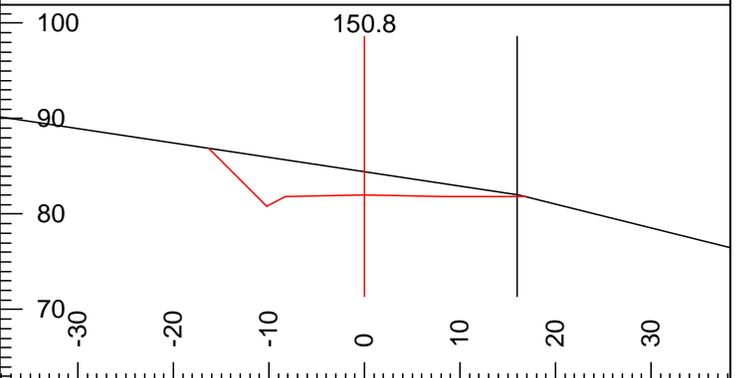
P-Stn: 0.0 V.Offset: 0.0 Cut Dp: -0.8
 L-Stn: 0.0 H. Offset: -16.5 Index: 301



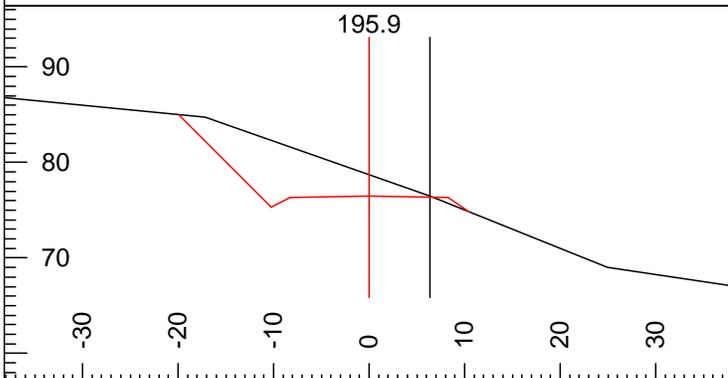
P-Stn: 51.8 V.Offset: 2.9 Cut Dp: -2.0
 L-Stn: 49.1 H. Offset: -10.9 Index: 302



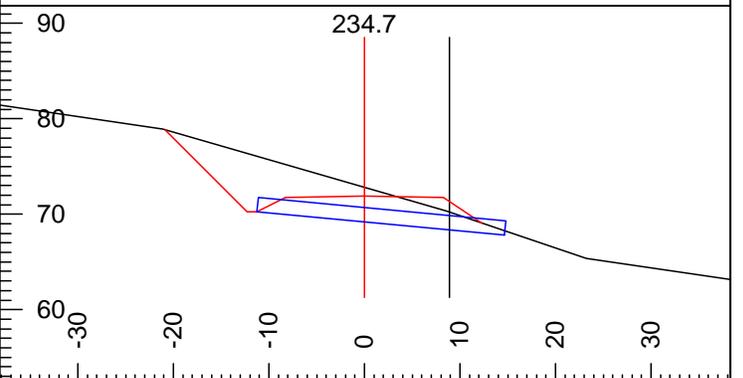
P-Stn: 94.0 V.Offset: 1.0 Cut Dp: -0.9
 L-Stn: 90.3 H. Offset: -0.1 Index: 303



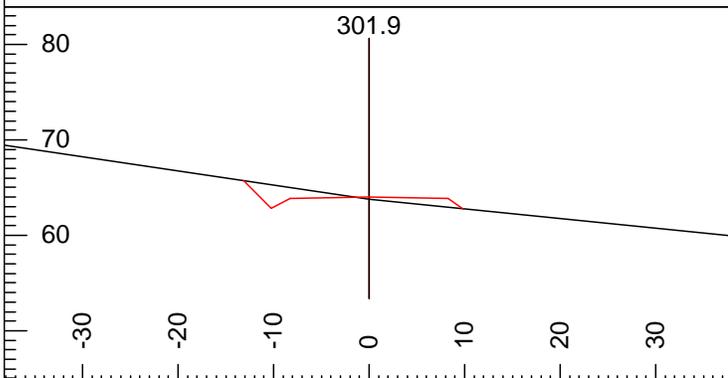
P-Stn: 156.0 V.Offset: 0.0 Cut Dp: 2.5
 L-Stn: 150.8 H. Offset: -16.1 Index: 304



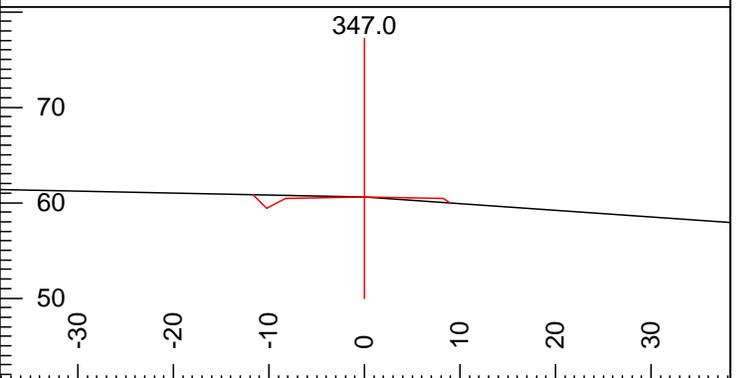
P-Stn: 202.4 V.Offset: 0.0 Cut Dp: 2.2
 L-Stn: 195.9 H. Offset: -6.4 Index: 305



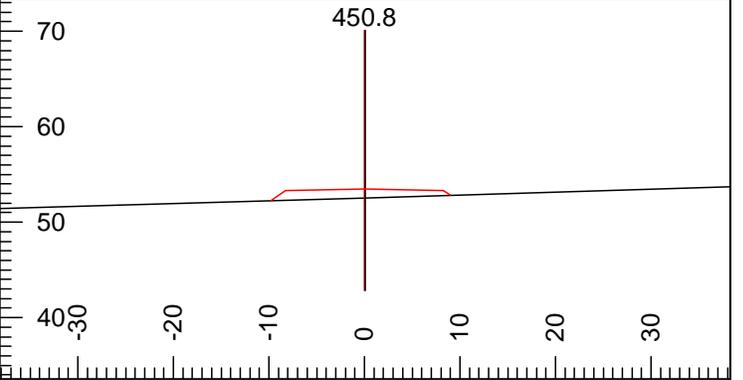
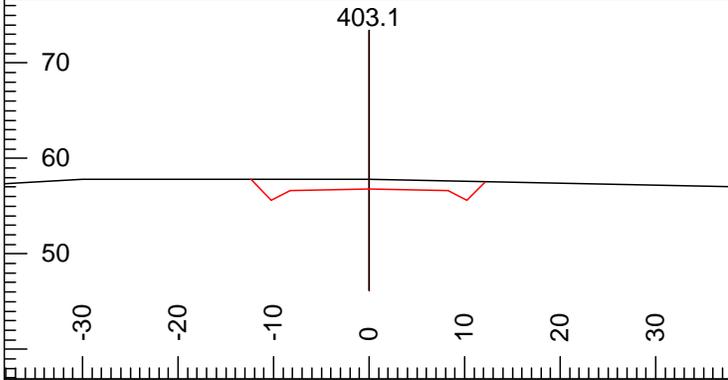
P-Stn: 238.7 V.Offset: 1.6 Cut Dp: 0.9
 L-Stn: 234.7 H. Offset: -8.3 Index: 306



P-Stn: 304.3 V.Offset: 0.3 Cut Dp: -0.3
 L-Stn: 301.9 H. Offset: 0.0 Index: 307

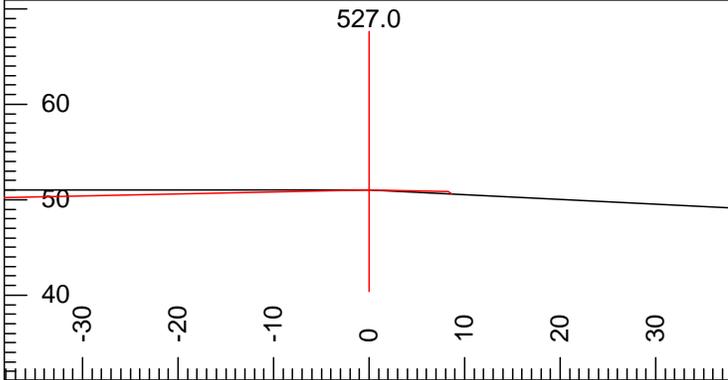


P-Stn: 349.4 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 347.0 H. Offset: 0.0 Index: 308



P-Stn: 405.5 V.Offset: -1.0 Cut Dp: 1.0
L-Stn: 403.1 H. Offset: 0.0 Index: 309

P-Stn: 453.2 V.Offset: 0.9 Cut Dp: -0.9
L-Stn: 450.8 H. Offset: -0.1 Index: 310



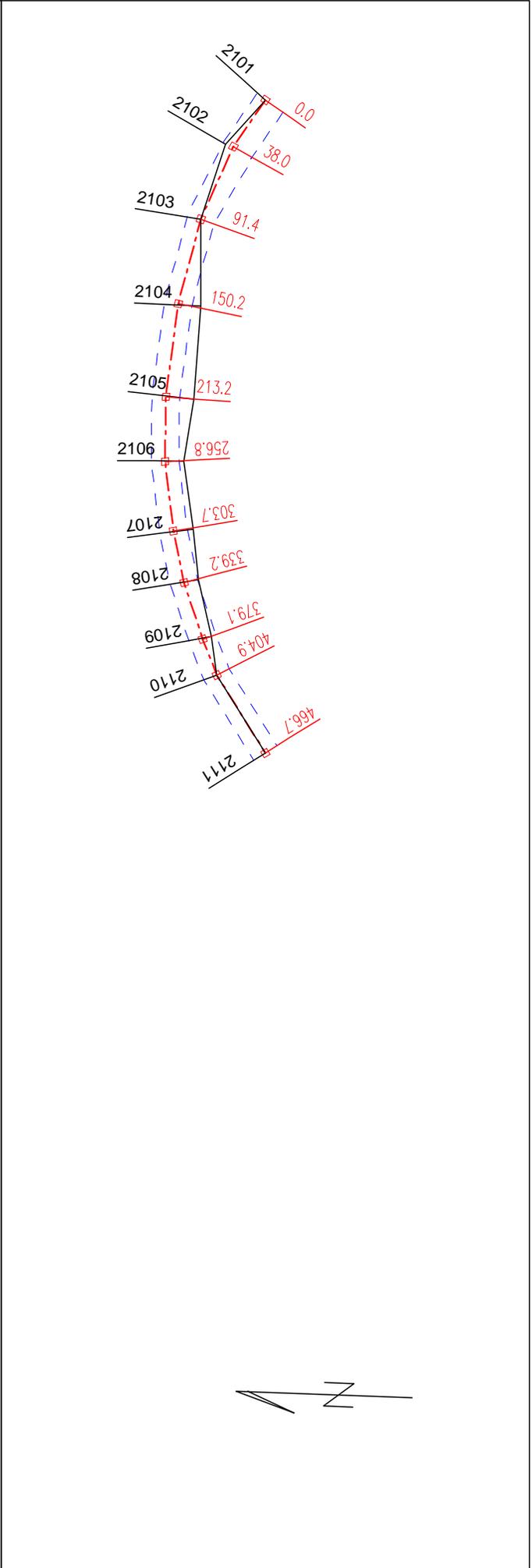
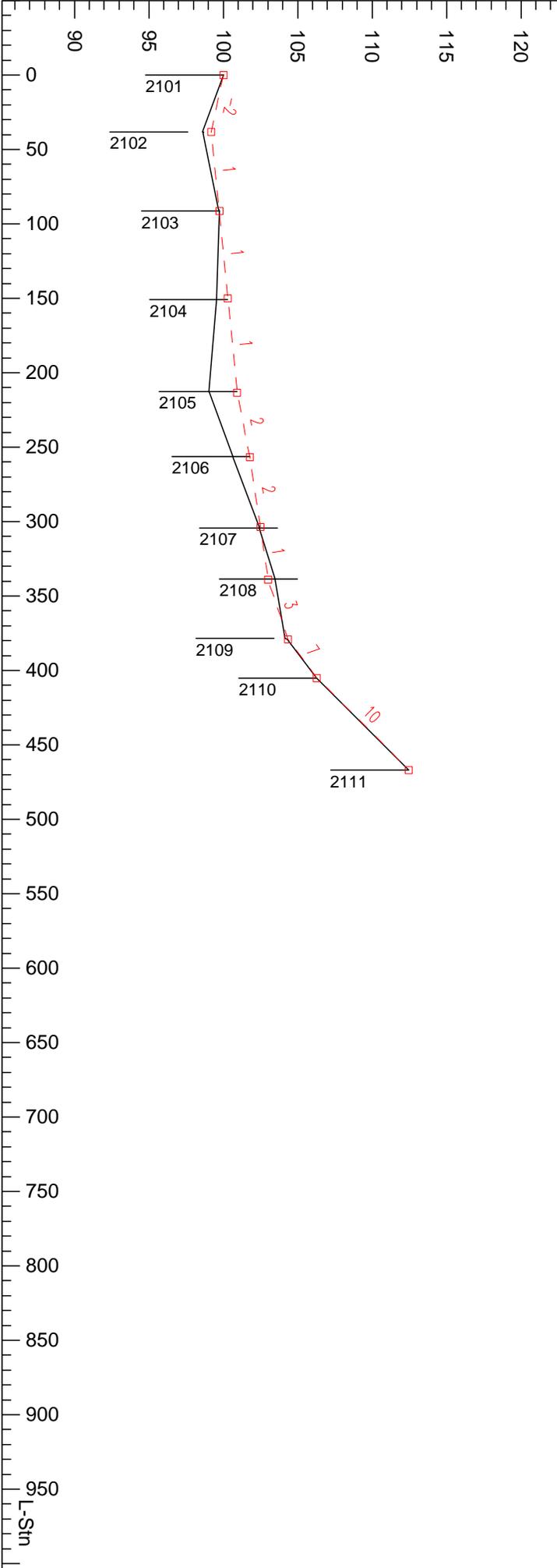
P-Stn: 529.4 V.Offset: 0.0 Cut Dp: 0.0
L-Stn: 527.0 H. Offset: 0.0 Index: 311

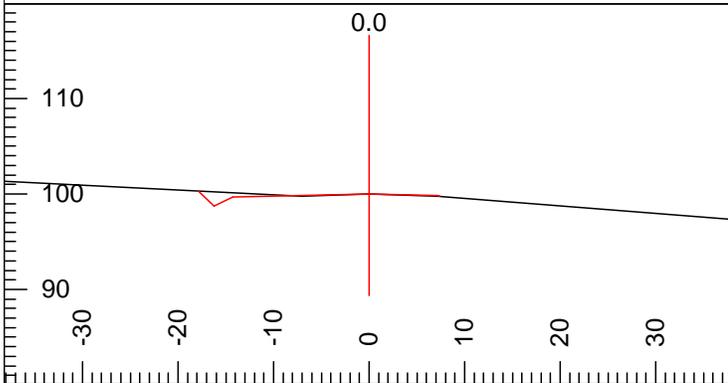
Board O' Feet Timber Sale
 E-6800/E-7000 Tie Rd
 Contract #: 30-91856

Washington State Department of Natural Resources
 South Puget Sound Region

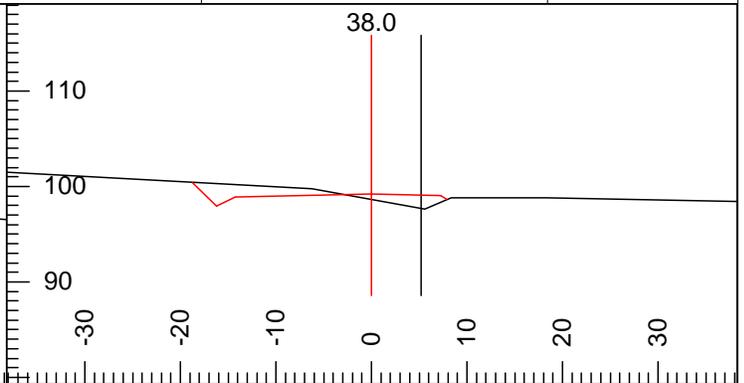
Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

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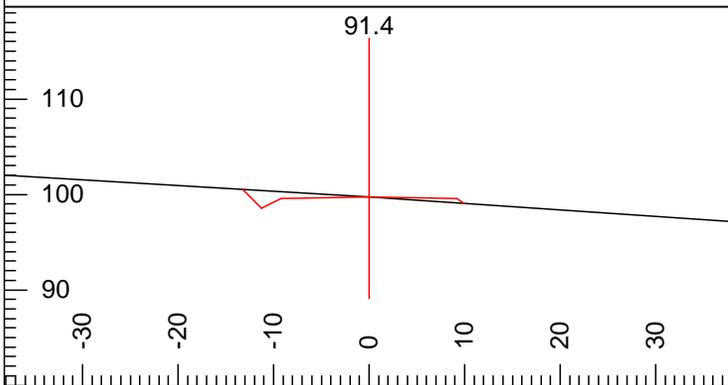




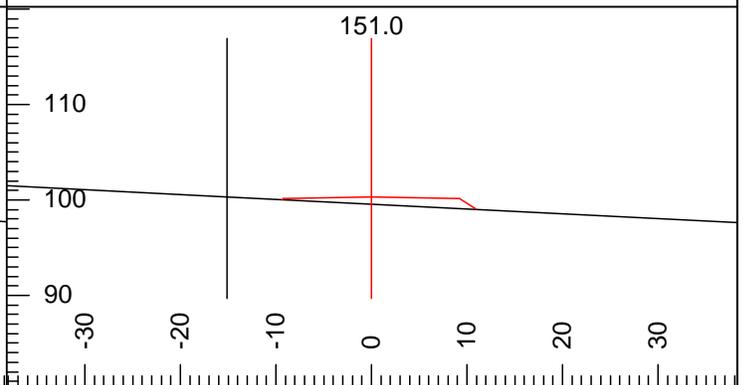
P-Stn: 0.0 H. Offset: 0.0 Cut Dp: 0.0
 L-Stn: 0.0 V.Offset: 0.0 Index: 2101



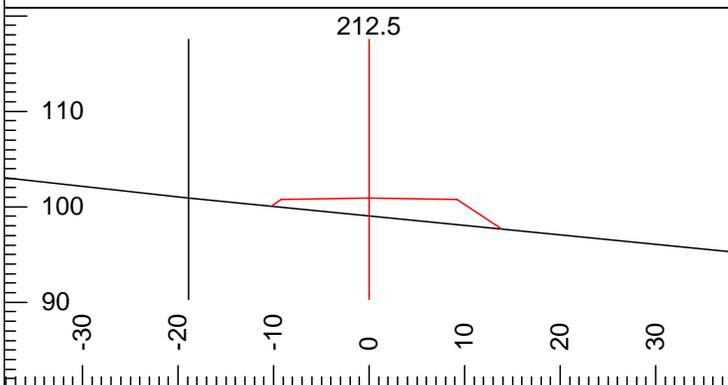
P-Stn: 39.9 H. Offset: -5.6 Cut Dp: -0.6
 L-Stn: 38.0 V.Offset: 1.6 Index: 2102



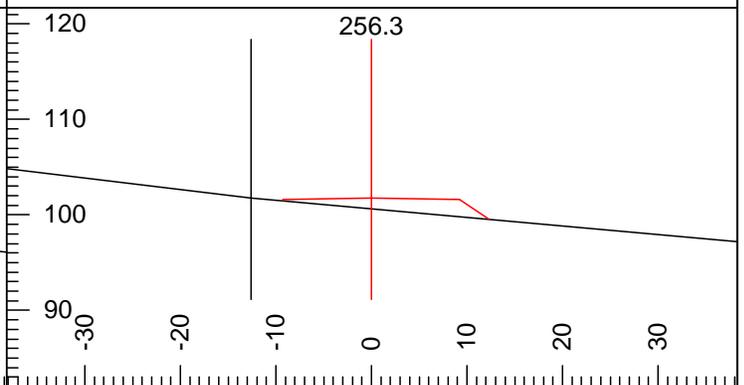
P-Stn: 93.1 H. Offset: 0.0 Cut Dp: 0.0
 L-Stn: 91.4 V.Offset: 0.0 Index: 2103



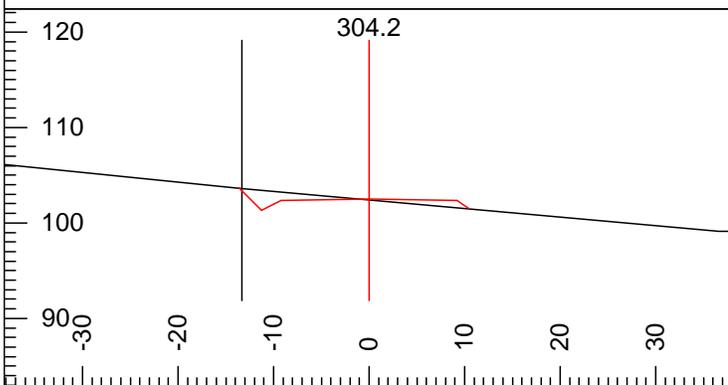
P-Stn: 151.2 H. Offset: 15.1 Cut Dp: -0.8
 L-Stn: 151.0 V.Offset: 0.0 Index: 2104



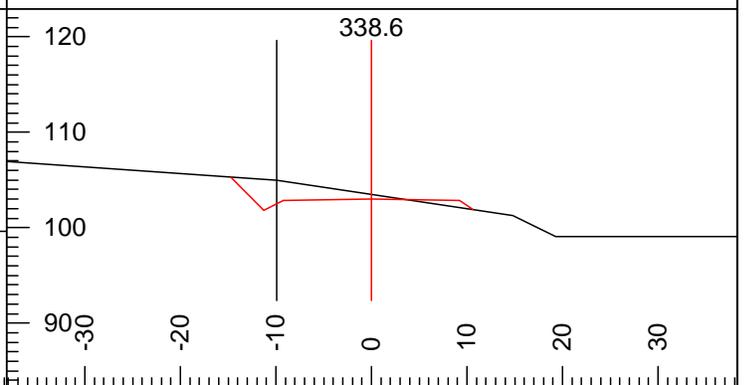
P-Stn: 214.0 H. Offset: 18.9 Cut Dp: -1.9
 L-Stn: 212.5 V.Offset: 0.0 Index: 2105



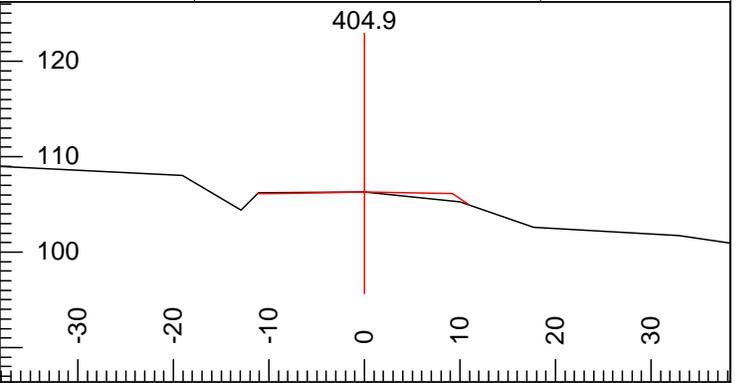
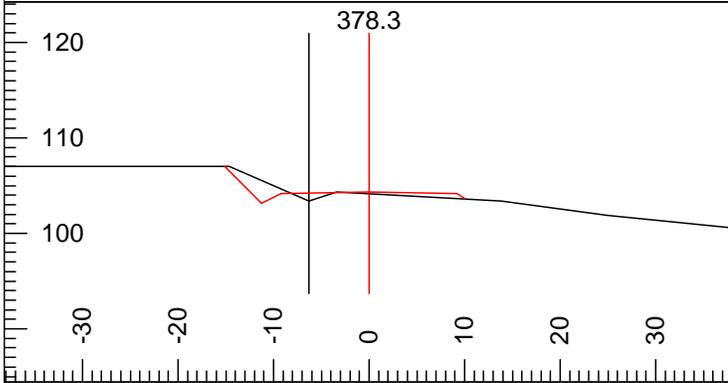
P-Stn: 256.3 H. Offset: 12.6 Cut Dp: -1.1
 L-Stn: 256.3 V.Offset: 0.0 Index: 2106



P-Stn: 302.5 H. Offset: 13.3 Cut Dp: -0.1
 L-Stn: 304.2 V.Offset: -1.1 Index: 2107

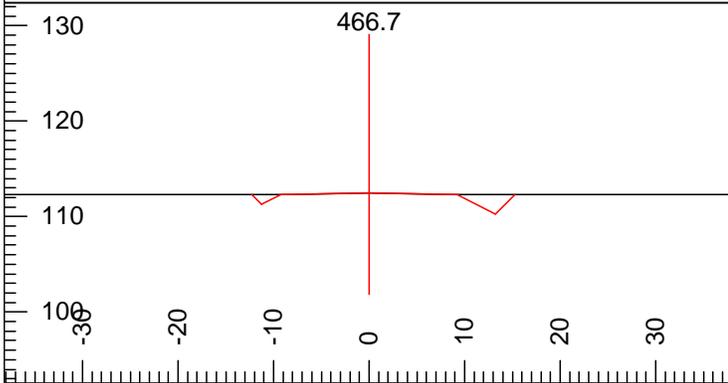


P-Stn: 336.3 H. Offset: 9.9 Cut Dp: 0.5
 L-Stn: 338.6 V.Offset: -2.0 Index: 2108



P-Stn: 375.6 H. Offset: 6.2 Cut Dp: -0.2
L-Stn: 378.3 V.Offset: 0.9 Index: 2109

P-Stn: 401.7 H. Offset: 0.0 Cut Dp: 0.0
L-Stn: 404.9 V.Offset: 0.0 Index: 2110



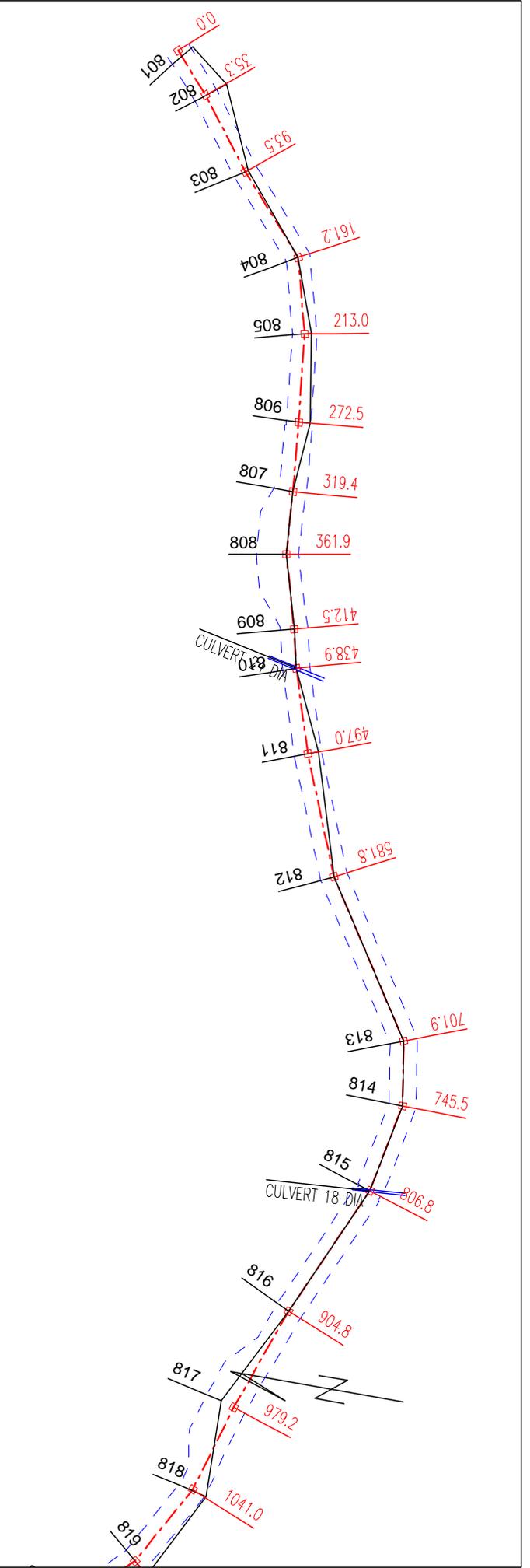
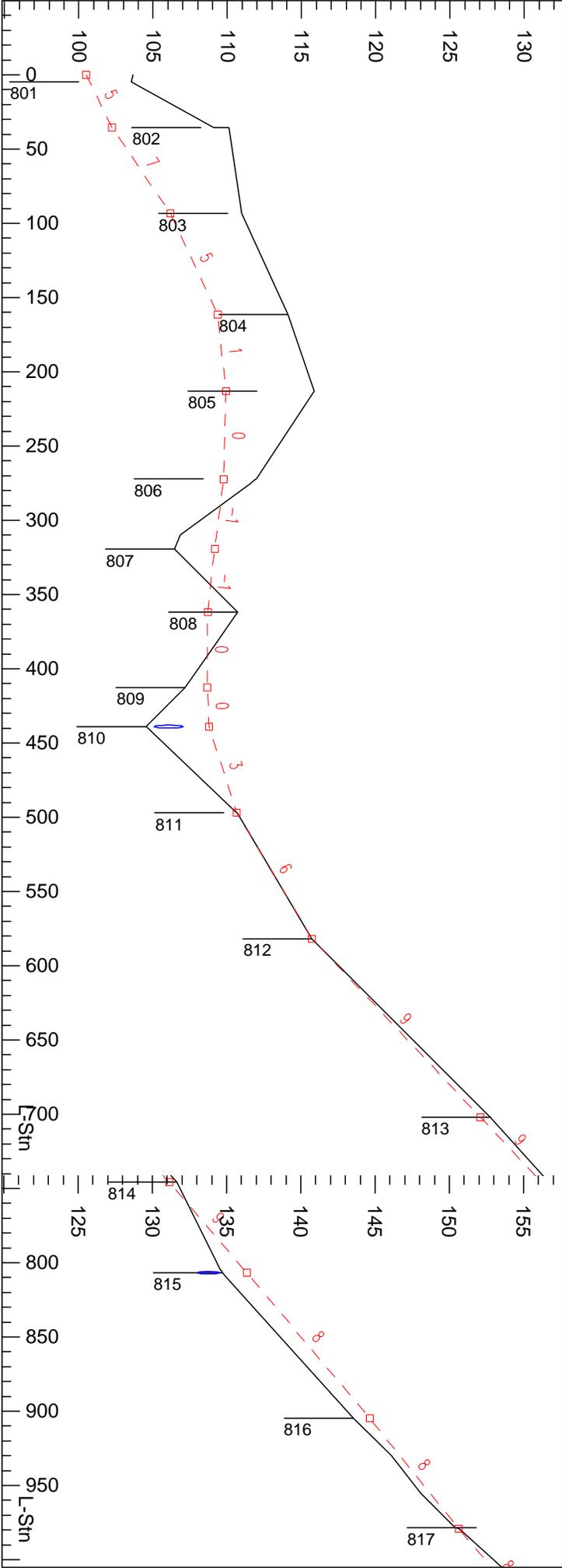
P-Stn: 463.5 H. Offset: 0.0 Cut Dp: 0.0
L-Stn: 466.7 V.Offset: 0.0 Index: 2111

Board O' Feet Timber Sale
 E-6800 ReRoute
 Contract #: 30-91856

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 South Puget Sound Region

Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

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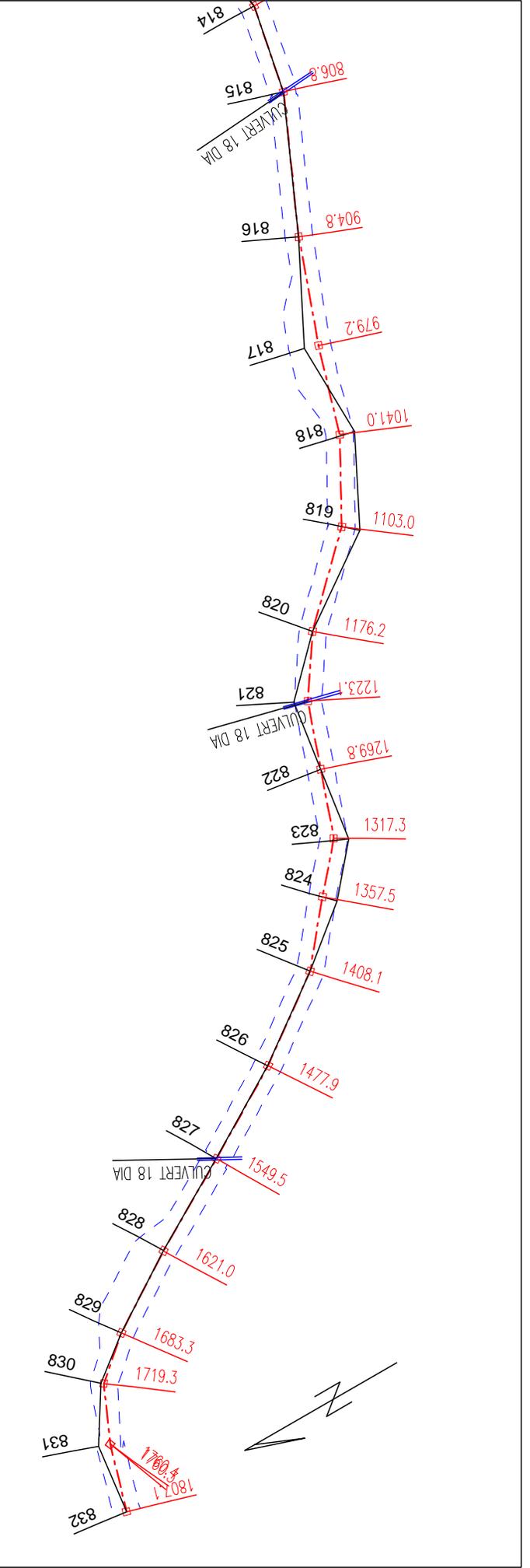
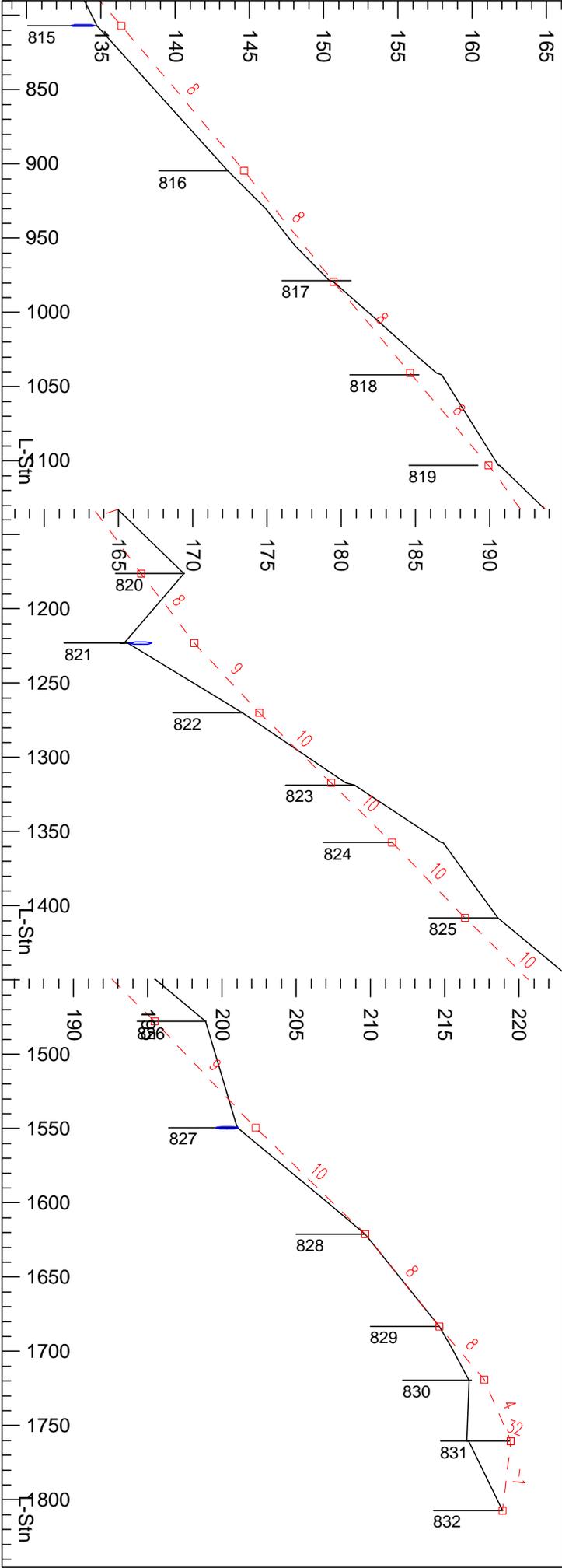


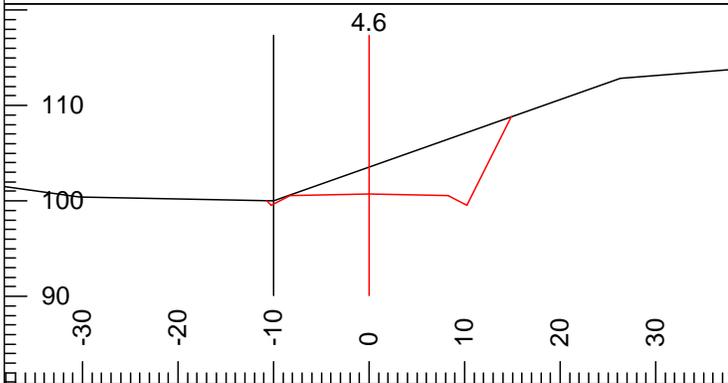
Board O' Feet Timber Sale
 E-6800 ReRoute
 Contract #: 30-91856

Washington State Department of Natural Resources
 South Puget Sound Region

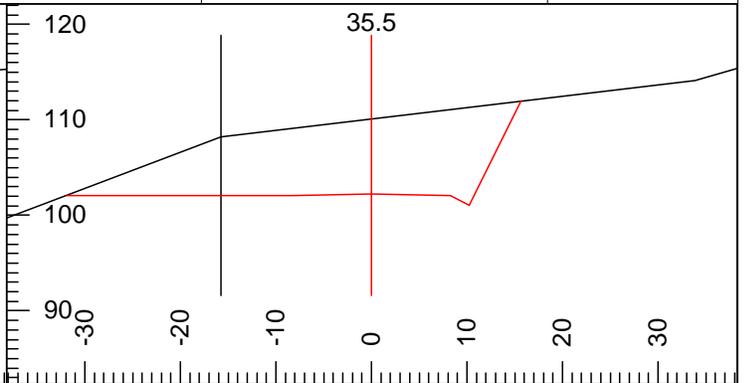
Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

Engineer: J Gardner
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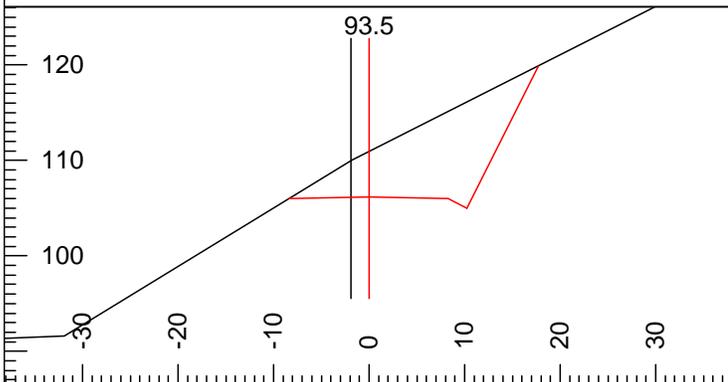




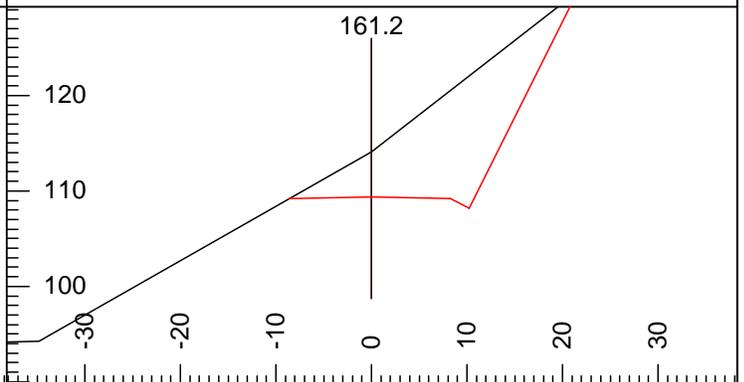
P-Stn: 0.0 H. Offset: 9.8 Cut Dp: 2.8
 L-Stn: 4.6 V.Offset: 0.7 Index: 801



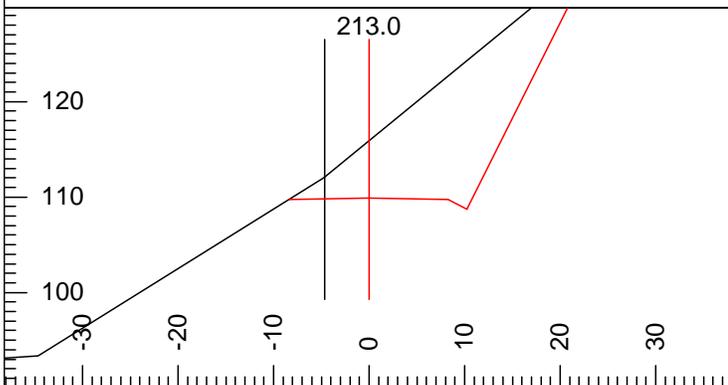
P-Stn: 34.2 H. Offset: 15.8 Cut Dp: 7.9
 L-Stn: 35.5 V.Offset: -6.0 Index: 802



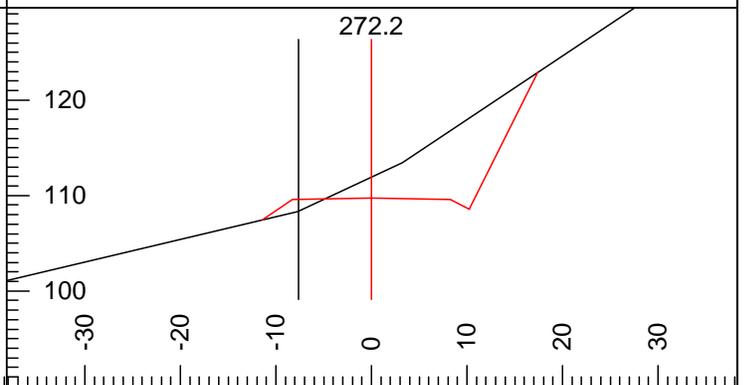
P-Stn: 94.2 H. Offset: 1.8 Cut Dp: 4.8
 L-Stn: 93.5 V.Offset: -3.8 Index: 803



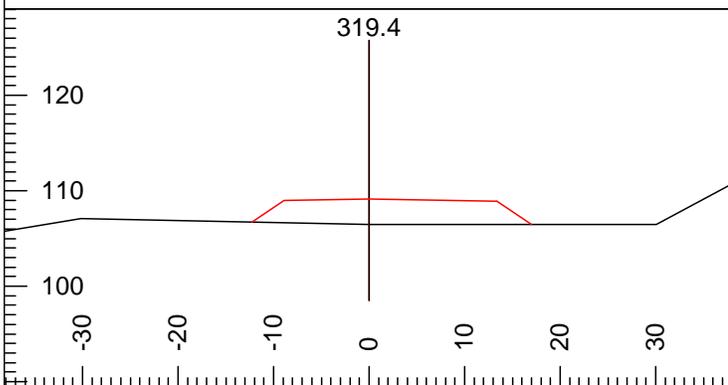
P-Stn: 161.7 H. Offset: 0.0 Cut Dp: 4.7
 L-Stn: 161.2 V.Offset: -4.7 Index: 804



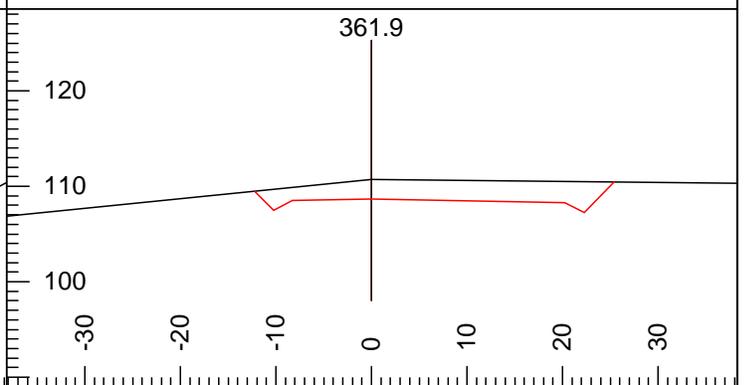
P-Stn: 213.6 H. Offset: 4.6 Cut Dp: 5.9
 L-Stn: 213.0 V.Offset: -2.1 Index: 805



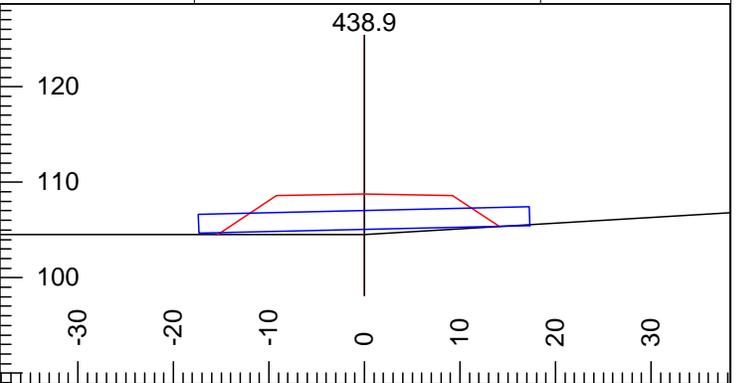
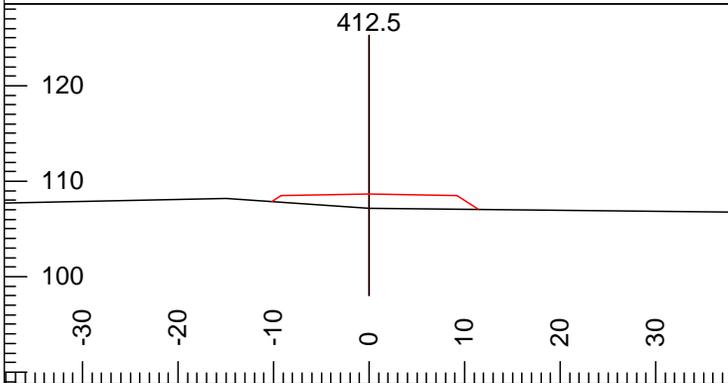
P-Stn: 274.1 H. Offset: 7.7 Cut Dp: 2.2
 L-Stn: 272.2 V.Offset: 1.4 Index: 806



P-Stn: 321.6 H. Offset: 0.0 Cut Dp: -2.7
 L-Stn: 319.4 V.Offset: 2.7 Index: 807

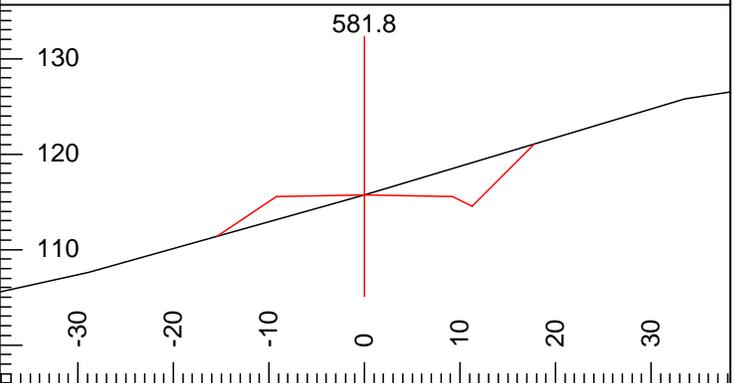
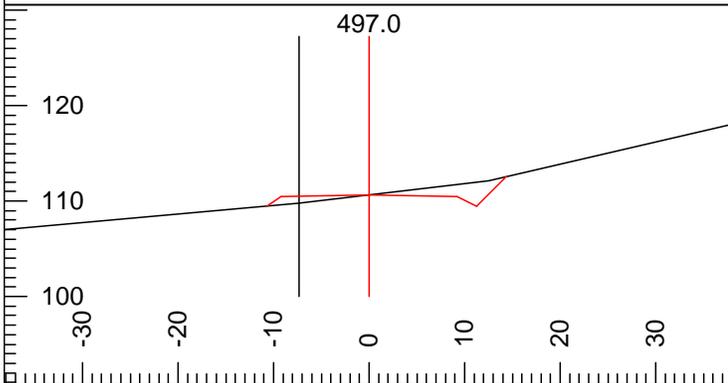


P-Stn: 364.1 H. Offset: 0.0 Cut Dp: 2.0
 L-Stn: 361.9 V.Offset: -2.0 Index: 808



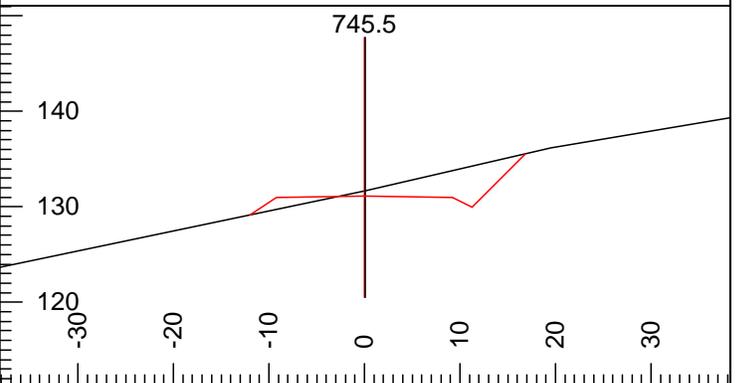
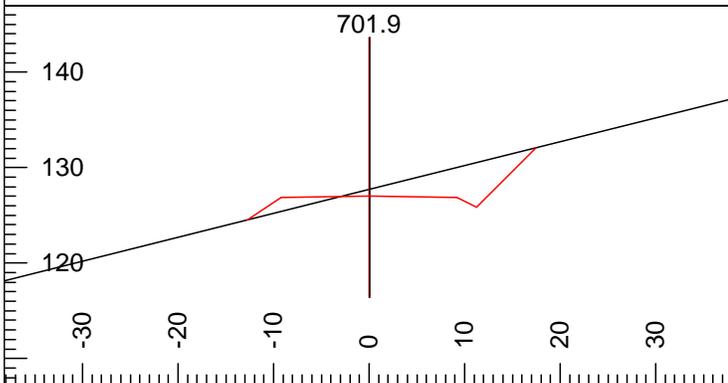
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 L-Stn: 412.5 V.Offset: 1.5 Index: 809

P-Stn: 441.0 H. Offset: 0.0 Cut Dp: -4.2
 L-Stn: 438.9 V.Offset: 4.2 Index: 810



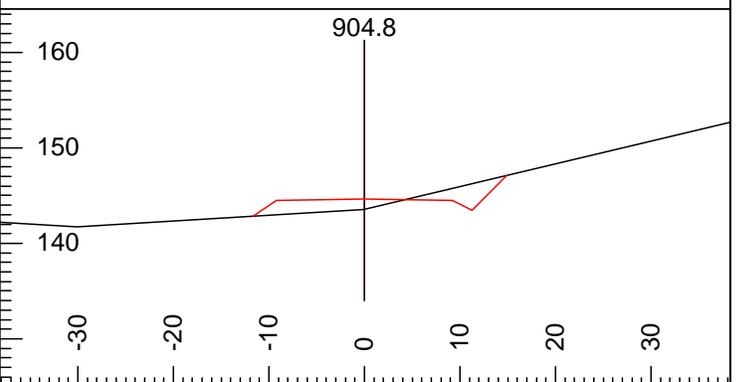
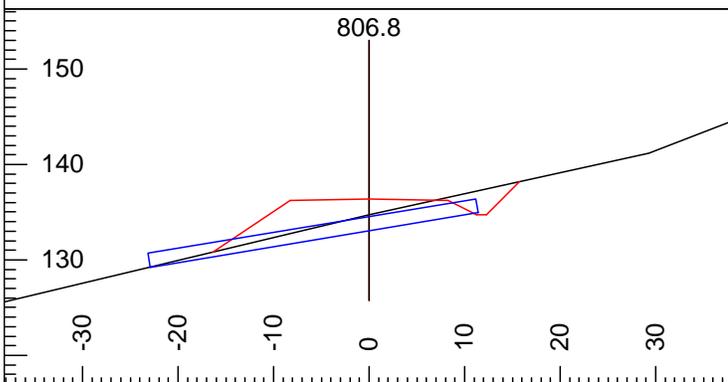
P-Stn: 499.2 H. Offset: 7.4 Cut Dp: 0.0
 L-Stn: 497.0 V.Offset: 0.9 Index: 811

P-Stn: 584.2 H. Offset: 0.0 Cut Dp: 0.0
 L-Stn: 581.8 V.Offset: 0.0 Index: 812



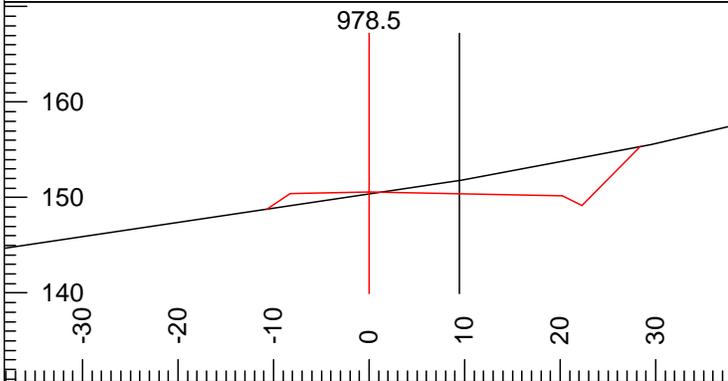
P-Stn: 704.3 H. Offset: -0.1 Cut Dp: 0.7
 L-Stn: 701.9 V.Offset: -0.7 Index: 813

P-Stn: 747.9 H. Offset: 0.0 Cut Dp: 0.5
 L-Stn: 745.5 V.Offset: -0.5 Index: 814

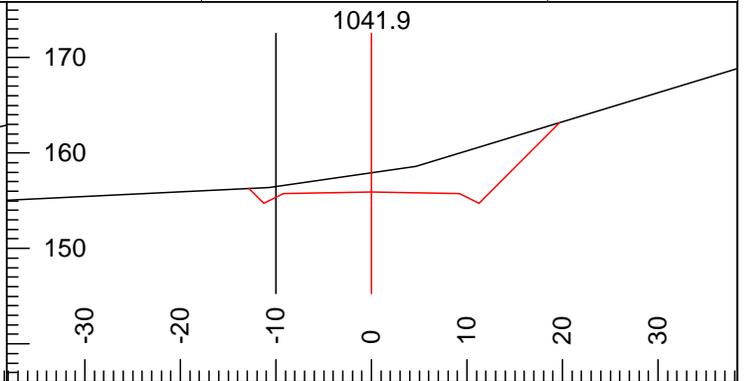


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 L-Stn: 806.8 V.Offset: 1.7 Index: 815

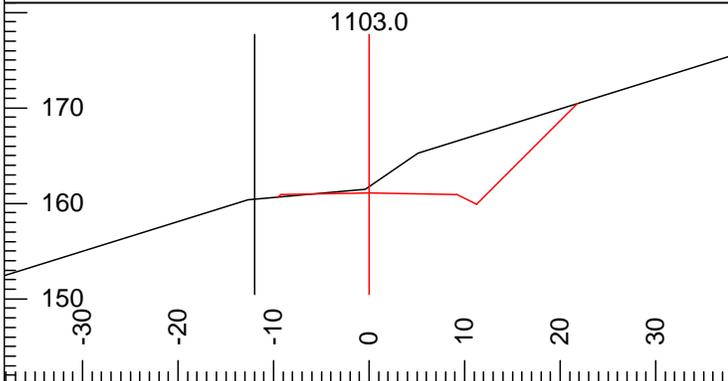
P-Stn: 907.1 H. Offset: 0.0 Cut Dp: -1.1
 L-Stn: 904.8 V.Offset: 1.1 Index: 816



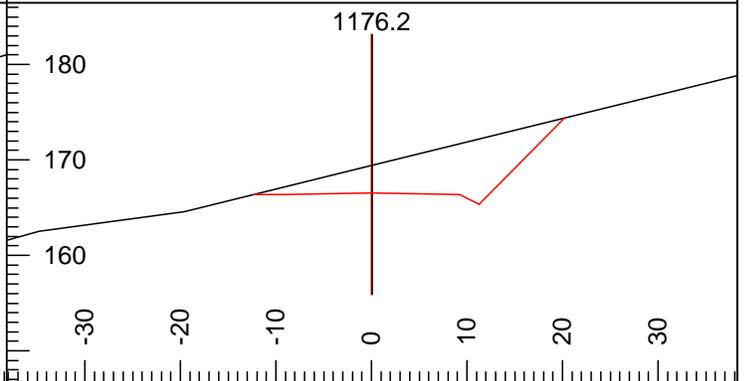
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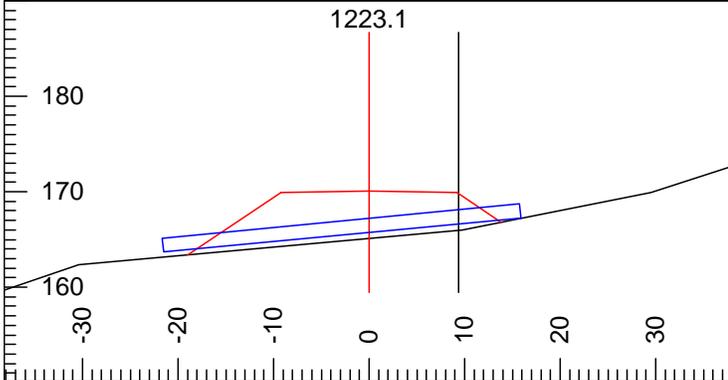
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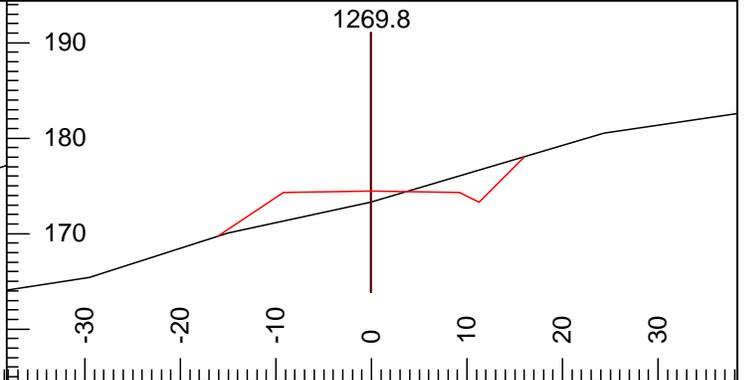
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 L-Stn: 1103.0 V.Offset: 0.7 Index: 819



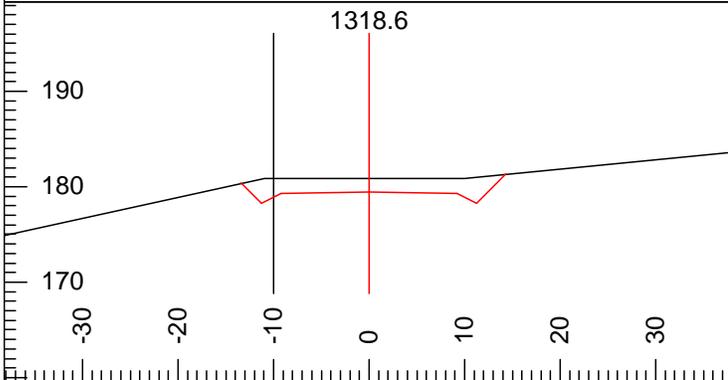
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 L-Stn: 1176.2 V.Offset: -2.9 Index: 820



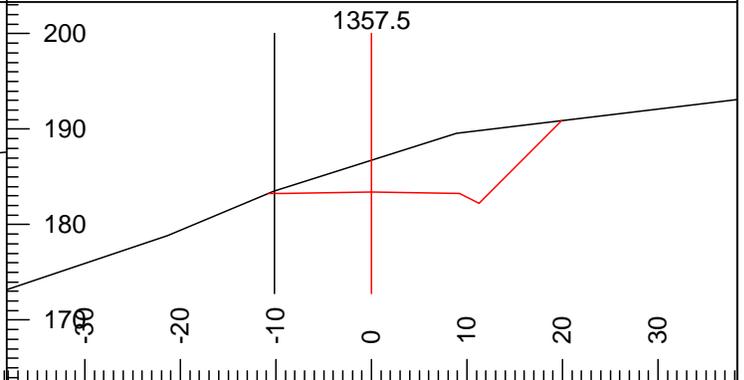
P-Stn: 1238.6 H. Offset: -9.7 Cut Dp: -5.0
 L-Stn: 1223.1 V.Offset: 4.1 Index: 821



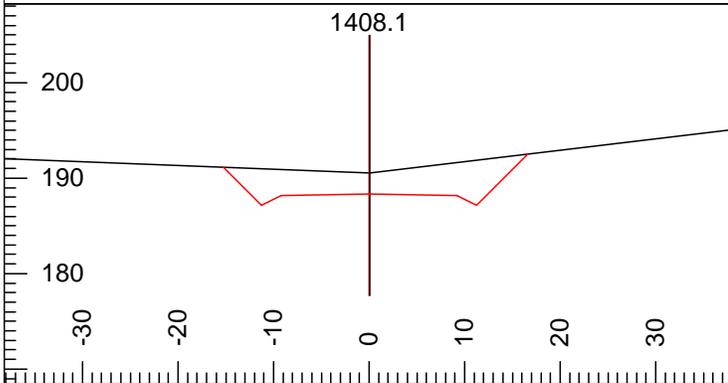
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 L-Stn: 1269.8 V.Offset: 1.2 Index: 822



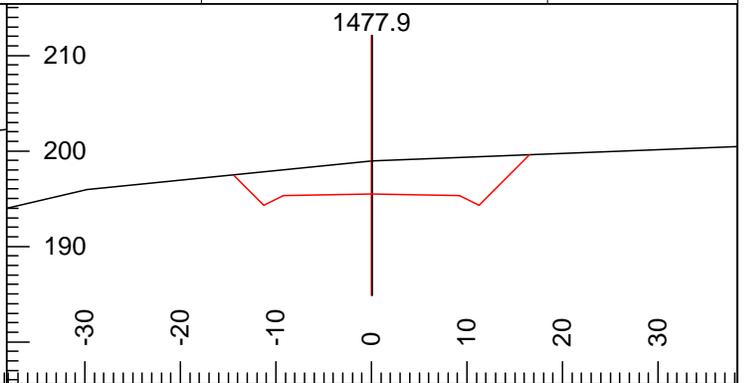
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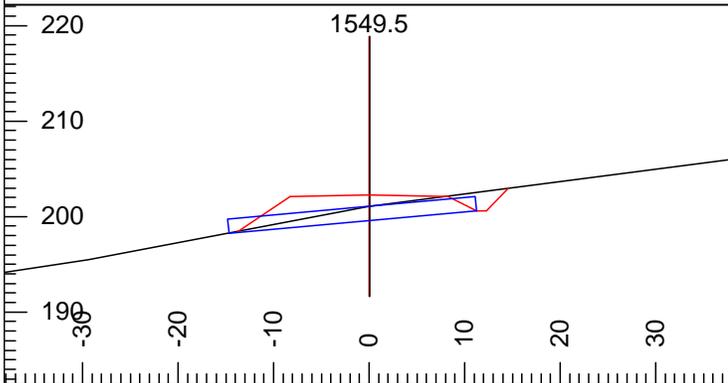
P-Stn: 1380.8 H. Offset: 10.2 Cut Dp: 3.3
 L-Stn: 1357.5 V.Offset: 0.0 Index: 824



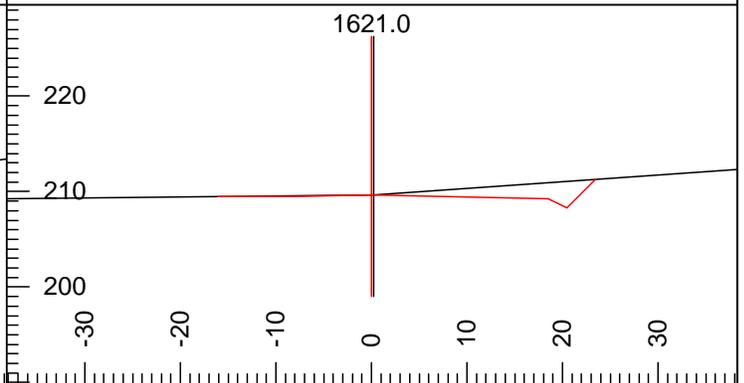
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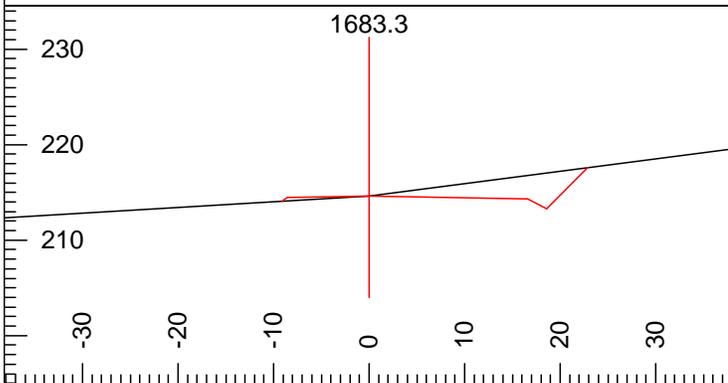
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 L-Stn: 1477.9 V.Offset: -3.4 Index: 826



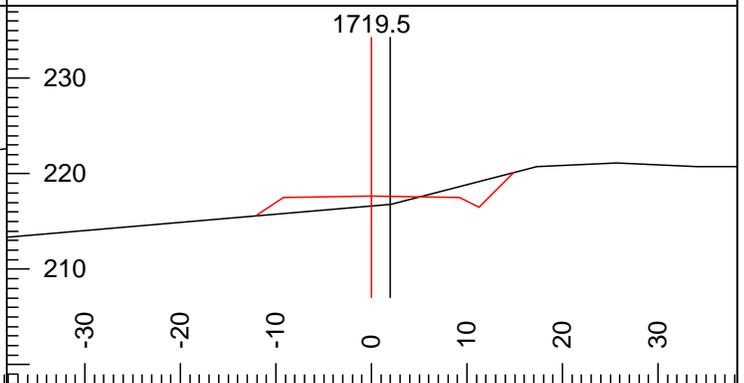
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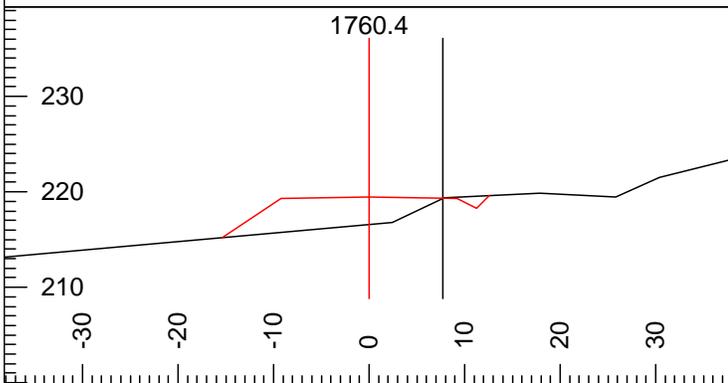
P-Stn: 1644.2 H. Offset: -0.2 Cut Dp: 0.0
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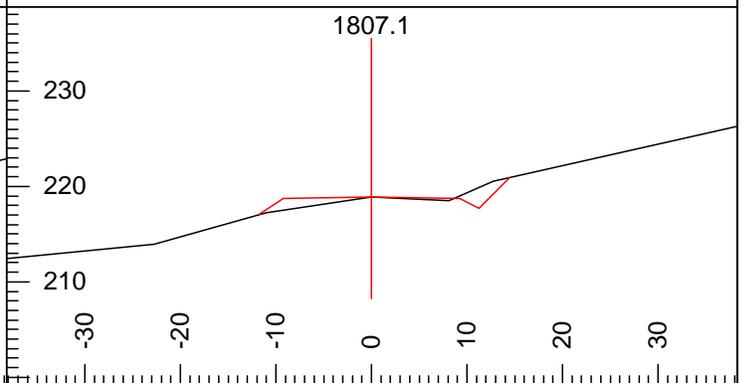
P-Stn: 1706.5 H. Offset: 0.0 Cut Dp: 0.0
 L-Stn: 1683.3 V.Offset: 0.0 Index: 829



P-Stn: 1742.9 H. Offset: -2.0 Cut Dp: -1.0
 L-Stn: 1719.5 V.Offset: 0.9 Index: 830



P-Stn: 1785.5 H. Offset: -7.8 Cut Dp: -2.9
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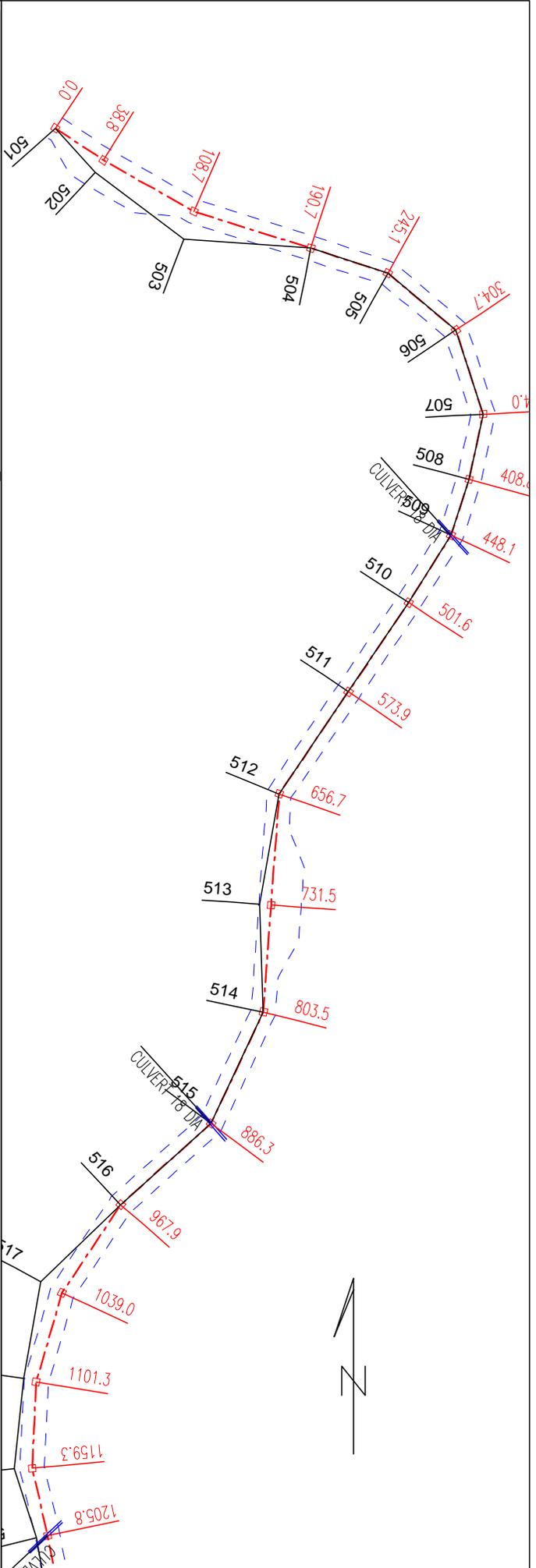
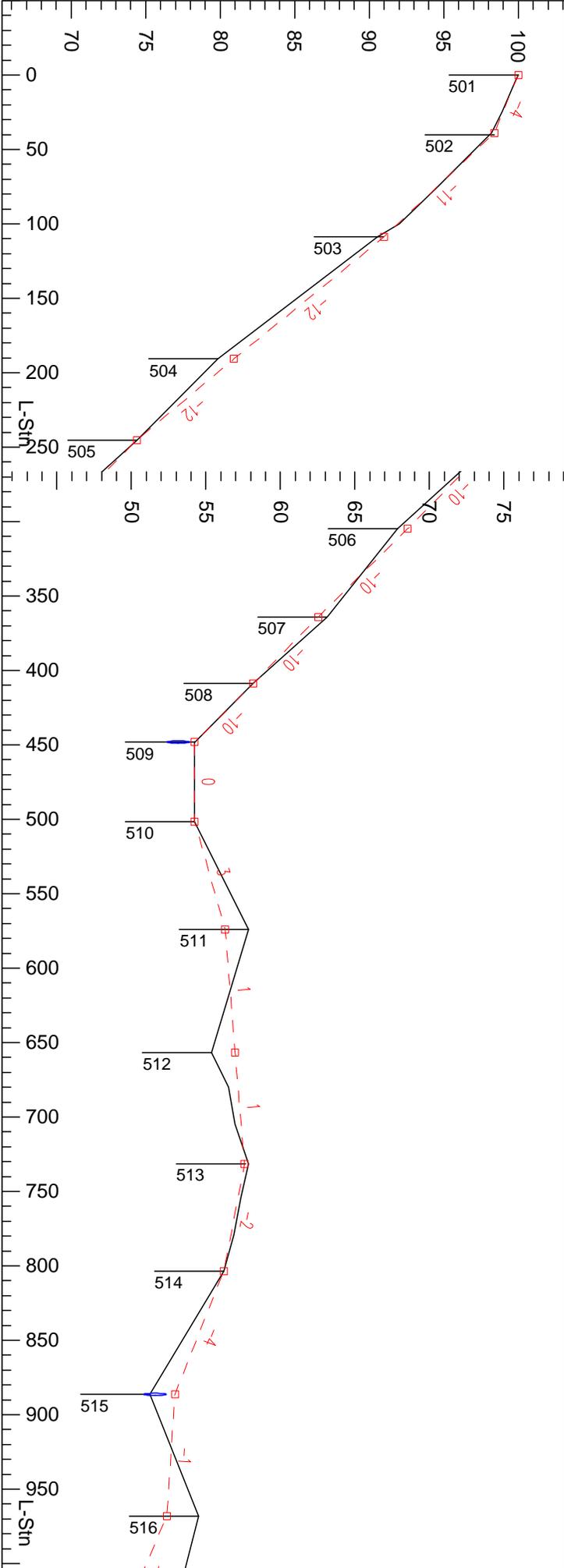
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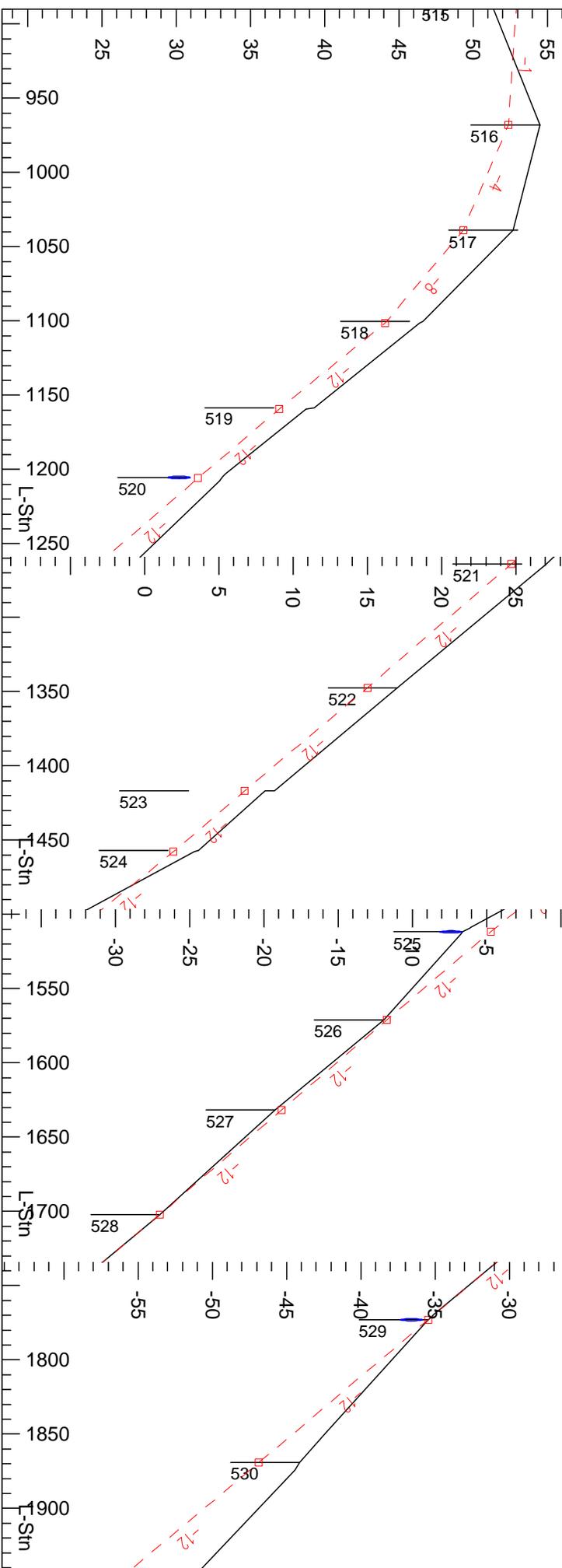
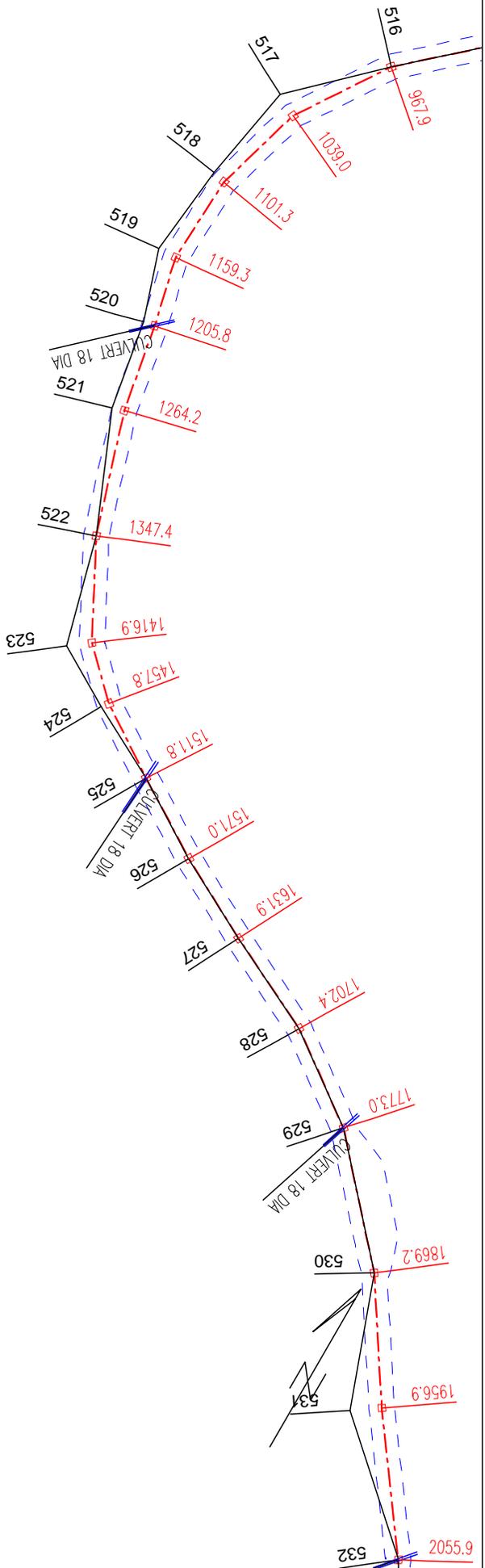
Board O' Feet Timber Sale
 E-6890 Extension
 Contract #: 30-91856

Washington State Department of Natural Resources
 South Puget Sound Region

Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

Engineer: J Gardner
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Board O' Feet Timber Sale
 E-6890 Extension
 Contract #: 30-91856

Washington State Department of Natural Resources
 South Puget Sound Region

Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horiz Scale 1:1200

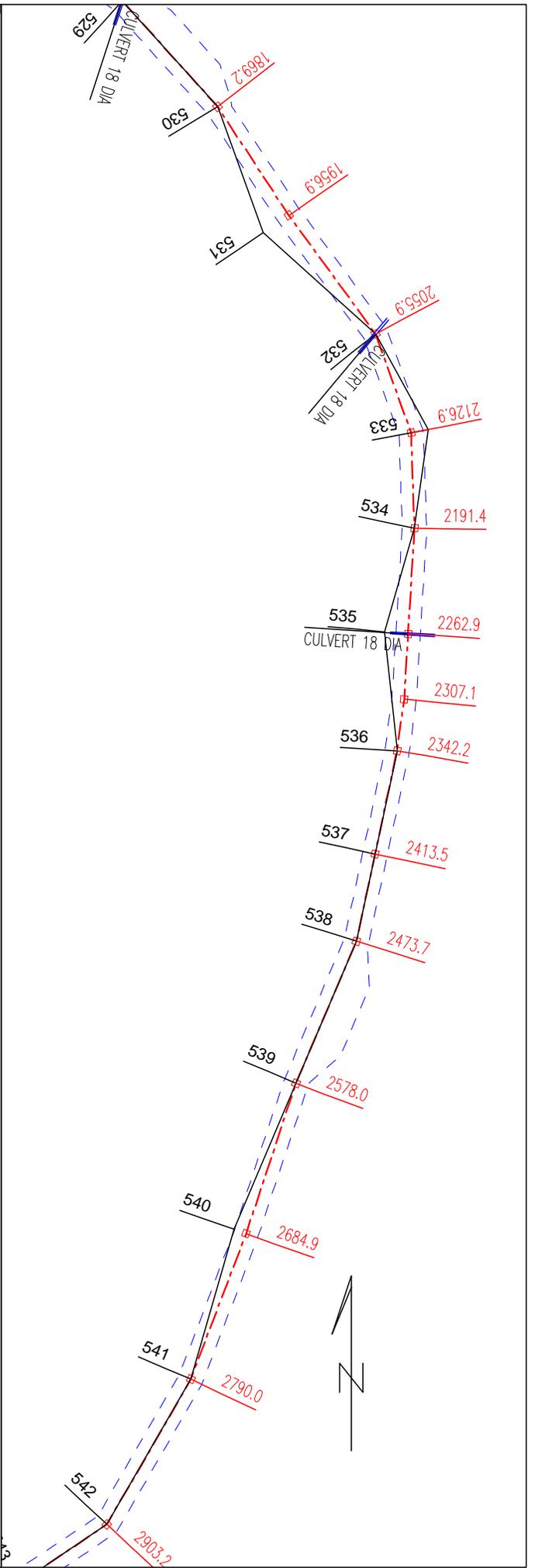
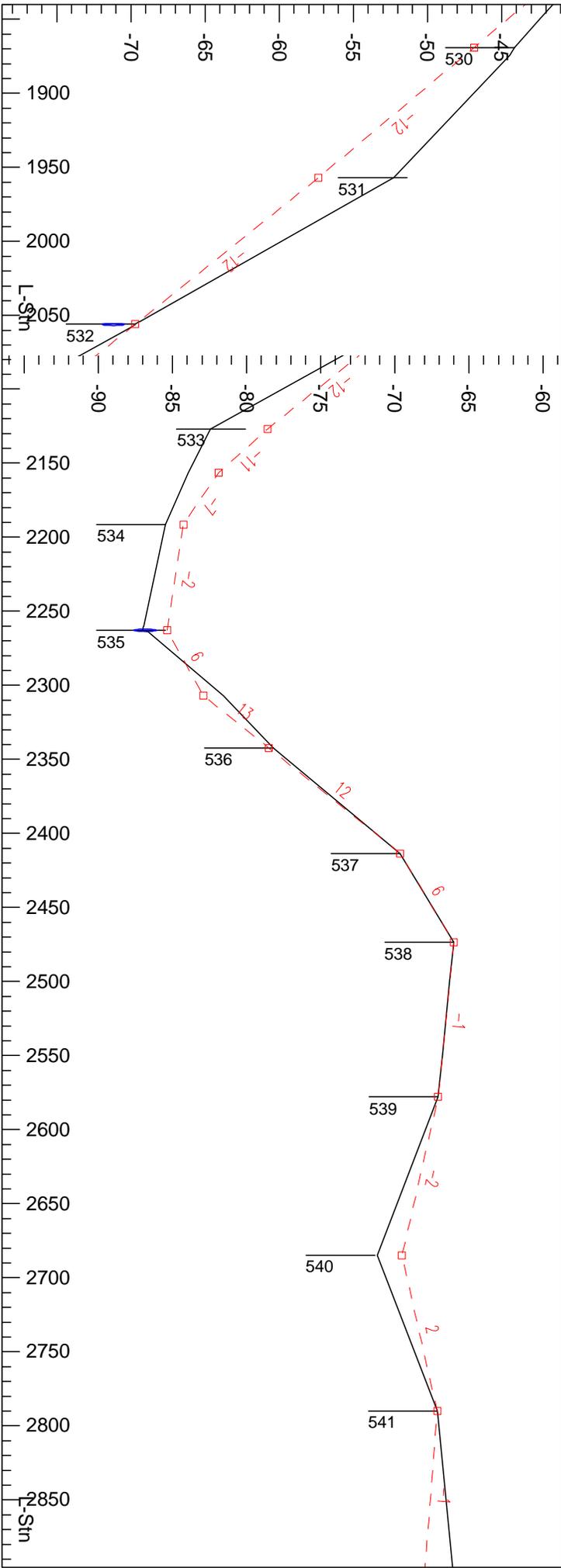
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Board O' Feet Timber Sale
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 South Puget Sound Region

Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

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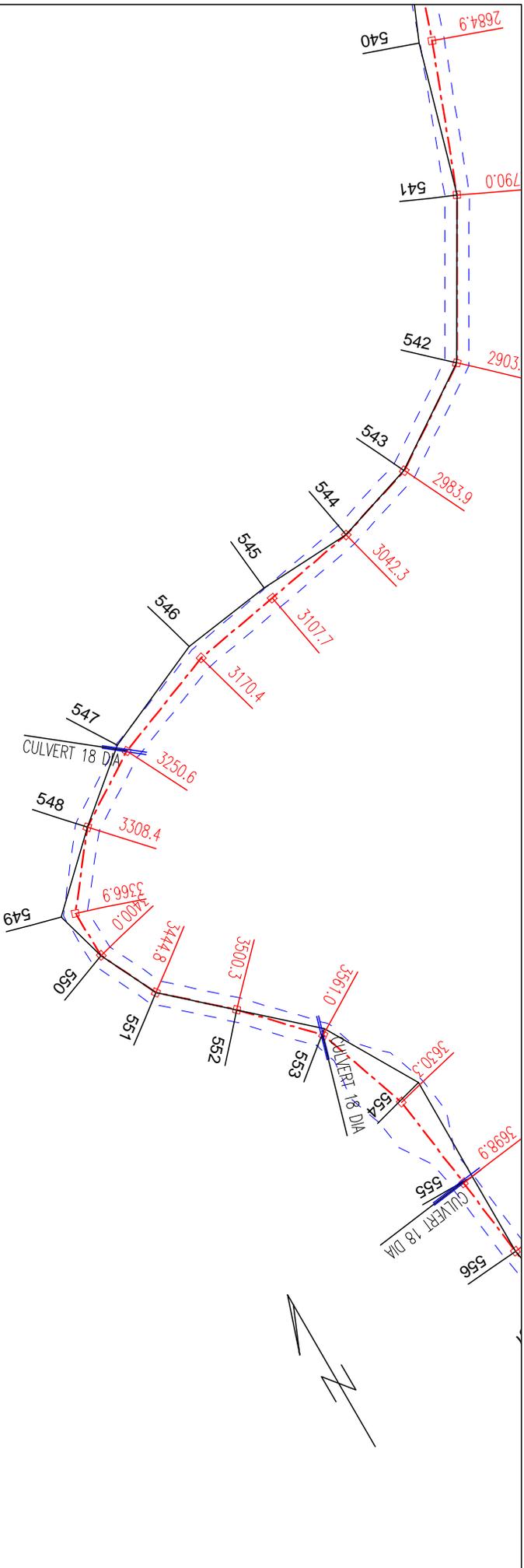
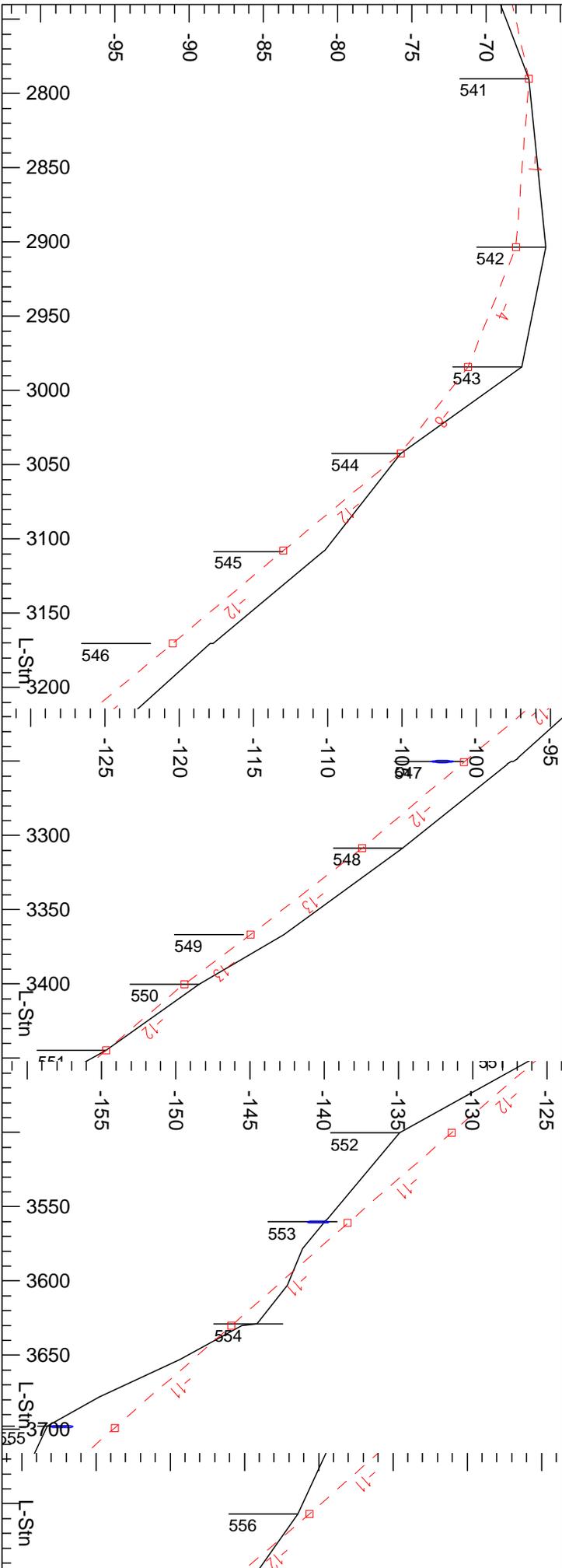


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Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horiz Scale 1:1200

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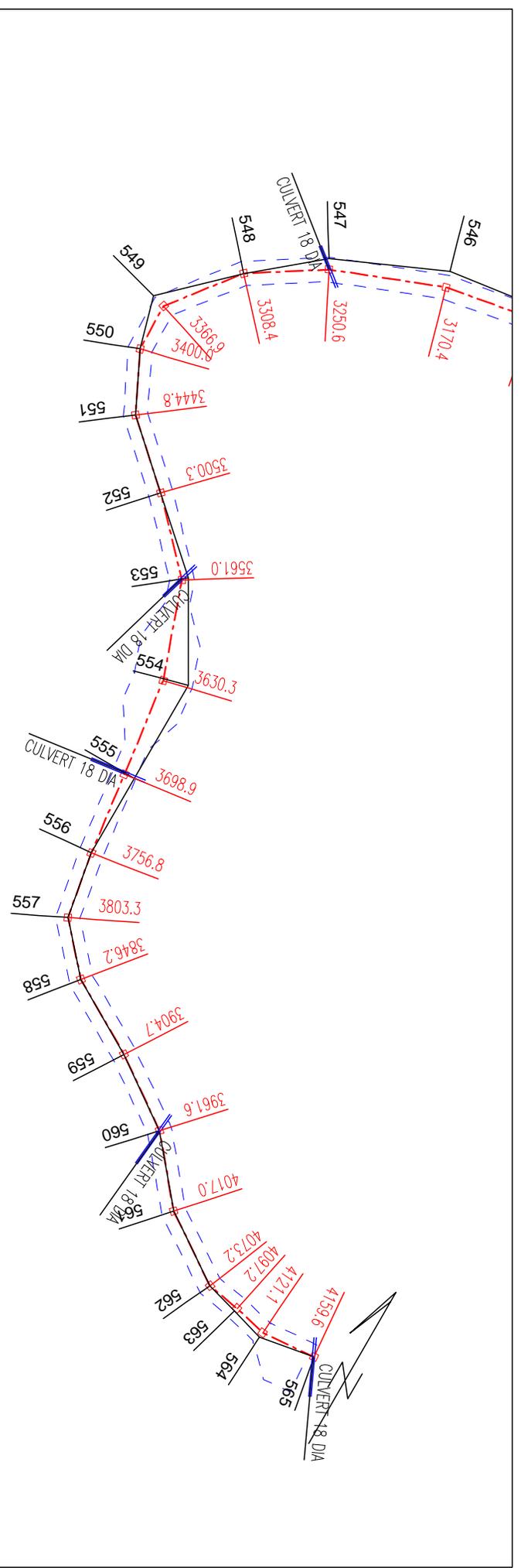
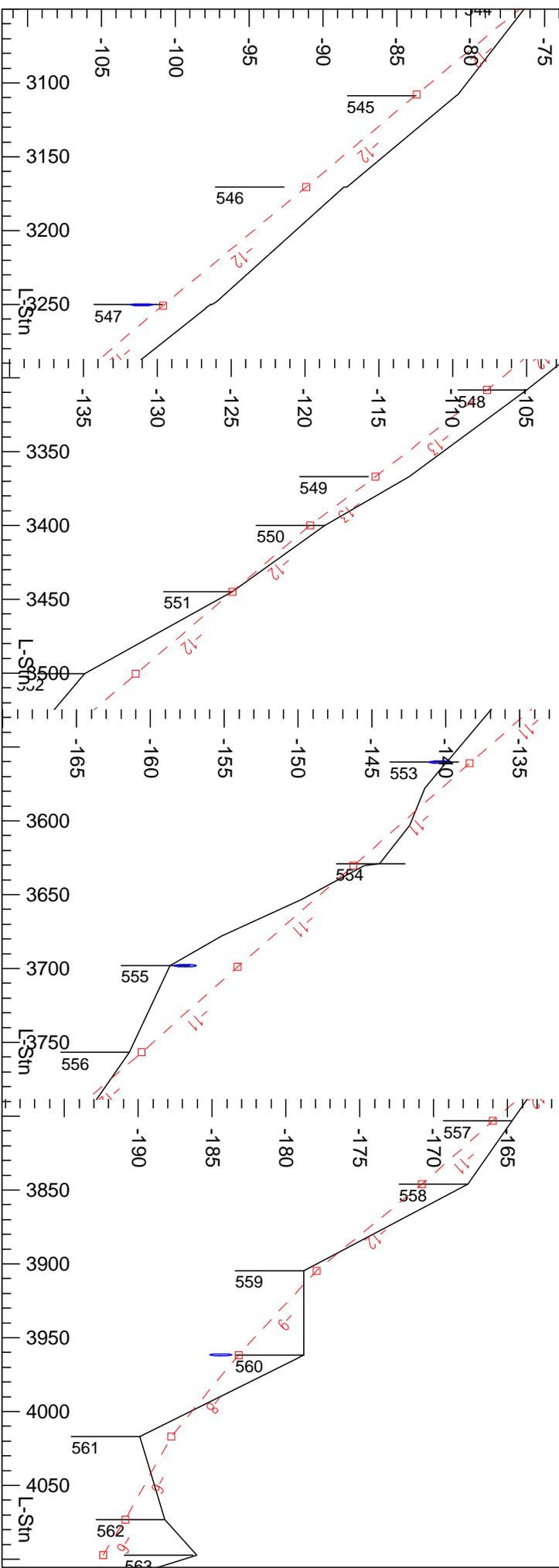


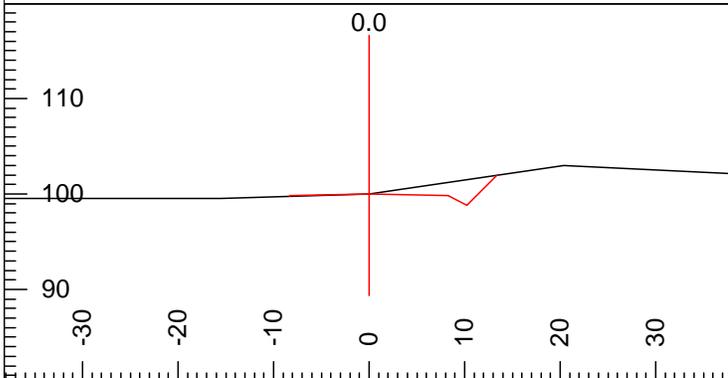
Board O' Feet Timber Sale
 E-6890 Extension
 Contract #: 30-91856

Washington State Department of Natural Resources
 South Puget Sound Region

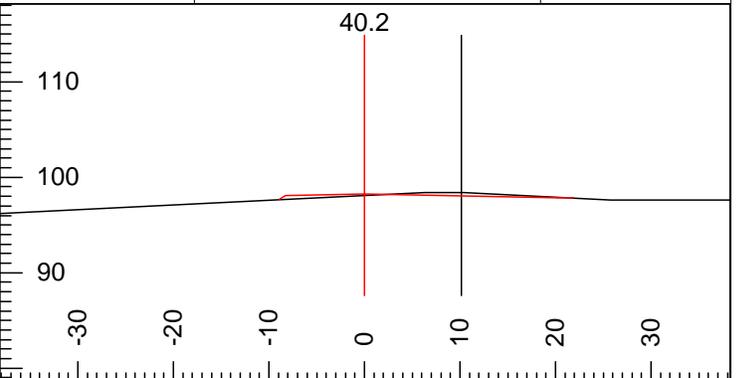
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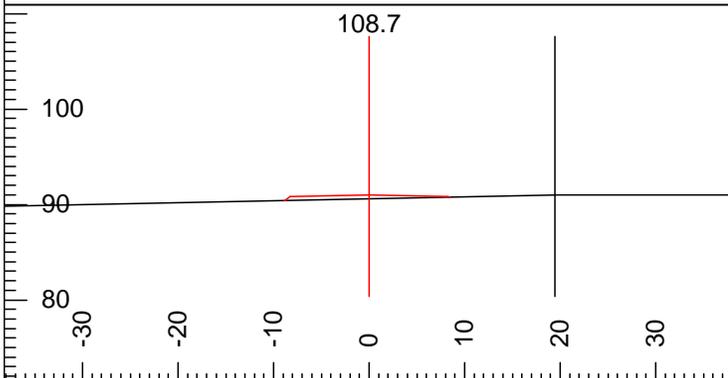




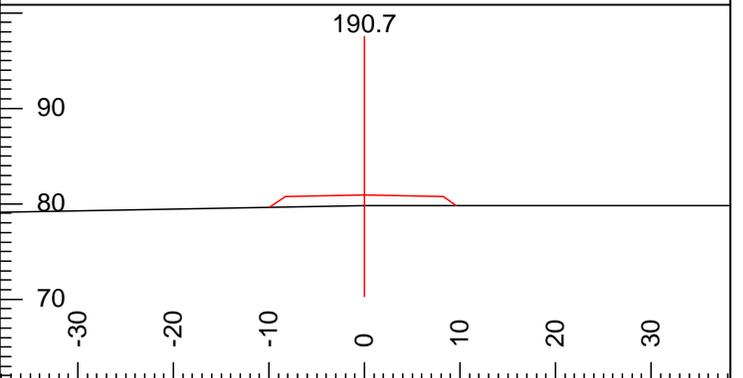
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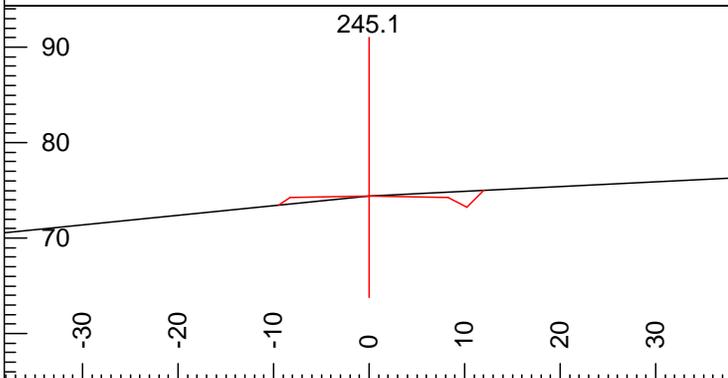
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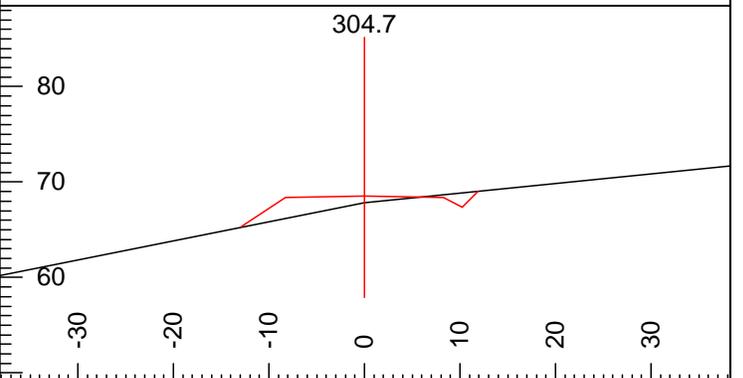
P-Stn: 114.4 V.Offset: 0.0 Cut Dp: -0.4
 L-Stn: 108.7 H. Offset: -19.7 Index: 503



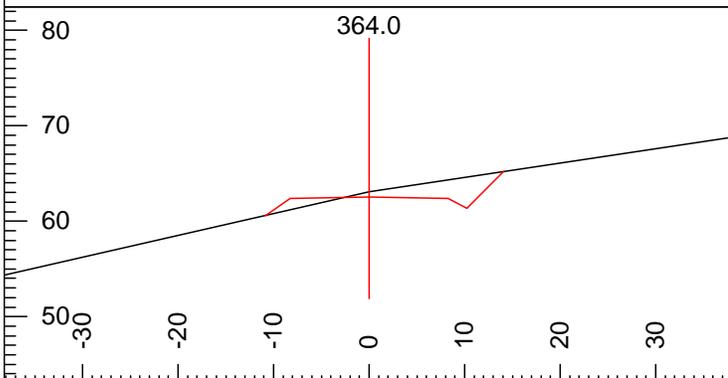
P-Stn: 199.8 V.Offset: 1.1 Cut Dp: -1.1
 L-Stn: 190.7 H. Offset: 0.0 Index: 504



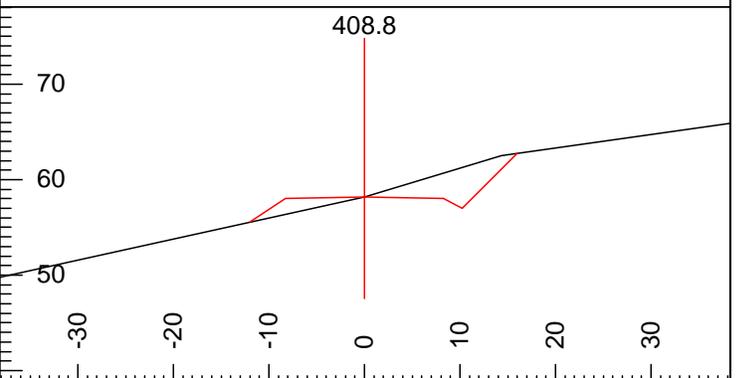
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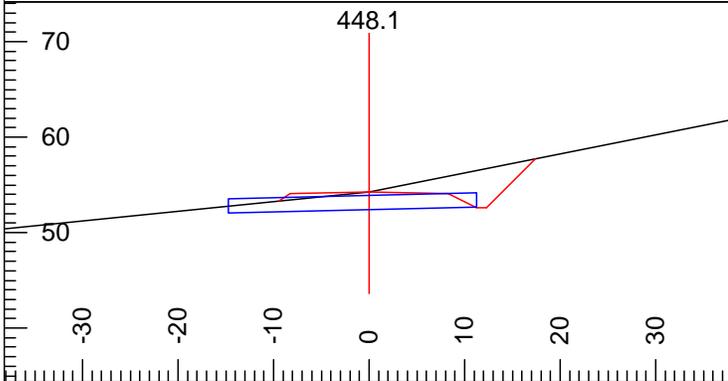
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 L-Stn: 304.7 H. Offset: 0.0 Index: 506



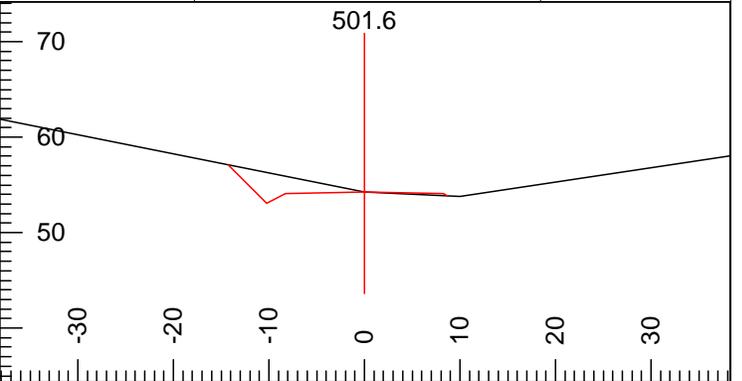
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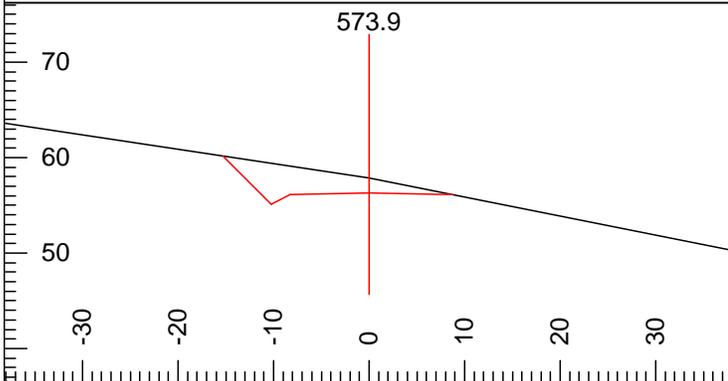
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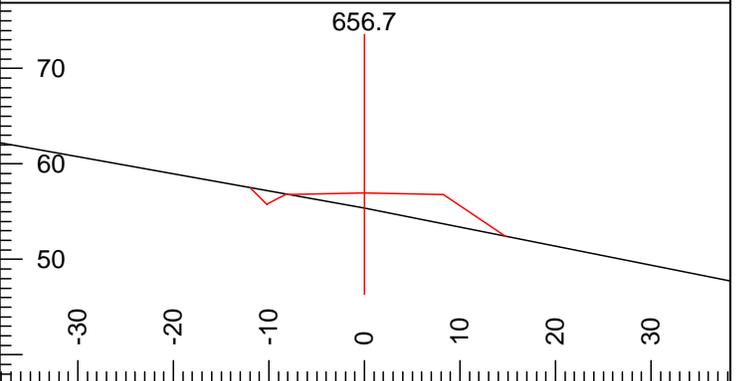
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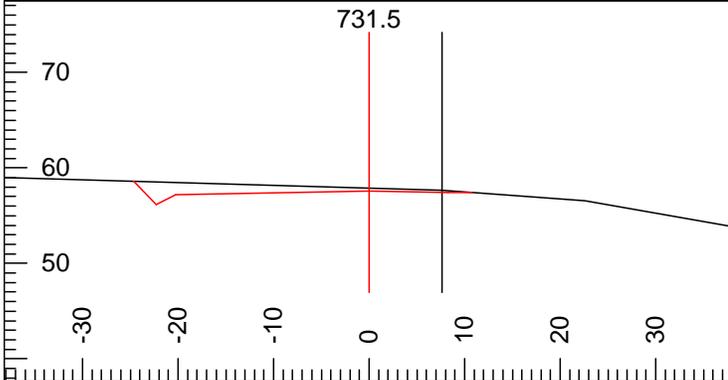
P-Stn: 510.7 V.Offset: 0.0 Cut Dp: 0.0
L-Stn: 501.6 H. Offset: 0.0 Index: 510



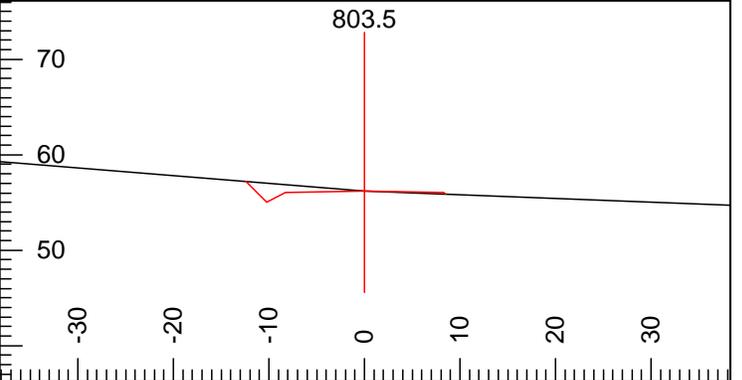
P-Stn: 583.0 V.Offset: -1.6 Cut Dp: 1.6
L-Stn: 573.9 H. Offset: 0.0 Index: 511



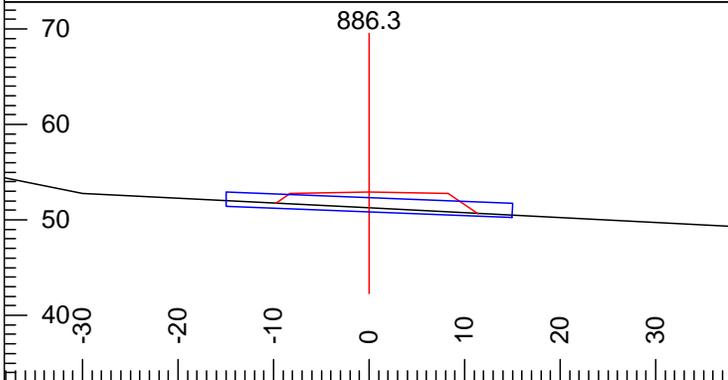
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L-Stn: 656.7 H. Offset: 0.0 Index: 512



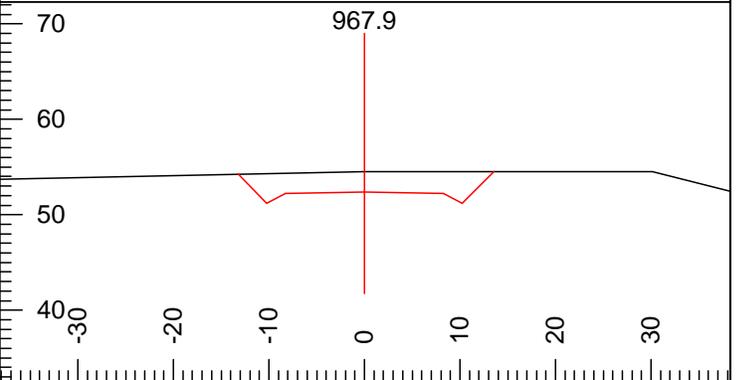
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L-Stn: 731.5 H. Offset: -7.7 Index: 513



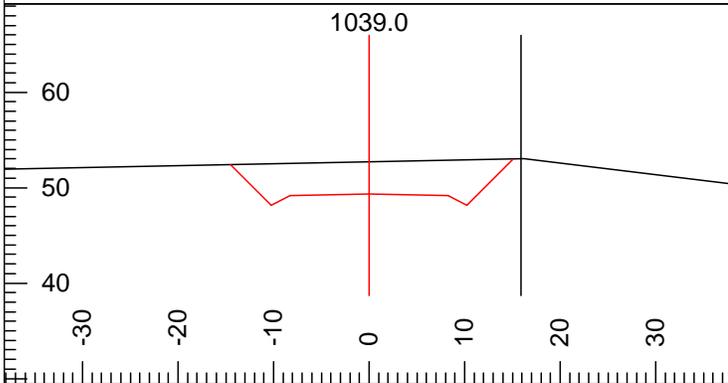
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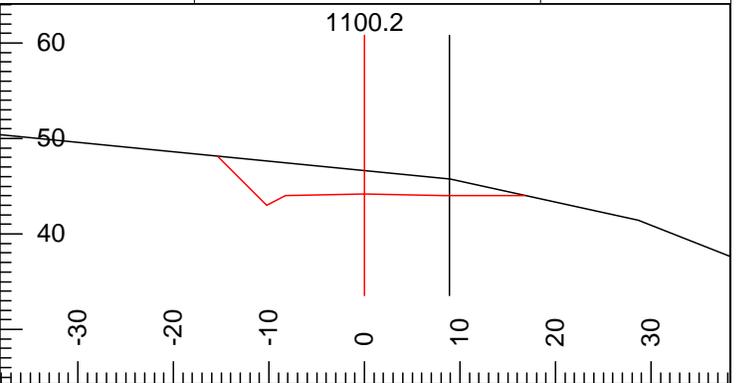
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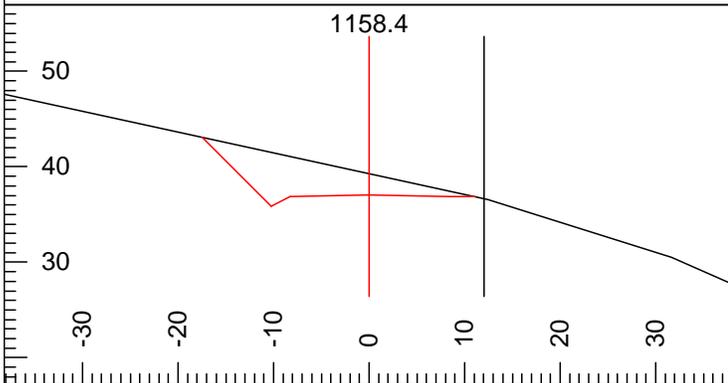
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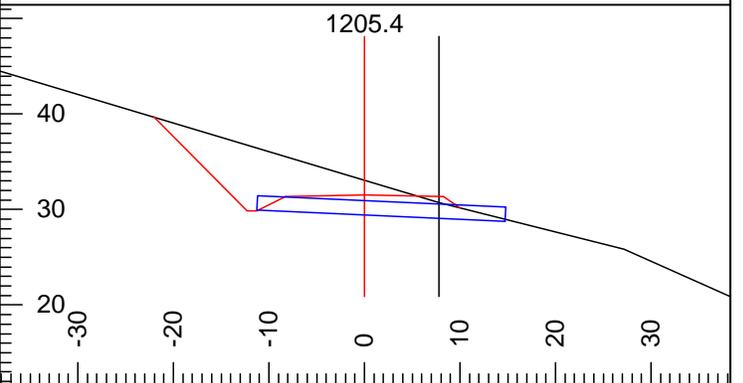
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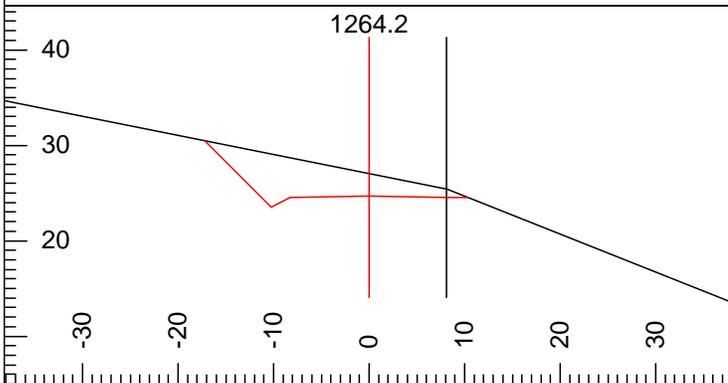
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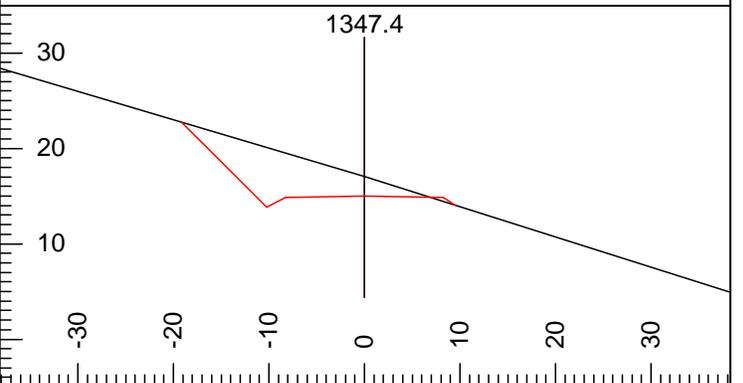
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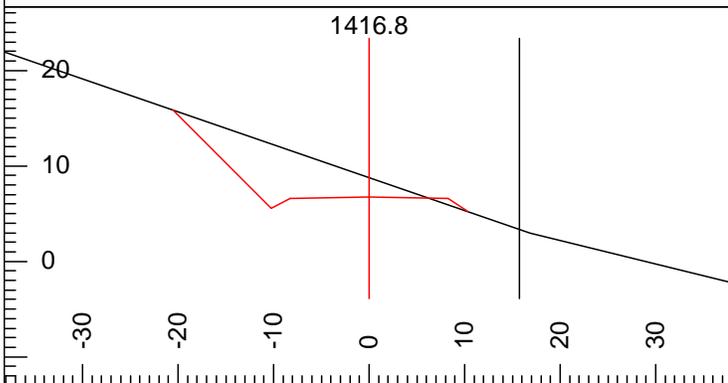
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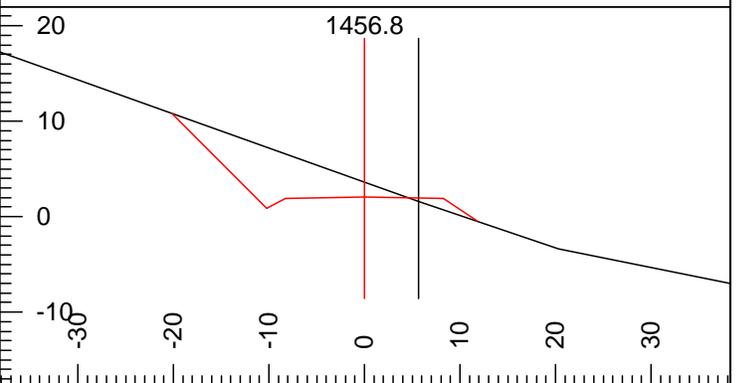
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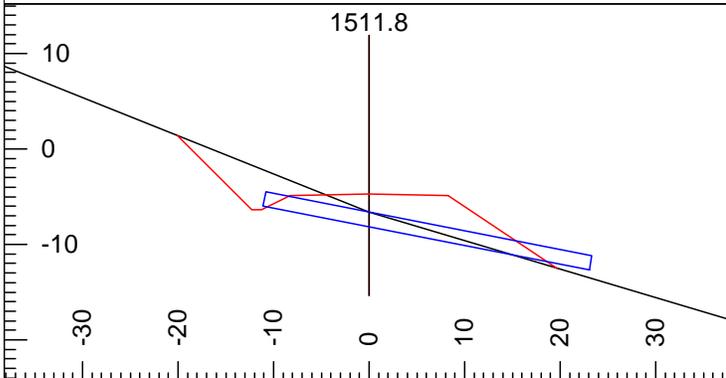
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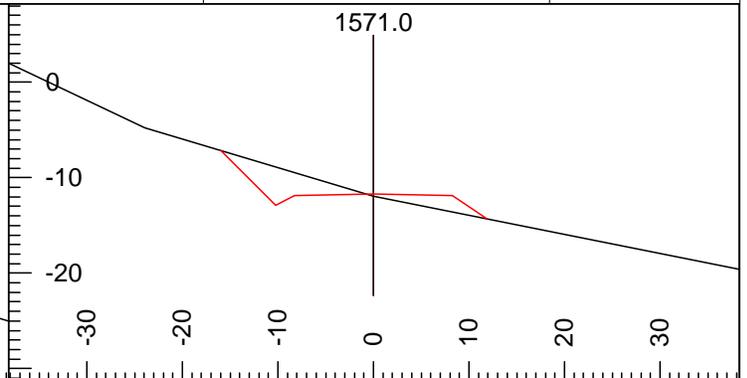
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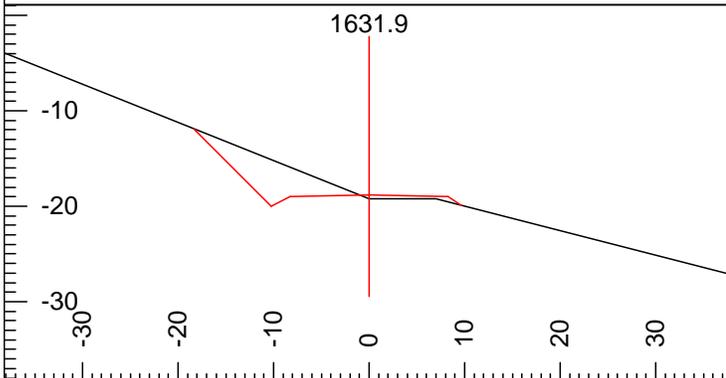
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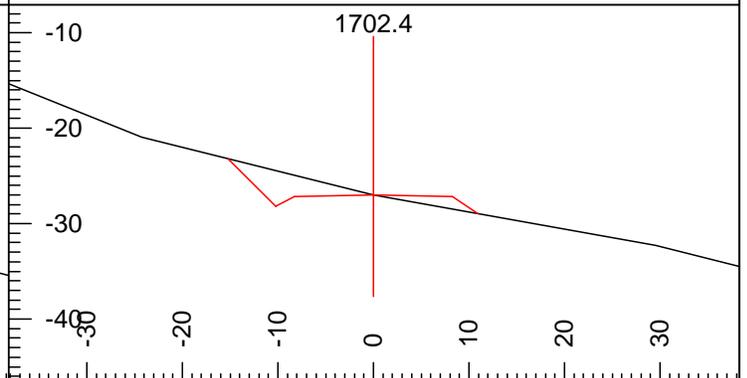
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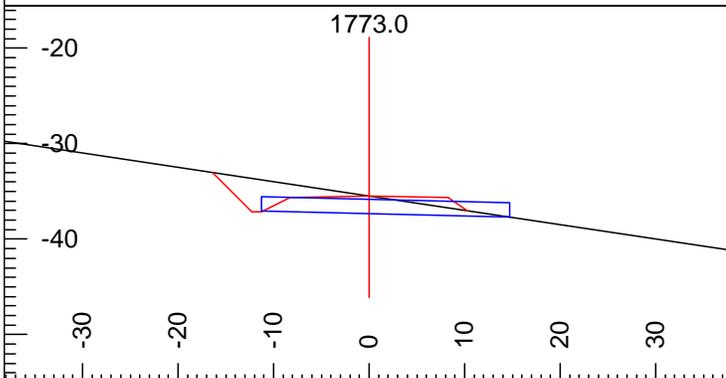
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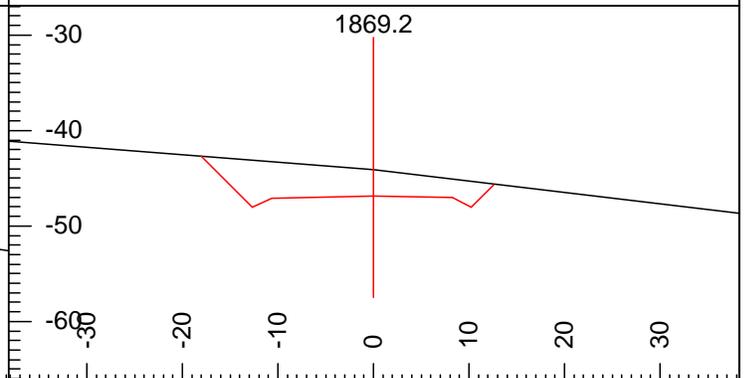
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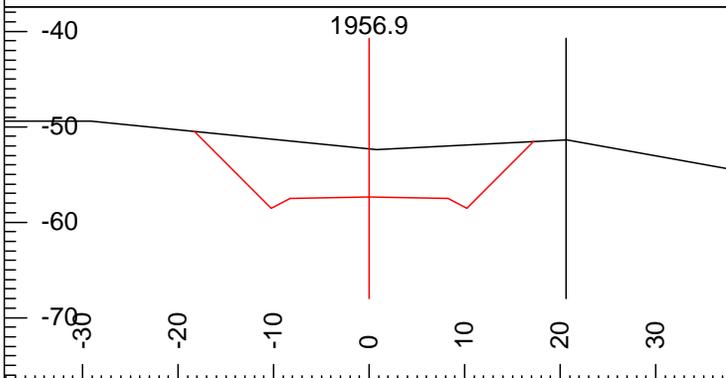
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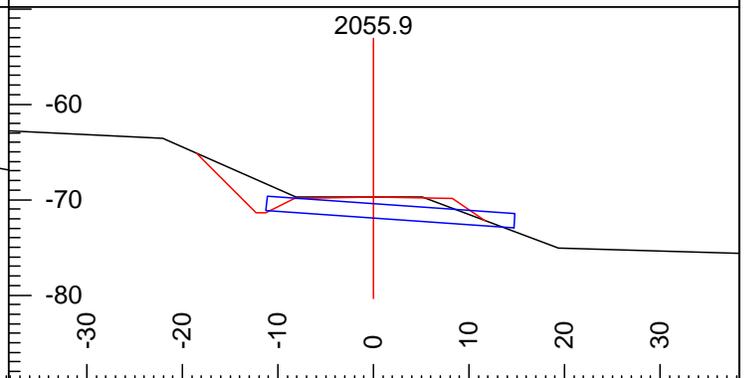
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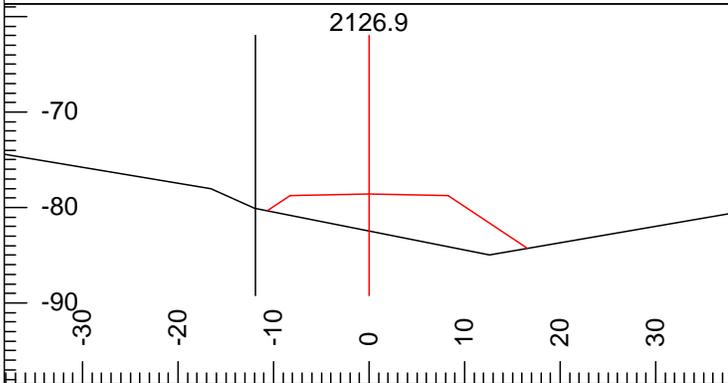
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 L-Stn: 1869.2 H. Offset: 0.0 Index: 530



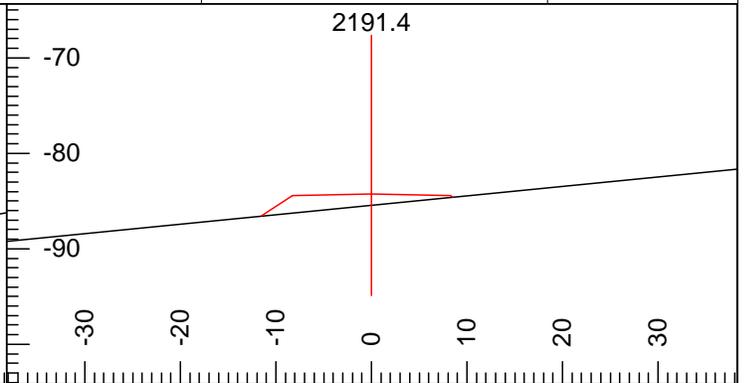
P-Stn: 1992.9 V.Offset: -6.0 Cut Dp: 5.1
 L-Stn: 1956.9 H. Offset: -20.7 Index: 531



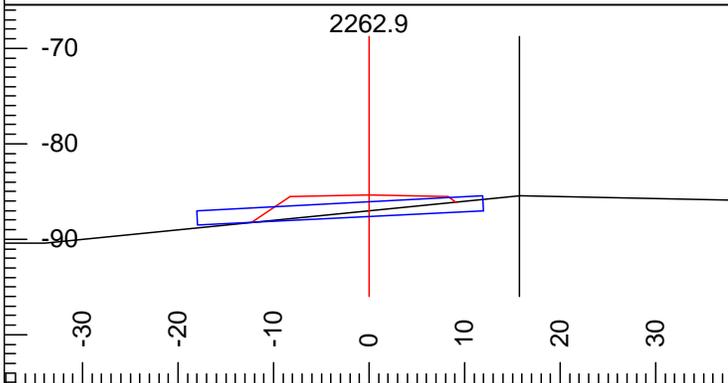
P-Stn: 2094.8 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 2055.9 H. Offset: 0.0 Index: 532



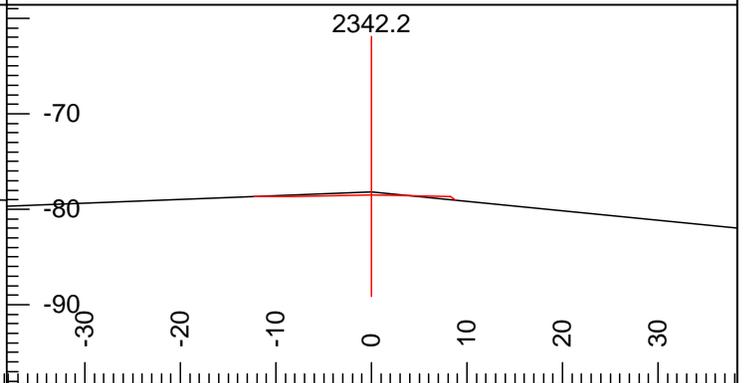
P-Stn: 2168.7 V.Offset: 1.5 Cut Dp: -3.9
 L-Stn: 2126.9 H. Offset: 11.9 Index: 533



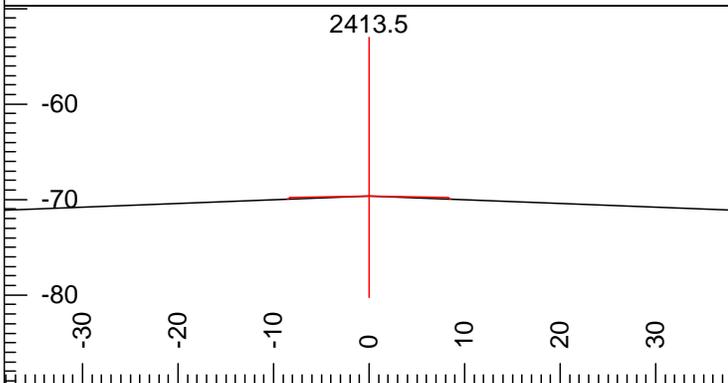
P-Stn: 2236.0 V.Offset: 1.2 Cut Dp: -1.2
 L-Stn: 2191.4 H. Offset: 0.0 Index: 534



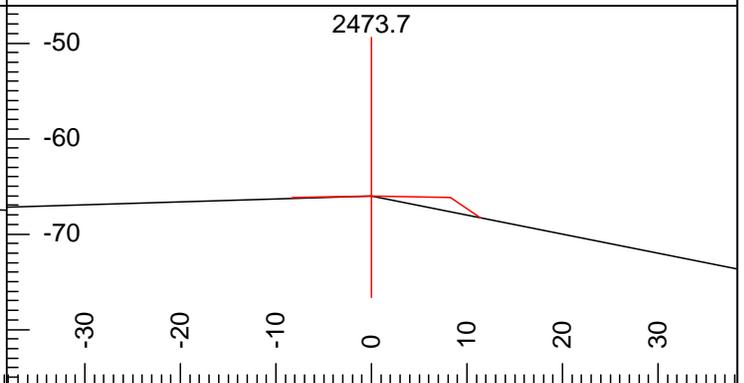
P-Stn: 2308.8 V.Offset: 0.1 Cut Dp: -1.7
 L-Stn: 2262.9 H. Offset: -15.8 Index: 535



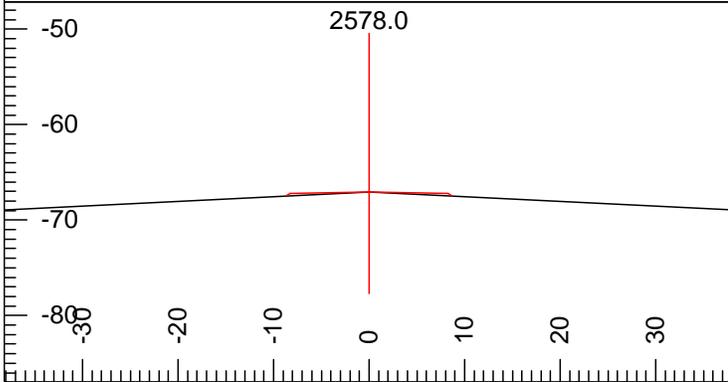
P-Stn: 2389.5 V.Offset: -0.3 Cut Dp: 0.3
 L-Stn: 2342.2 H. Offset: 0.0 Index: 536



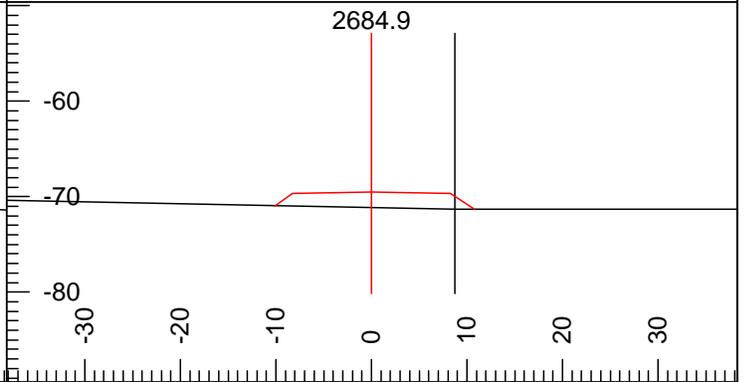
P-Stn: 2460.7 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 2413.5 H. Offset: 0.0 Index: 537



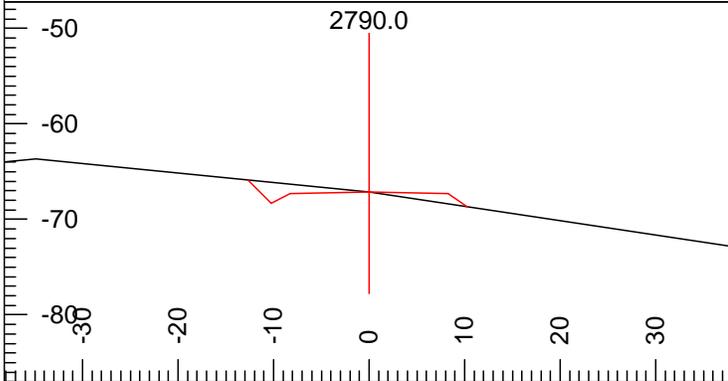
P-Stn: 2520.9 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 2473.7 H. Offset: 0.0 Index: 538



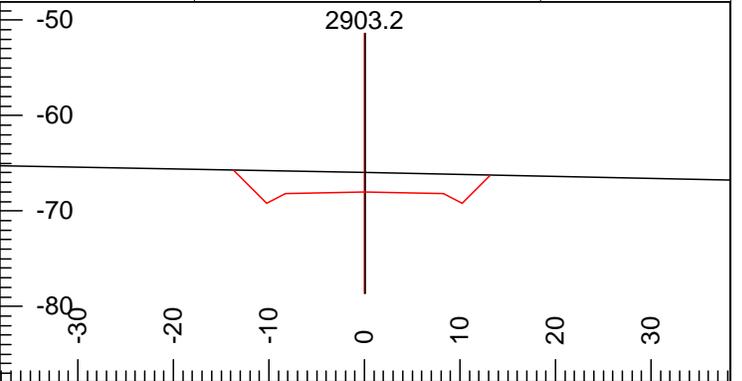
P-Stn: 2625.2 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 2578.0 H. Offset: 0.0 Index: 539



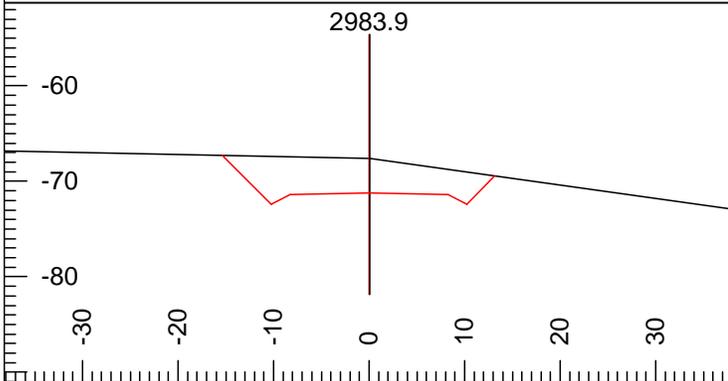
P-Stn: 2732.3 V.Offset: 1.8 Cut Dp: -1.7
 L-Stn: 2684.9 H. Offset: -8.8 Index: 540



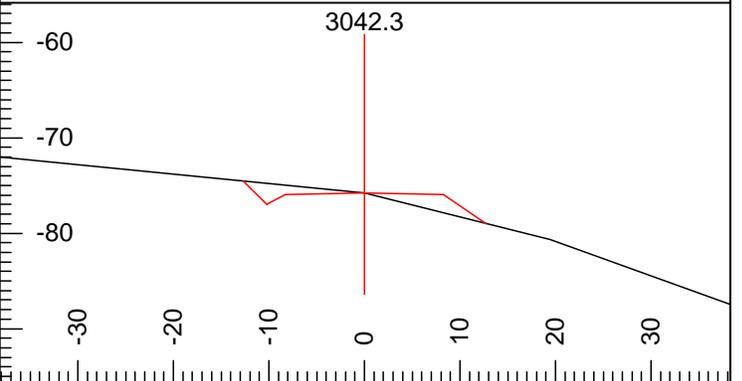
P-Stn: 2837.7 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 2790.0 H. Offset: 0.0 Index: 541



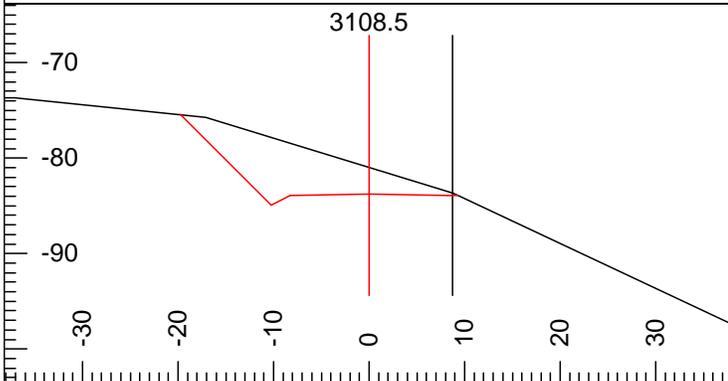
P-Stn: 2950.9 V.Offset: -2.0 Cut Dp: 2.0
 L-Stn: 2903.2 H. Offset: 0.0 Index: 542



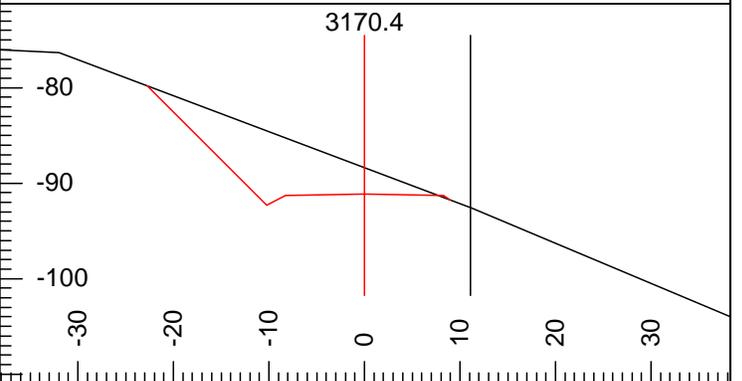
P-Stn: 3031.5 V.Offset: -3.6 Cut Dp: 3.6
 L-Stn: 2983.9 H. Offset: -0.1 Index: 543



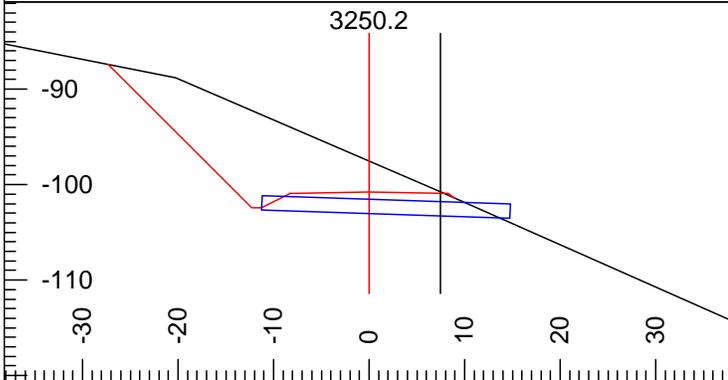
P-Stn: 3089.9 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 3042.3 H. Offset: 0.0 Index: 544



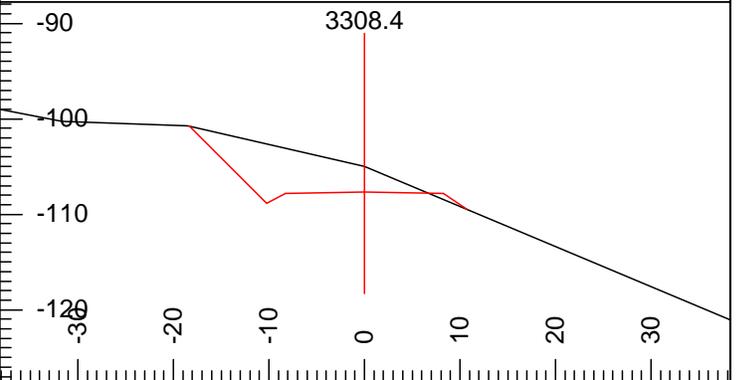
P-Stn: 3155.9 V.Offset: -0.1 Cut Dp: 2.8
 L-Stn: 3108.5 H. Offset: -8.8 Index: 545



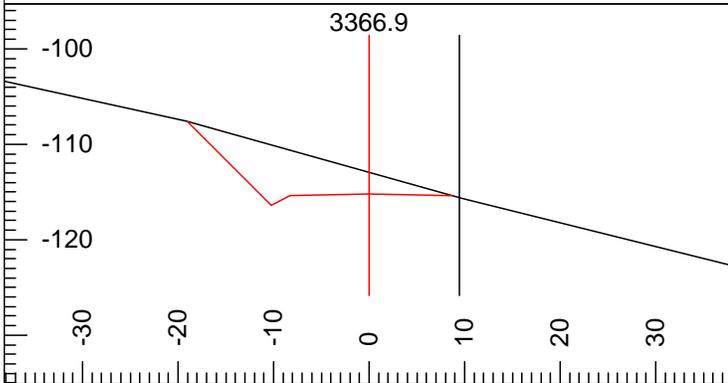
P-Stn: 3219.7 V.Offset: 1.5 Cut Dp: 2.7
 L-Stn: 3170.4 H. Offset: -11.2 Index: 546



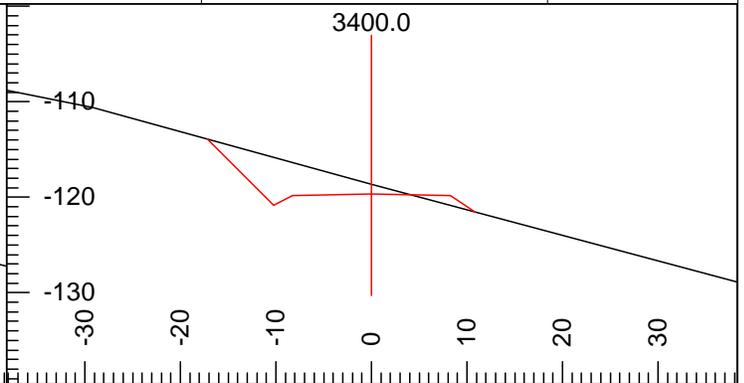
P-Stn: 3302.0 V.Offset: 0.1 Cut Dp: 3.3
 L-Stn: 3250.2 H. Offset: -7.6 Index: 547



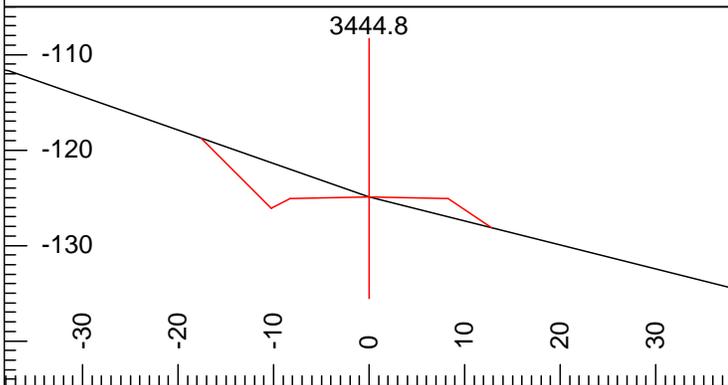
P-Stn: 3360.7 V.Offset: -2.7 Cut Dp: 2.7
 L-Stn: 3308.4 H. Offset: 0.0 Index: 548



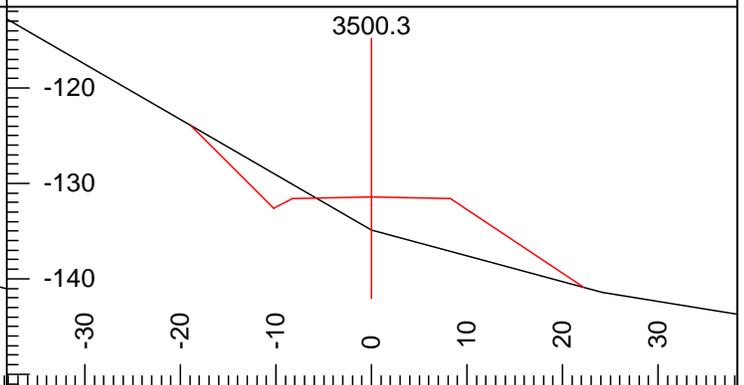
P-Stn: 3423.7 V.Offset: 0.5 Cut Dp: 2.3
 L-Stn: 3366.9 H. Offset: -9.8 Index: 549



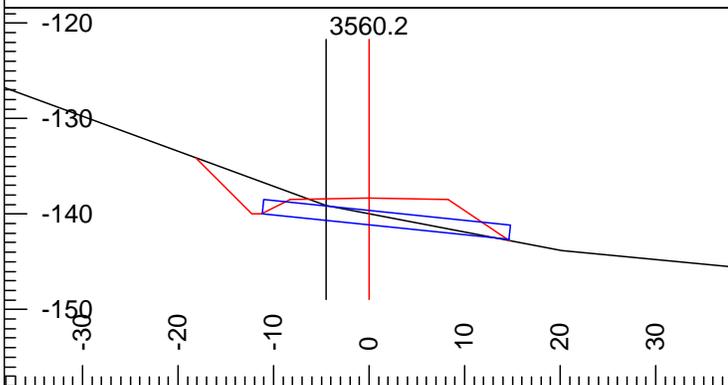
P-Stn: 3460.8 V.Offset: -1.0 Cut Dp: 1.0
 L-Stn: 3400.0 H. Offset: 0.0 Index: 550



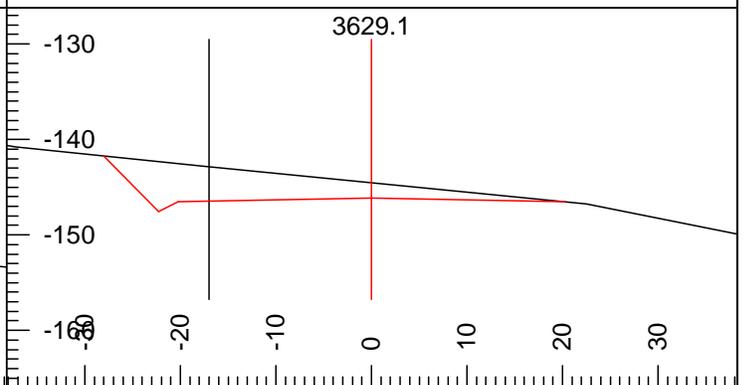
P-Stn: 3505.6 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 3444.8 H. Offset: 0.0 Index: 551



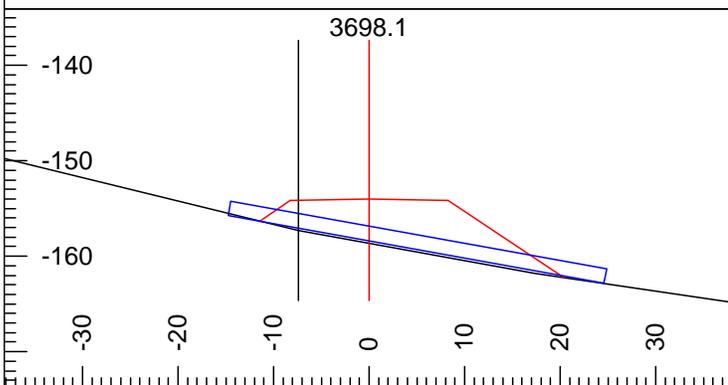
P-Stn: 3561.1 V.Offset: 3.5 Cut Dp: -3.5
 L-Stn: 3500.3 H. Offset: 0.0 Index: 552



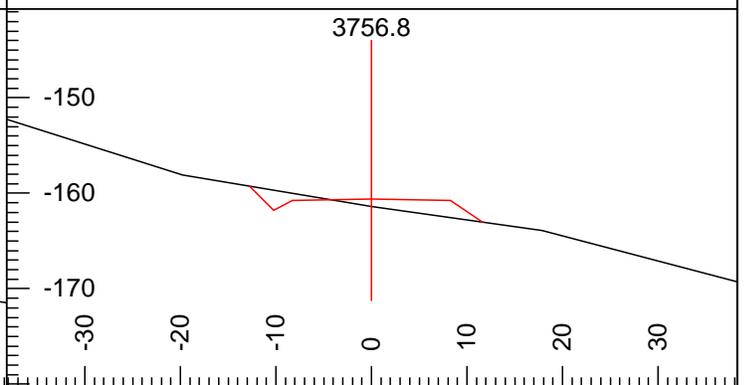
P-Stn: 3621.5 V.Offset: 0.8 Cut Dp: -1.7
 L-Stn: 3560.2 H. Offset: 4.5 Index: 553



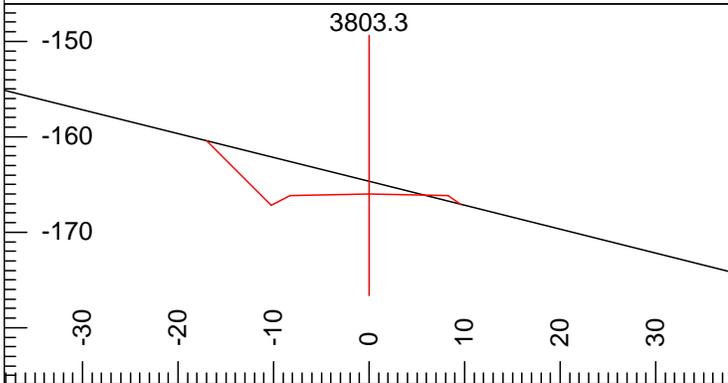
P-Stn: 3694.4 V.Offset: -3.3 Cut Dp: 1.6
 L-Stn: 3629.1 H. Offset: 17.3 Index: 554



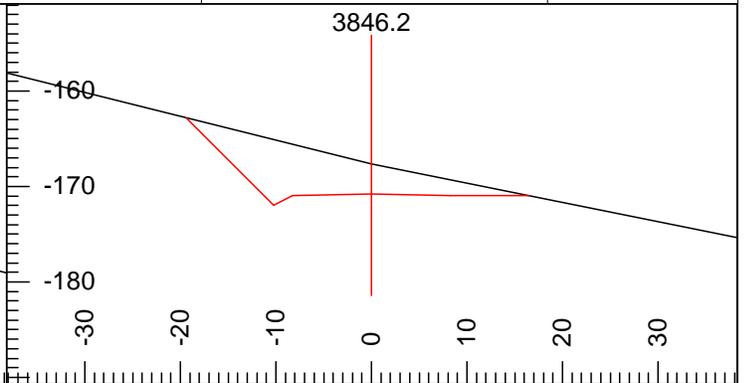
P-Stn: 3767.2 V.Offset: 3.3 Cut Dp: -4.7
 L-Stn: 3698.1 H. Offset: 7.4 Index: 555



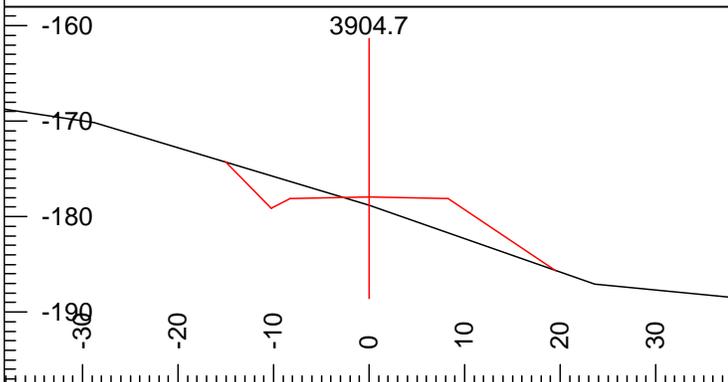
P-Stn: 3825.4 V.Offset: 0.8 Cut Dp: -0.8
 L-Stn: 3756.8 H. Offset: 0.0 Index: 556



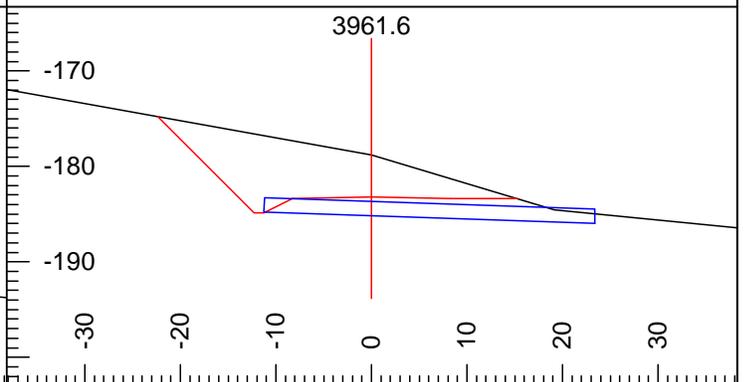
P-Stn: 3871.9 V.Offset: -1.3 Cut Dp: 1.3
 L-Stn: 3803.3 H. Offset: 0.0 Index: 557



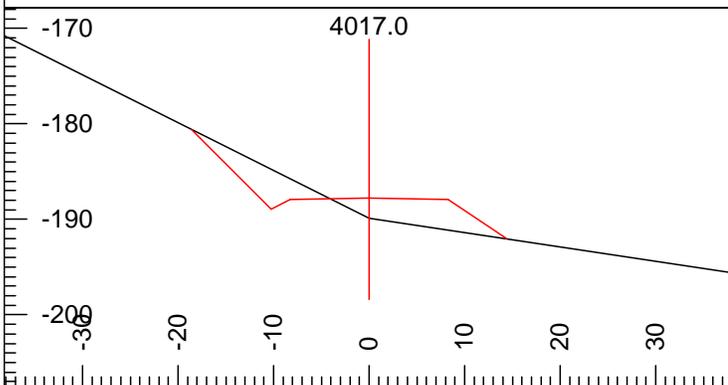
P-Stn: 3914.8 V.Offset: -3.1 Cut Dp: 3.1
 L-Stn: 3846.2 H. Offset: 0.0 Index: 558



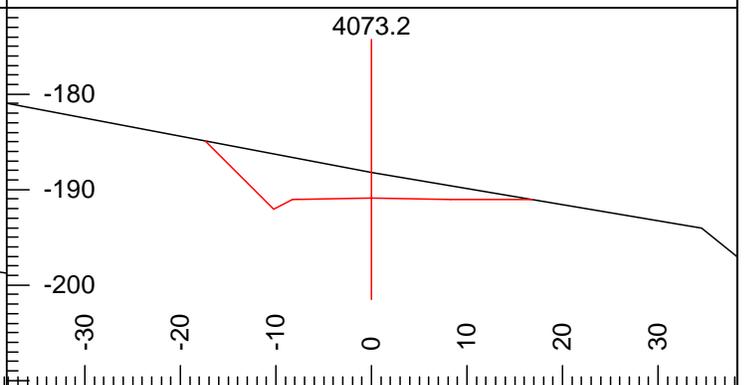
P-Stn: 3973.4 V.Offset: 0.9 Cut Dp: -0.9
 L-Stn: 3904.7 H. Offset: 0.0 Index: 559



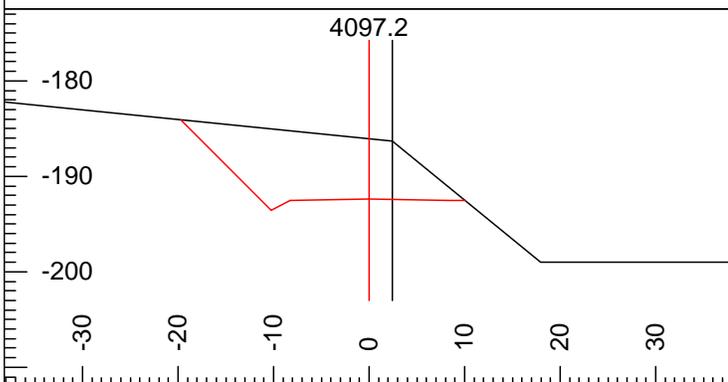
P-Stn: 4030.3 V.Offset: -4.4 Cut Dp: 4.4
 L-Stn: 3961.6 H. Offset: 0.0 Index: 560



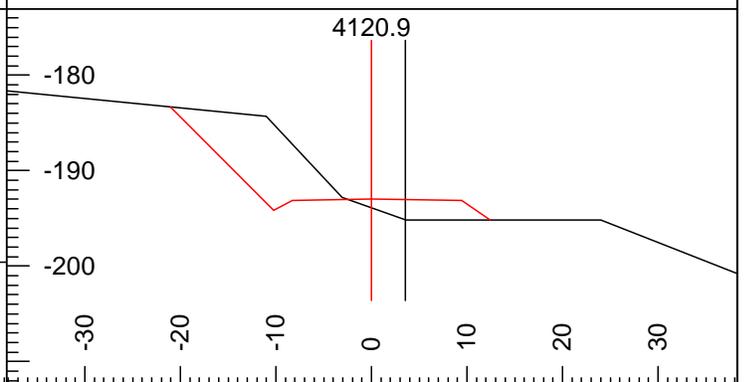
P-Stn: 4085.7 V.Offset: 2.1 Cut Dp: -2.1
 L-Stn: 4017.0 H. Offset: 0.0 Index: 561



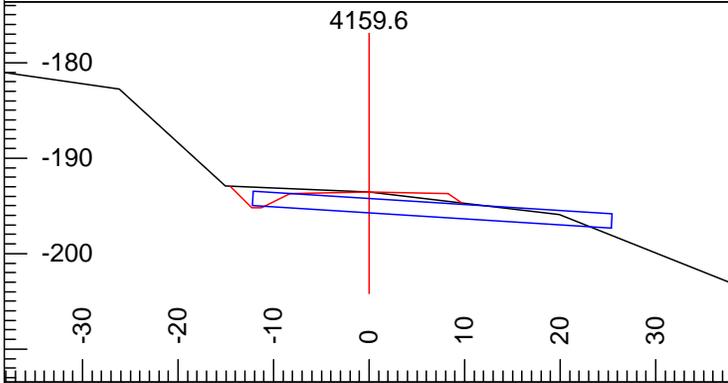
P-Stn: 4141.9 V.Offset: -2.7 Cut Dp: 2.7
 L-Stn: 4073.2 H. Offset: 0.0 Index: 562



P-Stn: 4165.7 V.Offset: -6.1 Cut Dp: 6.3
 L-Stn: 4097.2 H. Offset: -2.4 Index: 563



P-Stn: 4190.2 V.Offset: 2.2 Cut Dp: -0.9
 L-Stn: 4120.9 H. Offset: -3.6 Index: 564



P-Stn: 4229.5 V.Offset: 0.0 Cut Dp: 0.0

L-Stn: 4159.6 H. Offset: 0.0 Index: 565

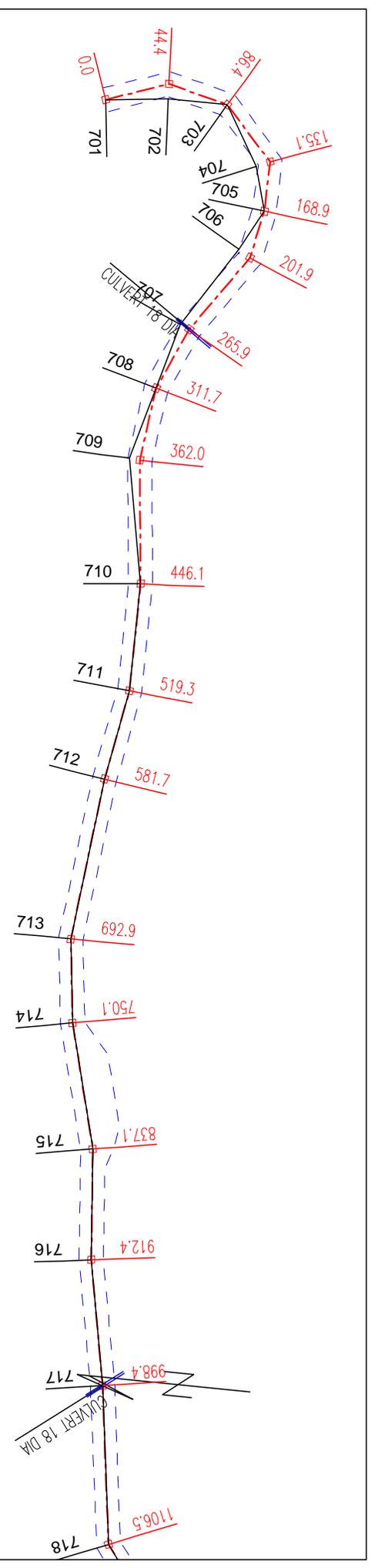
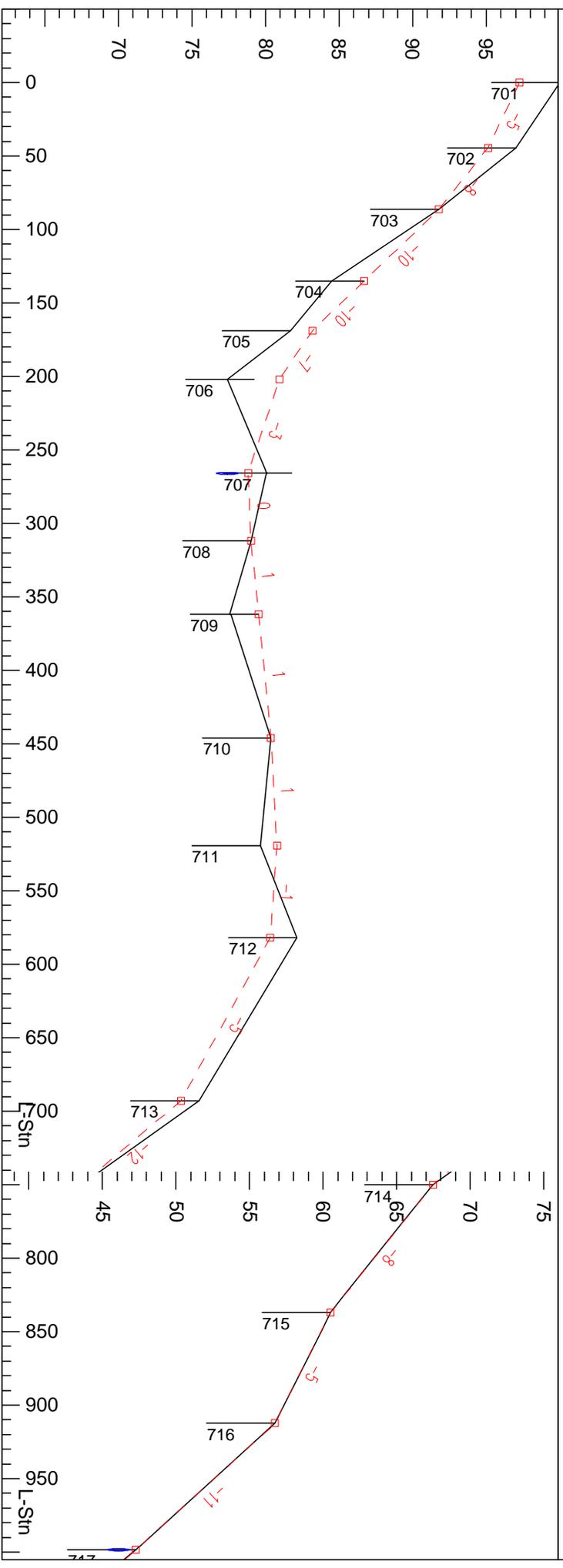
Board O' Feet Timber Sale
 E-6893
 Contract #: 30-91856

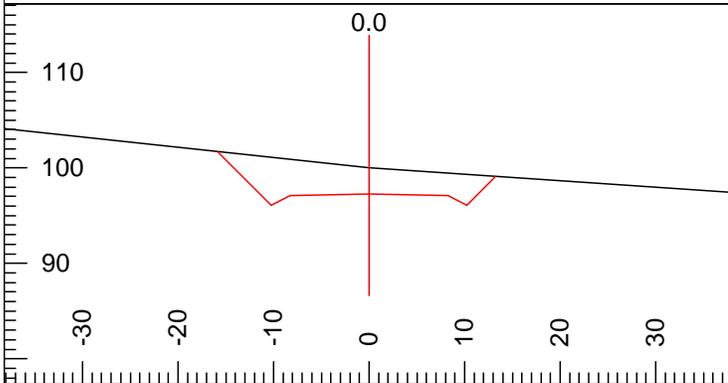
Washington State Department of Natural Resources
 South Puget Sound Region

Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

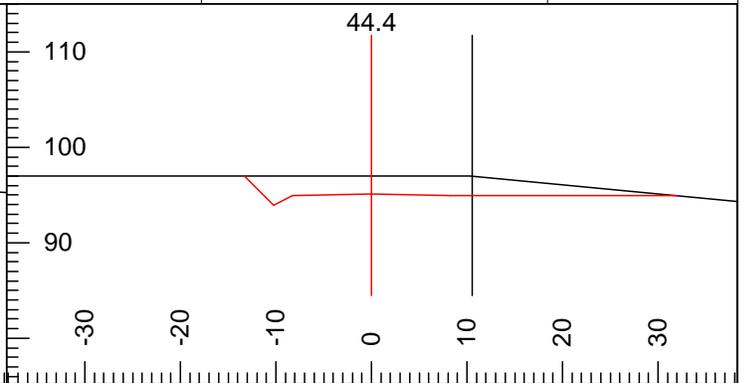
Engineer: J Gardner
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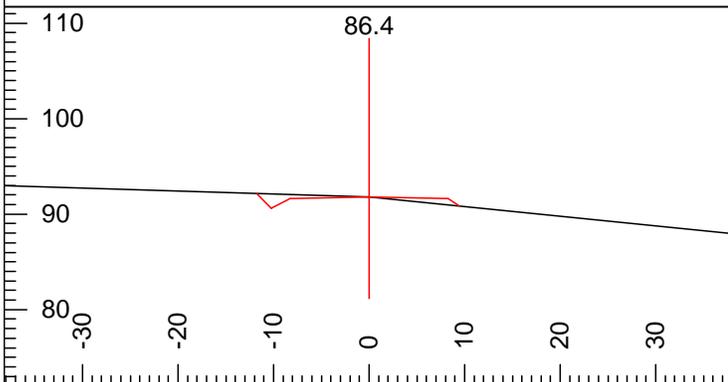




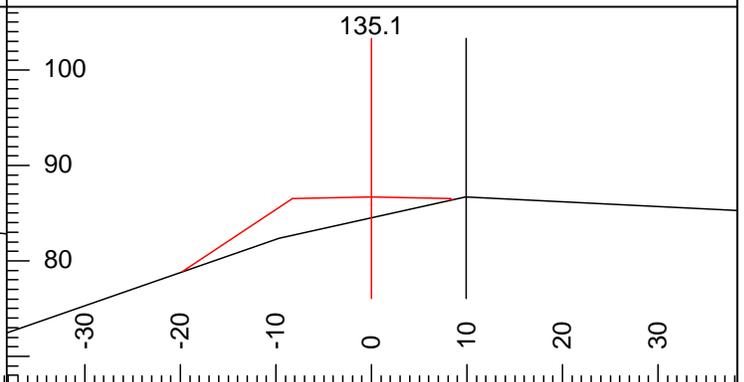
P-Stn: 0.0 V.Offset: -2.7 Cut Dp: 2.7
 L-Stn: 0.0 H. Offset: 0.0 Index: 701



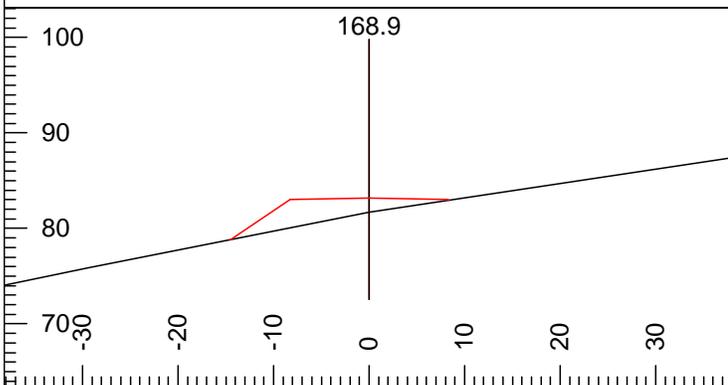
P-Stn: 42.7 V.Offset: -1.9 Cut Dp: 1.9
 L-Stn: 44.4 H. Offset: -9.9 Index: 702



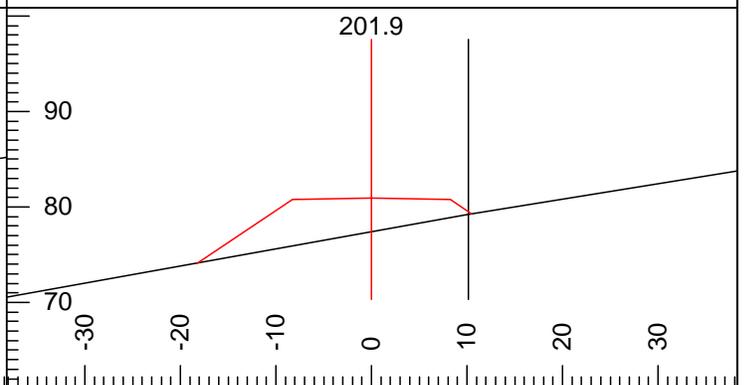
P-Stn: 82.9 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 86.4 H. Offset: 0.0 Index: 703



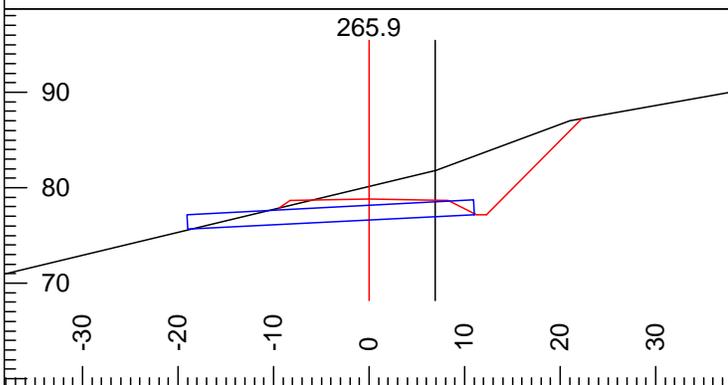
P-Stn: 129.3 V.Offset: 0.0 Cut Dp: -2.2
 L-Stn: 135.1 H. Offset: -9.9 Index: 704



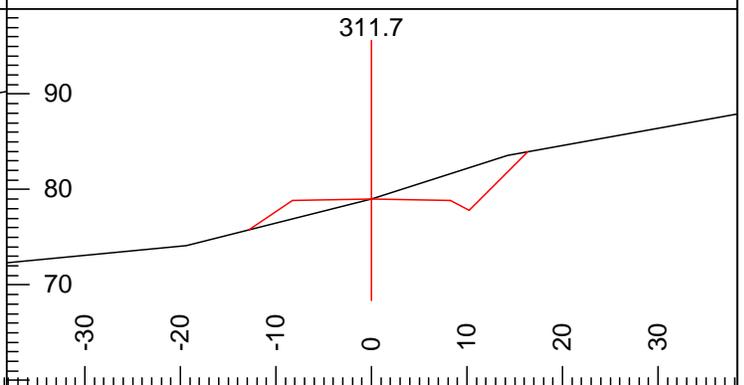
P-Stn: 160.4 V.Offset: 1.5 Cut Dp: -1.5
 L-Stn: 168.9 H. Offset: 0.0 Index: 705



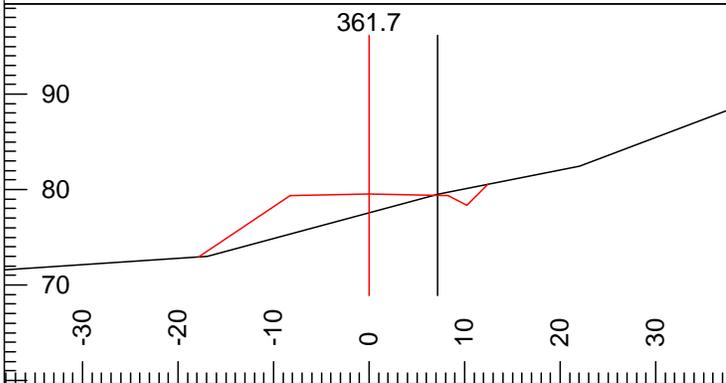
P-Stn: 191.7 V.Offset: 1.7 Cut Dp: -3.5
 L-Stn: 201.9 H. Offset: -9.5 Index: 706



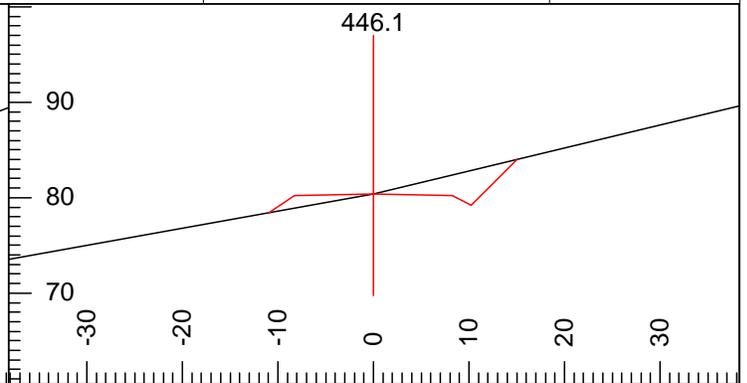
P-Stn: 256.3 V.Offset: -3.0 Cut Dp: 1.3
 L-Stn: 265.9 H. Offset: -7.0 Index: 707



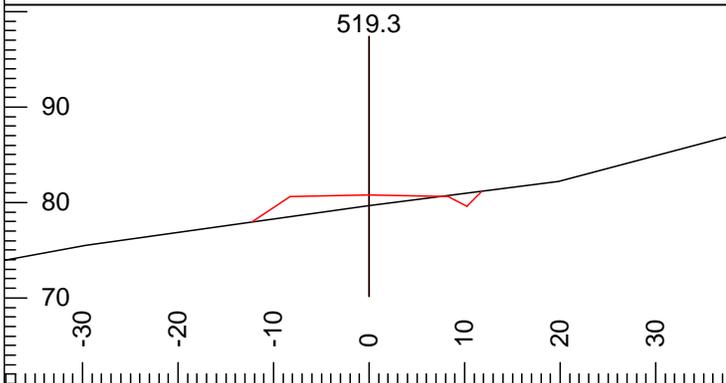
P-Stn: 302.6 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 311.7 H. Offset: 0.0 Index: 708



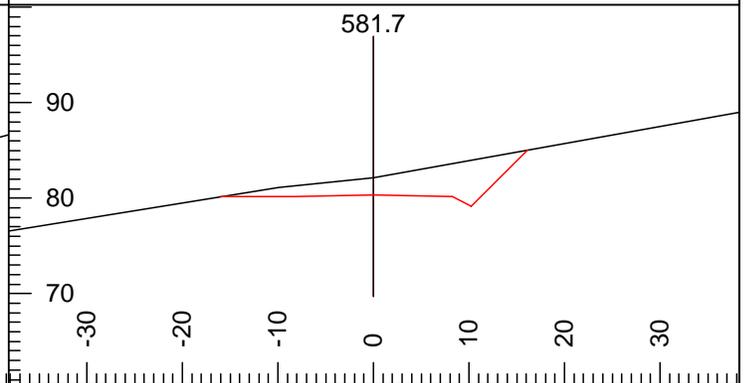
P-Stn: 353.7 V.Offset: 0.0 Cut Dp: -2.0
 L-Stn: 361.7 H. Offset: -7.3 Index: 709



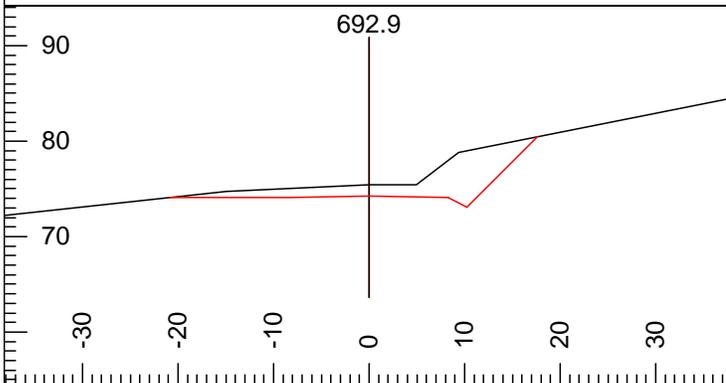
P-Stn: 439.4 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 446.1 H. Offset: 0.0 Index: 710



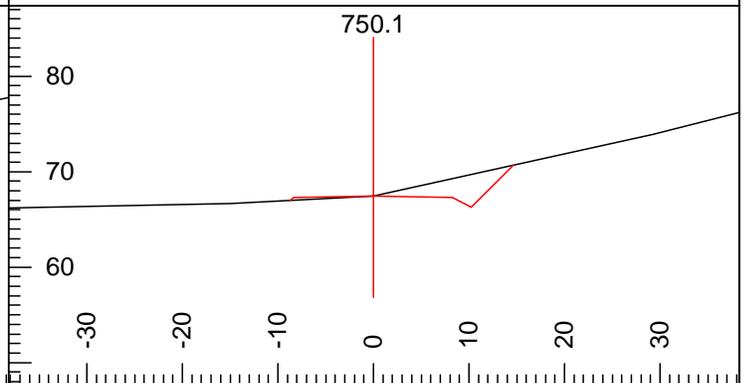
P-Stn: 512.7 V.Offset: 1.1 Cut Dp: -1.1
 L-Stn: 519.3 H. Offset: 0.0 Index: 711



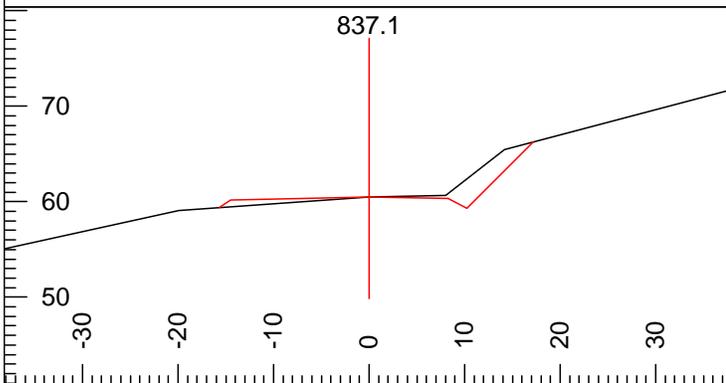
P-Stn: 575.1 V.Offset: -1.8 Cut Dp: 1.8
 L-Stn: 581.7 H. Offset: 0.0 Index: 712



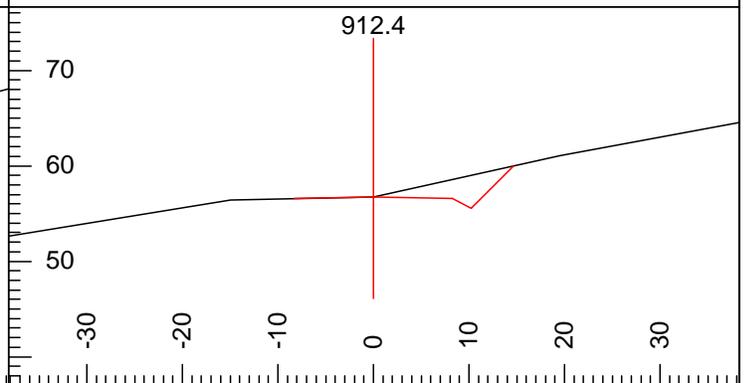
P-Stn: 686.3 V.Offset: -1.2 Cut Dp: 1.2
 L-Stn: 692.9 H. Offset: 0.0 Index: 713



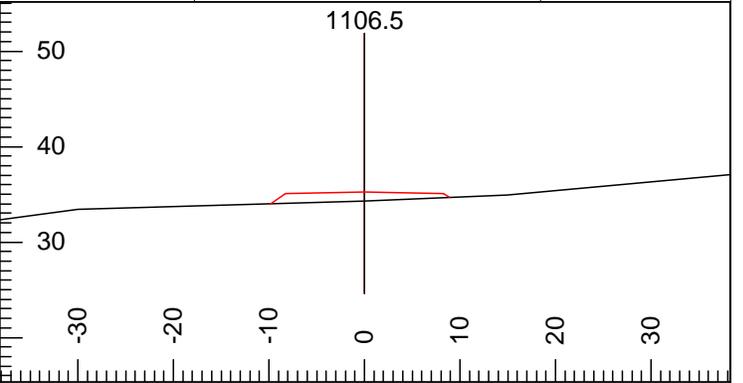
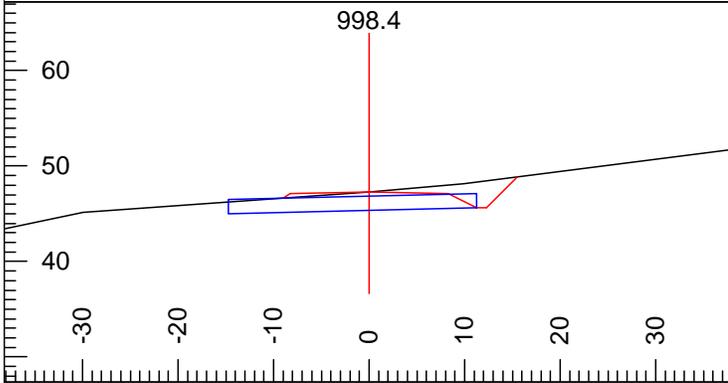
P-Stn: 743.5 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 750.1 H. Offset: 0.0 Index: 714



P-Stn: 830.5 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 837.1 H. Offset: 0.0 Index: 715

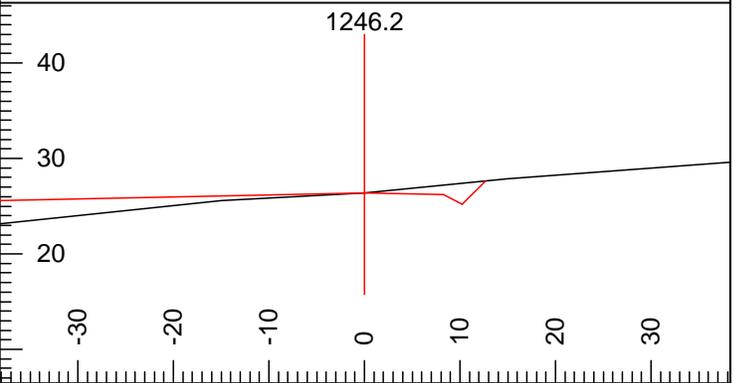
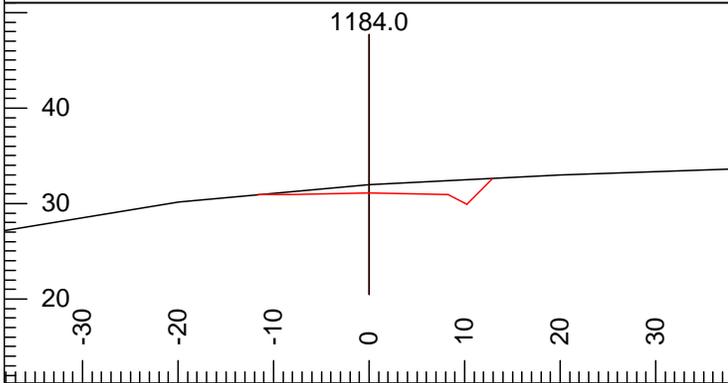


P-Stn: 905.8 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 912.4 H. Offset: 0.0 Index: 716



P-Stn: 991.7 V.Offset: 0.0 Cut Dp: 0.0
L-Stn: 998.4 H. Offset: 0.0 Index: 717

P-Stn: 1099.9 V.Offset: 0.9 Cut Dp: -0.9
L-Stn: 1106.5 H. Offset: 0.0 Index: 718



P-Stn: 1177.4 V.Offset: -0.9 Cut Dp: 0.9
L-Stn: 1184.0 H. Offset: 0.0 Index: 719

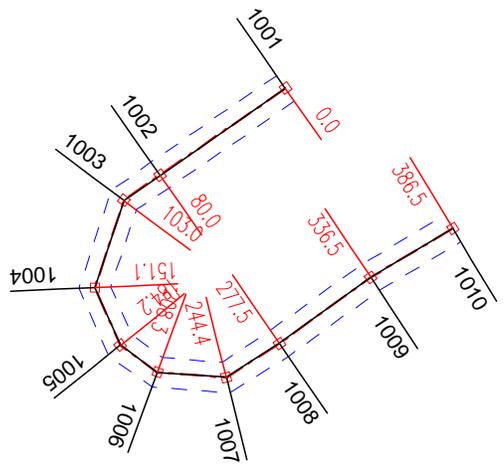
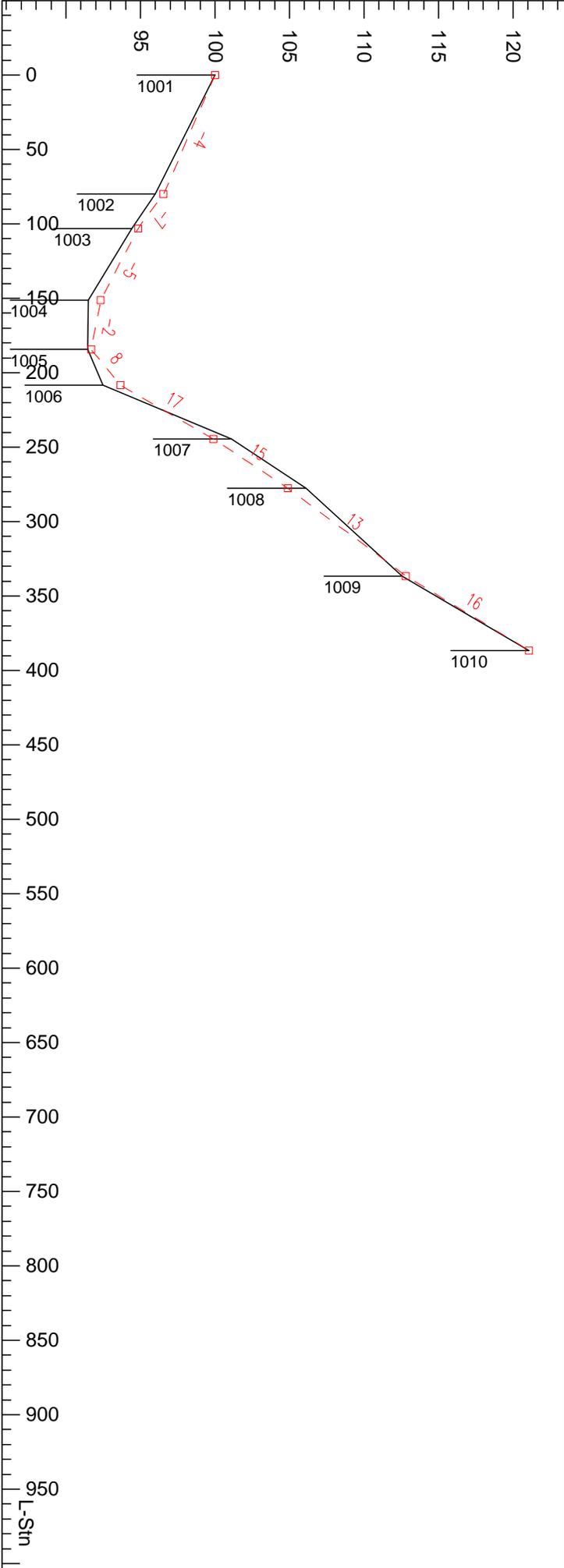
P-Stn: 1239.6 V.Offset: 0.0 Cut Dp: 0.0
L-Stn: 1246.2 H. Offset: 0.0 Index: 720

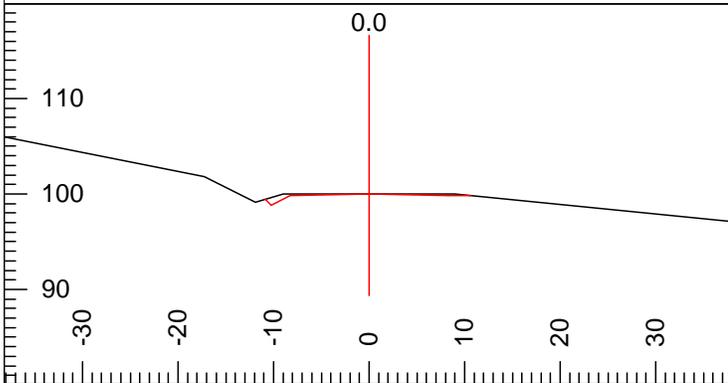
Board O' Feet Timber Sale
 E-Line/E-3020 Curve Widening
 Contract #: 30-91856

Washington State Department of Natural Resources
 South Puget Sound Region

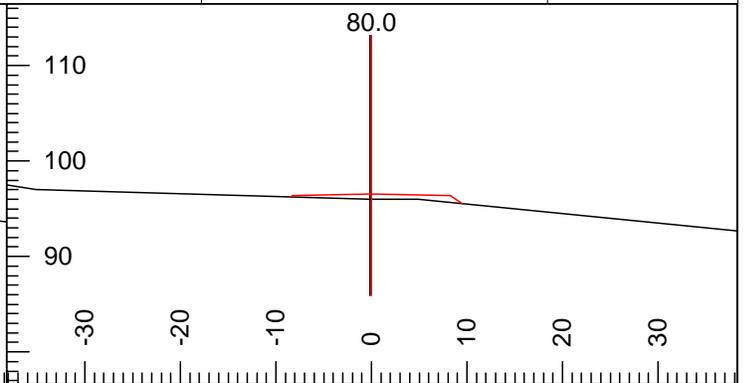
Plan Scale 1:1200
 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

Engineer: J Gardner
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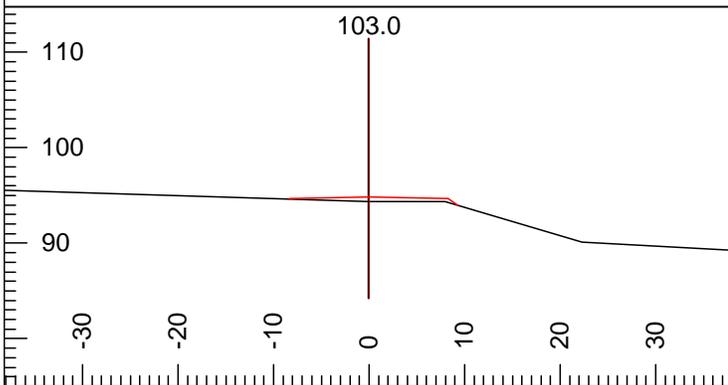




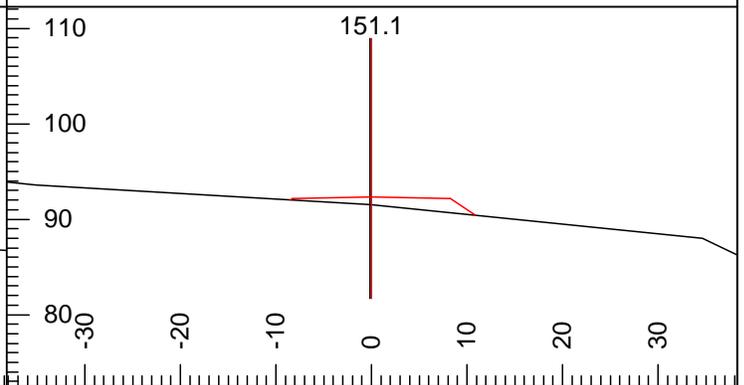
P-Stn: 0.0 V.Offset: 0.0 Cut Dp: 0.0
 L-Stn: 0.0 H. Offset: 0.0 Index: 1001



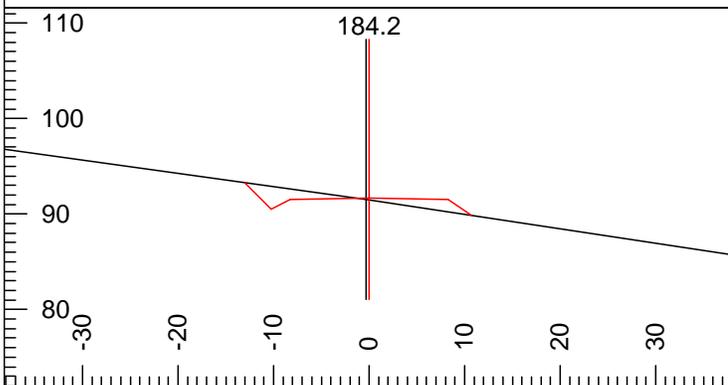
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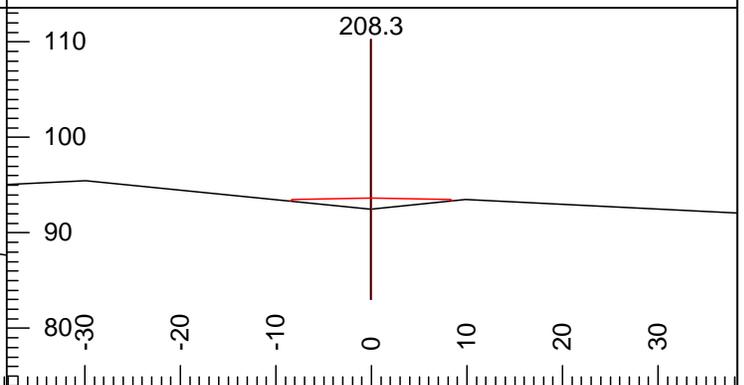
P-Stn: 103.0 V.Offset: 0.5 Cut Dp: -0.5
 L-Stn: 103.0 H. Offset: 0.1 Index: 1003



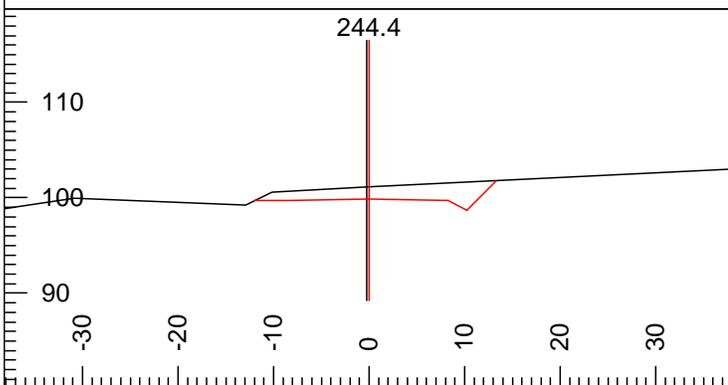
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 L-Stn: 151.1 H. Offset: 0.2 Index: 1004



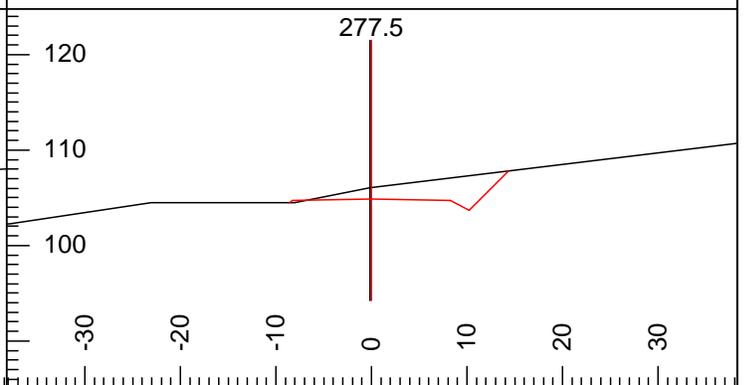
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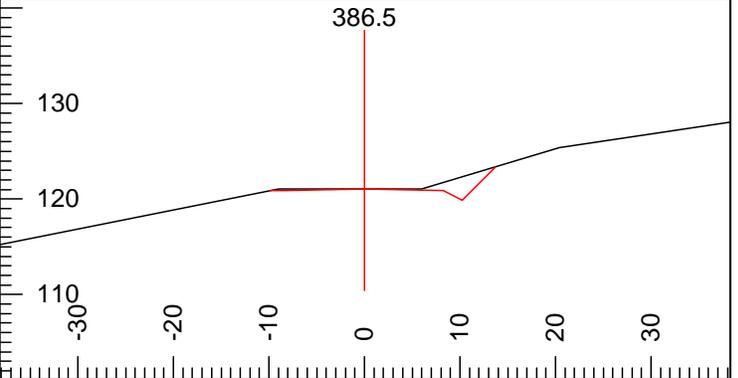
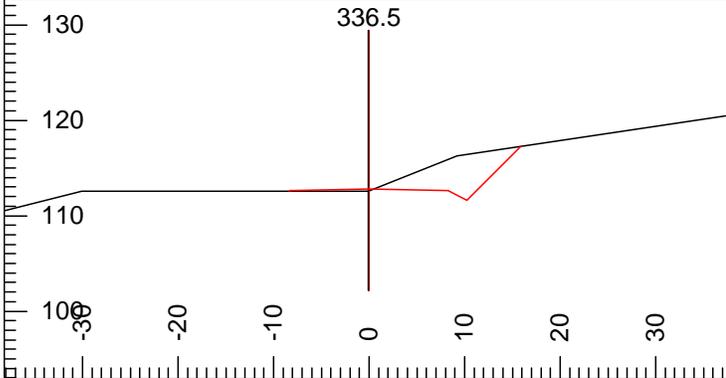
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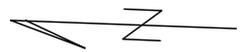
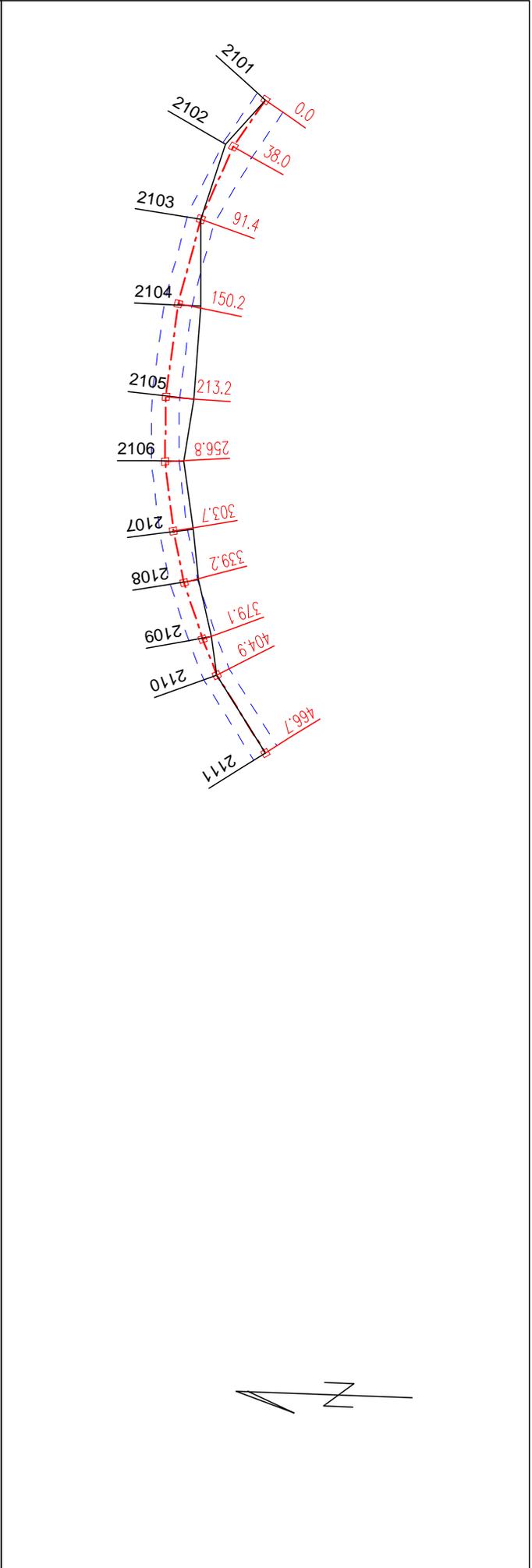
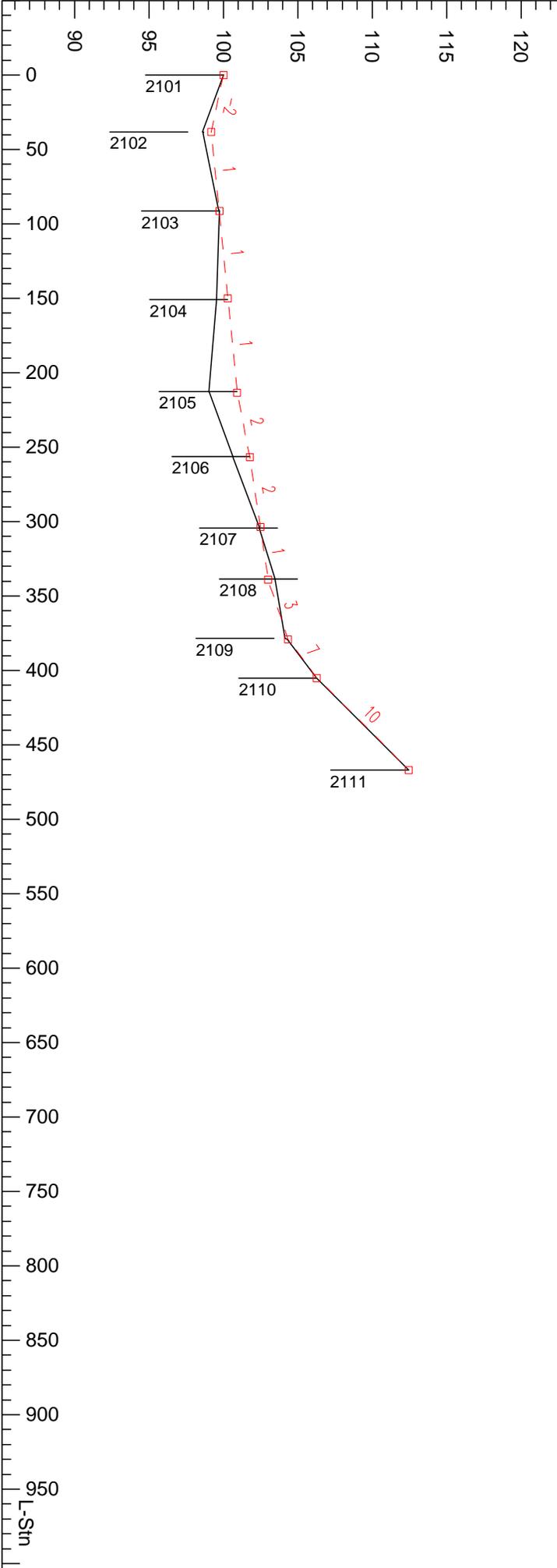
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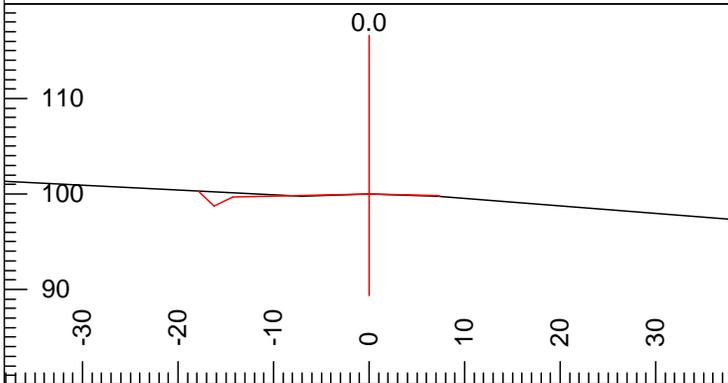
Board O' Feet Timber Sale
 E-Line/E-6800 Tie Rd
 Contract #: 30-91856

Washington State Department of Natural Resources
 South Puget Sound Region

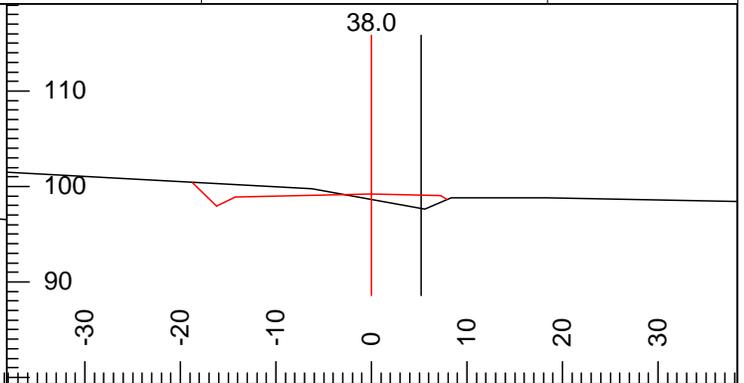
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 Profile Vert Scale 1:120
 Profile Horz Scale 1:1200

Engineer: J Gardner
 15/12/11
 Page 1 of 1

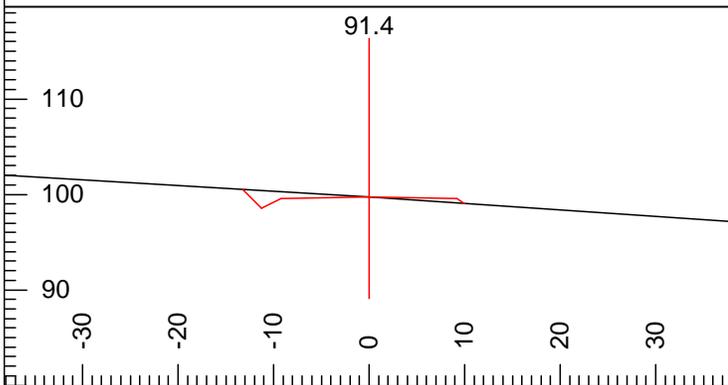




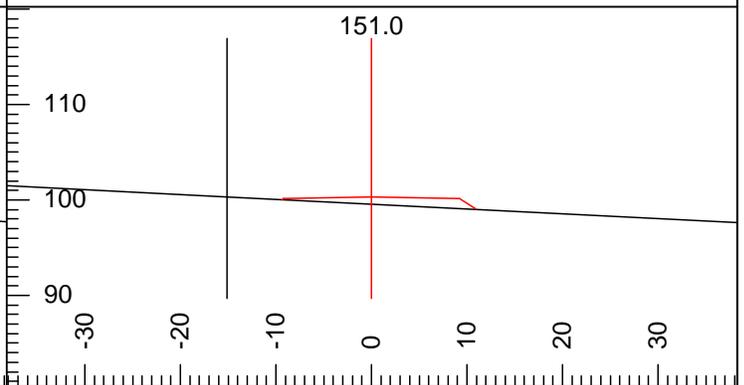
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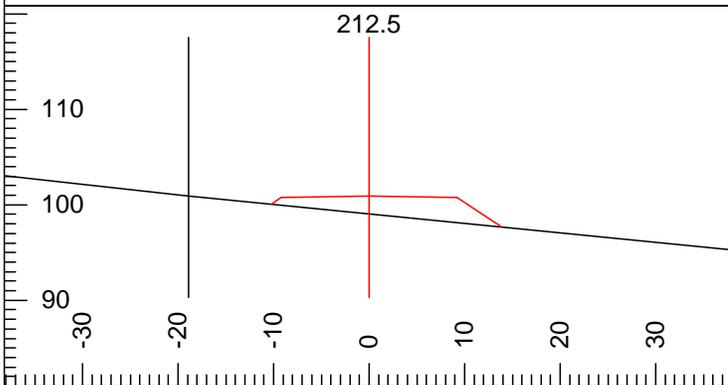
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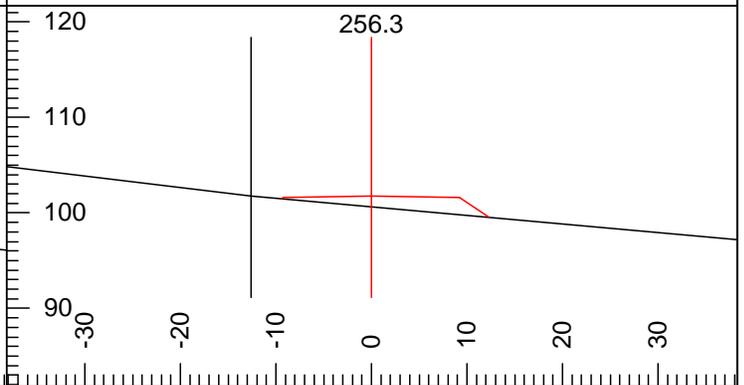
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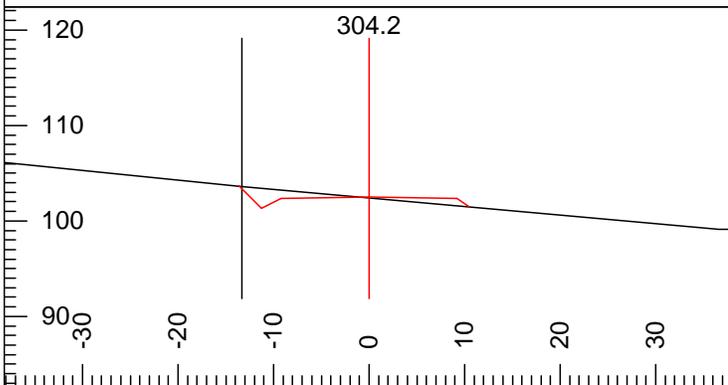
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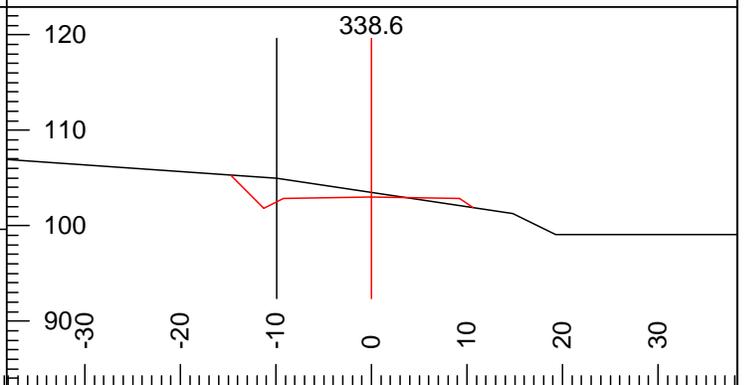
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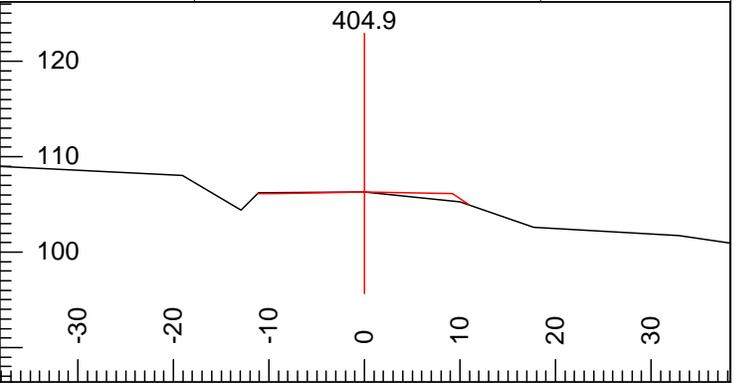
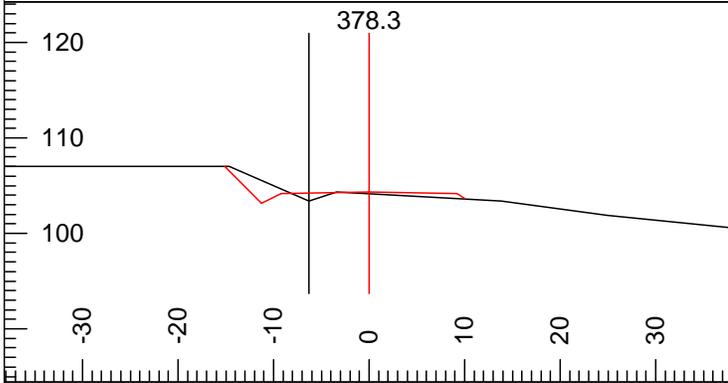
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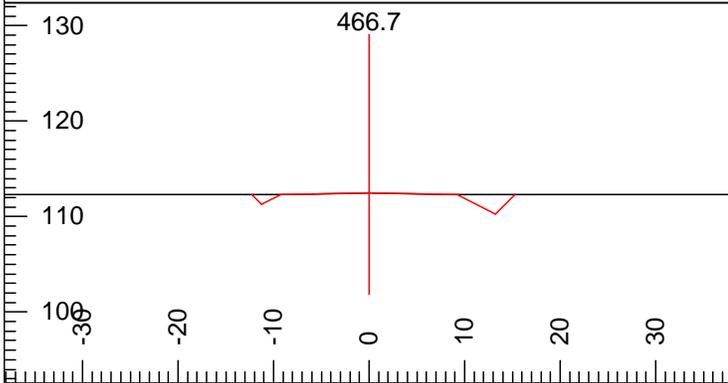


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DEPARTMENT OF NATURAL RESOURCES - SOUTH PUGET SOUND REGION

FORM 9-87(Rev. 01-09)

Road Development Cost Estimate

(For internal DNR use only. Costs are estimates only & are not guaranteed by the State or part of the Road Plan.)

REGION: SPS

UNIT: Little Rock

SALE/PROJECT NAME: Board O' Feet

CONTRACT NUMBER: 30-091856

LEGAL DESCRIPTION: Sec 4,5,7,8,9,17,18 T16N R03W. Sec 12,13,18,19,20,21,22 T16N R04W

ROAD NUMBER:	6800ReRoute,6890Ext,6893,6240Ext, 6240-1,-2,-3, Curve wide, 3020Reroute, 3021,3022, Tie Rds	E9020,E-6880	E- Line,9000,6800,6890,6891,6892,6000,62 00,6240
ROAD STANDARD:	Construction	Reconstruction	Pre-haul maintenance
NUMBER OF STATIONS:	167.57	20.85	366.01
SIDESLOPE:	0-85%	0-15%	0-15%
CLEARING AND GRUBBING:	\$29,347	\$834	
EXCAVATION AND FILL:	\$80,015	\$2,752	
MISC. MAINTENANCE:			\$19,096
ROCK TOTALS (Cu. Yds.):			
3" Minus: 944	\$2,387	\$0	\$809
4"-Jaw: 16271	\$212,896	\$18,875	\$45,615
Quarry Spalls 198	\$3,535	\$0	\$2,562
CULVERTS AND FLUMES:	\$27,778	\$0	\$28,874
STRUCTURES:	\$0	\$0	\$0
GENERAL EXPENSES:	\$28,477	\$2,021	\$7,756
MOBILIZATION:	\$4,800	\$4,800	\$4,800
TOTAL COSTS:	\$389,234	\$29,282	\$109,513
COST PER STATION:	\$2,323	\$1,404	\$299

ROAD DEACTIVATION AND ABANDONMENT COSTS: \$14,387

NOTE¹: This appraisal has no allowance for profit and risk.

NOTE²: This appraisal does not account for all optional rock.

TOTAL (All Roads) = \$542,416

SALE VOLUME MBF = 4,486

TOTAL COST PER MBF = \$120.91

Date: Dec. 10, 2015

SPS REGION - ROAD COST ESTIMATE - CONSTRUCTION

SALE NAME: Board O' Feet

CONTRACT NUMBER: 30-091856

I. CLEARING AND GRUBBING:

Flat Rate - Slope	% Side	MBF/ac	Disposal Factor	Production Factor	Cost/Station	Width Factor	Total Stations	Sub Total
E-6800 Reroute	45	25	1.00	3.72	\$50	1.00	18.07	\$3,361
E-6890 Ext, E-6893	50	25	1.00	3.72	\$50	1.00	54.06	\$10,055
E-6240Ext & E-6240-1,-2,-3	40	25	1.00	3.72	\$50	1.00	71.16	\$13,236
E-3020 Reroute	15	25	1.00	2.22	\$50	1.00	8.57	\$951
E-3021,E-3022	10	25	1.00	2.22	\$50	1.00	5.44	\$604
Curve Wide & Tie Roads	20	25	1.00	2.22	\$50	1.00	10.27	\$1,140
Clear and Grub TOTAL =								\$29,347

II. EXCAVATION:

Flat Rate - Slope	% Side	Exc. Type	Production Factor	Cost/Station	Width Factor	Total Stations	Sub Total
E-6800 Reroute	45	1.0	5.50	\$100	1.00	18.07	\$9,939
E-6890 Ext, E-6893	50	1.0	6.75	\$100	1.00	54.06	\$36,491
E-6240Ext & E-6240-1,-2,-3	40	1.0	4.25	\$100	1.00	71.16	\$30,243
E-3020 Reroute	15	1.0	1.75	\$100	1.00	8.57	\$1,500
E-3021,E-3022	10	1.0	1.50	\$100	1.00	5.44	\$816
Curve Wide & Tie Roads	20	1.0	1.00	\$100	1.00	10.27	\$1,027
*End Haul, Over Haul, Large Fills/Cuts							
End Haul/ Over Haul Large Fills/ Cuts				Estimated Vol. (cy)	No. of Equip. Days	Cost/day	Sub Total
							\$0
Excavation TOTAL = \$80,015							

III. BALLAST AND SURFACING :

Description	cu.yds/sta x stations = cubic yards	0 **	0	0
2" Minus		0 **	0	0
4" Jaw Run		0	0	0
QS		0	0	0

** Expansion factor of 1.3

* Haul Formula: (R.T.Miles/MPH+Delay)/(\$/hr / Cy/load)

UNIT COSTS	Surface	4" Jaw Run	QS
Drill & Shoot		\$4.00	
Dig and load	\$0.77	\$0.77	\$1.50
Crushing		\$3.75	
Purchase			
Haul *	\$2.00	\$5.50	\$2.00
Spread	\$1.36	\$1.36	\$20.00
Compact	\$0.51	\$0.51	
Strip		\$0.40	
Reclamation			
Use tax	\$0.09	\$0.09	\$0.09
TOTAL (\$/cy)	\$5.06	\$17.76	\$25.62

Scott Paper Vantage	9.0	1.0	10	Surface	472	Cu. yds @	\$5.06	/cu. yd =	\$2,387
Ave. Speed =	20	10	10	Surface	472	Cu. yds @	\$5.06	/cu. yd = <td>\$2,387</td>	\$2,387
Delay (Hrs.)=	0.1	0.1	4"	Jaw Run	11990	Cu. yds @	\$17.76	/cu. yd = <td>\$212,896</td>	\$212,896
Cost / Hour =	\$100.00	\$100.00	4"	Jaw Run	699	Cu. yds @	\$5.06	/cu. yd = <td>\$3,535</td>	\$3,535
CY / Load =	10	10	QS		98	Cu. yds @	\$25.62	/cu. yd = <td>\$2,510</td>	\$2,510

Rock total = \$218,818

IV. CULVERTS AND FLUMES:

Description	Qty.	Gauge	Diameter	No/Length	Installed Cost/ft	Sub-total
18"PD	1		18	1197	\$19.96	\$23,892
24"PD	1		24	130	\$29.89	\$3,886
30"PD					\$40.30	\$0
36"PD					\$43.30	\$0
48"PD					\$58.30	\$0
Bands & Gaskets					\$2,100.00	\$0
Geotextile 0.08-0.12/ft*2 (purchase only)						
Culvert total =						\$27,778

V. STRUCTURES

Description	Type	Width	Length	Cost/ft.	Sub-total
					\$0
					\$0
					\$0
Structure total =					\$0

Sub-TOTAL = \$355,958

VI. GENERAL EXPENSES:

Overhead & General Exp. Add 8% \$28,477

VII. MOBILIZATION:

Description	\$ per Move	# of Moves	Sub-total
Dump Trucks	\$720	2	\$1,440
Grader	\$1,130	1	\$1,130
Compactor	\$950	1	\$950
Excavator	\$950	2	\$1,900
Dozer D8)	\$950	1	\$950
Front end loader	\$1,130	1	\$1,130
Rock crusher	\$5,000	1	\$5,000
Drill	\$950	1	\$950
Dozer (D5)	\$950	1	\$950
Total Mobilization =			\$14,400
Mobilization sub-total =			\$4,800
Road No.	6800ReRoute,6:0	0	0
Standard:	Construction		
Stations:	157.30		
SHEET TOTAL =			\$389,234

SPS REGION - ROAD COST ESTIMATE - RECONSTRUCTION

SALE NAME: Board O' Feet

CONTRACT NUMBER: 30-091856

I. CLEARING AND GRUBBING:

Flat Rate -	% Side Slope	MBF/ac	Disposal Factor	Production Factor	Cost/ Station	Width Factor	Total Stations	Sub Total
E-6880	10	0	1.00	1.00	\$40	1	0.60	\$24
E-9020	10	0	1.00	1.00	\$40	1	20.25	\$810
	0	0	1.00	1.00	\$40	1		\$0
	0	0	1.00	1.00	\$40	1		\$0
	0	0	1.00	1.00	\$40	1		\$0

Clear and Grub TOTAL = \$834

II. EXCAVATION:

Flat Rate -	% Side Slope	Exc. Type Fact.	Production Factor	Cost/ Station	Width Factor	Total Stations	Sub Total
E-6880	10	1.0	1.50	\$88	1.00	0.60	\$79
E-9020	10	1.0	1.50	\$88	1.00	20.25	\$2,673
0	0	1.0	1.00	\$88	1.00		\$0
0	0	1.0	1.00	\$88	1.00		\$0
0	0	1.0	1.00	\$88	1.00		\$0

*End Haul, Over Haul, Large Fills/Cuts

End Haul/ Over Haul Large Fills/ Cuts	Estimated Vol. (cy)	No. of Equip. Days	Cost/day	Sub Total
				\$0
				\$0

Excavation TOTAL = \$2,752

III. BALLAST AND SURFACING :

2" Minus source: Vantage
 4" Jaw Run source: Scott Paper
 QS source: Scott Paper

** Expansion factor of 1.3

Description	cu.yds/sta x stations = cubic yards	
2" Minus		0 **
4" Jaw Run		0
QS		0

* Haul Formula: (R.T.Miles/MPH+Delay)/(\$/hr / Cy/load)

Scott Paper	Vantage
R.T. Miles = 9.0	1.0
Ave. Speed = 20	10
Delay (Hrs.) = 0.1	0.1
Cost / Hour = \$100.00	\$100.00
CY / Load = 10	10

UNIT COSTS	2" Minus	4" In-Place	Rip-Rap
Drill & Shoot		\$4.00	
Dig and load	\$0.77	\$0.77	\$1.50
Crushing		\$3.75	
Purchase			
Haul *	\$2.00	\$5.50	\$2.00
Spread	\$1.36	\$1.36	\$20.00
Compact	\$0.51	\$0.51	
Strip		\$0.40	
Reclamation			
Use tax	\$0.09	\$0.09	\$0.09
TOTAL (\$/cy)	\$5.06	\$17.76	\$25.62

0 Cu. yds @	\$5.06 /cu. yd =	\$0
1063 Cu. yds @	\$17.76 /cu. yd =	\$18,875
0 Cu. yds @	\$25.62 /cu. yd =	\$0

Rock total = \$18,875

IV. CULVERTS AND FLUMES:

Description	Qty.	Gauge	Diameter (in.)	No./Length (ft)	Installed Cost/ft	Sub-total
18"PD					\$19.96	\$0
24"PD					\$29.89	\$0
30"PD					\$40.30	\$0
36"PD					\$43.30	\$0
48"PD					\$58.30	\$0
Bands & Gaskets					\$21.00	\$0

Culvert total = \$0

V. STRUCTURES

Description	Type	Width	Length	Cost/ft.	Sub-total
					\$0
					\$0
					\$0

Structure total = \$0

Sub-TOTAL = \$22,461

VI. GENERAL EXPENSES:

Overhead & General Exp. Add 9% \$2,021

VII. MOBILIZATION:

Description	\$ per Move	# of Moves	Sub-total
Dump Trucks	\$720	2	\$1,440
Grader	\$1,130	1	\$1,130
Compactor	\$950	1	\$950
Excavator	\$950	2	\$1,900
Dozer D8)	\$950	1	\$950
Front end loader	\$1,130	1	\$1,130
Rock crusher	\$5,000	1	\$5,000
Drill	\$950	1	\$950
Dozer (D5)	\$950	1	\$950

Total Mobilization = \$14,400 Mobilization sub-total = \$4,800

Road No. E9020.E-6880 0 0 0 0 SHEET TOTAL = \$29,282

SPS REGION - ROAD COST ESTIMATE - ROAD CLOSURE

SALE NAME: Board O' Feet

CONTRACT NUMBER: 30-091856

Total stations Road Closure = 5.80

I. MISC. ROAD CLOSURE COSTS:

	Cost/ Station	Total Stations	Sub Total
water barring =	30.00		\$0
ripping =	20.00		\$0
culvert removal =	300.00		\$0
sidecast pullback =	50.00		\$0
grass seeding =	50.00		\$0
barricade =	400.00	1.00	\$400
LWD debris =	500.00	5.80	\$2,900
post-haul grading	6.50	761.29	\$4,948
			\$0
			\$0
			\$0
<u>Large Earthwork</u>	<u>Cost/hr</u>	<u>Total hrs</u>	
Cat 320	167.44	8.00	\$1,340
Dump Truck	100.00	16.00	\$1,600
			\$0
Misc TOTAL =			<u>\$11,188</u>

VI. GENERAL EXPENSES:

Overhead & General Exp. Add 10% \$1,119

VII. MOBILIZATION:

Description	\$ per Move	# of Moves	Sub-total
Dump Trucks	720		\$0
Grader	1,130	1	\$1,130
Compactor	950		\$0
Excavator	950	1	\$950
Dozer (D8)	950		\$0
Front end loader	1,130		\$0
Rock crusher	\$5,000		\$0
Dozer (D5)	\$950		\$0

* These move in costs are separate since they will occur after logging is done

Total Mobilization = \$2,080

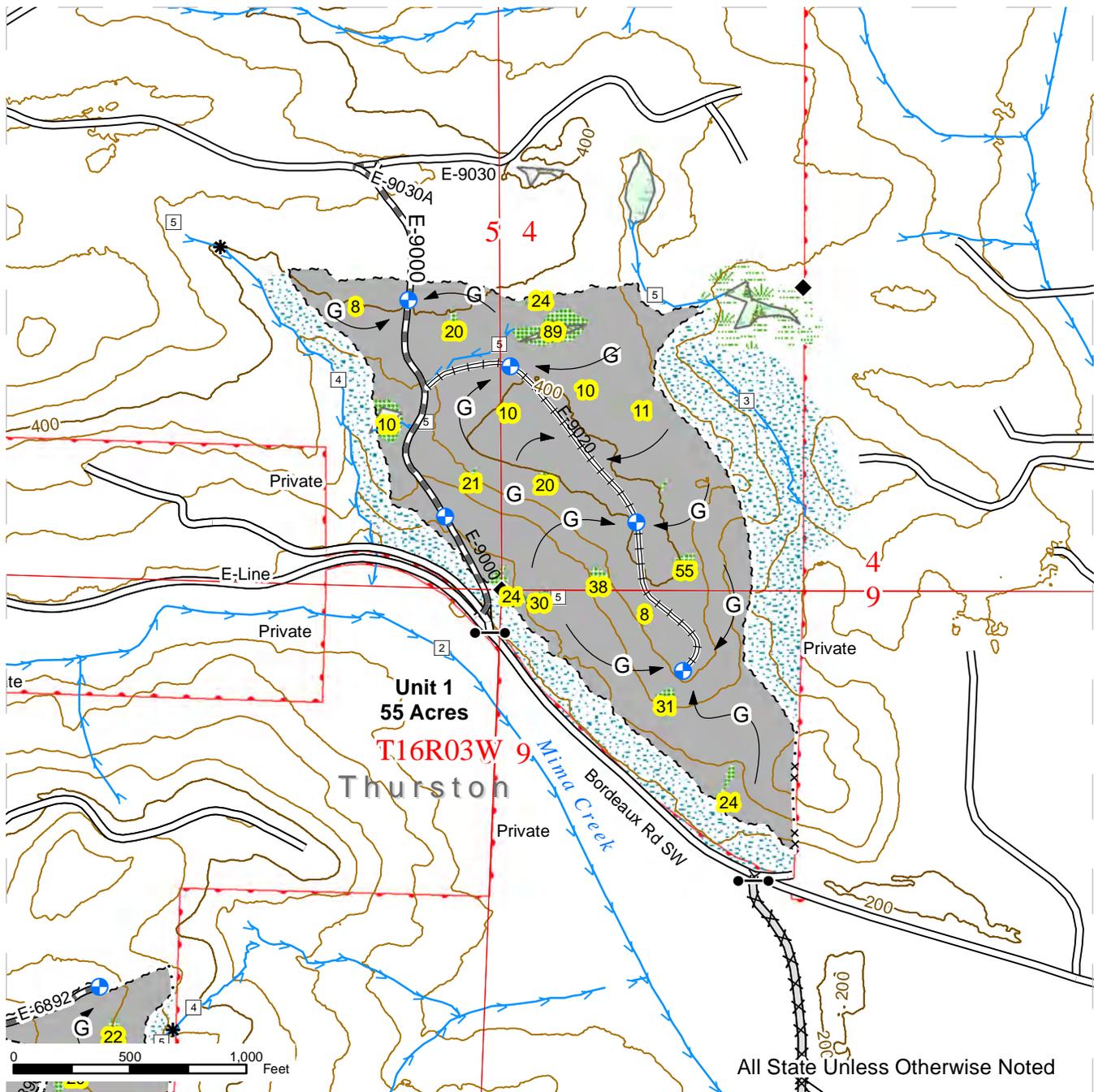
Road No. E-6880 0 0
Standard: Road Closure
Stations: 5.80

SHEET TOTAL = \$14,387

LOGGING PLAN MAP

SALE NAME: Board O' Feet
AGREEMENT#: 30-091856
TOWNSHIP(S): T16R04W, T16R03W
TRUST(S): Forest Transfer(1), Forest Purchase(2), Common School and Indemnity(3), Escheat(9), Forest Board Repayment(42)

REGION: South Puget Sound Region
COUNTY(S): GRAYS HARBOR, THURSTON
ELEVATION RGE: 200-1400

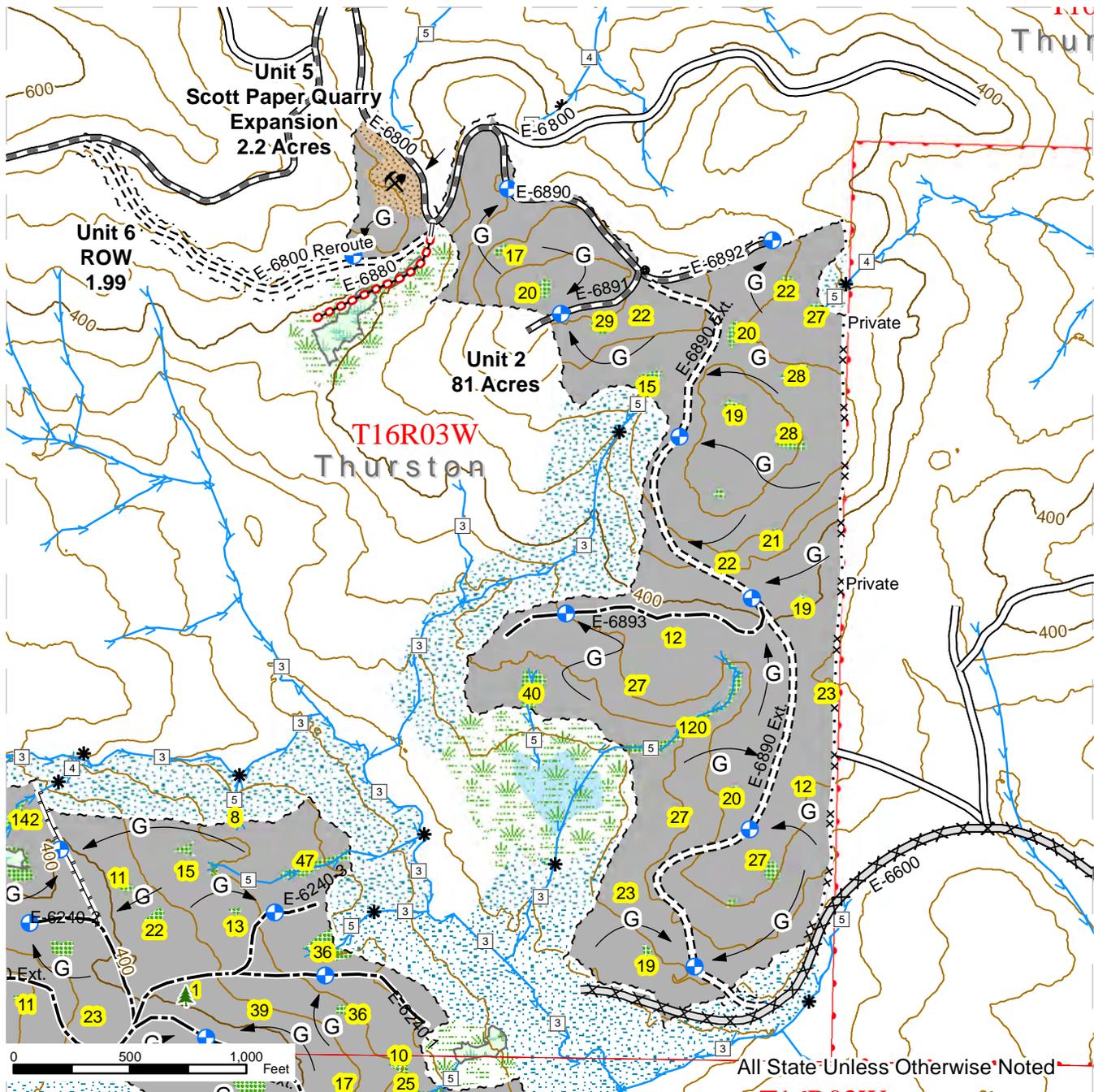


Sale Area	White "Timber Sale Boundary" Tags	Existing Road	Streams
Quarry	Private Property - Marked w/ White carsonite or PVC posts	Required Construction	Stream Type Break
Forested Wetland	Orange "Right-of-Way" Tags	Required Reconstruction	Stream Type
Non-Forested Wetland		Required Pre-Haul Maintenance	Single Leave Trees - Marked w/ Yellow "Leave Tree Area" Tags
Wetland Mgt Zone		Required Abandonment	Proposed Landings
Riparian Mgt Zone		Decommissioned Road	Ground Logging
Leave Tree Area - Marked w/ Yellow "Leave Tree Area" Tags		Optional Construction	Cable Logging
		Private Road - No Access	
		Designated Skid Trail	

LOGGING PLAN MAP

SALE NAME: Board O' Feet
 AGREEMENT#: 30-091856
 TOWNSHIP(S): T16R04W, T16R03W
 TRUST(S): Forest Transfer(1), Forest Purchase(2), Common School and Indemnity(3), Escheat(9), Forest Board Repayment(42)

REGION: South Puget Sound Region
 COUNTY(S): GRAYS HARBOR, THURSTON
 ELEVATION RGE: 200-1400

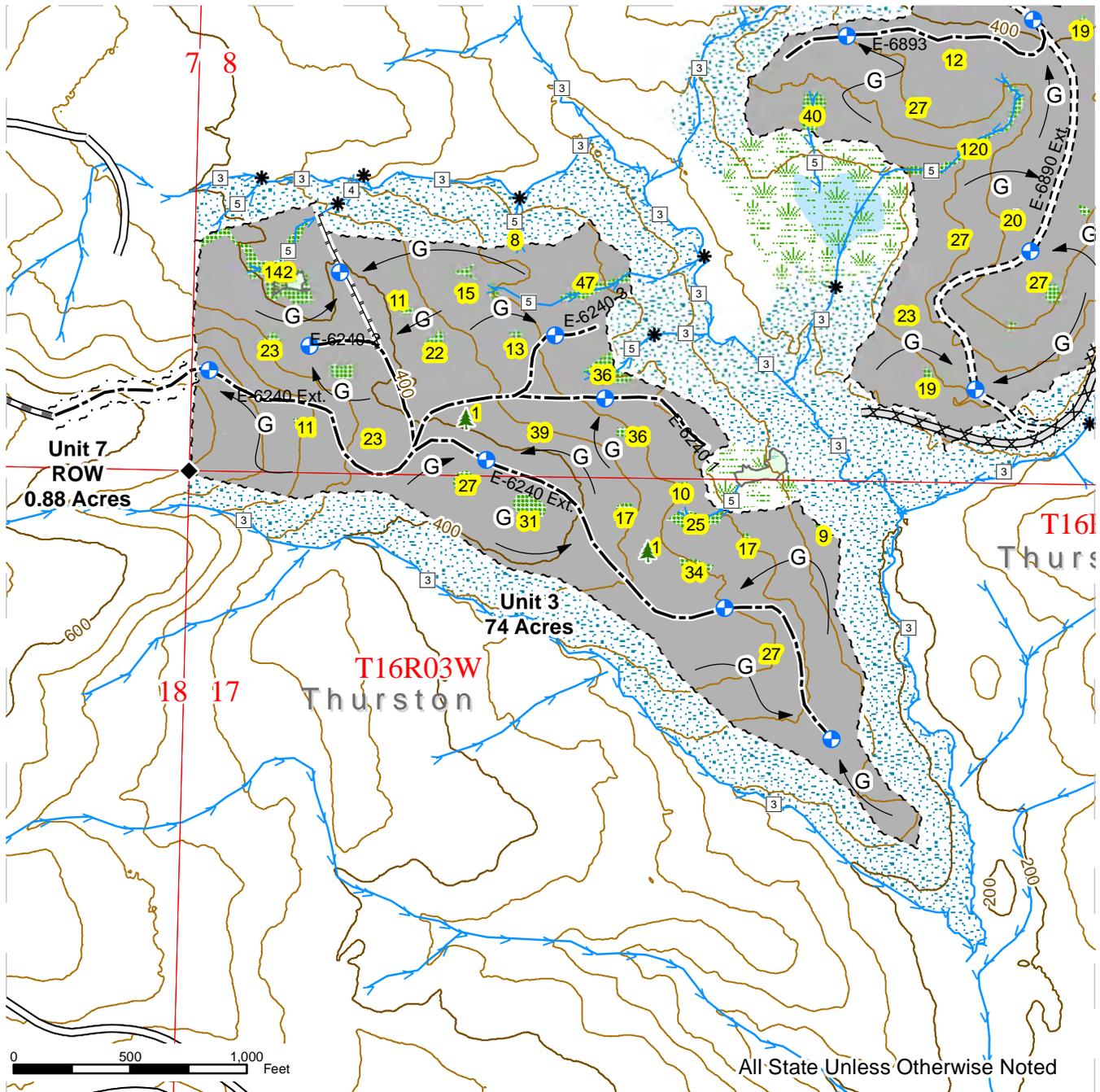


Sale Area	White "Timber Sale Boundary" Tags	Existing Road	Streams
Quarry	Private Property - Marked w/ White carsonite or PVC posts	Required Construction	Stream Type Break
Forested Wetland	Orange "Right-of-Way" Tags	Required Reconstruction	Stream Type
Non-Forested Wetland		Required Pre-Haul Maintenance	Single Leave Trees - Marked w/ Yellow "Leave Tree Area" Tags
Wetland Mgt Zone		Required Abandonment	Proposed Landings
Riparian Mgt Zone		Decommissioned Road	Ground Logging
Leave Tree Area - Marked w/ Yellow "Leave Tree Area" Tags		Optional Construction	Cable Logging
		Private Road - No Access	
		Designated Skid Trail	

LOGGING PLAN MAP

SALE NAME: Board O' Feet
AGREEMENT#: 30-091856
TOWNSHIP(S): T16R04W, T16R03W
TRUST(S): Forest Transfer(1), Forest Purchase(2), Common School and Indemnity(3), Escheat(9), Forest Board Repayment(42)

REGION: South Puget Sound Region
COUNTY(S): GRAYS HARBOR, THURSTON
ELEVATION RGE: 200-1400

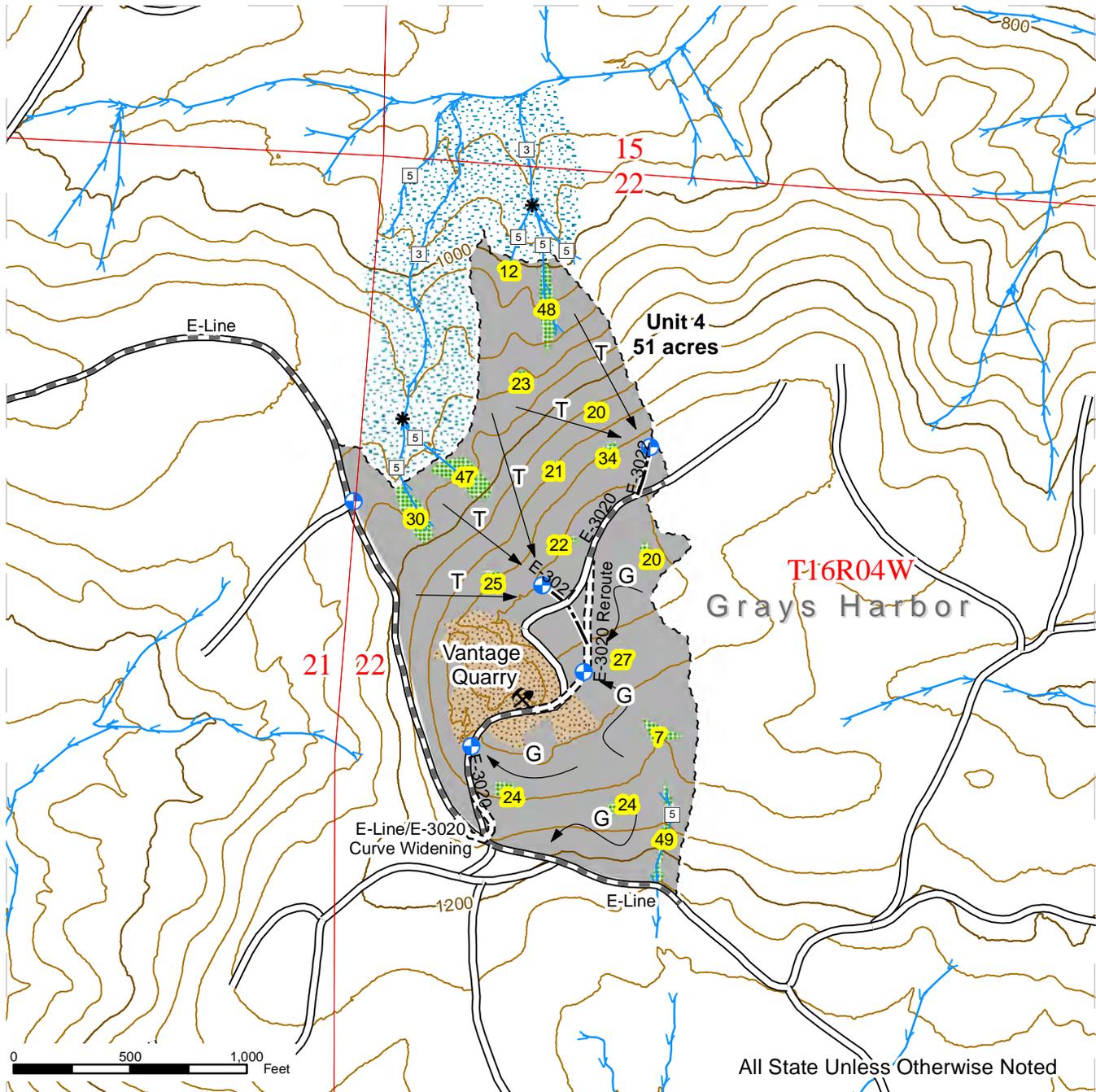


Sale Area	White "Timber Sale Boundary" Tags	Existing Road	Streams
Quarry	Private Property - Marked w/ White carsonite or PVC posts	Required Construction	Stream Type Break
Forested Wetland	Orange "Right-of-Way" Tags	Required Reconstruction	Stream Type
Non-Forested Wetland		Required Pre-Haul Maintenance	Single Leave Trees - Marked w/ Yellow "Leave Tree Area" Tags
Wetland Mgt Zone		Required Abandonment	Proposed Landings
Riparian Mgt Zone		Decommissioned Road	Ground Logging
Leave Tree Area - Marked w/ Yellow "Leave Tree Area" Tags		Optional Construction	Cable Logging
		Private Road - No Access	
		Designated Skid Trail	

LOGGING PLAN MAP

SALE NAME: Board O' Feet
 AGREEMENT#: 30-091856
 TOWNSHIP(S): T16R04W, T16R03W
 TRUST(S): Forest Transfer(1), Forest Purchase(2), Common School and Indemnity(3), Escheat(9), Forest Board Repayment(42)

REGION: South Puget Sound Region
 COUNTY(S): GRAYS HARBOR, THURSTON
 ELEVATION RGE: 200-1400



Sale Area	White "Timber Sale Boundary" Tags	Existing Road	Streams
Quarry	Private Property - Marked w/ White carsonite or PVC posts	Required Construction	Stream Type Break
Forested Wetland	Orange "Right-of-Way" Tags	Required Reconstruction	Stream Type
Non-Forested Wetland		Required Pre-Haul Maintenance	Single Leave Trees - Marked w/ Yellow "Leave Tree Area" Tags
Wetland Mgt Zone		Required Abandonment	Proposed Landings
Riparian Mgt Zone		Decommissioned Road	Ground Logging
Leave Tree Area - Marked w/ Yellow "Leave Tree Area" Tags		Optional Construction	Cable Logging
		Private Road - No Access	
		Designated Skid Trail	