

# STATE OF MONTANA

## GOOD NEIGHBOR AUTHORITY - TIMBER SALE CONTRACT FOR STUMPAGE SOLD BY THE TON

VERSION 17 – JANUARY 2015

<b>DEPARTMENT OF NATURAL RESOURCES &amp; CONSERVATION</b> 2705 Spurgin Road Missoula, MT 59804	<b>NAME, ADDRESS AND PHONE NUMBER OF PURCHASER:</b>	
	<b>Tax I.D. Number</b>	
<b>Land Office</b> Northwestern	<b>SALE NAME</b> GNA Talkie Teeters	<b>SALE NUMBER</b>
<b>Unit</b> Libby	<b>AWARD DATE</b>	<b>TERMINATION DATE</b> 10/31/2029

THIS TIMBER SALE CONTRACT (hereinafter called Contract or agreement) IS MADE AND ENTERED INTO by and between the State of Montana, acting through its Department of Natural Resources & Conservation, Forestry Division (hereinafter called the State) and ( , a sole proprietorship; or , a partnership; or , Inc. a corporation) (hereinafter called Purchaser) having an office and principal place of business at the address shown above. Purchaser's bid for all timber and timber products described in this Contract has been accepted by the State after having been estimated, appraised and advertised for sale as required by law. Therefore, in consideration of the mutual promises contained in this agreement, the State agrees to sell and the Purchaser agrees to purchase the designated timber located on the areas described in this Contract at the specified rates of payment and in strict conformity with the requirements, standards, specifications and conditions set forth in this Contract.

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-ATTACHMENTS-			
The following attachments are hereby made a part of this contract:			
ATTACHMENT A: Timber Sale Maps		3 Pages	
ATTACHMENT B: Road Construction, Improvements and Maintenance Specifications		33 Pages	
ATTACHMENT C: Forest Fire Regulations		2 Pages	
ATTACHMENT D: Working in Bear Habitat Brochure		1 Page	
ATTACHMENT E: Forest Resources Conservation and Shortage Relief Act		6 Pages	
ATTACHMENT F: Kootenai National Forest Food Sanitation Order		7 Pages	
ATTACHMENT G: Forest Service Supplemental Specifications		60 Pages	
ATTACHMENT H: Temporary Road Specifications		14 Pages	

<b>TABLE 1 - LEGAL DESCRIPTION OF THE GROSS SALE AREA</b>			
The timber designated for sale under this Contract is within the following sale area			
<b>Subdivisions</b>	<b>Section</b>	<b>TwN</b>	<b>Rge</b>
<b>Portions of</b>	28, 32, 33, 34	27N	30W
	4, 5	26N	30W
<b>Total approximate acres in gross sale area:</b>	600 Acres		
<b>Number of harvest units (Including Right-of-Way):</b>	10 Units		
<b>Total acres in harvest units (Including Right-of-Way):</b>	197 Acres		

<b>TABLE 1 (continued) - ESTIMATED SALE VOLUME</b>	
The state does not guarantee the product weight, by species or in total, to equal the estimated advertised weight in quantity or product designation.	
<b>Product</b>	<b>Estimated Quantity (Tons)</b>
<b>Sawlogs</b>	<b>19,752</b>
<b>Other Material</b>	<b>Not estimated</b>
<b>Total Estimated Volume</b>	<b>19,752</b>

<b>TABLE 1 (continued) - PAYMENT RATES</b>			
<b>Payment</b>	<b>Amount</b>		<b>Requirements</b>
Performance Bond Amount:	20% of bid value		See Section II.A.1-3.
	<b>Product</b>	<b>Amount</b>	
Stumpage Rate per ton:	<b>Sawlogs</b>	<b>Bid Rate</b>	See Section II.B.1-3.
	<b>Other Material</b>	<b>\$0.50/ton</b>	

## TIMBER SALE CONTRACT

**I. GENERAL TERMS****A. DEFINITION OF CONTRACT LANGUAGE:** The following definitions apply to terms used in this Contract:

1. Administrator – The Good Neighbor Authority Bureau Chief, Forestry Division, Department of Natural Resources & Conservation
2. Draw – A swale or drainageway that may not have perceptible or definite beds or banks.
3. Environmental Law – Includes, but is not limited to, the following laws and any regulations promulgated under these laws: the Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”) (42 U.S.C. § 9601 *et seq.*), as amended; the Resource Conservation and Recovery Act (“RCRA”) (42 U.S.C. §§ 6901 – 6987), as amended; the Clean Air Act (42 U.S.C. § 7401, *et seq.*), as amended; the Safe Drinking Water Act (42 U.S.C. § 300f *et seq.*), as amended; the Clean Water Act (33 U.S.C. § 1401 *et seq.*), as amended; the Clean Air Act of Montana (Mont. Code Ann. § 75-2-101 *et seq.*), as amended; the Montana Water Quality Act (Mont. Code Ann. § 75-5-101 *et seq.*), as amended; the Montana Solid Waste Management Act (Mont. Code Ann. § 75-10-201 *et seq.*), as amended; the Montana Hazardous Waste Act (Mont. Code Ann. § 75-10-401 *et seq.*), as amended; the Montana Comprehensive Environmental Cleanup and Responsibility Act (Mont. Code Ann. § 75-10-701 *et seq.*) as amended; and the Montana Underground Storage Tank Act (Mont. Code Ann. § 75-11-501 *et seq.*) as amended.
4. Forest Officer – The State field representative assigned the job of contract administration for this timber sale Contract. Except as otherwise expressly stated in the Contract, the Forest Officer is not authorized to modify the contract on behalf of the State.
5. Hazardous or deleterious substance – Means a substance that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may pose an imminent and substantial threat to public health, safety, or welfare or the environment, and is:
  - a. A substance that is defined as a hazardous substance by section 101(14) of CERCLA, 42 U.S.C. § 9601(14), as amended.
  - b. A substance identified by the administrator of the United States Environmental Protection Agency as a hazardous substance pursuant to section 102 of CERCLA, 42 U.S.C. § 9602, as amended.
  - c. A substance that is defined as a hazardous waste pursuant to section 1004(5) of RCRA, 42 U.S.C. § 6903(5), as amended, including a substance listed or identified in 40 CFR 261.
  - d. Any petroleum product.
6. Operating period – The annual time period during which field activities (logging, hauling, construction, etc.) may be conducted.
7. Paid or payment – Except as otherwise expressly stated in the Contract, full remuneration by either cash, money order or certified check.
8. Purchaser – The signatory party to this Contract other than the Administrator. Purchaser is also defined to include employees and agents of the Purchaser authorized to conduct activities as required for execution of the timber sale Contract. As an independent contractor, neither the Purchaser, its employees or agents shall be considered employees of the State of Montana or the United States Forest Service pursuant to work performed under this Contract.
9. Sawlog – A green or dead log as further defined under Section VII.C.

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10. State – The State of Montana and its agents and employees, including but not limited to the Department of Natural Resources & Conservation.
11. USFS - The United States Forest Service and its agents and employees.
12. Stream – A stream is a natural watercourse of perceptible extent that has a sandy or rocky bottom or definite banks and confines and conducts continuously or intermittently flowing water.
13. Stumpage – The rate paid in dollars per ton as specified in Table 1 for Sawlogs and/or Other Material.
14. Supervisor – A person designated by the Purchaser in charge of operations on site at the sale area at all times when construction or harvesting operations are in progress. The Supervisor shall have authorization to receive notices from the Forest Officer and take appropriate action with regard to breach and/or violations of the terms of the contract.

**B. REMOVAL OF TIMBER AND TITLE TRANSFER:**

1. Provided the Purchaser has paid for timber as required in Section II.B.1, ADVANCE STUMPAGE PAYMENT, the Purchaser has the right to cut and remove timber from the sale area provided all Contract requirements related to the commencement of operations have been met.
2. Title to all timber included in this contract shall be retained by the USFS until:
  - a. The timber has been paid for.
  - b. The timber has been measured, as described in Section III.A. MEASUREMENT AND LOG ACCOUNTABILITY.
  - c. The timber has been properly marked, branded and ticketed as described in Section III.C & E. MEASUREMENT AND LOG ACCOUNTABILITY and Attachment E, which is attached hereto and incorporated herein by reference, and removed from the gross sale area.
3. Title to timber remaining on the gross sale area at termination of the contract shall remain with the USFS.
4. As documented in this contract, or otherwise agreed to, all roads and other improvements become the property of the USFS as they are constructed.

**C. TERM OF CONTRACT:** This Contract is effective upon approval and execution by the Administrator and shall terminate on the Termination Date shown on page 1 unless terminated sooner for successful completion or for gross or persistent breach and/or failure to promptly and properly remedy contract violations of the Contract terms pursuant to Section IV. B, TERMINATION.

**D. PRE-OPERATIONS MEETING:** No activity may occur on the sale area until a pre-operations meeting is conducted between the Purchaser and the State. The Purchaser shall notify the Forest Officer at least seven (7) days prior to the start of operations to schedule the pre-operations meeting. The Forest Officer will specify to the Purchaser what information the Purchaser must provide to the State at the pre-operations meeting.

**E. ANNUAL OPERATING PLAN:** Purchaser may be required to submit a written annual operating plan, as specified by, and at the request of the Forest Officer.

**F. CONTRACT TERM EXTENSION:**

1. In the event that Purchaser's operations are delayed and Purchaser is not able to complete the requirements of this Contract prior to the harvest completion date or the termination date, the State may grant an extension of the term of this Contract. An extension will be considered by the State under only the following circumstances:



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- a. The State determines an extension is in the USFS and State's best interests;
  - b. Purchaser applies for the extension in writing at least 30 days prior to the termination date.
  - c. The State notifies the Purchaser that an extension is required.
  - d. Purchaser has provided the State with written notice from the surety that the performance bond on this contract has been extended for a period commensurate with the requested contract extension.
  - e. Purchaser has made a good faith effort to complete the sale.
  - f. The extension request is not based on poor log and/or market conditions.
2. If the contract term extension is granted, Purchaser shall conduct continuous operations through the operating periods and/or resume operations at the start of the next operating period until the requirements of this Contract are completed. No extension shall be granted for a period longer than eighteen (18) months after the termination date as provided herein unless a longer extension is determined to be in the State's and USFS's best interest.
  3. If the extension is requested and granted because of delays resulting from matters within Purchaser's control, the following will apply:
    - a. Purchaser shall pay an extension fee of \$ 500.00.
    - b. Stumpage rates for any volume cut, skidded or hauled during the extension period will be escalated a minimum of 10%.
    - c. No de-escalation will occur from the time the extension is granted by the Administrator, as documented in a signed modification, through the remainder of the Contract.
  4. An extension may be granted to the Purchaser without penalty if the State prohibits logging activity for more than 2 weeks during the operating period described in this Contract.
  5. All conditions of this contract shall remain in force during any period of extension, unless those conditions are amended by the terms of the extension.
  6. In the event the Contract terminates pursuant to Section I.C, TERM OF CONTRACT due to expiration of the time period within which its performance shall have been completed, and the State has not granted an extension, the Purchaser shall immediately cease all operations within the Gross Sale Area as shown in Table 1. Operations beyond the contract termination date for which the State has not granted an extension will be treated as trespass.
- G. LIABILITY FOR LOSS:** The Purchaser is responsible for loss, degradation, or damage to timber while the timber is in his, her or its custody, including but not limited to, timber which has been felled, skidded or decked and/or timber which has been lost, damaged or stolen after removal from the sale area but before scaling or weight is recorded.
- H. SUPERVISION:** When construction or harvesting operations are in progress, the Purchaser shall have exclusive control over the manner in which the Contract is executed if, as determined by the State, the Purchaser has and is complying with all terms and conditions provided herein. Purchaser is required to have a supervisor(s) in charge of operations on the sale area at all times. Such supervisor(s) shall have authorization to receive notices from the Forest Officer and take appropriate action with regard to breach and/or violations of the terms and conditions of the Contract.
- I. COMPLAINTS:**

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1. Complaints by the Purchaser concerning any action or decision of a Forest Officer, including suspension orders, must be made in writing to the Administrator postmarked within 30 days of the disputed action or decision. In the interim, Purchaser must comply with the directions of the Forest Officer.
2. Upon receipt of a complaint, the Administrator, or a designated representative, shall promptly hold an informal conference with the Purchaser and the Forest Officer to review the disputed action. The Purchaser shall be given adequate notice of the conference and shall be given the opportunity to present evidence and an argument to rebut the reasons given by the Forest Officer for the disputed action. After review, the Administrator shall notify the Purchaser in writing of his decision. The decision of the Administrator is final on behalf of the State, except regarding termination of the contract.

**J. ASSIGNMENT:** This contract shall not be assigned in whole or in part unless approved in writing by the Administrator. Any person or entity that is currently suspended or debarred from bidding on or operating government contracts is also suspended or debarred from bidding or operating (including as a sub-contractor) on this contract.

**K. MODIFICATIONS:**

1. This Contract, together with the attachments listed herein, contains the entire agreement of the parties and no statements, promises or inducements made by either party, or agents of either party, that are not contained in such written Contract shall be valid or binding. This Contract, except as described in Section I.K.2 below, cannot be enlarged, modified or altered except upon written agreement signed by all parties to this contract. Only the Administrator, his successor, or his designated representative is authorized to enter into such modification on behalf of the State.
2. To protect cultural or natural resources the State may modify provisions of the Contract without prior agreement by the Purchaser.

**L. EQUAL EMPLOYMENT OPPORTUNITY:** Pursuant to Section 49-3-207, MCA, any hiring by the Purchaser under this agreement must be on the basis of merit and qualifications and there must be no discrimination on the basis of race, color, religious creed, political ideas, sex, marital status, physical or mental handicap, national origin or ancestry by any person performing this Contract.

**M. LIABILITY INSURANCE:**

1. Prior to the execution of this Contract, the Purchaser or their agents shall obtain, carry and keep in good standing for the remainder of the Contract period, with any extensions:
  - a. Comprehensive general liability insurance coverage to the limit of \$1,000,000.00 per occurrence and \$2,000,000.00 per aggregate. Each such policy shall include endorsements, which shall name the State, US Forest Service, its elected and appointed officials, agents and employees as additional insured and shall provide that the State shall be given 30 days written notice, at the address stated above, prior to cancellation or any material change in such policy.
  - b. Automobile Liability Insurance: The Purchaser shall purchase and maintain coverage with split limits of \$500,000 per person (personal injury), \$1,000,000 per accident occurrence (personal injury), and \$100,000 per accident occurrence (property damage), OR combined single limits of \$1,000,000 per occurrence to cover such claims as may be caused by any act, omission, or negligence of the contractor or its officers, agents, representatives, assigns, or subcontractors.
2. In lieu of such coverage, the Purchaser may provide proof of self-insurance in at least an amount equal to that provided above.

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3. Prior to the execution of this Contract, Purchaser shall deliver to the State a certificate of insurance from the insurer(s) of the Purchaser or their agents certifying that coverage in at least the amounts stated above is in force. Such certificate shall be submitted to the State for approval of the insurer(s), the amount, and the form. The State reserves the right to require a certified copy of any such policy or to examine the policy itself.
4. A self-insured Purchaser shall provide an equivalent certificate of insurance subject to the approval of the State.
5. It is further understood and agreed that this Contract shall terminate immediately in the event that the mandatory liability insurance coverage required under this part is for any reason not obtained or is discontinued.

**N. WORKERS' COMPENSATION INSURANCE:**

1. Prior to the commencement of any work under this Contract, Purchaser shall provide written verification to the Administrator that any and all individuals who are to be engaged in work under this Contract, including but not limited to employees, agents or independent contractors of the Purchaser or of its subcontractors, are either insured for workers' compensation coverage or are exempted from such coverage as certified independent contractors pursuant to § 39-71-401 MCA.
2. It is expressly understood and agreed that no such individual may engage in work in furtherance of this Contract at any time during its period unless either insured for workers' compensation coverage or exempted from such coverage as indicated above.
3. It is understood and agreed that this Contract shall terminate immediately in the event that workers' compensation coverage or exemptions required under this part is discontinued for any individuals engaged in work under this Contract.

- O. SAFETY:** The Purchaser, employees, subcontractors and their employees shall conduct their activities in a safe and workmanlike manner, shall cooperate in making it possible for the Forest Officer to safely, efficiently, and economically perform his, her or its administrative duties, and shall comply with federal and State safety standards for logging operations as established by the United States Department of Labor, Occupational Safety and Health Administration (OSHA; 29 Code of Federal Regulations 1910 and any other such applicable regulations promulgated by OSHA) and as required by Title 50, Chapter 71 of the Montana Code Annotated, and any regulations promulgated to implement the statutes found in that Title and Chapter of the Montana Code Annotated. The Purchaser, and not the State, is responsible for instituting and maintaining all precautions, procedures and programs for the safety of all persons on the project site, and the State hereby disclaims any and all responsibility for injuries or accidents occurring at the site.

- P. SAWMILLS PROHIBITED:** No sawmills shall be allowed to operate on the gross sale area.

- Q. LOG CHIPPERS OR GRINDERS:** No log chippers or grinders shall be allowed to operate on the gross sale area unless written approval to do so is granted by the Forest Officer. In order for approval to be granted, the Purchaser shall identify a method acceptable to the State for the measurement of all wood to be ground or chipped. If the Purchaser intends to operate a log chipper outside of the gross sale area, provisions must be made for obtaining certified weights of either the material removed from the sale or of the resultant products.

**R. SALE DELAYED OR PRECLUDED BY JUDICIAL ACTION OR GOVERNMENT REGULATORY ACTION:**

1. In the event judicial action, change in applicable law, or implementation of government regulatory action renders proceeding with this Contract unlawful, the State will suspend or terminate the Contract in whole or in part. Upon notice of such suspension or termination, Purchaser shall

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immediately cease all or any portion of such operations under the Contract as directed by the State. If a court of competent jurisdiction has entered a final judgment rendering further proceeding with this Contract unlawful, or government regulatory action takes effect, the State may terminate the Contract or, at the State's option, suspend the Contract in whole or in part, pending appeal of the court's final judgment. If the Contract is suspended, the State shall not be liable to the Purchaser for damages or losses resulting from the delay. In the event the Contract is terminated due to judicial action, a change in law, or government regulations, the State shall be liable to Purchaser only as follows:

- a. The State shall refund any portion of advance stumpage payments or down payments not needed to compensate the State for timber removed.
- b. The State shall release any portion of the performance bond not needed to compensate the State for timber removed or other losses suffered by the State due to breach of contract by the Purchaser.

**S. VENUE AND CHOICE OF LAW:** In the event of litigation concerning this agreement, venue shall be in the First Judicial District, Lewis and Clark County, Montana, and this agreement shall be governed by the laws of the State of Montana both as to interpretation and performance.

**T. AUTHORIZATION TO ENTER:** The Purchaser is authorized to enter the sale area only for purposes related to the performance of this Contract. Any person or entity that is currently suspended or debarred from bidding on or operating government contracts is also suspended or debarred from bidding or operating (including as a sub-contractor) on this Contract.

**U. OTHER OPERATIONS BY THE STATE:** The State or USFS reserves the right to at any time conduct within the gross sale area forest management operations including, but not limited to, slash piling, burning, handwork, broadcast burning, mop-up, patrolling, thinning and tree planting during the term of this Contract.

**V. INDEMNITY AND LIABILITY:**

1. The Purchaser agrees to indemnify the State and the USFS, its officials, agents, and employees, while acting within the scope of their duties and hold the State harmless from and against all claims, demands, and causes of action of any kind or character, including the cost of defense, arising in favor of the Purchaser's employees or third parties on account of bodily or personal injuries, death or damage to property arising out of services performed, goods or rights to intellectual property provided or omissions of services or in any way resulting from the acts or omission of the Purchaser and/or its agents, employees, subcontractors or its representatives while engaged in work under this Contract, all to the extent of the Purchaser's negligence.
2. The Purchaser shall be responsible for, indemnify, defend and hold the State and the USFS harmless from and against any loss, cost (including, without limitation, reasonable legal, accounting, consulting, engineering and similar expenses), damage, claim, fine or liability, including the necessity for tests, inspections or other work, and any damage, claim, fine or liability arising as a result of such tests, inspections or other work, the State must perform:
  - a. Based upon an actual or alleged violation by the Purchaser of, or failure by the Purchaser to comply with, any Environmental Law during the term of this Contract;
  - b. Arising from the discharge, release, threatened release, handling, storage, treatment, deposit or disposal of any Hazardous or Deleterious Substances caused or exacerbated by the activities of the Purchaser on or in the gross sale area during the term of this Contract; or
  - c. Otherwise arising out of or in connection with any environmental condition or action caused or created by the Purchaser.

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- W. OTHER LAWS AND REGULATIONS:** This Contract is subject to all applicable federal, state, county, and municipal laws, ordinances, and regulations in effect at the date of this Contract or which may, from time to time, be adopted, and which do not impair the obligations of this Contract and which do not deprive the Purchaser of an existing property right recognized by law. A violation by the Purchaser of any federal, state, county, and/or municipal laws, ordinances and/or regulations while conducting operations under the terms of this Contract, shall, in the discretion of the State, constitute sufficient reason for the suspension or termination of this Contract. If any part of the lands or premises under this Contract are used or allowed or permitted to be used for any purpose contrary to the laws of this state or the United States, such unlawful use shall, in the discretion of the State, constitute sufficient reason for the suspension or termination of this Contract.
- X. FORCE MAJEURE:** Neither party shall be responsible for failure to fulfill its obligations due to causes beyond its reasonable control, including without limitation, acts or omissions of government or military authority, acts of God, materials shortages, transportation delays, fires, floods, labor disturbances, riots, wars, terrorist acts, or any other causes, directly or indirectly beyond the reasonable control of the nonperforming party, so long as such party is using its best efforts to remedy such failure or delays. Force majeure will not relieve the Purchaser from liability for damage or otherwise excuse performance of this Contract should the Purchaser cause a fire for which they would be liable under § 50-63-103, MCA.
- Y. CERTIFICATION REGARDING DEBARMENT AND SUSPENSION:** The Purchaser must complete and deliver to the State form AD-1047, Certification Regarding Debarment, Suspension, and Other Responsibility Matters – Primary covered transactions and form AD-1048 Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower tier Covered Transactions.

## II. CHARGES AND PAYMENTS

### A. PERFORMANCE BOND:

1. As a guarantee of the faithful performance of this Contract, Purchaser shall furnish a bond, with sufficient sureties, to the State in an amount equal to the potential loss to the State in the event of Purchaser's breach or default under the terms of this Contract as determined by the Administrator. The performance bond may be in cash, bond, irrevocable letter of credit, or certificate of deposit with sufficient sureties. A letter of credit must be automatically renewable without amendment for the term of the Contract. The bond shall not be less than five percent (5%) of the estimated value of the timber sold. The performance bond the Purchaser must submit for this Contract is shown in Table 1.
2. Upon full performance of the terms of the Contract, the State shall release the performance bond.
3. Upon substantial performance of the terms of the Contract, the Administrator may release a portion of the performance bond not needed to compensate the State for any remaining timber to be removed or any other losses that may be suffered by the State due to breach of Contract by the Purchaser. The bond shall not be reduced to less than five percent (5%) of the estimated value of the total Contract volume.

### B. PAYMENTS:

The Purchaser agrees to make payments to the Treasurer of the State of Montana as follows:

1. **ADVANCE STUMPAGE PAYMENTS:** The Purchaser is required to pay for all timber in advance of cutting at the rates shown in Table 1. Advance stumpage payments will be held by the State to cover the Purchaser's estimated timber cutting for at least six (6) weeks of operations. Advance stumpage payments may be reduced just before completion of the sale or when cutting requirements are to be suspended for at least 3 months. Advance stumpage payments may be in cash, bond, irrevocable letter of credit, or certificate of deposit with sufficient sureties.

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2. **INITIAL ADVANCE STUMPAGE PAYMENT:** The initial advance payment will be made by the Purchaser prior to the start of timber cutting operations.
3. **PAYMENT SCHEDULE:** Payments in full for individual invoices will be made by the Purchaser as called for by the Administrator; in no event will payments be made by the Purchaser more than 14 days from the date of billing.

**C. ROAD USE AND MAINTENANCE PAYMENTS:**

1. **PAYMENTS:** The Purchaser is required to make payments for road use and maintenance at the rates listed in Table 1 or as amended by revisions to road use permits. Payments will be made as called for by the Administrator or as otherwise directed in this Contract.
2. **ALTERNATE HAUL ROUTES:** The Purchaser is authorized by the State to use the haul route described in this Contract and attachments. If the Purchaser chooses to use an alternate haul route, that haul route must be approved by the State. Road use charges, maintenance requirements and payments may be adjusted to reflect the haul route used by the Purchaser. The Purchaser is responsible for obtaining any right-of-way required for an alternate haul route and for meeting all requirements of any agreements associated with that right-of-way. Proof of any such agreement must be provided to the State prior to use. Stumpage fees are not subject to a downward adjustment under this clause.

**III. MEASUREMENT AND LOG ACCOUNTABILITY****A. PRODUCT MEASUREMENT:**

1. The State will determine the value of products removed from the sale based on the total gross weight of material hauled. Weight tickets will be used to obtain the total value.
2. When mixed products with different payment rates per ton are hauled on one load, the entire load will be charged at the rate of the product with the highest value contained in the load.
3. Upon request by the State, the most recent load delivered to a receiving mill must be made available for inspection by the State or their representatives. The weight ticket identifying the load must remain affixed to the load.

**B. WEIGHT TICKETS:** The Purchaser is required to furnish weight tickets to the State as agreed to by the Forest Officer and the Purchaser.

1. All weight tickets shall be mailed or delivered with corresponding load tickets, as outlined below, directly to the DNRC Unit or Land Office administering this Contract. In this case, send truck tickets to (Name and address of Unit or Land Office). This requirement may be waived or changed by the Forest Officer.
2. Weight tickets shall show gross, tare and net weights and the corresponding load ticket number of each product load. Weight tickets must be from State of Montana certified scales, and all weight tickets must have mechanically stamped weights for the gross and tare weights unless otherwise permitted in writing by the Forest Officer. Weight tickets will be mailed or delivered to the State on a bi-weekly basis or as otherwise agreed to by the Forest Officer. A weight ticket will be considered as missing if not furnished within 4 weeks of the load delivery date. Failure to comply with this provision may be treated by the State as a contract violation.
3. Truck ticket information may be provided to DNRC electronically if all required ticket information is provided. The information must be provided to the State on a bi-weekly basis prior to the tenth (10<sup>th</sup>) and twenty-fourth (24<sup>th</sup>) of each month. The paper copy of the weight tickets must also

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continue to be provided to the State. The requirement to supply the paper copy of the weight tickets may be waived by the Administrator.

- C. LOAD TICKETS:** The Purchaser will be issued load ticket books with consecutively numbered tickets for uniquely identifying truckloads of logs. A load ticket shall be attached to the driver's side bunk log of each product load prior to hauling, with the Scaler's copy given to the State from the delivery point. The Purchaser shall complete each ticket with the sale information required by the State. The Purchaser shall provide to the Forest Officer a complete list of destinations to which loads will be delivered. The State, at its discretion, may require a separate ticket book for each destination. Failure to comply with this provision may be treated by the State as a contract violation.
- D. SORTING OF PRODUCTS:** The State may require separate ticket books for any loads sorted by the Purchaser by size or species or by specific products intended for different delivery points. Load tickets designated for a specific product must only be used for that specific product. When a load ticket is used with an incorrect product the State may treat such misuse as a contract violation.
- E. LOAD MARKING:** The Purchaser is required to mark all loads of logs before removal from the loading area to assist in identification while in transit or at the point of delivery. Marking shall be accomplished by painting "GNA" in blue paint and the last three digits of the truck load ticket number on log ends of at least three logs on each load, both front and back. The driver's side bunk log shall be one of the marked logs. Failure to comply with this provision may be treated by the State as a contract violation.
- F. PROMPT DELIVERY:** The Purchaser will deliver loads from the timber sale area to a receiving log yard directly without diversion. "Over-nighting" loads during transit are expressly forbidden unless approved by Forest Officer prior to hauling. Failure to comply with this provision may be treated by the State as a contract violation.
- G. SCALE RULE:**
  - 1. Any sawlogs scaled by the State shall be scaled using the Scribner Decimal "C" log rule. Log scaling will follow the procedures listed in the National Forest Log Scaling Handbook (FSH 2409.11) excluding Region 1 supplements.
  - 2. In cases where conversion is required, a conversion factor of **6.24 tons** per thousand board feet will be used for sawlogs.
- H. LOG BRANDING:** This contract is subject to the Forest Resources Conservation and Shortage Relief Act of 1990, as amended (16 USC 620, *et seq.*). The Purchaser must comply with log branding and accounting rules in Attachment E.

## IV. CONTRACT VIOLATIONS AND PENALTIES

### A. SUSPENSION:

- 1. **FAILURE TO PAY ADVANCE STUMPAGE:** If Purchaser fails to submit advance stumpage payments as directed by the Administrator pursuant to the terms of this Contract within 30 days of the request for such payments, all operations covered by this Contract shall immediately cease upon written or oral order from the State until all required advance stumpage payments, or guarantee of payment satisfactory to the State, have been made. The cutting and removal of timber may resume only upon receipt of written notice to the Purchaser from the State that acknowledges adequate payment or guarantee.
- 2. **LOSS OF BOND:** If the surety bond or other bond securing performance of this Contract is canceled or otherwise becomes ineffective, operations covered by this Contract shall immediately

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cease upon written or oral order from the State to the Purchaser. Cutting and removal of timber may resume only upon receipt of written notice from the State that acknowledges adequate bond.

### 3. OTHER CONTRACT VIOLATIONS:

- a. Should the Forest Officer observe a condition that violates the terms of this Contract, the Forest Officer may verbally notify the Purchaser or its employees or subcontractors of such condition and immediately suspend all or part of the operations in the sale area to prevent harm to the interests of the State or the public. Should the Purchaser or its employees or subcontractors fail to comply with any verbal suspension order, the Administrator may terminate the Contract pursuant to Section IV. B. Termination. The Forest Officer may rescind his/her verbal suspension order upon satisfactory cure of the Purchaser's violation and operations may resume.
- b. Suspension orders may be given in writing or verbally to the Purchaser, or to his, her or its employees or subcontractors. Once given, the Purchaser, and his, her or its employees or subcontractors shall immediately comply with such order of suspension and failure to do so shall constitute grounds for termination of this Contract. Suspension orders are reviewable under the provisions described in Section I.I. COMPLAINTS.
- c. The Administrator may issue a written notice of suspension depending upon the severity of the violation and Purchaser's ability to cure. Such notice shall contain information regarding: 1. The breach observed and harm anticipated; 2. The Contract provisions violated; 3. If possible, the measures required to cure the violation and allow operations to resume; and 4. The deadline within which the Purchaser must cure the violation. Should the Purchaser fail to cure the violation as required, or to obtain a written variance from the Administrator, the Administrator may charge the Purchaser a \$250 per day penalty for every day that the violation persists. Operations may resume only upon written notice from the Administrator. If satisfactory measures or remedies cannot be found to cure the violation, the Administrator may immediately terminate the Contract pursuant to Section IV.B. TERMINATION.

### B. TERMINATION:

1. Gross or persistent Contract violations and/or failure to promptly and properly remedy Contract violations by the Purchaser pursuant to the terms of this Contract shall be grounds for termination of the Contract by the State.
2. If this Contract is terminated by the State, the Administrator shall immediately notify the Purchaser of the termination and the reasons for it by certified mail. Such notice shall describe in what respects the Contract has been breached, the means, if any, by which the breach can be remedied and the consequences of such termination. The Contract shall be terminated 18 days from the date the notice is mailed to the Purchaser at the address stated in this Contract.
3. Upon receipt of the notice of termination the Purchaser shall immediately cease all operations pursuant to and permitted by the Contract until the termination is resolved as provided pursuant to this Section of the Contract, Section IV.B. TERMINATION.
4. If the Contract is reinstated the Purchaser will not be penalized for any delays that resulted from the appeal.
5. If the Contract is terminated for breach, it is understood that the State may refuse to accept bids or proposals submitted under 77-5-212 MCA from the Purchaser on future State timber sales and permits for a minimum period of 2 years.

### C. LIABILITY FOR DAMAGES:



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1. The Purchaser shall be liable for any damages sustained by the State arising from Purchaser's breach of the terms of this Contract and the State may cause all or part of the performance bond to be forfeited to recover such damages.
2. In the event that a portion of the timber sale under this Contract is resold as a result of the Purchaser's forfeiture and the stumpage rate pursuant to the resold contract is lower than the stumpage rate provided herein, the difference between the original rate and the new rate shall be considered damages and the Purchaser shall be liable to the State for those damages. The State may cause all or part of the Purchaser's performance bond to be forfeited to recover such damages.

**D. STATE'S OPTION TO COMPLETE CONTRACT REQUIREMENTS:** If the Purchaser fails to complete the requirements described in this Contract in a timely manner or if the Contract is terminated pursuant to Section IV.B. TERMINATION, the State reserves the right to complete the work itself or through a contractor. The Purchaser will be billed for any additional costs incurred by the State due to the Purchaser's failure to perform the requirements of this Contract. These additional costs may include State employee time and expenses that were extraordinary to the normal administration of the Contract, such as time and expenses incurred to hire a replacement contractor. Purchaser's failure to make payment within 14 days from the date of billing may cause all or part of the performance bond to be forfeited to recover such costs.

**E. WAIVER OF PENALTIES:** The penalties specified in this section shall be regarded as liquidated damages and may be waived or reduced at the discretion of the Administrator in exceptional cases.

**F. FOREST PRACTICES LAWS:** The Purchaser shall conduct logging operations in compliance with all applicable state and federal rules and laws relating to forest practices in the State of Montana. The Purchaser shall be responsible for all reclamation and penalties that result from violations of applicable forest practices rules and laws.

**G. LOGGING REQUIREMENT VIOLATIONS:**

1. **HIGH STUMPS:** The Purchaser may be charged \$25.00 for each tree stump cut higher than 12 inches on the side adjacent to the highest ground except in unusual cases when this height is not considered practical.
2. **LONG BUTTS:** The Purchaser may be required to pay \$25.00 per long butt for cutting long butts that contain useable material in excess of the minimum net scale in percentage of gross shown in Table 2.
3. **LARGE TOPS:** The Purchaser may be required to pay for cutting tops larger than the Top Diameter Inside Bark (DIB) shown in Table 2. This charge will be at the current contract rate for the net volume by species, or \$25.00 per large top, whichever is greater.
4. **UNDESIGNATED TREES:**
  - a. Undesignated or reserve trees that are cut or damaged as a result of Purchaser's operations shall be considered cut in trespass and the Purchaser may be charged three times the highest Contract stumpage rate (minimum \$10.00/ton) for the Contract product class(es) the tree contains.
  - b. If the Forest Officer determines that a suitable replacement for a reserve tree as described above is not available, Purchaser agrees to pay the State \$500.00 per tree, in addition to the rates charged in Section IV.G.4.a. UNDESIGNATED TREES.
5. **FAILURE TO REMOVE:** The State may charge the Purchaser for trees that are designated for cutting under the terms of this Contract and/or logs that meet the Manufacturing and Recovery Standards shown in Table 2 that are not removed from the sale area or presented for

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measurement. This charge may be up to triple the Contract stumpage rate plus the Forest Improvement rate for the class of material contained in those trees fixed in accordance with the terms of this Contract. If the State removes such material from the sale area, the Purchaser will be required to reimburse the State for all applicable cutting, yarding, processing, loading and hauling costs.

6. **LOSS IN WEIGHT DUE TO PURCHASER DELAY:** A 15% increase in net weight of logs may be added by the State for loss in weight due to delay by the Purchaser in delivering cut logs to the manufacturing point. A delay is defined as in excess of 30 days after felling.

#### **H. MEASUREMENT AND LOG ACCOUNTABILITY VIOLATIONS:**

1. **MISSING LOAD TICKETS:** The Purchaser will be charged up to \$500.00 for each unused load ticket that the Purchaser has lost or misplaced while in his, her or its possession. An unused ticket is defined as a ticket that is not turned into the State with an associated truckload weight.
2. **FAILURE TO ATTACH OR COMPLETE LOAD TICKET:** The Purchaser may be charged \$500.00 per load for failure to attach a load ticket to each product load prior to hauling, or for failure to complete the load ticket with all required information.
3. **MISSING WEIGHT TICKETS:**
  - a. The Purchaser may be charged triple the Contract stumpage rate [stumpage x 3 = penalty] for each truck weight ticket not furnished to the State.
  - b. The Forest Officer will notify the Purchaser of each missing weight ticket.
  - c. The load weight will be determined by averaging weights from other loads hauled by the Purchaser to the same mill within the same billing period, or 30 tons for single loads and 38 tons for loads with a pup trailer attached.
  - d. For Other Material, as defined by this Contract, the minimum stumpage for purposes of penalty shall be \$10.00 per ton or the Contract stumpage rate multiplied by 3, whichever is higher.
4. **IMPROPERLY LABELED PRODUCT:** The Purchaser may be charged up to \$1,500.00 per load for loads with an incorrect load ticket for the product (Sawlog or Other Material) in the load. In addition, the stumpage paid for an improperly ticketed load shall be at the highest Contract stumpage rate for products hauled pursuant to this Contract.
5. **IMPROPERLY MARKED LOADS:** The Purchaser may be charged forty dollars (\$40.00) per load for each load not marked in accordance with Section III.E. LOAD MARKING.

- I. **FAILURE TO MEET COMPLETION DATES:** The Purchaser may be charged \$100.00 for each complete calendar day the Purchaser fails to meet the deadlines shown in Table 3 and Table B1.

- J. **LATE PAYMENTS:** The Purchaser may be charged \$100.00 per day beginning the 15th day after the billing date for failure to pay for forest products, pursuant to Section II.B PAYMENTS.

## **V. FIRE PROTECTION**

- A. **FIRE REGULATIONS:** The Purchaser is required to conduct all operations in accordance with the Montana Forest Fire Regulations, Attachment C, which by this reference is made a part of this Contract.

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- B. FIRE PREVENTION:** During the time that this Contract remains in force, the Purchaser shall, to the greatest extent practicable, prevent forest fires on the area described in this Contract and in its vicinity, and shall require all employees, contractors and employees of contractors to do likewise.
- C. OPEN BURNING REQUIREMENTS:** The Purchaser is required to conduct any burning of slash or other debris in accordance with the Montana Department of Environmental Quality open burning restrictions. The Forest Officer must be notified prior to the start of any burning operations.
- D. FIRE SUPPRESSION:** Unless prevented by circumstances over which he, she or it has no control, the Purchaser shall place qualified employees, contractors and employees of contractors and all equipment at the disposal of any authorized State, County, or Federal Forest Officer for the purpose of fighting forest fires. Payment for such services shall be made at rates to be determined by the Forest Officer, which shall be within a range of payment rates shown in the Interagency Incident Business Management Handbook, NWCG Handbook 2. Any employees or equipment furnished by the Purchaser, contractors or employees of contractors, shall be relieved from fire fighting as soon as it is practicable for the Forest Officer to obtain other adequate labor or equipment.
- E. FIRE COSTS:** The costs borne by the Protecting Agency for suppressing fires that are intentionally lit by the Purchaser or that are caused by negligence or fault in the Purchaser's operations shall be paid by the Purchaser to the Protecting Agency. The Purchaser shall also be liable for property and resource damage resulting from these fires.
- F. FIRE REPORTING:** Any wildfires, which the Purchaser detects or suppresses, must be reported as soon as possible to the responsible fire protection agency and the State.
- G. SUSPENSION OF OPERATIONS:** When fire danger reaches extreme levels that cause operations to be curtailed through Stage II, Hoot Owl requirements or other measures, the State may suspend operations until fire conditions in and/or around the sale area improve. The State will grant a contract extension to compensate for the time suspended.
- H. CONTACT INFORMATION:** The Purchaser will provide the Forest Officer with phone numbers of the Purchaser and their employees and contractors when logging operations are in progress (including nights and weekends), in order to establish contact if a wildfire occurs within the sale area or on other lands accessed by road systems associated with the sale.

## VI. RESOURCE PROTECTION

- A. DAMAGE PREVENTION:** The Purchaser shall use reasonable skill and care in all operations to prevent damage to soils, trails, meadows, stream banks, stream channels, wetlands, lakeshores or other natural features of the sale area.
- B. STREAM PROTECTION:**
  - 1. Construction and logging equipment will not be operated in Streamside Management Zones. An exception may be provided for, under this Contract, through the procurement of an Alternative Practice (with approval of the Forest Officer). Additional protection measures may be required in Section VII.G, SPECIAL OPERATING REQUIREMENTS and in Contract Attachments.
  - 2. The Purchaser shall notify the Forest Officer immediately if debris from logging or construction enters a stream or stream channel.
  - 3. Under the direction of the Forest Officer, the Purchaser shall remove any debris in a stream resulting from logging or construction operations. This work will be completed in a manner that causes the least disturbance to the streams.

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4. Logs shall not be hauled, skidded or yarded across streams unless the logs are fully suspended, or otherwise yarded as specified in this Contract. An approved Alternative Practice must be in place. The Forest Officer must approve all logging and construction plans, including changes, before implementation.
5. All operations shall be conducted in a manner to comply with Montana Water Quality Standards, the Streamside Management Zone Law, and all applicable permits.

**C. CULTURAL RESOURCES:** If a cultural resource is discovered, the Purchaser shall immediately suspend all operations in the vicinity of the cultural resource and notify the Forest Officer. Operations may only resume if authorized by the Forest Officer. Cultural resources identified and protected elsewhere in this Contract are exempted from this clause. Cultural resources, once discovered or identified, are not to be disturbed by the Purchaser, or his, her or its employees and/or sub-contractors.

**D. DISCOVERY OF SENSITIVE, THREATENED AND ENDANGERED SPECIES:**

1. If a specific habitat feature for a federally listed sensitive, threatened or endangered species is encountered, the Purchaser shall suspend all operations in the vicinity of the observation or discovery and immediately notify the Forest Officer. Operations may resume only if authorized by the Forest Officer. Habitat features identified and protected elsewhere in this Contract are exempted from this clause.
2. If a federally listed sensitive, threatened or endangered species is encountered, the Purchaser shall immediately notify the Forest Officer. The Purchaser may be required to suspend operations in the vicinity of the observation or discovery. If suspended, operations may resume only if authorized by the Forest Officer.

**E. SANITATION:** The Purchaser's operations, as described by this Contract, shall comply with all applicable State laws, rules and regulations concerning sanitation in operations. Refuse resulting from the Purchaser's activities, including the use, servicing, repair, or abandonment of equipment, shall be removed, buried or otherwise disposed of in a manner that complies with all State laws and meets the approval of the Forest Officer. The Purchaser shall not service tractors, trucks and similar pieces of equipment on lands that directly drain into or are within 100 feet of lakes, streams or recreational facilities. No logging camp will be located on the gross sale area without prior approval by the Forest Officer.

**F. HAZARDOUS SUBSTANCES:** In addition to the indemnification provided in Section I.W.2. INDEMNITY AND LIABILITY, with respect to Hazardous Substances, the following duties shall apply:

1. The Purchaser shall know and comply with regulations governing the storage, handling, application, disposal, and reporting of pesticides, herbicides, containers, biological waste, petroleum products, dust abatement compounds, and other hazardous substances. The Purchaser shall obtain the approval of the Forest Officer to store, handle, apply or dispose of these substances on the gross sale area.
2. The Purchaser shall not transport, handle, store, load, apply, or dispose of any hazardous substance in such a manner as to pollute water supplies or waterways, or cause damage or injury to people, land, desirable plants, and animals.
3. **Contractors will have spill prevention and containment materials on site to minimize the risk of an accidental spill of petroleum products.**
4. **The Purchaser and/or Contractor shall notify the Forest Officer immediately of Hazardous Material Spills.**

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- G. PROTECTION OF IMPROVEMENTS:** The Purchaser shall to the greatest extent practicable protect from damage all gates, signs, telephone lines, power lines, fences, irrigation ditches, cattle guards, drainage structures, road improvements, and any other improvements or infrastructure within the gross sale area and/or along haul routes. Damages caused by the Purchaser, his, her or its employees or subcontractors, and expenses associated with the repair or replacement of damaged structures and improvements are the sole responsibility of the Purchaser.
- H. PROPERTY CORNER RESTORATION:** The Purchaser is required to replace any General Land Office township, section, quarter or meander corners, monuments or witness trees on or adjacent to the timber sale area which may have been moved, disturbed or lost, as a result of the Purchaser's logging or construction operations. Any necessary replacements must be carried out by a licensed surveyor at the Purchaser's expense.
- I. PASSABLE ROADS:** The Purchaser will leave all roads and trails free from obstruction by logs, brush or debris following the completion of logging operations. Temporary or permanent obstructions may be acceptable if approved by the Forest Officer.
- J. NOXIOUS WEED MANAGEMENT:** All equipment used in road construction and off-road logging activity must be pressure-washed by the Purchaser and inspected by the Forest Officer prior to entering the sale area. This cleaning will remove all dirt, plant parts, and material that may carry noxious weed seeds into the sale area. Other equipment and vehicles entering and leaving the sale area shall be cleaned prior to start up and kept reasonably clean during the course of operations. All subsequent move-ins of logging and construction equipment shall be treated the same as the initial move-in.
- K. AQUATIC INVASIVE SPECIES MANAGEMENT:** All equipment operated in or adjacent to streams, lakes, or other bodies of water must be pressure by the purchaser and inspected by the forest officer prior to entering the sale area. This cleaning will remove all dirt, plant parts, and other material that may carry aquatic invasive species. Drafting from water sources with known aquatic invasive species is prohibited. When drafting, intake hoses must be fitted with a screen mesh equal to or smaller than 3/32 inches. If drafting from streams occurs place intake hoses in low velocity portions of the stream channel.
- L. WILDLIFE PROTECTION:**
1. The Purchaser is authorized to enter areas closed by gates, barricades or berms with motorized vehicles only for the purposes related to the performance of this Contract. Motorized vehicle entry for purposes other than contract performance, such as hunting or transporting game animals will be considered trespass and prosecuted to the fullest extent of the law (Montana Code Annotated § 45-6-203).
  2. The Purchaser is prohibited from carrying firearms while conducting contract operations [ARM 36.11.432(1)(m); 36.11.433(1)(d); 36.11.443(2)].
  3. The Purchaser will store human or pet food, livestock food, garbage, and other attractants in a bear-resistant manner.
  4. The Purchaser will not bury or discard attractants in the sale area, or burn attractants (such as food leftovers) in an open campfire.
  5. The Purchaser will provide each employee with a copy of Attachment D "Working in Bear Habitat" Brochure.
  6. The Purchaser will comply with Attachment F, the Kootenai National Forest Food Storage Order F14-083-L-11.

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**M. PROTECTION OF SENSITIVE PLANTS:** If previously undocumented populations of sensitive plants listed on the Regional Forester's Sensitive Species List are encountered, the Purchaser shall immediately notify the Forest Officer. The Purchaser may be required to suspend operations in the vicinity of the observation or discovery. If suspended, operations may resume only if authorized by the Forest Officer.

## VII. LOGGING

**A. TREES DESIGNATED FOR CUTTING:** All trees meeting the following requirements must be cut by the Purchaser.

1. **TREES IN UNITS:** Trees that meet the Minimum Log Size of Trees Designated for Cutting in Table 2 are to be cut in each unit according to the Marking specifications shown in Section VII.F. UNIT DESIGNATIONS.
2. **RIGHT-OF-WAY TREES:** All trees within road right-of-way boundaries must be cut.
3. **DAMAGED TREES:** Reserved trees, which are root-cut, damaged by felling or skidding, uprooted or broken off by the Purchaser's operations may be designated for cutting by the Forest Officer. The Forest Officer may mark additional reserve trees to replace those that have been cut or damaged.
4. **FIRE KILL, INSECT INFESTATIONS AND WIND THROWN:** The Purchaser may be required to cut and remove at current contract rates, fire-killed, high hazard, disease infected, insect-infested or wind thrown (defined as blown down or wind-damaged to the extent that the tree is expected to fall or is dying) trees that occur in any part of the gross sale area while this Contract is in effect, if the Forest Officer determines that the stumpage value per ton of the additional timber is approximately equal to the value of the timber being harvested under this Contract.

**B. TREES RESERVED FROM CUTTING:**

1. **LEAVE TREES:** Trees, both live and dead, marked to leave or otherwise described to leave are reserved from cutting. Any trees not specifically required to be cut are reserved from cutting.
2. **BOUNDARY AND BEARING TREES:** Trees marking the boundaries of ownership, logging units, equipment restriction zones, streamside management zones, road rights-of-way, and bearing trees, are reserved from cutting unless otherwise designated by this Contract or by the Forest Officer.
3. **VALID CLAIMS:** Timber to which there exists a claim under valid contracts with the State of Montana is exempted from this sale.

**C. LOG MANUFACTURING AND RECOVERY STANDARDS:**

1. **SAWLOG STANDARDS:** Trees cut by the Purchaser shall be manufactured to secure the maximum utilization of forest products according to III.G.1. All logs that meet or exceed the Manufacturing and Recovery Standards in Table 2 and this section shall be skidded to landings and hauled by the Purchaser.
  - a. Logs shall be bucked to utilize the entire length of the tree to the top diameter specified under Manufacturing and Recovery Standards in Table 2.
  - b. Logs meeting utilization specifications in Table 2 shall be manufactured in such a manner as to minimize waste during bucking operations.

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- c. A tree or log larger than 5.6" top DIB is considered to be a sawlog if it contains Scribner Decimal C Net Scale <sup>3</sup> 33% of Gross.
2. **OTHER MATERIAL:** The Purchaser **is required to cut and skid Other Material** to the landing that does not meet Sawlog Manufacturing and Recovery Standards in Table 2 but meet or exceed the Other Material manufacturing and Recovery Standards in Table 2 of this section. Such products shall be billed at the rate for Other Material shown in Table 1. Trees cut by the Purchaser shall be manufactured to secure the maximum utilization of Sawlog forest products according to III.G.1 and VII.C.1.
- a. All contract provisions apply to the removal of Other Material.
  - b. Other Material that has been manufactured by the Purchaser shall be decked and hauled separately from sawlogs. All decked non-sawlog material must be hauled, or disposed of by the Purchaser in accordance with instructions of the Forest Officer. All hauled loads will have a truck ticket assigned and will meet the specifications in Section III, MEASUREMENT AND LOG ACCOUNTABILITY.
  - c. Butt cut logs (the first log cut above the stump) that meet LOG MANUFACTURING AND RECOVERY STANDARDS in Table 2, but do not meet TREES DESIGNATED FOR CUTTING minimum top DIB and length, may be considered as Other Material, not sawlogs.
3. **DOWN WOODY MATERIAL AND SNAGS:** The Purchaser shall leave the desired range of downed woody material and snags as follows:
- a. Units 112T, 112S, 113, 113A, 113O, 113S and 113T:
    - i. Retain 2 WL, DF, PP snags per acre over 15" DBH as well as any trees with visible cavities to meet snag retention objectives. Trees cut for safety purposes shall remain in the unit.
    - ii. A minimum of approximately **8-15 tons per acre** of downed woody material greater than 3 inches in diameter should be retained within the unit. Retained material should consist of the longest and largest pieces present and, where possible, of intact pieces of a variety of species, sizes, and stages of decay, including cull treetops and cull logs. Leave all downed logs greater than 9 inches in diameter intact where possible.
  - b. Units 111T, 111S, 114A, 114B and 116:
    - i. Retain 3.5 WL, DF, PP snags per acre over 15" DBH as well as any trees with visible cavities to meet snag retention objectives. Trees cut for safety purposes shall remain in the unit.
    - ii. A minimum of approximately **17-25 tons per acre** of downed woody material greater than 3 inches in diameter should be retained within the unit. Retained material should consist of the longest and largest pieces present and, where possible, of intact pieces of a variety of species, sizes, and stages of decay, including cull treetops and cull logs. Leave all downed logs greater than 9 inches in diameter intact where possible.
4. **HARDWOODS:** The purchaser will retain all hardwood tree species. Trees cut for safety purposes shall remain in the unit.

TABLE 2.					
PRODUCT	TREES DESIGNATED FOR CUTTING		SAWLOG MANUFACTURING AND RECOVERY STANDARDS		
	The Purchaser must fell all trees marked or designated for cutting that contain a log of this minimum size.		The Purchaser must skid all material meeting this minimum specification.		
	Diameter at Breast Height	Length	Top DIB	Length	Sawlogs meeting standards in Section VII.C.1.b through c
Sawlogs	7.0"	16.5'	5.6" - 8.5" 8.6"+	10.5' 8.5'	
Other Material	4.0"	16.5'	3.0" +	16.5'	Other material products meeting standards in Section VII.C.2

**D. TREE AND BOUNDARY MARKING:**

1. TREES MARKED TO CUT: **N/A**
2. TREES MARKED TO LEAVE: Marked with a horizontal **orange** paint mark at Diameter at Breast Height (DBH) and a mark below stump height.
3. HARVEST UNIT BOUNDARIES: Marked with three vertical **orange** paint stripes and a mark below stump height. One vertical strip faces into the unit and the other stripes are perpendicular to the unit boundary.
4. ROAD RIGHT-OF-WAY BOUNDARIES: **N/A**
5. PROPERTY BOUNDARIES: Marked with posts, signs, **Red** blazes and **Pink** flagging.

- E. HARVEST SCHEDULE:** The purchaser must cut and remove trees from the sale or portions of the sale, such as units, by the dates shown on the HARVEST COMPLETION SCHEDULE, Table 3:

TABLE 3. HARVEST COMPLETION SCHEDULE		
Priority	Unit or Portion of Sale	Completion Date
<b>1</b>	<b>ALL</b>	<b>03/31/2029</b>

- F. UNIT DESIGNATIONS:** The following requirements are to be performed by the Purchaser in the harvest units listed below and as shown on the sale map, Attachment A. Paragraph headings refer to paragraphs listed in Section VII.G, SPECIAL OPERATING REQUIREMENTS.



HARVEST UNIT NUMBER(S)	ACRES	ESTIMATED VOLUME (Tons Sawlogs)
111T	19	1,920
112T	6	513
113T	7	1,007
YARDING METHOD: Tractor		
MARKING: Leave Tree Marked in Orange		
OPERATING PERIOD: Winter Logging Required between Dec 1 – March 31; When the ground is frozen or snow covered as required in VII.G.4, VII.L.1.b-c and VII.L.2.		
SPECIAL OPERATING REQUIREMENTS: WINTER LOGGING REQUIRED		

HARVEST UNIT NUMBER(S)	ACRES	ESTIMATED VOLUME (Tons Sawlogs)
111S	14	1,245
112S	6	429
113S	25	2,471
YARDING METHOD: Skyline		
MARKING: Leave Tree Marked in Orange		
OPERATING PERIOD: Winter Logging Required between Dec 1 – March 31; When the ground is frozen or snow covered as required in VII.G.4, VII.L.1.b-c and VII.L.2.		
SPECIAL OPERATING REQUIREMENTS: SKYLINE YARDING REQUIRED WINTER LOGGING REQUIRED		

HARVEST UNIT NUMBER(S)	ACRES	ESTIMATED VOLUME (Tons Sawlogs)
113	35	4,438
YARDING METHOD: Skyline		
MARKING: Purchaser Leave Tree Selection VII.G.2.a, c-d		
OPERATING PERIOD: Winter Logging Required between Dec 1 – March 31; When the ground is frozen or snow covered as required in VII.G.4, VII.L.1.b-c and VII.L.2.		
SPECIAL OPERATING REQUIREMENTS: SKYLINE YARDING REQUIRED PURCHASER LEAVE TREE SELECTION WINTER LOGGING REQUIRED		

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HARVEST UNIT NUMBER(S)	ACRES	ESTIMATED VOLUME (Tons Sawlogs)
113A	47	4,719
YARDING METHOD: Tractor		
MARKING: Leave Tree Marked in Orange		
OPERATING PERIOD: Winter Logging Required between Dec 1 – March 31; When the ground is frozen or snow covered as required in VII.G.4, VII.L.1.b-c and VII.L.2.		
SPECIAL OPERATING REQUIREMENTS: WINTER LOGGING REQUIRED TRAIL REHABILITATION		

HARVEST UNIT NUMBER(S)	ACRES	ESTIMATED VOLUME (Tons Sawlogs)
113O	6	728
YARDING METHOD: Alternative		
MARKING: Purchaser Leave Tree Selection VII.G.2.a, c-d		
OPERATING PERIOD: Winter Logging Required between Dec 1 – March 31; When the ground is frozen or snow covered as required in VII.G.4, VII.L.1.b-c and VII.L.2.		
SPECIAL OPERATING REQUIREMENTS: PURCHASER LEAVE TREE SELECTION OPTIONAL UNIT WINTER LOGGING REQUIRED ALTERNATIVE SYSTEMS REQUIRED		

HARVEST UNIT NUMBER(S)	ACRES	ESTIMATED VOLUME (Tons Sawlogs)
114A	29	2,576
114B	9	433
YARDING METHOD: Tractor		
MARKING: Leave Tree Marked in Orange		
OPERATING PERIOD: June 16 – March 31 and when soil conditions are dry, the ground is frozen or snow covered as required in VII.L.1 a-c and VII.L.2.		
SPECIAL OPERATING REQUIREMENTS: NA		

HARVEST UNIT NUMBER(S)	ACRES	ESTIMATED VOLUME (Tons Sawlogs)
116	10	750
YARDING METHOD: Skyline		
MARKING: Purchaser Leave Tree Selection VII.G.2.a, c-d		
OPERATING PERIOD: June 16 – March 31 and when soil conditions are dry, the ground is frozen or snow covered as required in VII.L.1 a-c and VII.L.2.		
SPECIAL OPERATING REQUIREMENTS: SKYLINE YARDING REQUIRED PURCHASER LEAVE TREE SELECTION OPTIONAL UNIT		

UNIT	ACRES	1 SKYLINE YARDING REQUIRED	2 PURCHASER LEAVE TREE SELECTION	3 OPTIONAL UNIT	4 WINTER LOGGING REQUIRED	5 ALTERNATIVE SYSTEMS REQUIRED	6 TRAIL PROTECTION AND REHABILITATION
111T	19				X		
111S	14	X			X		
112T	6				X		
112S	6	X			X		
113	35	X	X		X		
113A	47				X		X
113O	6		X	X	X	X	
113S	25	X			X		
113T	7				X		
114A	29						
114B	9						
116	10	X	X	X			
<b>TOTAL</b>	<b>213</b>						

## TIMBER SALE CONTRACT

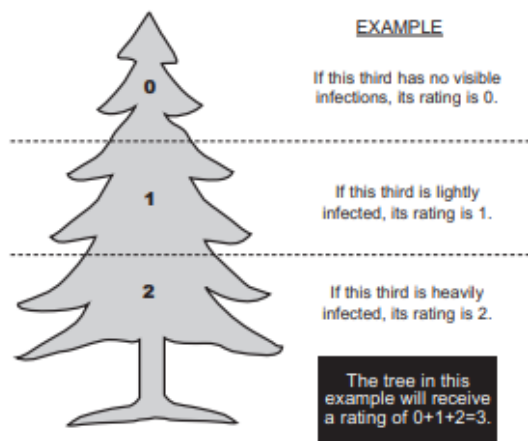
**G. SPECIAL OPERATING REQUIREMENTS:** The following requirements are to be performed by the Purchaser in specific sale units as shown in Section VII.F, UNIT DESIGNATIONS.

1. **SKYLINE YARDING REQUIRED:** A skyline yarding system capable of yarding 1,600-2,000 feet external yarding distance uphill must be used. A carriage capable of 50 feet minimum lateral yarding distance is required. The carriage must maintain a fixed position on the skyline while lateral yarding.
  - a. Skyline corridors shall be spaced not less than 75 feet apart unless approved by the Forest Officer. In the case of ridges where fan-shaped settings are required, the minimum distance at the widest divergence will be 150 feet.
  - b. The location of all skyline corridors shall be approved by the Forest Officer in advance of any felling operations.
  - c. Purchaser will be required to locate the following prior to approval by the Forest Officer:
    - i. all corridors after determining adequate deflection (minimum 5%)
    - ii. tail trees or tail holds
    - iii. intermediate support tree
    - iv. guyline anchors
    - v. blind leads
    - vi. decking areas
  - d. Clearing width for corridors must be kept to the absolute minimum necessary to accommodate yarding and shall not exceed 12 feet.
  - e. Except for lateral yarding, logs shall be yarded with one end suspended or fully suspended.
  - f. Multispan skyline yarding required: To obtain adequate deflection, intermediate supports may be required on some corridors.
  - g. High tail trees required: Tail trees or lift trees suitable to obtain adequate deflection may be required.
  - h. When rigging is attached to trees not designated for cutting, tree plates or similar effective protective devices may be required and will be removed at completion of use.
  - i. Mobile tailholds or mobile guyline anchors are restricted to areas where it is not necessary to build constructed trails for equipment access unless agreed upon in writing by the Forest Officer.
  - j. In the event that special problems outside the scope of the skyline logging specifications are identified by either party, the Purchaser and the Forest Officer will mutually agree upon the solution.
2. **PURCHASER LEAVE TREE SELECTION:** Leave Trees are not marked. All high-quality wildlife snags (DF, WL, PP snags >15" DBH, and at least 12' high), hardwood trees are designated as leave trees. Leave trees will be selected by the purchaser based on direction and approval by the Forest Officer as follows:
  - a. **Units 113 and 1130** - The purchaser will select healthy and vigorous western white pine, western larch, ponderosa pine, and Douglas-fir to be left on a variable spacing averaging approximately 31 feet of stem spacing. Spacing can vary +/- 20' to allow for retention of the

## TIMBER SALE CONTRACT

highest quality trees and must leave a minimum of 5 feet between driplines. Stocking post-treatment will leave a target basal area of 80-90 ft<sup>2</sup> and approximately 40-50 trees per acre. Leave trees will be the highest quality, dominant and codominant WP, WL, PP, and DF, listed in preferential order.

- i. Select dominant leave trees with the highest live crown ratios, 30% or greater.
  - ii. Select well-formed trees free of insect and disease problems such as bark beetle attacks, dwarf mistletoe, blister rust and root rot infection. Retain damage free trees with the best crowns. Avoid leaving trees with crooks, sweep, or forked tops.
  - iii. Leaving WL with a crown ratio of 20% is acceptable if the tree has a firm stout bole.
  - iv. Remove western larch with a mistletoe rating greater than 3.
  - v. Leave trees will be the tallest and largest diameter when all other criteria are met.
- b. **Unit 116** - The purchaser will select healthy and vigorous ponderosa pine, western larch, and Douglas-fir to be left on a variable spacing averaging approximately 66 feet of stem spacing. Spacing can vary +/- 20' to allow for retention of the highest quality trees and must leave a minimum of 5 feet between driplines. Stocking post-treatment will leave a target basal area of 10 ft<sup>2</sup> and approximately 5-10 trees per acre. Leave trees will be the highest quality, dominant and codominant PP, WL, and DF, listed in preferential order.
- i. Select dominant leave trees with the highest live crown ratios, 30% or greater.
  - ii. Select well-formed trees free of insect and disease problems such as bark beetle attacks, dwarf mistletoe, blister rust and root rot infection. Retain damage free trees with the best crowns. Avoid leaving trees with crooks, sweep, or forked tops.
  - iii. Leaving WL with a crown ratio of 20% is acceptable if the tree has a firm stout bole.
  - iv. Remove western larch with a mistletoe rating greater than 2.
  - v. Leave trees will be the tallest and largest diameter when all other criteria are met.
- c. All purchaser leave tree selection and cutting must occur during hours with adequate visibility.
- d. If the Purchaser fails to meet the cutting prescription, cutting operations will be suspended and the Forest Officer will require leave trees to be marked by the Purchaser, and the marking to be approved by the Forest Officer prior to harvest.

**Hawksworth Dwarf Mistletoe Severity Rating**

**Step 1)** Divide the live crown of the tree into 1/3rds.

**Step 2)** Rate each third according to this scale:

0 - No visible infection

1 -  $\frac{1}{2}$  or fewer of total # branches infected

2 - More than  $\frac{1}{2}$  of the total # branches infected

**Step 3)** Add rating for each 1/3

3. **OPTIONAL UNIT:** The Purchaser has the option to harvest in this unit. Operations in this unit will follow the specification of this contract. The Purchaser must inform the Forest Officer by **6/30/2025** if they elect to pursue or decline operating within the optional unit. Purchaser must submit an operating plan to the Forest Officer for approval prior to operation in this unit.
  4. **WINTER LOGGING REQUIRED:** Harvest operation is allowed only over a minimum frost depth of 4 inches or a minimum snow depth of 18 inches, loose, or 12 inches, packed.
  5. **ALTERNATIVE SYSTEMS REQUIRED:** The Purchaser must use alternative felling and yarding methods where slopes exceed 40%. The alternative system proposed by the Purchaser must be approved by the Forest Officer at or before the time the Logging Operations Plan for the unit is approved. The Forest Officer will only approve alternatives that are consistent with planned mitigation and resource protection measures. Alternatives may include skyline yarding, hand-felling, alternative ground-based equipment or other systems.
  6. **TRAIL PROTECTION AND REHABILITATION:** The Purchaser shall protect the Teeters Peak Trail #300 to the greatest extent practical and perform restoration post-harvest. During temporary road decommissioning, the Purchaser shall construct a 2' foot-trail on approximately 475 feet as directed by the Forest Officer. Approximately 900 feet will require rehabilitation on the existing trail tread through the unit.
- H. LOGGING OPERATIONS PLAN:** The Forest Officer shall approve a plan for felling, yarding, and landing logs (both Sawlogs and Other Material) in each harvest unit prior to the start of operations in that unit.
- I. SKID TRAIL LAYOUT AND YARDING PLAN:** The Purchaser must follow these requirements along with those shown under VII.G. SPECIAL OPERATING REQUIREMENTS when developing a yarding plan for each unit. The Forest Officer may approve exceptions to these requirements in writing.
1. The Purchaser shall lay out skid trails and have locations approved by the Forest Officer prior to felling trees.
  2. All skid trails will be located within the harvest unit boundaries.
  3. Any constructed skid trails shall be completed and approved by the Forest Officer prior to felling timber.

## TIMBER SALE CONTRACT

4. Skid trails will not be located in draws, and may only cross draws at locations flagged and approved by the Forest Officer.

**J. LANDINGS AND LOG DECKS:**

1. The Purchaser shall construct landings at locations approved by the Forest Officer prior to felling timber.
2. Landings shall be kept to the minimum size necessary to allow the safe handling of logs. The Forest Officer must approve landing size.
3. All deck locations shall be approved by the Forest Officer prior to clearing or use. Decks shall be located so as to minimize the number of trees cut for construction of the deck area.

**K. FELLING:**

1. In each harvest unit, a felling pattern shall be used which conforms to the logging operations plan and causes the least damage to reserve trees and other resources.
2. Felling shall be systematic and continuous to avoid lost logs and minimize the number of skidding trips.
3. Trees shall be directionally felled away from features requiring protection within or adjacent to harvest units. Features requiring protection include streams, meadows, wet areas, and areas specified under Section VII.F. UNIT DESIGNATIONS. Wedges, jacks, winches, or other special equipment may be required to direct trees when felling. Trees falling into protection areas shall be winch-line skidded out of protected features. All necessary mitigation for damage caused by improper and/or non-approved felling into a protected zone is the responsibility of the Purchaser. The Forest Officer must approve all mitigation work.
4. Traffic Control Required For Felling along Roads: If felling operations occur along public roads, traffic guards with "STOP" signs shall be posted 500 feet in both directions from the units on open roads, providing a safety zone to warn oncoming traffic that logging operations are in progress. All traffic shall be stopped when tree felling is in progress. Traffic stops should not exceed 15 minutes at any one time. All saws will be shut off when traffic is moving through the safety zone. Wedges and/or jacks shall be used to ensure trees do not fall onto the roadway. In the event a tree falls across the roadway, all debris shall be removed immediately from the roadway and right-of-way. The Forest Officer must approve any extended road closures for logging operations.

**L. YARDING AND MECHANICAL FELLING:** The Purchaser must follow these requirements during logging operations, along with those shown under Section VII.G. SPECIAL OPERATING REQUIREMENTS. The Forest Officer will determine when restrictive conditions apply, and may approve exceptions to these requirements in writing.

1. Soil Compaction Restrictions: In order to prevent soil resource impacts, ground-based mechanical felling and yarding are restricted to periods when one or more of the following conditions occur:
  - a. Soil moisture content at 4-inch depth less than 20% oven-dry weight.
  - b. Minimum frost depth of 4 inches.
  - c. Minimum snow depth of 18 inches, loose, or 12 inches, packed.
2. Suspended Operations for Soil Compaction and Displacement: The Purchaser will be required to restrict or suspend logging operations when soils are subject to compaction or displacement by heavy equipment.

## TIMBER SALE CONTRACT

3. Equipment Restrictions:

- a. Equipment shall not be operated in areas designated as EQUIPMENT RESTRICTION ZONES, WETLAND MANAGEMENT ZONES or STREAMSIDE MANAGEMENT ZONES as shown in Section VII.D.6 and 7, unless authorized by this Contract or the Forest Officer.
- b. Equipment shall not be operated in soft soils, boggy areas or areas where skidding would cause excessive compaction and displacement.
- c. Any trees designated for harvest within such zones shall be winchline skidded to skid trails outside the zone.
- d. Slash will not be piled in or pushed into these zones.
- e. The Forest Officer must approve any designated crossings of restricted areas.

- 4. Protection of Reserved Trees: The Purchaser shall exercise reasonable care to prevent damage to trees reserved from cutting during logging operations.

**M. CLEAN-UP AND COMPLETION:** The Purchaser must follow these requirements and those shown under Section VII.G. SPECIAL OPERATING REQUIREMENTS during logging operations. The Forest Officer will determine when restrictive conditions apply, specifications and dates to meet these requirements and may approve exceptions in writing. The Forest Officer must approve all designated work prior to the removal of Purchaser's equipment.

- 1. Logging Debris Confined To Units: All debris from logging shall be confined within the harvest unit boundaries. Any logging debris outside a harvest unit must be returned to within the unit boundary.
- 2. Skidding Debris on Roads: The Purchaser shall remove logging slash remaining on any portion of a road cutbank or traveled way. Cut and fill slopes, ditches, or road surfaces damaged by skidding operations shall be restored to original conditions. Reseeding is required if vegetation is damaged by skidding.
- 3. Repair of Improvements: Damage caused by the Purchaser's operations to culverts, waterlines, fences, roads, bridges, gates, cattleguards, signs, and all other improvements must be adequately repaired or replaced.
- 4. Erosion Control:
  - a. The Purchaser shall construct slash and debris erosion barriers, dips, water bars or ditches in skid trails and landings as directed by the Forest Officer.
  - b. The kinds and frequency of erosion control structures shall be adjusted to soil types, topography and climatic conditions as directed by the Forest Officer.
  - c. The Purchaser is required to recontour any excavated skid trails, and provide for effective erosion control in the trail location as directed by the Forest Officer.
  - d. Erosion control work shall commence as soon as skidding is completed on each skid trail or landing, and must be kept current with unit operations.
  - e. Erosion control work shall be completed and approved by the Forest Officer in unfinished units before operations cease for inactive periods including heavy winter snowfall, spring breakup and restricted dates.
  - f. All erosion control work in each unit shall be completed prior to notification pursuant to Section VII.M.7. Acceptance of Completed Harvest Units.

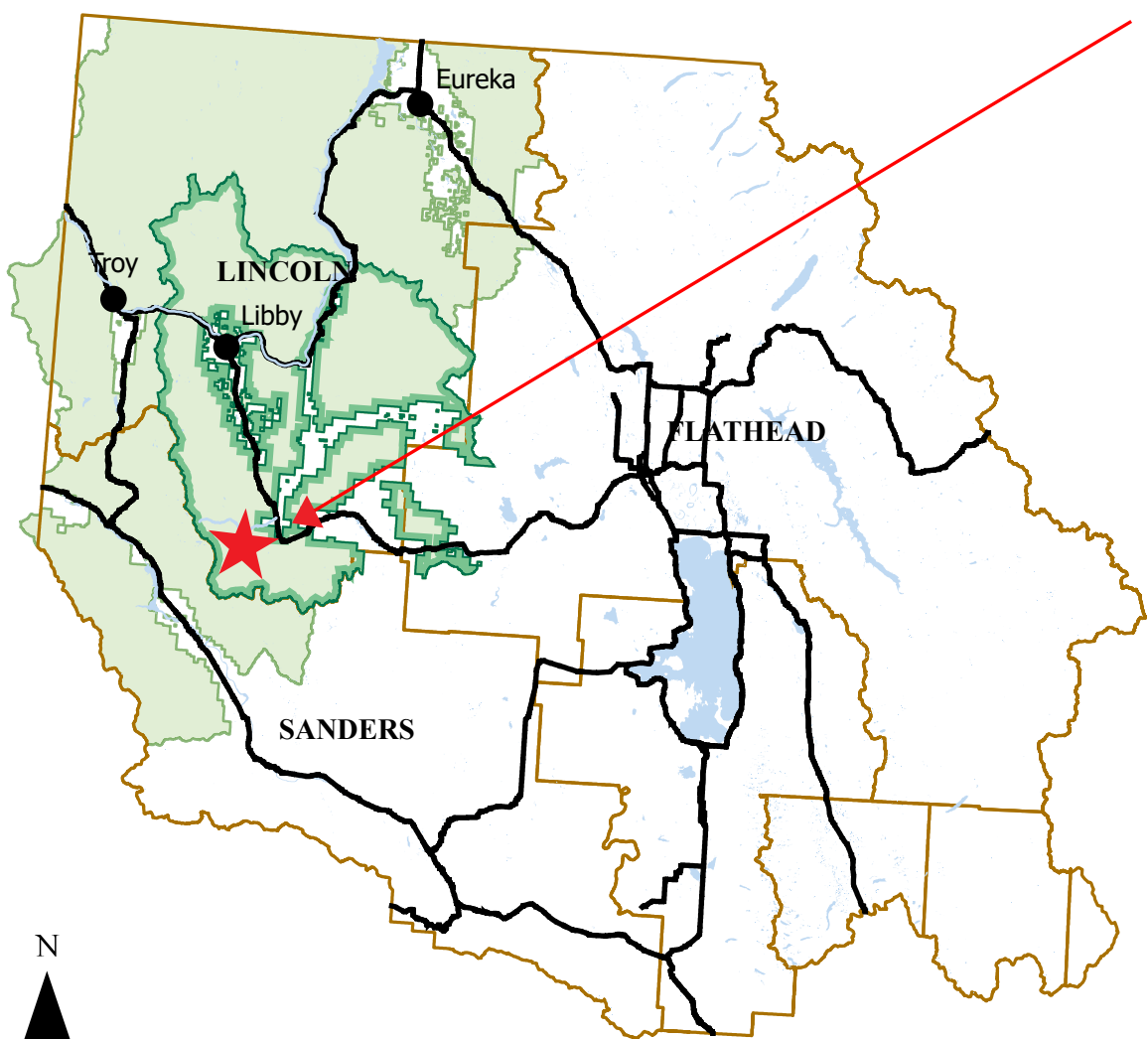


## TIMBER SALE CONTRACT

- g. The Purchaser shall maintain erosion control structures in active sale areas throughout the contract period or extensions thereof.
- 5. **Landing and Decking Area Cleanup:** The Purchaser is required to pile logging residues on landings and log-decking areas. Proper equipment (e.g. brush blade, log loader) shall be used to ensure that no dirt is incorporated into the piles. Mechanical scarification of landing and decking areas may be required. Where logs have been decked on the downhill or fill side of a road, the Purchaser may be required to pile residue with a log loader or by hand. Residue piles shall be a minimum of 15 feet away from any live trees. Piles shall be located and constructed as directed by the Forest Officer.
- 6. **Systematic Harvest Unit Operations:** When harvest operations are begun on a designated harvest unit, the harvest operations on that unit shall be fully completed before cutting may begin on other harvest units.
- 7. **Acceptance of Completed Harvest Units:** The Forest Officer shall notify the Purchaser in writing when all contract requirements for each specified harvest unit or area have been met. After notice has been received, the Purchaser is not required to do additional work on the specified area except as provided in Section VII.A.4. FIRE KILL, INSECT INFESTATION, AND WIND THROWN.
- 8. **Reseeding:** The purchaser shall apply seed to skid trails, landings, obliterated roads and other areas disturbed by logging as directed by Forest Officer. Appropriate seed mix specified per ATTACHMENT B, Table B-2 and Grass Seeding Specifications.
- N. SLASHING OF LOGGING-DAMAGED TREES REQUIRED:** The Purchaser shall fell all submerchantable trees with logging-related root or stem damage, causing lean. The stem shall be completely severed from the stump below the lowest live limb. Maximum stump height shall be 8 inches on the uphill side.
- O. HAULING RESTRICTIONS:** The Purchaser will be required to restrict or suspend hauling during periods when the compacted road surface would be damaged, as directed by the Forest Officer. Restrictions are required when hauling would cause rutting into the subgrade, or surfacing materials would be displaced, such as during heavy rainfall or spring breakup freezing and thawing cycles
- P. LOGGING OPERATIONS SAFETY SIGNS:** Road signs warning of logging and road construction operations shall be posted 500 feet from the operations. When log hauling is in progress, warning signs shall be posted at major road junctions as directed by the Forest Officer. Warning signs must comply with specifications in the Manual on Uniform Traffic Control Devices.
- Q. TEMPORARY SPUR ROAD CONSTRUCTION:** Purchaser is permitted to construct a temporary spur road for access to units as seen in the Sale Area Map in Attachment A. Location of the road must be approved by the Forest Officer. The road must be constructed and reclaimed to specifications in Attachment B.
- R. CLOSE ROADS:** Temporary roads and/or existing roads will be closed using various methods that include constructing earthen berms; trampling slash within the travel way; reshaping excavated material; and grass seeding. Closure methods and placement will be as directed by the Forest Officer.

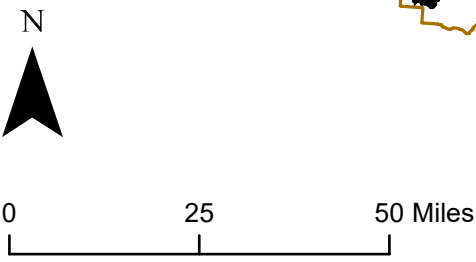
# Good Neighbor Authority Vicinity Map

## Libby District

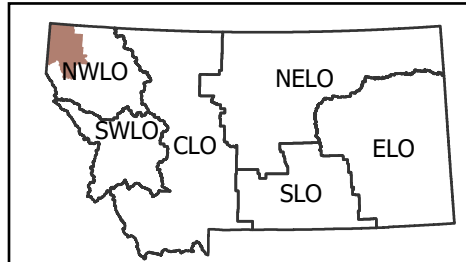


GNA Talkie Teeters Timber Sale  
Project Location: Approximately  
25 Miles South of Libby, MT  
County: Lincoln

- Towns
- Major Roads
- Streams
- Water Bodies
- Libby Ranger District
- Kootenai National Forest
- County Lines



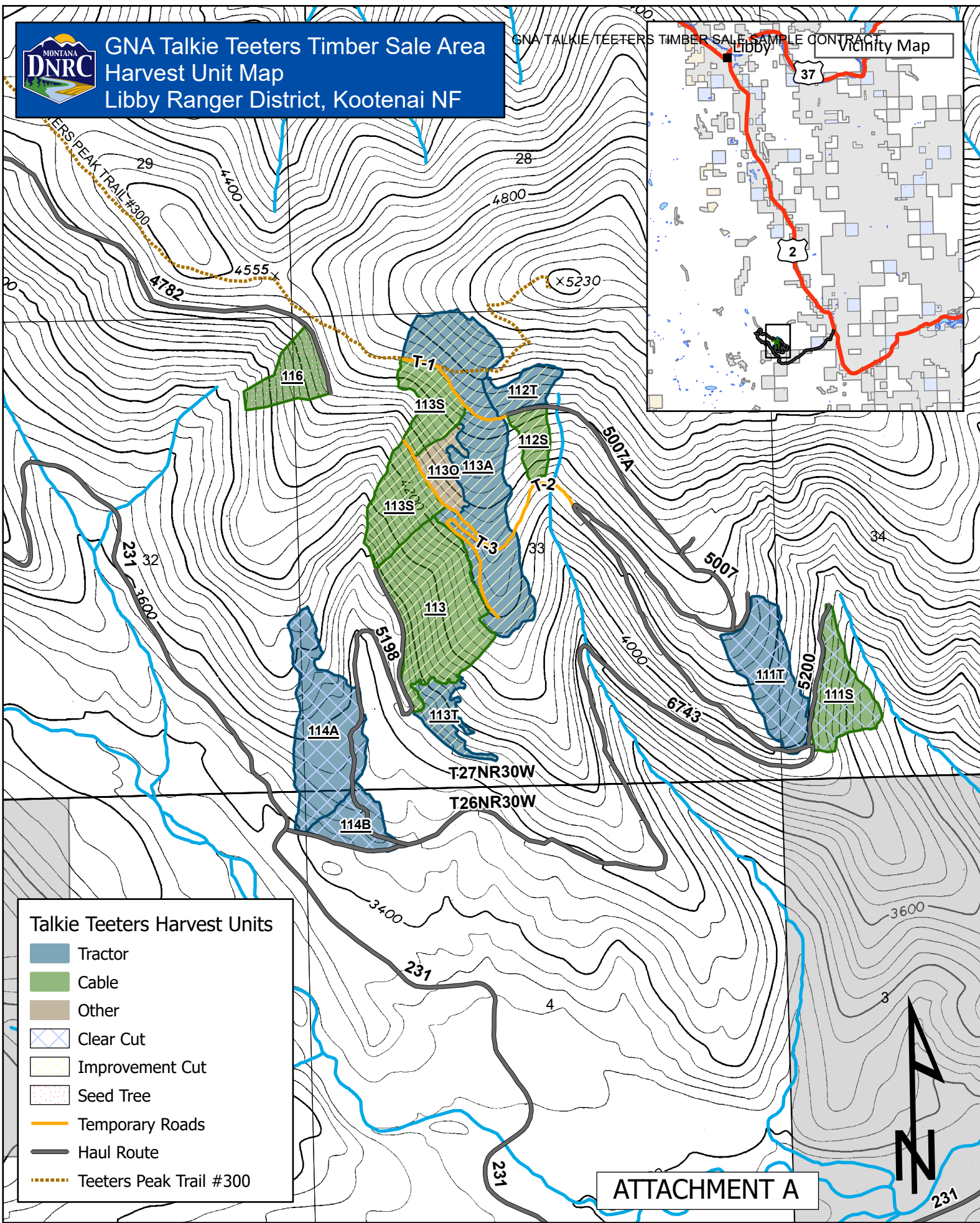
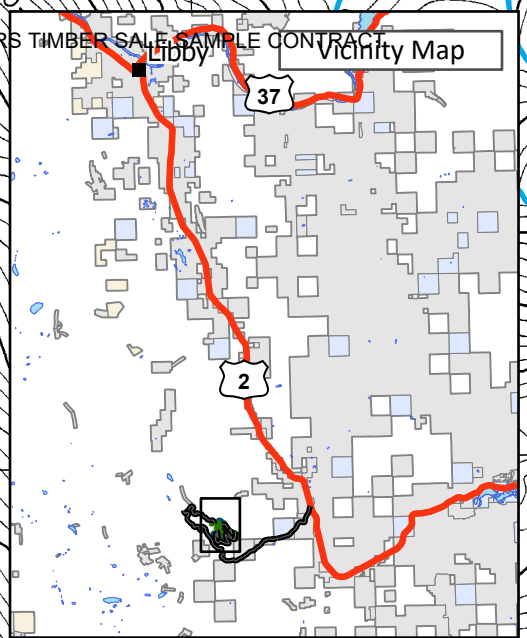
Spatial Reference: NAD 1983 StatePlane Montana





# GNA Talkie Teeters Timber Sale Area Harvest Unit Map Libby Ranger District, Kootenai NF

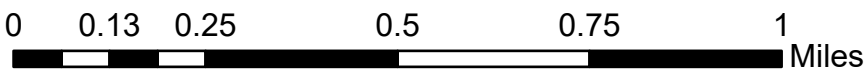
GNA TALKIE/TEETERS TIMBER SALE SAMPLE CONTRACT  
Libby  
Vicinity Map



## Talkie Teeters Harvest Units

- Tractor
- Cable
- Other
- Clear Cut
- Improvement Cut
- Seed Tree
- Temporary Roads
- Haul Route
- Teeters Peak Trail #300

ATTACHMENT A







GNA TALKIE TEETERS TIMBER SALE SAMPLE CONTRACT  
**STATE OF MONTANA**  
**TIMBER SALE CONTRACT**  
**ATTACHMENT B**

<b>ROAD MAINTENANCE, RECONSTRUCTION &amp; TEMPORARY ROAD CONSTRUCTION SPECIFICATIONS</b>	
<b>SALE NAME</b> GNA Talkie Teeters	<b>SALE NUMBER</b>

**I. CONSTRUCTION REQUIREMENTS**

- A. ROADS:** The Purchaser is required to construct, improve and maintain the roads shown in Table B-1 per the schedules stated, as shown on the Sale Map, Attachment A, and to the specifications and drawings in Attachment B and other applicable attachments. All work must be completed when soil conditions meet requirements in Timber Sale Contract Section VII.M.1 SOIL COMPACTION RESTRICTIONS.

<b>TABLE B-1. ROAD CONSTRUCTION REQUIREMENTS</b>				
<b>Road Name and/or Number</b>	<b>Approximate Length (Miles)</b>	<b>Type of Construction</b>	<b>Operation Period</b>	<b>Completion Date or Requirement</b>
Libby Creek Fisher River Road #231	6.92	Maintenance	June 16 <sup>th</sup> – October 15 <sup>th</sup> and when soil conditions meet Timber Sale Contract requirements in Section VII.L.	Prior to Logging in units and as needed
Teeters Mountain Road #6743	3.07	Reconstruction/ Maintenance		Prior to Logging in units and as needed
Teeters Mountain Oldie Road #5198	0.93	Reconstruction/ Maintenance		Prior to Logging in units and as needed
Upper Teeters Mountain Road #5200	0.25	Reconstruction/ Maintenance		Prior to Logging in units and as needed
South Teeters Face Road #5007	0.30	Reconstruction/ Maintenance		Prior to Logging in units and as needed
South Teeters Face A Road #5007	0.52	Reconstruction/ Maintenance		Prior to Logging in units and as needed
Temporary Road T-1	0.28	Temporary Construction		Prior to logging
		Obliteration		Following Completion of Unit Requirements
Temporary Road T-2	0.59	Temporary Construction		Prior to logging
		Obliteration		Following Completion of Unit Requirements
Temporary Road T-3	0.38	Temporary Construction		Prior to logging
		Obliteration		Following Completion of Unit Requirements

<b>TABLE B-1. OPTIONAL ROAD CONSTRUCTION</b>				
<b>Road Name and/or Number</b>	<b>Approximate Length (Miles)</b>	<b>Type of Construction</b>	<b>Operation Period</b>	<b>Completion Date or Requirement</b>
Libby Creek Fisher River Road #231	3.03	Maintenance	June 16 <sup>th</sup> – March 31 <sup>st</sup> and when soil conditions meet Timber Sale Contract requirements in Section VII.L.	Prior to Logging in units and as needed
Standard Creek – Miller Creek Road #4782	2.41	Maintenance		Prior to Logging in units and as needed
	0.60	Reconstruction		

**B. ROAD CONSTRUCTION MATERIALS ESTIMATE:**

TABLE B-2: MATERIALS FURNISHED AND INSTALLED BY THE PURCHASER:			
The Purchaser is required to furnish the described material and install as required in Attachment B. Quantities are estimated, and the Attachment B requirements and specifications must be met regardless of the estimated amounts. All materials furnished by the Purchaser become the property of the State when installed. If, due to a minor design change, material is not installed, the material will be delivered to the nearest DNRC Unit Office and become property of the State upon delivery.			
Corrugated Metal Pipe w/ Bands			
No.	Diameter	Length	Gauge
1	18"	38'	16
1	18"	32'	16
1	18"	40'	16
1	30"	65'	16
Other Materials			
Amount	Description		
2.46 Acres	Turf Establishment, Dry Method Seeding & Mulching		
Fill Material (may be furnished from government borrow pit)			
Cu. Yards	Type	Delivery Location	
50	Roadway Aggregate 3/4" minus crushed gravel (certified weed-free)	See VIII. Work List Summary & Road Log – exact placement may adjust during reconstruction.	
45	RipRap 15" to 21" diameter (certified weed-free)		

**TABLE B-2 (CONTINUED): SEED AND FERTILIZER REQUIREMENTS**

The Purchaser is required to furnish and apply certified noxious weed-free, pure live seed mixture(s) and fertilizer in the amounts shown. Total pounds mixed seed are pure live seed, corrected for germination and purity. Germination and purity tests must have been conducted within the last 12 months prior to delivery. Purchaser shall furnish documentation of germination and purity tests to the Forest Officer prior to application.

Certified Noxious Weed-Free Seed		Fertilizer	
Pounds	Description	Pounds	Analysis (N-P-K)
8	<i>Elymus glaucus</i> , Blue Wildrye	N/A	
4	<i>Pseudoroegneria spicata</i> , Bluebunch Wheatgrass	N/A	
4	<i>Elymus trachycaulus</i> , Slender Wheatgrass	N/A	
4	<i>Bromus marginatus</i> , Mountain Brome	N/A	
6	<i>Lolium multifolrum</i> , Cover Crop of Annual Rye	N/A	
<b>26</b>	<b>Pounds of seed per acre</b>		
<b>198.9</b>	<b>Total pounds seed mix according to IX.C. GRASS SEEDING SPECIFICATIONS, concurrent with road reconstruction, temporary road obliteration and final blading</b>		

**C. MINOR CHANGES:** The Forest Officer may require minor changes in location, design or specifications of road construction, improvement or maintenance requirements. Such changes must be within the scope of Attachment B requirements, and must not result in a significant (one thousand dollars [\$1,000.00] or greater) increase or decrease in cost as agreed to by the Forest Officer and the Purchaser.

**D. ADJUSTMENT FOR CHANGE IN REQUIREMENTS:** If the State requests a change in road construction, improvement or maintenance specifications and the State in its discretion determines that the change would significantly increase the cost to the Purchaser, then the State must compensate the Purchaser. If the Purchaser requests a change in road construction, improvement or maintenance specifications and the State in its discretion determines that the change is acceptable and would significantly reduce the cost to the Purchaser, then the Purchaser must compensate the State. Compensation to the Purchaser will be in the form of stumpage credit. Compensation to the State will be in cash and will be billed as a supplement to the stumpage bill. All significant changes and compensation will be described in a contract modification.

## II. RIGHT-OF-WAY CLEARING

**A. CLEAR LIMIT DEFINITIONS** are shown in Section IX. SPECIFICATIONS AND DRAWINGS.

**B. CLEAR LIMIT MARKING:**

1. Clear limits for existing roads are not marked. Clear limits for special features in Temporary Road #2 are marked with two blue dots facing the centerline.

**C. CLEARING REQUIREMENTS:**

1. Brush or trees on existing roads may be removed by sawing individual stems, cutting with a rotary brush cutter, uprooting with an excavator or other methods approved by the Forest Officer.
2. Inside the clear limits, but outside the road prism, trees and brush less than 20 feet tall and less than 3 inches in diameter that do not interfere with visibility or slope stability may be left as directed

by the Forest Officer.

3. All merchantable timber within the clear limits on all roads to be constructed under the terms of this Contract shall be cut to the specifications in the timber sale contract and skidded to decks, or decked with an excavator, prior to earth moving.
4. Clearing procedures shall protect residual stands, prevent incorporation of construction slash into the road prism, and protect roadside appearance outside clear limits.
5. Grubbing will be limited to only those stumps and large roots within the road prism.

### **III. TREATMENT OF RIGHT-OF-WAY CLEARING MATERIALS**

#### **A. GENERAL TREATMENT REQUIREMENTS:**

1. Road construction slash shall be disposed of by the methods described in this section and VIII. WORK LIST SUMMARY & ROAD LOG.
2. Slash and debris shall not be placed in drainages, roadside ditches or heads of culverts where the flow of water may be obstructed and shall be removed if placed therein.
4. All slash to be disposed of by piling and burning shall be piled in burn bays to be burned at locations approved by the Forest Officer. Construction of piles will be of such size and at a sufficient distance from trees so that burning does not result in unnecessary damage to remaining trees. The Purchaser may be required to remove any trees damaged by burning operations at current contract rates. If burning is incomplete the residue must be disposed of as directed by the Forest Officer.

#### **B. SIDESLOPES OF 35% OR LESS AND EXISTING ROADS:**

1. Disposal will be by hand or machine piling for burning as directed by the Forest Officer.
2. Minor concentrations of slash or individual trees may be disposed of outside of the road prism by lopping and scattering as directed by the Forest Officer.
3. Tree stumps, large boulders and cull logs may be scattered outside the road right-of-way clear limits if approved in writing by the Forest Officer. Scattered stumps and boulders shall be placed away from trees and positioned so they will not roll.

#### **C. SIDESLOPES OF 35% AND GREATER:**

1. Treatment will be by excavator only, or by whole tree skidding to a decking area.
2. Where topography and timber types permit, piling for burning will be required as directed by the Forest Officer.
3. Where piling is not practical, treatment will be by windrowing at the toe of the fill. Slash will be windrowed on a trail constructed at the bottom of the right-of-way. Slash will be trampled and covered with organic surface material taken from the road prism as directed by the Forest Officer. Fill material may butt up against but not cover or bury the windrow.
4. Minor concentrations of slash or individual trees may be disposed of by lopping and scattering as directed by the Forest Officer.
5. Tree stumps, large boulders and cull logs may be scattered outside the road right-of-way clear limits if approved in writing by the Forest Officer. Scattered stumps and boulders shall be placed away from trees and positioned so they will not roll.



#### **IV. EXCAVATION AND EMBANKMENT OF FILL MATERIALS**

##### **A. EXCAVATION OF ROAD CROSS SECTION:**

1. All grubbing and clearing shall be completed prior to the beginning of any excavation.
2. Surface organic layer and ash cap (surface reddish-brown soils with low gravel content) will be bladed to the side of the road and not incorporated into fills.
3. Wasted soils and organic layer will be shaped and spread to natural contours at locations approved by the Forest Officer.

##### **B. EMBANKMENT OF FILL MATERIALS:**

1. Fill materials shall be unfrozen and free of snow and ice.
2. Fill materials shall be sorted to remove large rocks over 6 inches in diameter near the surface, which may interfere with surface blading.
3. Where possible all fill materials shall be applied in layers not to exceed 18 inches and each layer compacted with heavy equipment prior to application of the next layer.
4. If fill materials are too dry to allow compaction, the Forest Officer may require watering of layers followed by heavy equipment compaction.
5. Gravel used for surfacing shall be compacted into place using loaded dump trucks or a vibratory drum roller if specified in the Road Log.

##### **C. PIT DEVELOPMENT AND RECLAMATION:**

1. While the gravel pit or borrow area is open the surface of the pit shall be kept clean of noxious weeds. The Purchaser shall remove any weeds found growing at the pit by pulling, cultivating, covering with plastic, spraying, or other methods as directed by the Forest Officer.
2. At completion of use, the pit area will be reshaped to as near natural contours as possible. Backslope ratios shall not exceed 3:1. Purchaser may be required to save topsoil, recontour the pit wall, and reclaim the disturbed portion of pit. All disturbed portions of the pit shall be grass seeded and fertilized.
3. At completion of use, talus slopes shall be backsloped and reshaped as directed by the Forest Officer. Grass seeding and fertilizing are required on any disturbed areas with exposed soil.

#### **V. DRAINAGE STRUCTURES**

##### **A. CORRUGATED METAL PIPE:** The corrugated metal pipe required in Table B-2 will be installed as follows:

1. All pipes shall be installed with a backhoe or excavator. The exact locations shall be determined and approved by the Forest Officer after the right-of-way is brushed and cleared.
2. The excavation trench for culvert installation shall not be wider than necessary to permit satisfactory jointing and thorough tamping of the bedding material under and around the pipe.
3. The bedding surface shall be constructed to provide a firm foundation of uniform density through the entire length of the culvert and shall be slightly cambered along the centerline to correct for expected settlement.

4. Where the bedding surface is not firm at the grade established, all unstable soil under the pipe and for a width of at least one diameter on each side of the pipe shall be removed and replaced with suitable selected material. Rock encountered in the bedding foundation will be removed to at least 12 inches below the bottom of the pipe and one diameter on each side. The final bedding area shall consist of fine, compacted granular material.
5. Selected material shall be placed alongside the pipe for backfill in alternating layers not exceeding six inches in depth and thoroughly compacted by a hand held mechanical tamper (wacker packer). Special care must be taken to compact the fill thoroughly under the haunches of the pipe. Wacker packer compaction of backfill must be done for a horizontal distance on each side of the pipe equal to either one pipe diameter or to the outside limits of the trench, whichever is less. The depth of wacker packer compaction must extend at least to the top of the pipe.
6. Selected native fill material will be free from rocks and hard earth clods larger than 3 inches in size. Frozen material, sod or a high percentage of organic matter is not permitted.
7. The remainder of the fill above the top of the pipe may be compacted by tractor or rubber-tired roller. Fill is to extend above each pipe at least one-half the pipe diameter or a minimum of 12 inches, whichever is greater.
8. The pipe shall be protected by adequate fill cover before heavy equipment is permitted to cross during roadway construction.
9. Pipe that is damaged or improperly installed shall be repaired or replaced at Purchaser expense as directed by the Forest Officer.
10. The Forest Officer must be contacted two days before any culvert installation and must be present at any wet site culvert installation.
11. Riprap consisting of angular native rock of graded sizes 6 to 12 inches in diameter shall be installed to armor cuts and fills at both ends of all culverts installed in streams.
12. Energy dissipators consisting of native rock at least 24 inches in diameter with flat cross section shall be installed below culvert outlets in all perennial streams.

**B. WET SITE CULVERT INSTALLATION REQUIREMENTS:**

1. The Forest Officer and the Purchaser shall agree upon a site specific sediment and erosion control plan that meets the requirements of all attachments and permits for each wet installation prior to any construction. Sediment and erosion control features may include any or all of the following at each site:
  - a. Filter Fabric Sediment Traps.
  - b. Sediment Control Fence.
  - c. Slash Filter Windrows.
  - d. Other measures as directed by Forest Officer.
2. The Forest Officer and the Purchaser shall agree upon a site specific water diversion plan for each wet installation. Diversions may include: by-pass ditches, plastic lined by-pass ditches, plastic or metal pipe by-passes or other methods as directed by the Forest Officer. Pumping with discharge back into the channel is not permitted.
3. All wet site culvert installations require seeding of all disturbed areas the same day as installation

is completed.

4. Any equipment operated within the high-water level of any stream or river channel shall be free of oil and fluid leaks and shall be clean of mud. Said equipment must be inspected by the Forest Officer and approved prior to any use.
5. Filter fabric sediment traps shall be installed prior to any construction activities on all wet culvert installations.

## **VI. ROAD MAINTENANCE**

### **A. ROAD MAINTENANCE SCHEDULE AND REQUIREMENTS:**

1. Road maintenance may be required on all native material or gravel roads designated for hauling purposes.
2. Road maintenance is defined to include all operations listed under Section VI. of Attachment B.
3. Initial maintenance of the roads shall be completed prior to use for logging and hauling.
4. The Forest Officer will determine the number, type, extent and frequency of intermediate maintenance operations. Road maintenance shall be repeated as needed to facilitate traffic and proper road drainage. The Purchaser will be advised of the time limitations to complete each maintenance project.
5. Final maintenance of the road system is required after all logging and hauling and prior to termination of the Timber Sale Contract.

### **B. SURFACE BLADING:**

1. Description: Surface blading is keeping a native or aggregate roadbed in a condition to facilitate traffic and provide proper drainage. It includes maintaining the crown or slope, shoulder, drainage dips, leadoff ditches, berms and turnouts, and provides a level of smoothness appropriate for the amount and kind of traffic served and consistent with existing surfacing.
2. Specifications:
  - a. The existing roadbeds, including turnouts, shall be bladed and shaped to reasonably conform to the designed cross section, and to eliminate ruts. Existing aggregate surfacing shall be bladed to conserve material and to prevent segregation of particle sizes. Rocks or other material remaining on the traveled way surface after final blading which are 4 inches or larger in size shall be removed from the road surface.
  - b. Roadside cutslopes should not be undercut when cleaning ditches or removing road sloughs. Berms shall be removed from road shoulders when blading, except where berms are located as part of road design.
  - c. Cutslopes that have been undercut may require backsloping, seeding and fertilizing.
  - d. At intersections, the roadbeds at side roads shall be graded for a reasonable distance to assure proper blending of the two riding surfaces.
  - e. Drainage dips and leadoff ditches shall be cleaned and graded to form their previous line and grade.
  - f. Crowned roads should slope towards shoulders at least 2-5% (1/4-1/2 inch per foot road width) on native and gravel roads.

- g. At intersections where side roads enter the main road and the entering side road exceeds +3%, shallow ditching across the side road may be required to divert surface runoff and protect the main road's stability.
- h. The side-casting of road material into a stream, lake, wetland, or other body of water during road maintenance operations is prohibited in the SMZ.

**C. DITCH CLEANING:**

- 1. Description: Ditch cleaning is removing and disposing of all foreign and slough material from roadside ditches to provide an unobstructed waterway conforming reasonably to previous line, grade and cross section.
- 2. Specifications:
  - a. Slough material removed from the ditch may be blended into existing native road surface or shoulder only if it is the same material as the road surface. Slough material that is not suitable for blending should be disposed of as directed by the Forest Officer.
  - b. Live vegetation and other organic material shall be removed and disposed of as directed by the Forest Officer.
  - c. Unstable stumps, rocks, leaning trees or other debris shall be removed from the cutslope as directed by the Forest Officer.

**D. CULVERT MAINTENANCE:**

- 1. Description: Maintenance is work performed on inlets, outlets, catch basins, related channels, existing riprap, trash racks and any other facilities related to the drainage structure.
- 2. Specifications: Catch basins, outlets and energy dissipaters shall be kept functioning and cleaned of debris. Ends of culverts shall be kept straight and undamaged. Any washing alongside or underneath the culvert shall be repaired.

**E. ROADSIDE VEGETATION MAINTENANCE:**

- 1. Description: Maintenance of roadside vegetation includes removal of brush, tree growth, deadfall or other obstructions to passage, safety or visibility, as such obstructions are present or develop during the contract period.
- 2. Specifications:
  - a. All trees that have fallen across the road shall be removed from the road prism unless otherwise agreed upon. Merchantable timber, if any, shall be cut in appropriate lengths and decked along the roadside in locations where traveled way width or sight distances will not be impaired.
  - b. Brush and seedling trees that encroach upon the original road clear limits shall be removed when they reduce safe sight distances. Low shrubs and brush that do not restrict sight distance but provide cover and reduce erosion shall not be removed. Brush and seedling trees removed shall be disposed of as directed by the Forest Officer.

**F. SNOWPLOWING:** If hauling occurs during the winter months, the Purchaser will be required to plow snow to the following guidelines on all State, Federal and private roads.

- 1. Snow should be windrowed beyond the fill shoulder line.

2. To protect the road surface, a 1 to 4-inch cushion of snow may be left on the road.
3. At termination of use, the road will be prepared for spring runoff by opening drainage outlets through the plowed berms and by installing a snow-berm road closure.
4. Tracked equipment will not be used to plow snow without prior written approval from the Forest Officer.
5. The side-casting of road material into a stream, lake, wetland, or other body of water during snow plowing operations is prohibited in the SMZ.

**G. DUST ABATEMENT:** The Purchaser may be required to perform dust abatement on any of the roads designated as part of the haul route. Any dust abatement must conform to current standards of the owner of the road. **N/A**

1. If the Purchaser applies Magnesium Chloride or Calcium Chloride for dust abatement, the following specifications will be followed:
  - a. Dust abatement will be applied prior to summer hauling of logs.
  - b. Scarify road surface and grade to final grading specifications. A minimum of two inches of loose material is required on the road surface prior to applying the abatement.
  - c. The road surface will be moist to a minimum of depth of two inches or watered uniformly to moisten the road. If the road is watered, it will be done twelve to twenty-four hours prior to application of the abatement.
  - d. The abatement will be applied at the rate of 0.25 gallons Magnesium Chloride per square yard or 0.20 gallons Calcium Chloride per square yard, followed immediately by another application at the same rate, for a total of 0.5 gallons Magnesium Chloride per square yard or 0.4 gallons Calcium Chloride per square yard. If Calcium Chloride flake is applied, application rate is 2 pounds per square yard.
  - e. Chemical abatement will not be applied for 50 feet on either side of any stream crossing.
  - f. Additional treatments using water may be required if deemed necessary by the Forest Officer.

**H. NOXIOUS WEED MANAGEMENT:** The Purchaser may be required to perform noxious weed management on any of the roads designated as part of the haul route and on landings. Noxious weed management may include grass seeding, equipment washing and herbicide spraying.

1. Grass seeding, if required, is shown in Section IX, GRASS SEEDING SPECIFICATIONS.
2. All road construction equipment and equipment used in off-road logging activity must be pressure-washed by the Purchaser and inspected by the Forest Officer prior to entering the sale area. This cleaning will remove all dirt, plant parts, and material that may carry noxious weed seeds into the sale area. Other equipment and vehicles entering and leaving the sale area shall be cleaned prior to start up and kept reasonably clean during the course of operations. All subsequent move-ins of logging and construction equipment shall be treated the same as the initial move-in.
3. If spraying is required in Attachment B, it shall be done by a commercial applicator licensed by the State of Montana or by personnel under the direct supervision of the licensed applicator. All herbicide applications shall follow EPA label requirements. Any weed control must comply with the current standards of the County Weed Board and as directed by the Forest Officer.

## **VII. ADDITIONAL REQUIREMENTS**

- A. TEMPORARY SPUR ROAD SPECIFICATIONS:** Temporary spur roads are defined as any roads constructed by the Purchaser to access a harvest unit or landing which is not an existing road and may not be shown as a required road to be constructed in Table B-1. All temporary roads will be constructed to the following specifications:
1. Forest Officer shall approve the location prior to any construction.
  2. Clearing and excavation shall be kept to the absolute minimum for safe truck hauling and to prevent erosion and water quality impacts. Some sidehill excavation, minor through cuts, ditching and turnpiking may be required.
  3. Temporary culverts may be required at ditch crossings, wet areas or other locations as seen in Table B-1 and VIII. Work List Summary & Road Log or as directed by the Forest Officer.
  4. Temporary erosion control measures may be required to meet BMP standards on the road and/or the landing area while being used.
  5. At the completion of use the road shall be shaped back to natural contours, temporary culverts removed, erosion control measures installed, the disturbed areas grass seeded and the access closed to all vehicular traffic. The Forest Officer may require scarification or ripping of compacted landings and temporary spur roads.
- B. GATES ON PRIVATE ROAD EASEMENTS:** When using private road easements to access the timber sale area, any gate encountered on private land will be left as prescribed by the easement grantor.
- C. TRAFFIC CONTROL AND WARNING SIGN SPECIFICATIONS:**
1. The Purchaser shall furnish, erect, and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs, and other traffic control devices, and shall take all necessary precautions for the protection of the work and safety of the public. Suitable warning signs shall be provided to properly control and direct traffic as requested by the Forest Officer.
  2. All road barricades, warning signs, lights, temporary signals, flagger and pilot car operations and equipment, and other protective devices, shall conform with the specifications in the Manual on Uniform Traffic Control Devices (MUTCD).
- D. KEEP ROADS CLOSED:** Yearlong, seasonal and temporary roads shall be closed to restrict public motor vehicle access during nights, weekends and periods of inactivity.

## **VIII. WORK LIST SUMMARY & ROAD LOG**

### **A. GENERAL SPECIFICATIONS FOR RECONSTRUCTION OF EXISTING ROADS:**

1. Construct the project in compliance with Federal Highway Administration Standard Specifications for construction of roads and bridges on federal highway projects (FP-14) and applicable forest service supplemental specifications (FSSS), attached herein by reference.
2. Conserve rock from culvert excavations and place as riprap armoring at the inlets and outlets..
3. Roadside Clearing: Remove limbs, residual slash, live roadside brush and small trees between or obtruding to the designated clearing limits in Section IX. SPECIFICATIONS AND DRAWINGS.
4. Selective Clearing: Clear and dispose of trees, snags, brush, downed timber, and other vegetation designated to be removed. Cut all brush and small trees, 6 inches in diameter or less

at the point of cut, inside the roadside clearing limits and outside the roadway no higher than 12 inches above the ground level. If rocks or other obstructions are encountered, cut no higher than 6 inches above the obstruction. Limb live trees with a diameter larger than 6 inches to a height of 14 feet above the road surface.

5. Special Clearing and Grubbing: Clear, grub, and dispose of trees, snags, brush, downed timber, stumps, roots, buried logs, moss, turf, grass, and other vegetation designated to be removed. Remove all trees and vegetation. Clear within the roadside clearing limits, include all turnouts and turnarounds. Grub the roadway and horizontally 2 feet beyond each shoulder. Dispose of merchantable timber designated for removal according to the provisions of the timber sale contract.
6. Drainage Establishment: Construct road drainage drain dips as specified in the road log or as directed by Forest Officer.
7. Roadway Reconditioning: This work consists of reconditioning the entire roadbed, including ditches, shoulders, roadbeds, aggregate surfaces, clean culvert inlets and outlets.
8. Disposal Method A: Remove from project. Recycle or dispose of material legally off the project. Submit a statement documenting the nature and quantity of material processed or sold for recycling. Otherwise, submit a signed copy of the disposal agreement before disposal begins.
9. Disposal Method F: Scattering - Scatter construction slash in designated areas without damaging trees. Limb all logs. Place logs and stumps away from trees, positioned so they will not roll, and are not on top of one another. Limb and scatter other construction slash to reduce slash concentrations. When scattering for erosion control, place construction slash as flat as practicable on the completed slope.
10. Disposal Method K: Piling. Pile construction slash in designated areas. Place and construct piles so that if the piles are burned, the burning will not damage remaining trees. Keep piles free of dirt from stumps.
11. Compaction Method 3: Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer until there is no visible evidence of further consolidation. Make at least three complete passes.
12. Compaction Method 4: Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer.
13. Compaction Method 5: Adjust the moisture content of the material to a moisture content suitable for compaction. Compact the complete surface with a bucket of an excavator larger than 39,000 pounds (18 metric ton) Gross Vehicle Weight using a minimum of three blows. Overlap compaction by  $\frac{1}{2}$  width of bucket.
14. Compaction Method 6: Adjust the moisture content of the material to a moisture content suitable for compaction. Compact using an approved mechanical tamper for a minimum of three complete passes.
15. Turf Establishment: Prepare soil with dry seeding and dry mulching methods. Apply the seed with approved power driven seeders, drills, or other mechanical equipment. Hand-operated seeding methods are satisfactory on areas inaccessible to mechanical equipment. Mulch material shall be weed free straw and shall be applied at a uniform rate to adequately cover the seed. The weed free straw shall be from a grain crop such as barley straw, wheat straw or oat straw. Mulch will be applied in a one-step operation with the seed at the rate of 1 Ton per Acre.

16. Disturbed areas shall be seeded at the rates specified in Section VIII and IX.C to all areas outside of the road shoulder including catch basins, ditches, drain dip outlets, and other disturbed areas.
17. ITEM 30207 and 25101 may be furnished at borrow pit at the location marked on the Sale Area Map in Attachment A.

GNA TALKIE TEETERS TIMBER SALE			ROAD NO.	6743	5198	5200	5007	5007A	4782
			MILES	3.072	0.930	0.266	0.300	0.520	0.600
			RECON/CON	RECON	RECON	RECON	RECON	RECON	RECON
ITEM NO	DESCRIPTION	SPECIAL REFERENCES	UNITS	SUMMARY OF QUANTITIES					
15101	MOBILIZATION	FP-14 PG 58	LUMP SUM	ALL	ALL	ALL	ALL	ALL	ALL
15706	TEMPORARY LOG CULVERT/LOG CORDUROY	FP-14 PG 86	EACH					1.00	
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (k), COMPACTION METHOD (5)	FP-14 PG 96 FSSS PG 22	MILE	3.07	0.93	0.27	0.03	0.52	0.60
20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD (5)	FP-14 PG 98 FSSS PG 23	EACH	1.00					
20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS (A), COMPACTION METHOD (3)	PF-14 PG 102 FSSS PG 25	EACH	1.00				2.00	
20421B	DRAINAGE EXCAVATION, TYPE CATCH BASIN, TOLERANCE CLASS (A), COMPACTION METHOD (5)	PF-14 PG 102 FSSS PG 25	EACH	2.00					
25101	PLACED RIPRAP, CLASS 2	FP-14 PG 150	CUBIC YARD	15.00				10.00	
30207	ROADWAY AGGREGATE SURFACE COURSE, COMPACTION METHOD (4)	FP-14 PG 212 FSSS PG 53	CUBIC YARD	20.00					
30315	ROADWAY RECONDITIONING, COMPACTION METHOD (4)	FP-14 PG 215 FSSS PG 54	MILE	3.07	0.93	0.27	0.30	0.52	0.60
60201	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD (6)	FP-14 PG 547 FSSS PG 55	FOOT	70.00					
60710A	RECONDITIONING DRAINAGE STRUCTURE, JACK INLET/OUTLET	FP-14 PG 561	EACH	1.00					
60710B	RECONDITIONING DRAINAGE STRUCTURE, EXISTING CULVERT	FP-14 PG 561	EACH	1.00					
62551	TURF ESTABLISHMENT, DRY METHOD SEEDING, DRY METHOD MULCHING, PURCHASER FURNISHED SEED	FSSS PG 56	ACRE	1.32	0.34	0.10	0.31	0.39	0.32

TEETERS MOUNTAIN ROAD					
Road #	6743				
BEG M.P.	END M.P.	ITEM NO	WORK DESCRIPTION	QTY	UNIT
0.000	3.072	30315	ROADWAY RECONDITIONING, COMPACTION METHOD (4)	3.07	MILE
			Light blading, minimal aggregate surfacing present. Includes cleaning all culvert inlets/outlets and reconditioning all existing drain dips.		
		20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (k), COMPACTION METHOD (5)	3.07	MILE
			Clear branches out to clearing limits.		
		62551	TURF ESTABLISHMENT, DRY METHOD SEEDING, DRY METHOD MULCHING, PURCHASER FURNISHED SEED	1.32	ACRE
			Includes seeding and mulching in all disturbed area. Quantity assumed to be 3' ditch inslope for the full length of reconditioning area plus 0.1 acres for each new culvert and drain dip.		
			Existing 18" CMP in good condition.		
0.040			Existing gate in good condition, 16' usable width.		



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		20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD (5)	1.00	EACH
		30207	ROADWAY AGGREGATE SURFACE COURSE, COMPACTION METHOD (A)	10.00	CUBIC YARD
		60201	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD (6)	38.00	FOOT
			Remove existing 18" CMP. Install new 18" x 38' long CMP. Matching existing culvert slope and skew. Culvert has approximately 8' of fill over the outlet. Place 10 CY of ¾"-minus aggregate surface course with 4" depth over the new culvert.		
0.115			Existing 18" CMP in good condition.		
0.189			Intersection with FSR 5198, left.		
0.231			Existing 18" CMP in good condition.		
0.257		60710A	RECONDITIONING DRAINAGE STRUCTURE, JACK INLET/OUTLET	1.00	EACH
			Existing 18" CMP, inlet is crushed allowing for less than 50% flow. Jack open inlet and restore to circular shape.		
0.366			Existing 18" CMP in good condition.		
1.053		20421B	DRAINAGE EXCAVATION, TYPE CATCH BASIN, TOLERANCE CLASS (A), COMPACTION METHOD (5)	1.00	EACH
			Existing 18" CMP, inlet is partially buried. Construct catch basin and remove debris from culvert inlet.		
1.105		25101	PLACED RIPRAP, CLASS 2	15.00	CUBIC YARD
			Fill slope slump slide encroaching 5' into roadway. 12' road width is still present. Install 15 CY of class 2 riprap to stabilize slope and regain 2' of road width.		
1.128		20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS (A), COMPACTION METHOD (3)	1.00	EACH
1.304		60710B	RECONDITIONING DRAINAGE STRUCTURE, EXISTING CULVERT	1.00	EACH
			Existing culvert located on a switchback, assumed to be 24" or 36" CMP. Unable to locate inlet or outlet. No signs of overflow onto roadway. Uncover inlet/outlet and clean culvert barrel.		
1.350		60201	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD (6)	32.00	FOOT
		20421B	DRAINAGE EXCAVATION, TYPE CATCH BASIN, TOLERANCE CLASS (A), COMPACTION METHOD (5)	1.00	EACH
		30207	ROADWAY AGGREGATE SURFACE COURSE, COMPACTION METHOD (A)	10.00	CUBIC YARD
			Install new 18" x 36' long CMP just upstasion of existing CMP. Construct catch basin to tie into existing ditch. Place 10 CY of ¾"-minus aggregate surface course with 4" depth over the new culvert.		
1.623			Existing 18" CMP Re-establish catch basin		
1.881			Intersection with FSR 5200, right.		
2.621			Existing rubber surface water deflector.		
2.660			Existing rubber surface water deflector.		
3.072			Intersection with FSR 5007, left. End of roadwork on FSR 6743.		

TEETERS MOUNTAIN OLDIE ROAD					
Road #	5198				
BEG M.P.	END M.P.	ITEM NO	WORK DESCRIPTION	QTY	UNIT
0.000	0.930	30315	ROADWAY RECONDITIONING, COMPACTION METHOD (4)	0.93	MILE

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			Medium blading, no existing aggregate surfacing on roadway.		
		20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (k), COMPACTION METHOD (5)	0.93	MILE
			12" DBH trees on roadway shoulder.		
		62551	TURF ESTABLISHMENT, DRY METHOD SEEDING, DRY METHOD MULCHING, PURCHASER FURNISHED SEED	0.34	ACRE
			Includes seeding and mulching in all disturbed area. Quantity assumed to be 3' ditch inslope for the full length of reconditioning area plus 0.1 acres for each new culvert and drain dip.		
0.930			End of roadwork on FSR 5198.		

UPPER TEETERS MOUNTAIN ROAD					
Road #	5200				
BEG M.P.	END M.P.	ITEM NO	WORK DESCRIPTION	QTY	UNIT
0.000	0.266	30315	ROADWAY RECONDITIONING, COMPACTION METHOD (4)	0.27	MILE
			Medium blading, no existing aggregate surfacing on roadway.		
		20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (k), COMPACTION METHOD (5)	0.27	MILE
			12" DBH trees on roadway shoulder.		
		62551	TURF ESTABLISHMENT, DRY METHOD SEEDING, DRY METHOD MULCHING, PURCHASER FURNISHED SEED	0.10	ACRE
			Includes seeding and mulching in all disturbed area. Quantity assumed to be 3' ditch inslope for the full length of reconditioning area plus 0.1 acres for each new culvert and drain dip.		
0.266			End of roadwork on FSR 5200.		

SOUTH TEETERS FACE ROAD					
Road #	5007				
BEG M.P.	END M.P.	ITEM NO	WORK DESCRIPTION	QTY	UNIT
0.000	0.300	30315	ROADWAY RECONDITIONING, COMPACTION METHOD (4)	0.30	MILE
			Medium blading, no existing aggregate surfacing present.		
		20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (k), COMPACTION METHOD (5)	0.30	MILE
			12" DBH trees on roadway shoulder.		
		62551	TURF ESTABLISHMENT, DRY METHOD SEEDING, DRY METHOD MULCHING, PURCHASER FURNISHED SEED	0.31	ACRE
			Includes seeding and mulching in all disturbed area. Quantity assumed to be 3' ditch inslope for the full length of reconditioning area plus 0.1 acres for each new culvert and drain dip.		
0.211			Intersection with FSR 5007A, left.		

SOUTH TEETERS FACE A ROAD					
Road #	5007A				
BEG M.P.	END M.P.	ITEM NO	WORK DESCRIPTION	QTY	UNIT
0.000	0.520	30315	ROADWAY RECONDITIONING, COMPACTION METHOD (4)	0.52	MILE
			Medium blading, no existing aggregate surfacing on roadway.		
		20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (k), COMPACTION METHOD (5)	0.52	MILE

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			12" DBH trees on roadway shoulder.		
		62551	TURF ESTABLISHMENT, DRY METHOD SEEDING, DRY METHOD MULCHING, PURCHASER FURNISHED SEED	0.39	ACRE
			Includes seeding and mulching in all disturbed area. Quantity assumed to be 3' ditch inslope for the full length of reconditioning area plus 0.1 acres for each new culvert and drain dip.		
0.340		25101	PLACED RIPRAP, CLASS 2	10.00	CUBIC YARD
			Surface drainage eroding fill slope. Place 10 CY of class 2 riprap.		
0.350		20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS (A), COMPACTION METHOD (3)	1.00	EACH
			Construct drain dip upstation of riprap embankment to divert surface flow away from damaged area.		
0.410		15706	TEMPORARY LOG CULVERT/LOG CORDUROY	1.00	EACH
			Utilize materials on site designated by Forest Service rep to construct log culvert/log corduroy		
0.430		20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS (A), COMPACTION METHOD (3)	1.00	EACH
0.520			End of roadwork on FSR 5007A.		

STANDARD CREEK – MILLER CREEK ROAD (OPTIONAL)					
Road #	4782				
BEG M.P.	END M.P.	ITEM NO	WORK DESCRIPTION	QTY	UNIT
0.000			Intersection with FSR 231		
0.016			Existing gate in good condition, 14' usable width.		
0.116			Existing 18" CMP in good condition.		
0.171			Existing 18" CMP in good condition.		
0.265			Existing 18" CMP in good condition.		
0.439			Existing 18" CMP in good condition.		
0.480			Existing drain dip.		
0.543			Existing 18" CMP in good condition.		
0.569			Existing 18" CMP in good condition.		
0.613			Existing 18" CMP in good condition.		
0.654			Existing 18" CMP in good condition.		
0.689			Existing 24" CMP in good condition.		
			Existing 18" CMP in good condition.		
0.783			Existing 18" CMP in good condition.		
0.822			Existing drain dip.		
0.947			Existing 18" CMP in good condition.		
1.101			Existing 18" CMP in good condition.		
1.269			Existing 18" CMP in good condition.		
1.337			Existing drain dip.		
1.353			Existing 18" CMP in good condition.		
1.488			Existing 18" CMP in good condition.		
1.554			Existing drain dip.		
1.600			Existing 18" CMP in good condition.		

GNA TALKIE TEETERS TIMBER SALE SAMPLE CONTRACT  
**ATTACHMENT B**

1.749			Existing 18" CMP in good condition.		
1.766			Existing drain dip.		
1.805			Existing 18" CMP in good condition.		
1.871	2.466	30315	ROADWAY RECONDITIONING, COMPACTION METHOD (4)	0.60	MILE
			Heavy blading, no existing aggregate surfacing present on roadway.		
		20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (k), COMPACTION METHOD (5)	0.60	MILE
			4" DBH trees in roadway.		
		62551	TURF ESTABLISHMENT, DRY METHOD SEEDING, DRY METHOD MULCHING, PURCHASER FURNISHED SEED	0.32	ACRE

TEMPORARY ROAD T-1				
Road #	T-1			
BEG M.P.	END M.P.	WORK DESCRIPTION	QTY	UNIT
0.000	0.28	Begin temporary road construction. Exact location shall be agreed upon and drainage features constructed as directed by the Forest Officer.	0.28	MILE
		Dispose of slash generated from Right of Way clearing using disposal method F.		
0.28		End Temporary Road T-1		
		Rehabilitate temporary road following haul. Recontour and apply available slash and large woody material to the recontour surface to create erosion control. Rehabilitate Teeters Trail #300 with 2' foot tread according to contract section VII.G.6. Seed all disturbed areas.	0.28	MILE

TEMPORARY ROAD T-2				
Road #	T-2			
BEG M.P.	END M.P.	WORK DESCRIPTION	QTY	UNIT
0.000	0.59	Begin temporary road construction. Exact location shall be agreed upon and drainage features constructed as directed by the Forest Officer.	0.59	MILE
		Dispose of slash generated from Right of Way clearing using disposal method F.		
		See Attachment H for Temporary T-2 Road Specifications. Clear limits, where specified, are marked with two blue dots facing the centerline.		
0.09		Install new 30" x 65' long CMP. Matching existing slope and skew. Place 20 CY of ¾"-minus aggregate surface course with 4" depth over the new culvert.	20.00	CUBIC YARD
		30 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD (6)	65.00	FOOT
		PLACED RIPRAP, CLASS 2	20.00	CUBIC YARD
0.13		Install new 18" x 40' long CMP. Matching existing slope and skew. Place 10 CY of ¾"-minus aggregate surface course with 4" depth over the new culvert.	10.00	CUBIC YARD
		18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD (6)	40.00	FOOT
0.59		End Temporary Road T-2		
		Rehabilitate temporary road following haul. Pull culverts and store at Libby Unit. Recontour and apply available slash and large woody material to the recontour surface to create erosion control. Seed all disturbed areas.	0.59	MILE

TEMPORARY ROAD T-3				
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Road #	T-3			
BEG M.P.	END M.P.	WORK DESCRIPTION	QTY	UNIT
0.000	0.38	Begin temporary road construction. Exact location shall be agreed upon and drainage features constructed as directed by the Forest Officer.	0.38	MILE
		Dispose of slash generated from Right of Way clearing using disposal method F.		
		Construct Switchback	1	EACH
0.38		End Temporary Road T-3		
		Rehabilitate temporary road following haul. Recontour and apply available slash and large woody material to the recontour surface to create erosion control. Seed all disturbed areas.	0.38	MILE

## IX. SPECIFICATIONS AND DRAWINGS

**A. REQUIREMENTS:** Any construction requirements or structures shown in the Timber Sale Contract or Attachment B shall be constructed and installed by the Purchaser to specifications in this section. Structures shall be constructed at locations shown in the Road Log and as specified or staked by the Forest Officer.

### B. SPECIFICATIONS:

- Road Construction Fabric: When road construction fabric is required the following specifications shall be met: minimum twenty mills thick with minimum trapezoid tear strength (ASTMD-1117-80) of 110 and mullen burst strength (ASTMD-3786-80) of minimum 375 psi; (e.g. Mirafi 500x or AMOCO 200208).

### C. SPECIFICATION TABLES AND DRAWINGS:

GENERAL SPECIFICATIONS  
 GRASS SEEDING SPECIFICATIONS  
 GRAVEL AND ROCK SPECIFICATIONS  
 CLEAR LIMITS AND TYPICAL CROSS SECTIONS  
 HIGHWAY SAFETY SIGNS  
 WARNING SIGN SPECIFICATIONS  
 TYPICAL SECTIONS  
 CURVE WIDEN DETAIL  
 TURNOUT AND TURNAROUND DETAILS  
 CULVERT DETAIL  
 CULVERT WITH CATCH BASIN DETAIL  
 CATCH BASIN DETAIL  
 OUTLET DITCH DETAIL  
 DRAIN DIP DETAIL  
 TEMPORARY ROAD DESIGN FEATURES

GENERAL SPECIFICATIONS	
<p><b>ALIGNMENT</b></p> <p>Minimum Curve Radius:</p> <p>Switchbacks: 50 Feet</p> <p>Curves: As marked on the ground</p>	<p><b>CUT SLOPE RATIO</b></p> <p>Common excavation: 1:1</p> <p>Angular Rock: 3/4:1</p> <p>Solid Rock: 1/4:1</p> <p>Maximum tolerance: plus 15% minus 0%</p>
<p><b>ROAD GRADE MAXIMUM</b></p> <p>Favorable: 12%</p> <p>Adverse: 8%</p> <p>Grades as shown in the Road Log</p>	<p><b>FILL SLOPE RATIO</b></p> <p>Common material: 1-1/2:1</p> <p>Angular rock: 1-1/3:1</p> <p>Maximum tolerance: plus 15% minus 0%</p>
<p><b>DITCHES</b></p> <p>Width: 3 feet</p> <p>Depth: 1 foot</p> <p>Located as shown in the Road Log or as directed by the Forest Officer</p>	<p><b>TURNOUTS</b></p> <p>Length: 75 feet</p> <p>Width: 7 feet</p> <p>Located by Purchaser and approved by the Forest Officer. Spacing will be intervisible as topography allows.</p>
<b>USABLE ROAD SURFACE</b>	<b>TURNAROUNDS</b>

<p>Tangents: 14 feet</p> <p>Curves: 16 feet (radius over 75 feet) 20 feet (radius under 75 feet)</p> <p>Switchbacks: 22 feet</p> <p>Slough widening: Tangents: 1foot (in addition to usable road surface) Curves and all fills over 6 feet height: 2 feet.</p>	<p>Dimensions: large enough to safely turn around a long wheel base 2-wheel-drive pickup.</p> <p>Location: at or near the end of all dead end roads as approved by the Forest Officer.</p>
--	--

## **GRASS SEEDING SPECIFICATIONS**

- A. SEED REQUIREMENTS:** The Purchaser shall furnish certified noxious weed-free, pure live seed mixture(s) and fertilizer in the amounts shown in Table B-2.

### **2018 Kootenai National Forest Approved Seed**

#### **Seed Mix Must Have:**

1. Blue tags, or copies of blue tags from each seed lot used in the specified mix. Only certified Blue-tagged seed shall be used. The blue tag represents a field certification and serves as evidence of the genetic purity and varietal identity of the seed contained in the seed lot.
2. Labels which indicate the percentage composition of the various species in the seed mix.
3. Copies of Seed Analysis Reports from a certified seed analyst for each seed lot used in the specified mix. Contractor will obtain this report from the seed provider. Seed Analysis Reports must include, at a minimum, content of any noxious weed seeds listed on the current "State of Montana Noxious Weeds List". In addition, the labels should indicate that no cheatgrass (*Bromus tectorum*) seed is present in the seed mix.

Only after the Forest Officer has verified the above will the seed be accepted and used.

Fertilizer may not be needed if soils are intact and not disturbed. However a bio-based, slow-release fertilizer is recommended for native seed mixes if soils are disturbed, the top horizon has been removed, and/or planting will occur in subsurface soils (such as cut and fill slopes, skid trails, and landings). Slow release fertilizers have a N-P-K ratio of 7-(1-2)-(1-2). Chemical fertilizers such as ammonium nitrate (N=20 or greater) should not be used as they encourage the establishment of weeds over native plants.

#### **B. APPLICATION REQUIREMENTS:**

1. Fertilizer and seed may be applied with a hand spreader or power blower, which adjusts to distribute seed evenly at the specified rate while limiting application to the desired area. Seed and fertilizer shall be applied separately. Mixing of seed and fertilizer is prohibited.
2. Seed and fertilizer shall be applied as listed in the following tables. In the event weather conditions or time of year are not conducive for successful seed establishment, the Forest Officer may require a different application schedule from the ones stated.
3. Application estimates are approximate figures only to be used for estimating purposes.



**SEEDING ESTIMATES CONCURRENT WITH ROAD RECONSTRUCTION**

Areas shown in this table shall be seeded and fertilized concurrent with initial road construction according to the following schedule:

Cut slopes shall be seeded within 7 calendar days of the day that each segment of cut slope is rough shaped with the dozer or excavator. A cut slope segment is defined as one day's work regardless of the amount of work accomplished or the length of the cut slope. Even if the driving portion of the road is not shaped, graded or drivable, cut slope seeding is still required.

**FILL SLOPES, DITCHES, SHOULDERS OF THE ROAD AND OTHER DISTURBED AREAS SHALL BE SEEDED WITHIN 15 CALENDAR DAYS AFTER COMPLETION OF EACH ROAD SEGMENT.**

Road Name	Length (Miles)	Seed Pounds Per Acre	Width (Feet)	Estimated Acres
Teeters Mountain Road #6743	3.07	26	10	3.72
Teeters Mountain Oldie Road #5198	0.93	26	10	1.13
Upper Teeters Mountain Road #5200	0.25	26	10	0.30
South Teeters Face Road #5007	0.30	26	10	0.36
South Teeters Face A Road #5007A	0.52	26	10	0.63
Total Acres:				6.14

**SEEDING ESTIMATES FOLLOWING TEMPORARY ROAD OBLITERATION AND FINAL BLADING**

Areas shown in this table shall be seeded and fertilized within  
15 calendar days after completion of final road blading and shaping.

Road Name	Length (Miles)	Seed Pounds Per Acre	Width (Feet)	Estimated Acres
Temporary Road T-1	0.28	26	10	0.34
Temporary Road T-2	0.59	26	10	0.71
Temporary Road T-3	0.38	26	10	0.46
Total Acres:				1.51

GRAVEL AND ROCK SPECIFICATIONS	
Material	Specifications
3/4" minus crushed gravel	Crushed gravel. Well graded. Fine fraction (minus 200 sieve) not to exceed 15%
Pit run gravel	Native gravel, well graded, with binder, compactable and not containing any rocks over 4" diameter.
Drain rock	1"- 3" diameter, screened clean rock.
<b>General Large Rock Requirements</b> Stone shall be hard, durable, angular in shape, resistant to weathering and weather action, and free from overburden, soil, and organic matter. Stone must be hard enough so pieces do not fracture or break during the loading, hauling, or placement activities. Neither breadth nor thickness of stone shall be less than one-third its length. Rounded stone or boulders from a streambed will not be accepted unless authorized by the State.	
Rock armor	Large rock with most sizes ranging from 6" to 12" diameter, used to armor fill slopes and catch basins.
Talus rock	Large rock of variable sizes used as load-bearing fill or drainage rock in soft areas or French drains, as approved by Forest Officer.
RipRap	Large rock of variable sizes ranging from 15" to 21" diameter placed in streams at culvert outlets, road stabilization and armoring.

# SPECIFICATION DRAWINGS

## Clear Limits and Typical Cross Sections

CLEARTPK.WPG

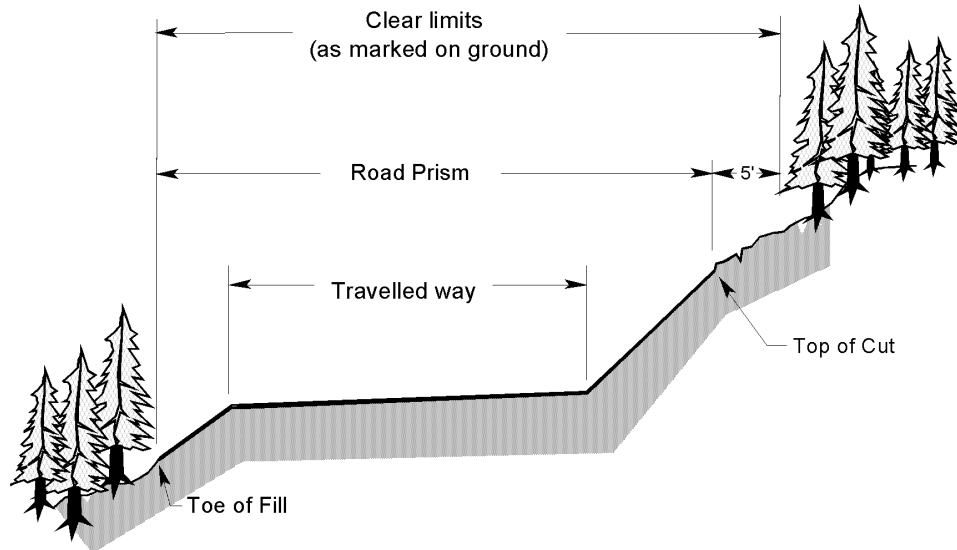


Figure I: Clear limits for New Construction

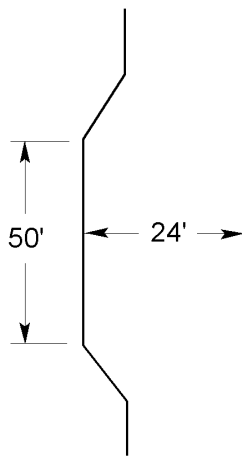


Figure II:  
Typical turn out  
construction

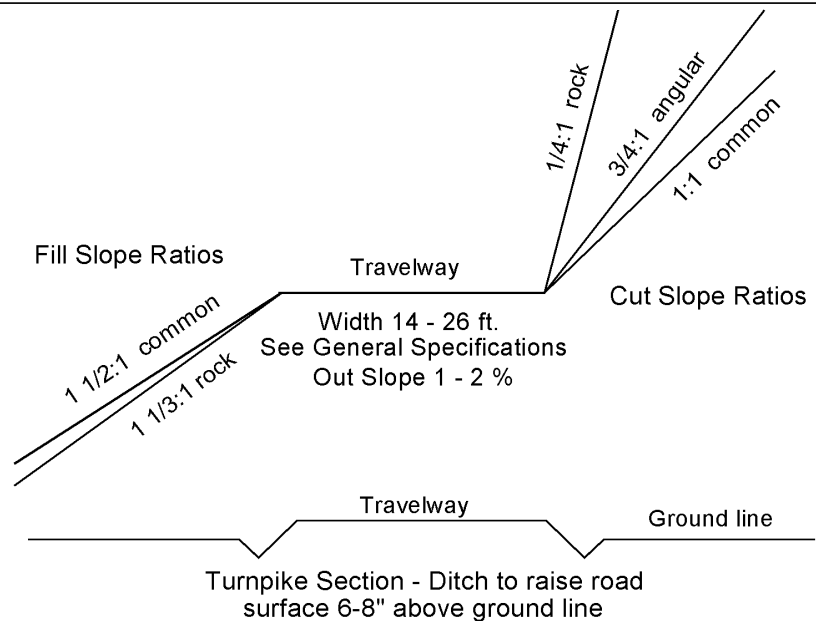
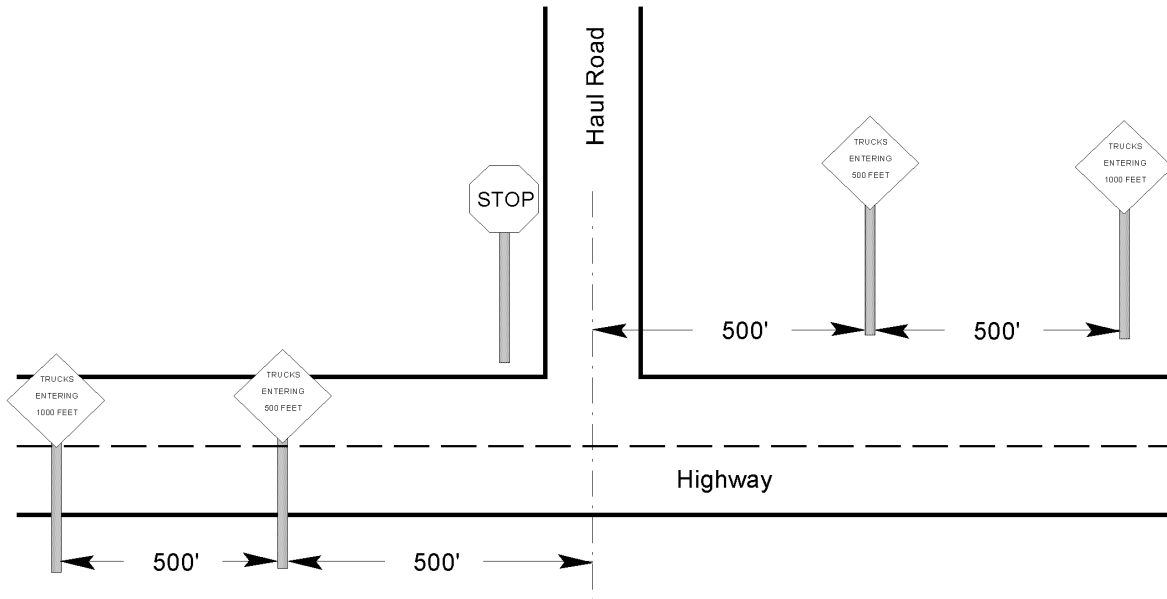


Figure III: Typical Cross Sections

## HIGHWAY SAFETY SIGNS



### Materials Required

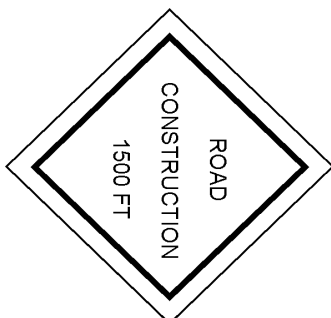
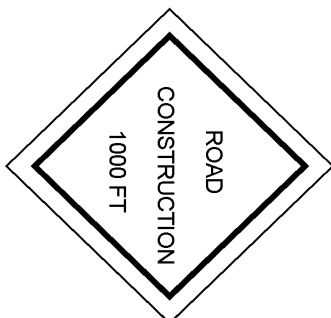
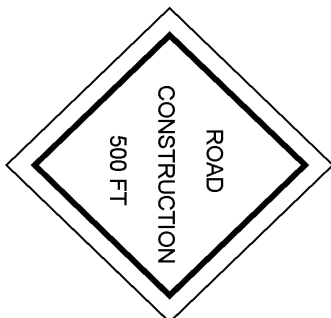
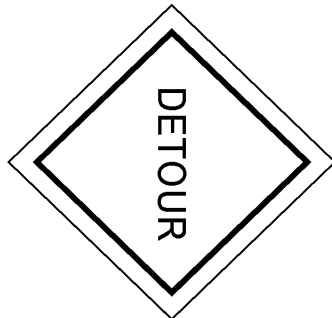
- 1 each 4"x4"x10' full pressure treated wood post.
- 4 each 4"x4"x14' full pressure treated wood post.
- 1 each 30"x30" STOP sign, aluminum, octagon, white letters on red.
- 2 each 36"x36" TRUCKS ENTERING 500' sign, aluminum, diamond, black letters on orange, center hinged.
- 2 each 36"x36" TRUCKS ENTERING 1000' sign, aluminum, diamond, black letters on orange, center hinged.
- Mounting hardware as required.

### Specifications

- 1. All signs shall have reflectorized background and shall meet all specifications as per Manual on Uniform Traffic Control Devices.
- 2. All signs shall be new condition.
- 3. Bottom of sign shall be 5' vertical as measured from the roadway surface.
- 4. Lateral clearance of "TRUCKS ENTERING" signs shall be 10' as measured from the edge of pavement to the edge of sign.

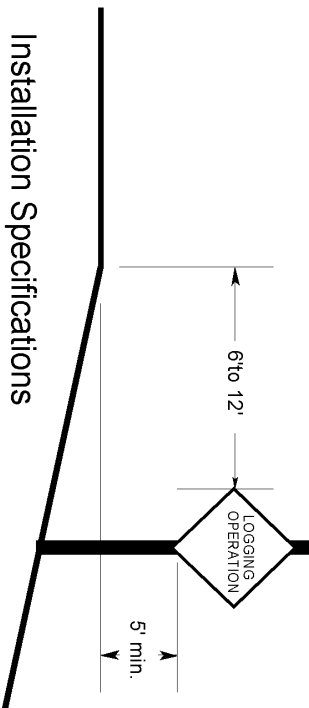
Attachment B

## Warning Sign Specifications



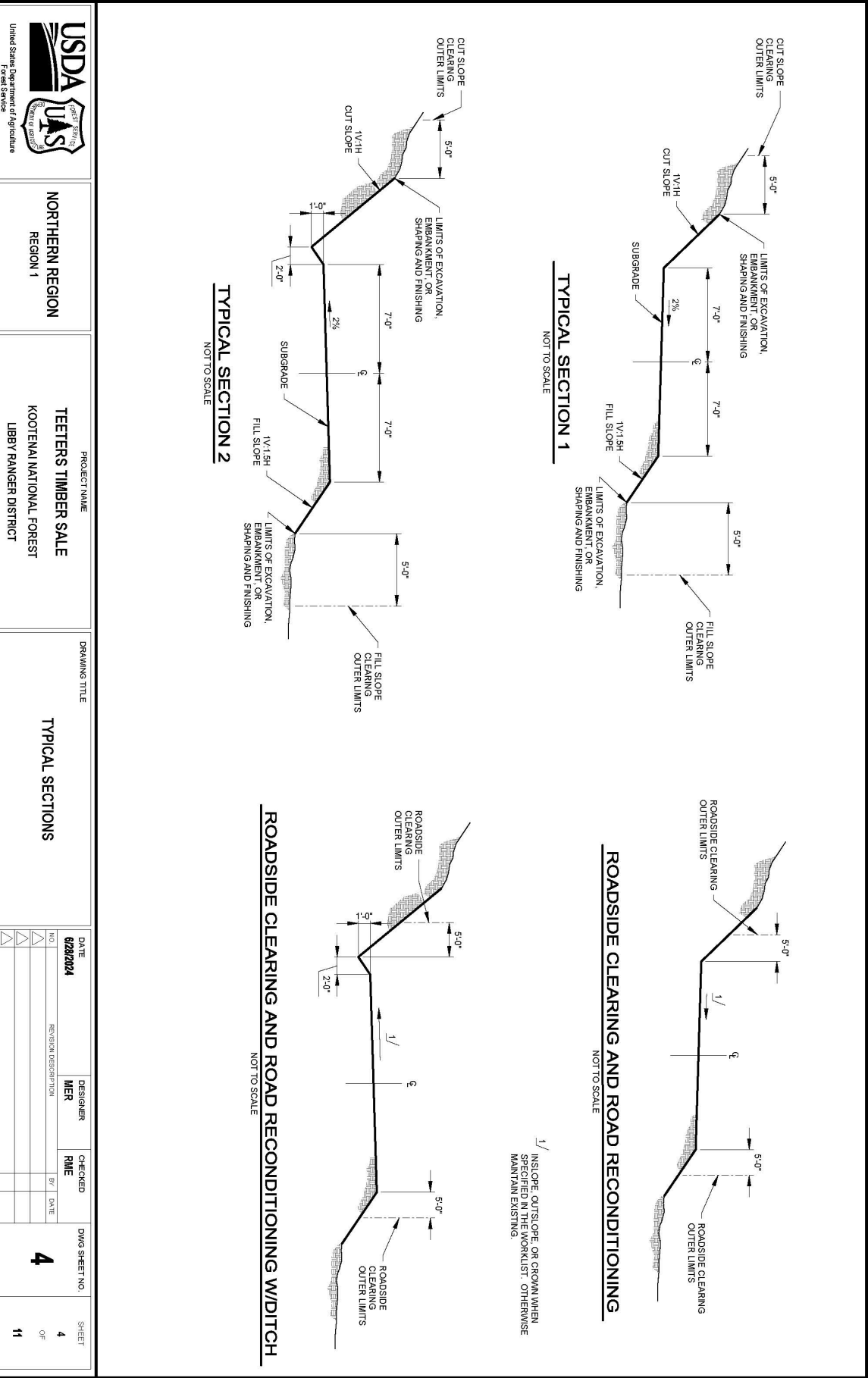
Size: 30"x 30"  
 Shape: Diamond  
 Color: Diamond: Orange and Black. Barricade: Red and Silver  
 Lettering: Minimum 4 inch letters. Standard Alphabet  
 Series C. 1/2 inch Border.  
 Reflective Background Required  
 Mounting: Posts or portable sign stands, clearly visible to drivers. Do not mount on trees.

### Installation Specifications



WARNSIGN.WPG

9/28/16 07:07 MARKL F-1 CAD STANDARDS AGENCY STANDARDS FOREST SERVICES-CTB.DWG.



9/28/18 07:07 MARKL F1\_CAD STANDARDS\AGENCY STANDARDS\FORST SERVICE\WFS-CTB.DWG



NORTHERN REGION  
REGION 1

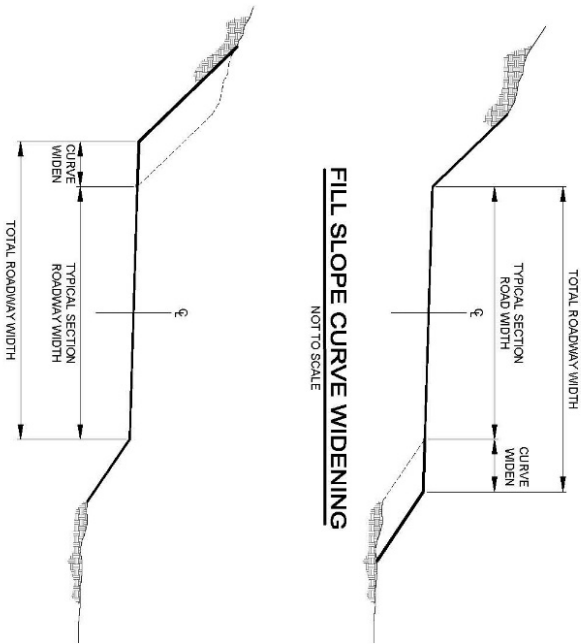
PROJECT NAME  
TEETERS TIMBER SALE  
KOOTENAI NATIONAL FOREST  
LIBBY RANGER DISTRICT

DRAWING TITLE

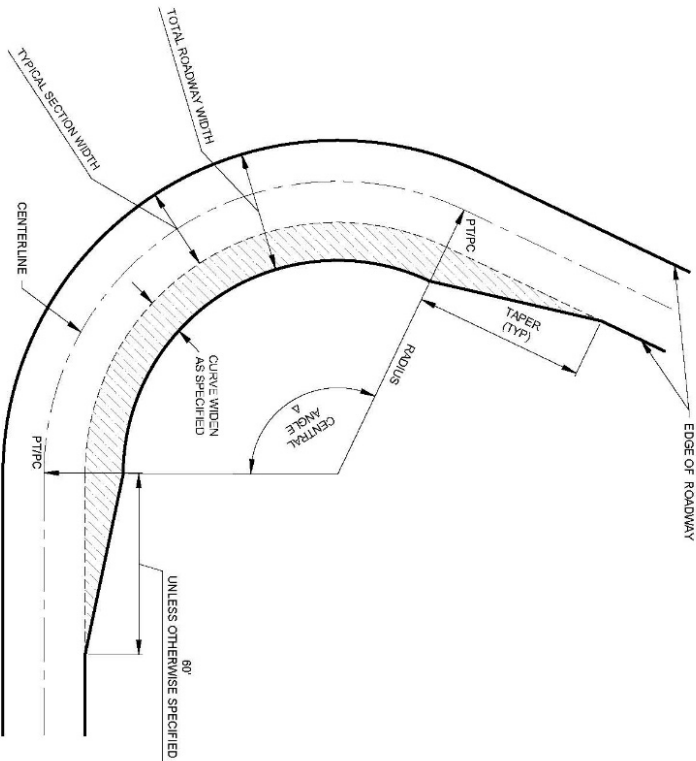
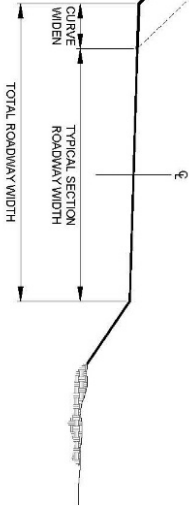
CURVE WIDEN DETAIL

DATE	DESIGNER	CHECKED	DWG SHEET NO.	SHEET
6/28/2024	MER	RME	5	5
BY	DATE	BY	DATE	OF
				11

FILL SLOPE CURVE WIDENING  
NOT TO SCALE



CUT SLOPE CURVE WIDENING  
NOT TO SCALE



NOTES:  
1. ADD HORIZONTAL CURVE WIDENING TO THE INSIDE OF CURVES.  
WIDENING APPLIES TO THE ROADWAY THROUGH THE ENTIRE CURVE  
FROM PC TO PT.



## NORTHERN REGION

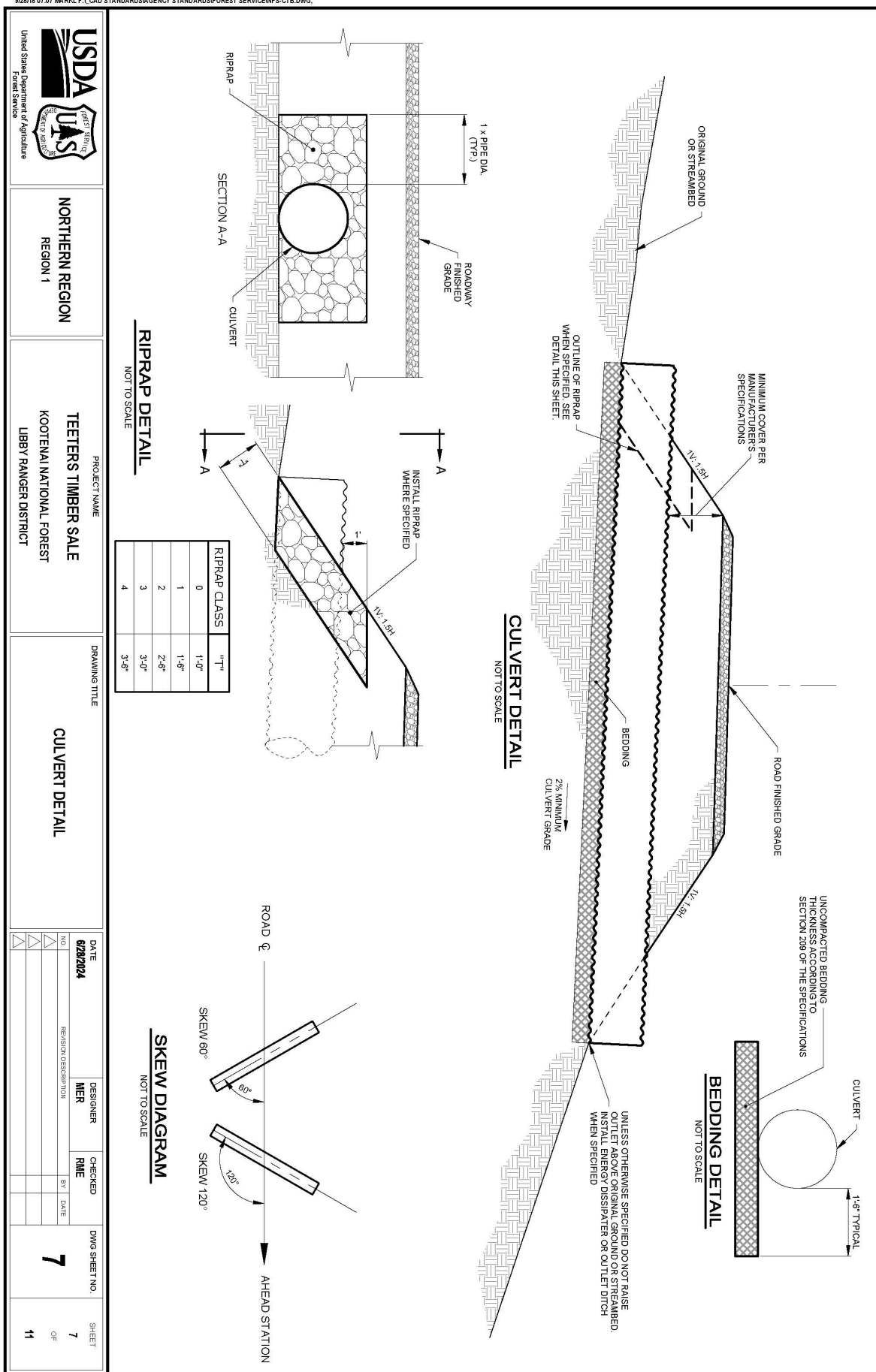
### REGION 1

**TEETERS TIMBER SALE**  
**KOOTENAI NATIONAL FOREST**  
**LIBBY RANGER DISTRICT**

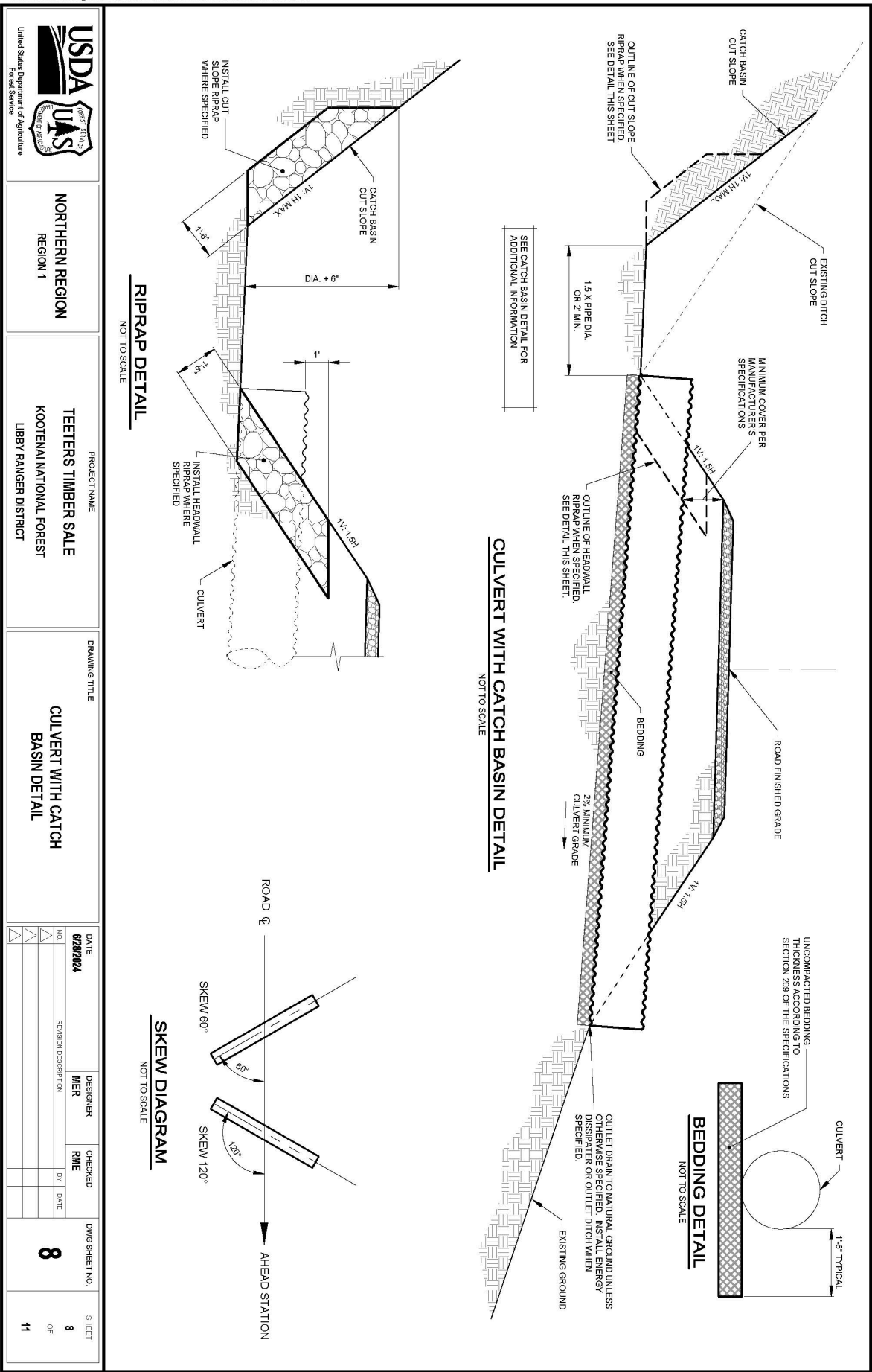
## TURNOUT AND TURNAROUND DETAILS

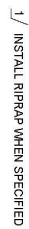
<b>DATE</b> <b>6/28/2024</b>		<b>DESIGNER</b> <b>MER</b>	<b>CHECKED</b> <b>RME</b>	<b>DWG SHEET NO.</b> <b>6</b>	<b>SHEET</b> <b>6</b>
<b>NO.</b>	<b>REVISION DESCRIPTION</b>	<b>BY</b>	<b>DATE</b>	<b>6</b>	<b>OF</b> <b>11</b>





9/28/18 07:07 MARKL F.L.CAD STANDARDSAGENCY STANDARDSFOREST SERVICES-CTB.DWG





SHEET  
9  
OF  
11



NOTES:

1. DITCH AND BERM SHALL BE SEEDED
2. MATERIAL SHALL BE DEPOSITED
3. INSTALL RIPRAP WHERE SPECIFIED

CULVERT

DIAM.

EXISTING GROUND

EXCAVATED MATERIAL FROM DITCH AS SHOWN. SEE NOTE THIS SHEET

1'-6" MIN.

1'-6" MIN.

1V : 1.5H

1V : 1.5H

RIPPAP (WHERE SPECIFIED)

**OUTLET DITCH**  
NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

## Attachment C

# FOREST FIRE RULES & REGULATIONS

These rules apply to all activities on all classified forest lands within Montana during the legal Forest Fire Season, including any extension thereof (see 77-5-103(3), 76-11-101, 76-13-102(7), and 76-13-109 MCA). Reference also ARM 36.10.119 through 132.

Related State statute numbers are provided as a reference.

## RULE I - DEBRIS BURNING

1. The person conducting the burn shall obtain written authorization from the recognized fire protection agency before igniting any open fire during the legal forest fire season (required by 76-13-121 MCA). The recognized fire protection agency may deny, restrict, or rescind any authorization by notifying the person conducting the burn.
2. All burning must comply with the Department of Environmental Quality or State/county/local open burning regulations.
3. Written authorization is not required for campfires.

## RULE II - CAMPFIRES

1. Campfires cannot be left unattended and must be completely extinguished (see 76-13-123 MCA).
2. All campfires must be constructed in cleared or bare areas, and not allowed to spread beyond the established ring, pit, grate, or container.
3. Anyone igniting a campfire is required to have fire tools listed in Rule VIII (4).

## RULE III - RAILROADS AND POWERLINES

Railroad and powerline companies are required to prepare and annually update working agreements with recognized fire protection agencies. These agreements must stress safety and fire response procedures; and identify, remove, prevent, modify, abate, or correct forest fire hazards and risks associated with railroad and powerline company operations (see 69-14-721 MCA).

## RULE IV - EQUIPMENT

1. All internal combustion engines must be equipped with an approved and effective spark-arresting system, as established in the National Wildfire Coordinating Group's Spark Arrester Guides. Spark-arresting devices must be marked, properly installed, and maintained in accordance with the Guides. The following vehicles are exempt:
  - a. automobiles and light trucks of less than 23,000 GVW when all exhaust gases pass through a properly installed and maintained exhaust system, baffle-type muffler, and tailpipe. Vehicles with glass-pack mufflers do not qualify for the exemption.
  - b. heavy-duty trucks of 23,000 GVW or greater, with a muffler and vertical stack exhaust system extending

above the cab.

- c. vehicles with other spark-arresting systems providing equal or increased effectiveness. Such vehicles must be inspected and have written authorization from the recognized fire protection agency.
2. Equipment used for commercial, ranching, or industrial activities must meet the fire extinguisher and tool requirements listed in Rule VIII (5).

## RULE V - FLAMING AND GLOWING SUBSTANCES

1. All flaming and glowing substances, including but not limited to, lighted cigarettes, cigars, ashes, and matches, must be extinguished before being discarded (see 76-13-124 MCA).
2. Smoking is allowed only at areas free of flammable or combustible material. Examples of these areas include a graveled road or an enclosed vehicle.

## RULE VI - FIREWORKS

Use of fireworks is prohibited on all classified forest lands unless written authorization is obtained from the recognized fire protection agency. Authorization will only be considered between June 24 and July 5, inclusive, to coincide with the legal dates for the sale of fireworks in Montana (see 50-37-106 MCA).

## RULE VII - WILDLAND/URBAN INTERFACE

1. County governments without subdivision wild-fire protection standards are encouraged to establish standards for all new subdivisions by January 1, 2000.
2. The Fire Protection Guidelines for Wildland/Residential Interface Development (DSL/DOJ, 1993) is available for use to assist counties in the development of standards.

## RULE VIII - FIRE EXTINGUISHERS AND FIREFIGHTING TOOLS

1. Chainsaw operators shall carry a fully charged and operable fire extinguisher, minimum-capacity 8-ounce liquid or 1-pound dry chemical, with a 4BC or higher rating.
2. Vehicles and equipment, mobile or stationary, with a combustion engine/motor used for commercial, ranching, or industrial activities must have one operable, dry-chemical fire

extinguisher with a minimum 2-1/2 -pound capacity and 4BC or higher rating.

3. Chainsaw operators shall maintain one usable shovel at chainsaw-fueling sites.
4. All persons or parties igniting a campfire shall have one usable shovel and bucket. Persons igniting a barbecue need not have a shovel or bucket if the ashes are not removed from the container and the ashes or container are not placed on or near combustible material.
5. All commercial, ranching, or industrial activities must have:
  - a. one usable shovel or pulaski with each vehicle and equipment with an internal combustion engine/motor, mobile or stationary.
  - b. one backpack pump with each vehicle and with any equipment, used off road, mobile or stationary, with an internal combustion engine/motor, that cannot be used to build fireline and is being operated on combustible material.
6. Other types of firefighting tools that provide increased efficiency or effectiveness may be substituted by written authorization from the recognized fire-protection agency. For example, a [combi] firefighting tool may be substituted for a shovel or pulaski.

#### RULE IX - FOREST ACTIVITY RESTRICTIONS

In areas designated by public proclamation by the administrator, division of forestry, as areas of high fire hazard, the administrator may request all persons, firms, or corporations present or engaged in any activity in the areas to voluntarily cease operations or to adjust working hours to less critical periods of the day. In the event such a request is refused, the administrator may issue a written order directing compliance.

#### RULE X - FOREST CLOSURE

1. During periods of dangerous fire conditions, no person may enter or be upon those forest lands designated by public proclamation by the governor of the state of Montana as areas of dangerous fire hazard except under written permit issued by a recognized agency.
2. Permits to enter upon such areas during the closure may be issued by the recognized agency upon a showing of real need by the applicant. Permits may be issued to those persons having actual residence as a permanent or principal place of abode in the forest lands designated or to persons engaged in non-fire hazardous employment.
3. However, no permit may be required of persons engaged in either firefighting, fire prevention, or law enforcement who are engaged in official business.

#### RULE XI - CORRECTION OF HAZARD AND UNUSUAL CIRCUMSTANCES OR EVENTS

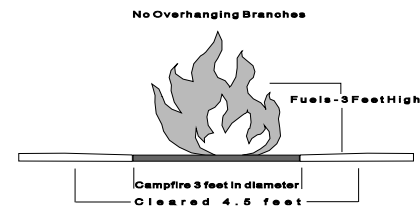
The recognized fire-protection agency may require identified wildland-fire hazards and/or risks be halted, prevented, abated, removed, disposed of, mitigated, or patrolled. This applies to public, private, nonprofit, commercial, and/or residential circumstances or events.

#### RULE XII - REQUEST FOR REVIEW

If any operator believes that in his case any requirement of a recognized agency is excessive, the operator may request the administrator, division of forestry, to review the requirements. If in the opinion of the administrator any or all are not necessary in the interest of public safety, he may make such changes as he considers advisable.

#### RULE XIII - DEFINITIONS

**Backpack Pump:** 5-gallon minimum; standard galvanized metal, fiberglass, or rubberized backpack water container with attached handpump; full of water at all times.



**Bucket:** Metal, plastic, canvas, or fiberglass container capable of holding at least one gallon of water. Motorcycle helmets qualify. **[Campfire]** means a fire set for cooking, warming, or ceremonial purposes; not more than 3 feet in diameter or height; void of overhanging branches; with all combustible material cleared at least 1-1/2 times the diameter of the fire; or a barbecue in a noncombustible container.

**Combi Tool:** A tool combining a shovel and pick.

**Fireworks:** As defined in 50-37-101 MCA.

**Forested Land:** As defined in 76-13-102 MCA and 36.10.101 ARM.

**Hazard:** Condition that promotes the ignition and/or spread of a wildland fire.

**Open Fire:** The burning of a bonfire, rubbish fire, or other fire in an outdoor location where fuel being burned is not contained in a closed incinerator, or outdoor fireplace. Barbecue pits and burn barrels are considered open fires and therefore require a burning permit (Rule I).

**Pulaski:** An ax with a medium size sharp grub hoe opposite the ax blade.

**Recognized Fire-Protection Authority:** An agency organized for the purpose of providing fire protection and recognized by the board as giving adequate fire protection to forest lands in accordance with rules adopted by the board.

**Risk:** Action or device that could cause a wildland fire to ignite.

**Shovel:** Vehicle, equipment, and chainsaw operator shovels will have a minimum overall length of 36 inches with a round pointed shovel head with a minimum width of 6 inches. Shovels required for campfires must be at least 24-inches in length with a pointed shovel head. Folding handles qualify.

#### RULE XIV - APPLICABILITY

The forest fire rules, Rule I through Rule XIII, (ARM 36.10.119 through 30.10.132) are in effect each year on classified forest land during the forest fire season May 1st to September 30th inclusive, or any legal extension thereof. Requirements pertaining to motor vehicles do not apply to those being operated solely on roads that are a part of federal or State maintained highway systems or on any paved public road.

**FOREST RESOURCES CONSERVATION AND SHORTAGE RELIEF ACT****USE OF TIMBER**

(a) This contract is subject to the Forest Resources Conservation and Shortage Relief Act of 1990, as amended (16 USC 620, *et seq.*).

(b) Except for determined pursuant to public hearing to be surplus, unprocessed timber designated for harvest shall not be exported from the United States nor used in direct or indirect substitution for unprocessed timber exported from private lands by Purchaser or any person as defined in the Act (16 USC 620e).

(c) Timber in the following form will be considered unprocessed:

(i) Trees or portions of trees or other roundwood not processed to standards and specifications suitable for end product use;

(ii) Lumber, construction timbers, or cants intended for remanufacturing not meeting standards defined in the Act (16 USC 620e); and

(iii) Aspen or other pulpwood bolts exceeding 100 inches in length.

(d) Unless otherwise agreed in writing, unprocessed timber designated for harvest shall be delivered to a domestic processing facility and shall not be mixed with logs intended for export.

(e) Prior to award, during the life of this contract, and for a period of 3 years from Termination Date, Purchaser shall furnish to State, upon request, records showing the volume and geographic origin of unprocessed timber from private lands exported or sold for export by Purchaser or affiliates.

(f) Prior to delivering unprocessed timber designated for harvest to another party, Purchaser shall require each buyer, exchange, or recipient to execute an acceptable agreement (Domestic Processing Form) that will:

(i) Identify the Federal origin of the timber;

(ii) Specify domestic processing for the timber involved;

(iii) Require the execution of such agreements between the parties to any subsequent transactions involving the timber;

(iv) Require that all hammer brands and/or yellow paint must remain on logs until they are either legally exported or domestically processed, whichever is applicable; and

(v) Otherwise comply with the requirements of the Act (16 USC 620d).

(g) No later than 10 days following the execution of any such agreement between Purchaser and another party, Purchaser shall furnish to the State a copy of each such agreement. Purchaser shall retain, for 3 years from Termination Date, the records of all sales, exchanges, or dispositions of all Timber designated for harvest.



## Attachment E

(i) For breach of this Section, State may terminate this contract and take such other action as may be provided by statute or regulation, including the imposition of penalties. When terminated by the State under this Section, the State will not be liable for any Claim submitted by Purchaser relating to the termination.

**Branding and Painting Requirements****For sawtimber products being delivered to manufacturing sites within Region 1 and 4 –**

Ten (10) sawtimber logs on each loaded log truck, that are greater than seven (7) inches d.i.b that are eight (8) feet or more in length and one-third (1/3) or more sound will be painted with highway yellow paint and branded with a hammer brand identifying the timber sale from which the log was removed. Each paint spot must be not less than three (3) square inches in size. The brand and paint marks must be on the same end of the logs. The hammer brand will be assigned/registered by the State selling federal timber, in coordination with the appropriate Forest and Region.

**For all sawtimber products being delivered to the IFG sawmill in Lewiston, ID-**

Twenty (20) sawtimber logs on each loaded log truck, that are greater than seven (7) inches d.i.b that are eight (8) feet or more in length and one-third (1/3) or more sound will be painted with highway yellow paint and branded with a hammer brand identifying the timber sale from which the log was removed. The brand and paint marks must be on the same end of the logs. Each paint spot must be not less than three (3) square inches in size. All ponderosa pine >15 inches and all other species >30" will require double end painting and branding. The hammer brand will be assigned/registered by the State selling federal timber, in coordination with the appropriate Forest and Region.

**For sawtimber products being delivered to manufacturing sites within Region 1 located in Powell, Granite, and all other counties located east of the continental divide –**

Painting and Branding requirements will be waived for all sawtimber logs.

If purchasers are violating export laws or are not complying with the terms as identified above the State will require single end painting and branding of all Logs.

**For sawtimber products being delivered to non-manufacturing sites within Region 1 and 4, including sort yards, reloads and collection sites –**

All Sawtimber logs on each loaded log truck, that are greater than seven (7) inches d.i.b that are eight (8) feet or more in length and one-third (1/3) or more sound will be painted with highway yellow paint and a single-end brand identifying the timber sale from which the log was removed. The brand and paint marks must be on the same end of the logs. Each paint spot must be not less than three (3) square inches in size. The hammer brand will be assigned/registered by the State selling federal timber, in coordination with the appropriate Forest and Region.

**For sawtimber products being delivered to Guy Bennett Lumber, port of Wilma, Clarkston Washington, -**

At least twenty (20) logs on each loaded log truck, that are greater than seven (7) inches d.i.b that are eight (8) feet or more in length and one-third (1/3) or more sound will be painted with highway yellow paint and branded with a hammer brand identifying the timber sale from which the log was removed. The brand and paint marks must be on the same end of the logs. Each paint spot must be not less than three (3) square inches in size. The hammer brand will be assigned/registered by the State selling federal timber, in coordination with the appropriate Forest and Region.

**For logs being hauled to other Regions, the painting and branding requirements will be the following:**

**For sawtimber products being hauled to manufacturing sites within Region 2 –**

At least ten (10) sawtimber logs on each loaded log truck, that are greater than seven (7) inches d.i.b that are eight (8) feet or more in length and one-third (1/3) or more sound will be painted with highway yellow paint and branded with a hammer brand identifying the timber sale from which the log was removed. The brand and paint marks must be on the same end of the logs. Each paint spot must be not less than three (3) square inches in size. Or as identified by Region 2 given the location of where logs are being delivered.

**Sawtimber products being hauled to manufacturing sites within Region 3 and Region 5 –**

All sawtimber logs on each loaded log truck, greater than seven (7) inches d.i.b that are eight (8) feet or more in length and one-third (1/3) or more sound will be single end painted with highway yellow paint and branded with a hammer brand identifying the timber sale from which the log was removed. The brand and paint marks must be on the same end of the logs. Each paint spot must be not less than three (3) square inches in size. The hammer brand will be assigned/registered by the State selling federal timber, in coordination with the appropriate Forest and Region.

**Sawtimber products being hauled to manufacturing sites within Region 6 –**

At least twenty (20) logs on each loaded log truck, that are greater than seven (7) inches d.i.b that are eight (8) feet or more in length and one-third (1/3) or more sound will be painted with highway yellow paint and branded with a hammer brand identifying the timber sale from which the log was removed. The brand and paint marks must be on the same end of the logs. Each paint spot must be not less than three (3) square inches in size. The hammer brand will be assigned/registered by the State selling federal timber, in coordination with the appropriate Forest and Region.

**Sawtimber products being delivered to port of Umatilla, Oregon, other ports east of the Cascades, all points west of the Cascades and any port of entry into British Columbia –**

All sawtimber logs on each loaded log truck that are greater than seven (7) inches d.i.b that are eight (8) feet or more in length and one-third (1/3) or more sound will be double end painted with highway yellow paint and branded with a hammer brand identifying the timber sale from which the log was removed. The brand and paint marks must be on the same end of the logs.

## Attachment E

Each paint spot must be not less than three (3) square inches in size. The hammer brand will be assigned/registered by the State selling federal timber, in coordination with the appropriate Forest and Region.

**Log and Load Identification Operating Procedures.**

- a. If mule trains or truck/pup combinations are used, each bunked load stands on its own and these requirements will apply to each unit. If a flatbed stake trailer is used, each bundle will be treated as a separate unit.
- b. Bucking of broken-ended logs on the sale area to furnish a branding surface will not be required.
- c. Purchasers of Idaho timber sales will have to register their brands with the State Board of Scaling Practices at Coeur d'Alene, Idaho. Timber purchasers already having brands registered with the State of Idaho may use these brands on Forest Service timber sales, when approved in advance by the State Forester. The same applies to purchasers of Montana sales destined to be processed in Idaho.
- d. Branding and painting of non-sawtimber logs is not required.

**Sample-DOMESTIC PROCESSING OF TIMBER AGREEMENT**  
**USE OF TIMBER**

The Forest Resources Conservation and Shortage Relief Act of 1990, as amended (16 U.S.C. 620 et seq.) (Act) and the \_\_\_\_\_ Timber Sale on the \_\_\_\_\_ National Forest, dated: \_\_\_\_\_, between: \_\_\_\_\_ of \_\_\_\_\_ (Purchaser)

\_\_\_\_\_ and the \_\_\_\_\_ (enter state).  
 \_\_\_\_\_ (Address)

acting through the Forest Service, United States Department of Agriculture, expressly requires that all unprocessed timber sold or otherwise transferred thereunder shall not be exported from the United States and shall receive domestic processing within the United States. The requirement for domestic processing does not apply to Port Orford cedar and Alaska yellow cedar. Within the terms and conditions of this contract, "unprocessed timber" is defined to mean: "Trees or portions of trees or other roundwood not processed to standards and specifications suitable for end product use and intended for remanufacture (36 CFR 223.186)".

The unprocessed timber originating from Federal lands which is being transferred under this agreement is branded with the following brand: \_\_\_\_\_

As a buyer of logs, bolts, or other roundwood originating from the sale area of said timber sale, (I) (We) acknowledge the Federal origin of such timber and agree to abide with the Act and by the terms and conditions of said contract with respect to the domestic processing of unprocessed timber. (I) (We) also agree that all hammer brands and/or yellow paint will not be removed from logs until they are domestically processed. In addition, (I) (We) agree to require the execution of another "Agreement" by any party we sell, exchange, or otherwise deliver such "unprocessed timber" to, as a condition of such a sale, exchange, or delivery, the "Agreement" shall (1) specify domestic processing for unprocessed timber, and (2) require that all hammer brands and/or yellow paint must remain on logs until they are domestically processed, and (3) require the execution of such agreements between the parties to any subsequent transactions involving unprocessed timber. And to submit a copy of each agreement within 10 calendar days of the transaction to the State from which the Federal timber originated.

\_\_\_\_\_  
 (Name of Seller/Transferer)

\_\_\_\_\_  
 (Name of Buyer/Transferee)

\_\_\_\_\_  
 (Address)

\_\_\_\_\_  
 (Address)

\_\_\_\_\_  
 (Signature of Authorized Official)

\_\_\_\_\_  
 (Signature of Authorized Official)

\_\_\_\_\_  
 (Title)

\_\_\_\_\_  
 (Title)

\_\_\_\_\_  
 (Date)

\_\_\_\_\_  
 (Date)

Attachment F

**United States Department of Agriculture**  
**U.S. Forest Service**

**Food/Wildlife Attractant Storage Order**

**Northern Continental Divide Ecosystem Area**

Flathead, Lolo, Kootenai, Helena-Lewis and Clark, Beaverhead-Deerlodge National Forests  
USDA, Forest Service, Region One

Pursuant to 16 U.S.C. §551 and Title 36 C.F.R. §261.50(a) the following acts are prohibited or restricted on the Flathead, Lolo, Kootenai, Beaverhead-Deerlodge, Helena – Lewis and Clark National Forests, Montana, within the Northern Continental Divide Ecosystem area.

**PROHIBITIONS**

1. Possessing or storing any food or refuse, except as specified in this Order. Exhibit B, which is hereby made part of this Order. 36 C.F.R. § 261.58(cc)
2. Possessing, storing, or transporting any bird, fish, or other animal or parts thereof, except as specified in this Order. Exhibit B, which is hereby made part of this Order. 36 C.F.R. § 261.58(s)

**PURPOSE**

The purpose of these restrictions is to reduce the likelihood of a human-to-bear conflict, compromising the safety for both humans and bears.

**AREA RESTRICTED**

Appropriate food storage or attendance, as outlined in this Order, is required on all National Forest System (NFS) lands within the Flathead, Lolo, Kootenai, and Helena – Lewis and Clark, except the Crazy Mountain Range, on the Belt Creek–White Sulphur Springs Ranger District and on all NFS lands within that portion of the Beaverhead-Deerlodge National Forest, Butte Ranger District, within the Elkhorn Mountain Range, as depicted on the map, Exhibit A, which is hereby made part of this Order.

**IMPLEMENTATION**

1. This Order will be in effect annually from March 1<sup>st</sup> to December 31<sup>st</sup>, through calendar year 2028.
2. Food/Wildlife Attractant Storage Special Order Prohibitions, Information and Definitions are attached as Exhibit B, and hereby made a part of this Order.

**EXEMPTIONS**

Pursuant to 36 C.F.R. §261.50(e), the following are exempt from this Order:

1. Persons with a special use authorization or other Forest Service authorization specifically exempting them from the effect of this Order. 36 C.F.R. §261.50(e)(1)
2. Any Federal or State officer placing baits to capture animals for research or management purposes as part of their official duties. 36 C.F.R. §261.50(e)(4)

Attachment F


**PENALTY**

Violation of these prohibitions is punishable by a fine of not more than \$5,000 for an individual or \$10,000 for an organization, or imprisonment for not more than 6 months, or both (16 U.S.C. § 551 and 18 U.S.C. §§ 3559, 3571, and 3581).

**INFORMATION**

Further information regarding this order may be obtained at any of the following Supervisors Offices: Flathead National Forest, located at 650 Wolfpack Way, Kalispell, MT, (406) 758-7502. Lolo National Forest, located at 24 Fort Missoula, Missoula, MT (406) 329-3750, or Helena-Lewis and Clark National Forest, located at 2880 Skyway Drive Helena, MT (406) 449-520, Kootenai National Forest, located at 31374 US Highway 2, Libby, MT (406) 293-6211, Beaverhead-Deerlodge National Forest, located at 420 Barrett St. Dillion, MT (406) 683-3900.

Done this 28<sup>th</sup> day of February 2023.

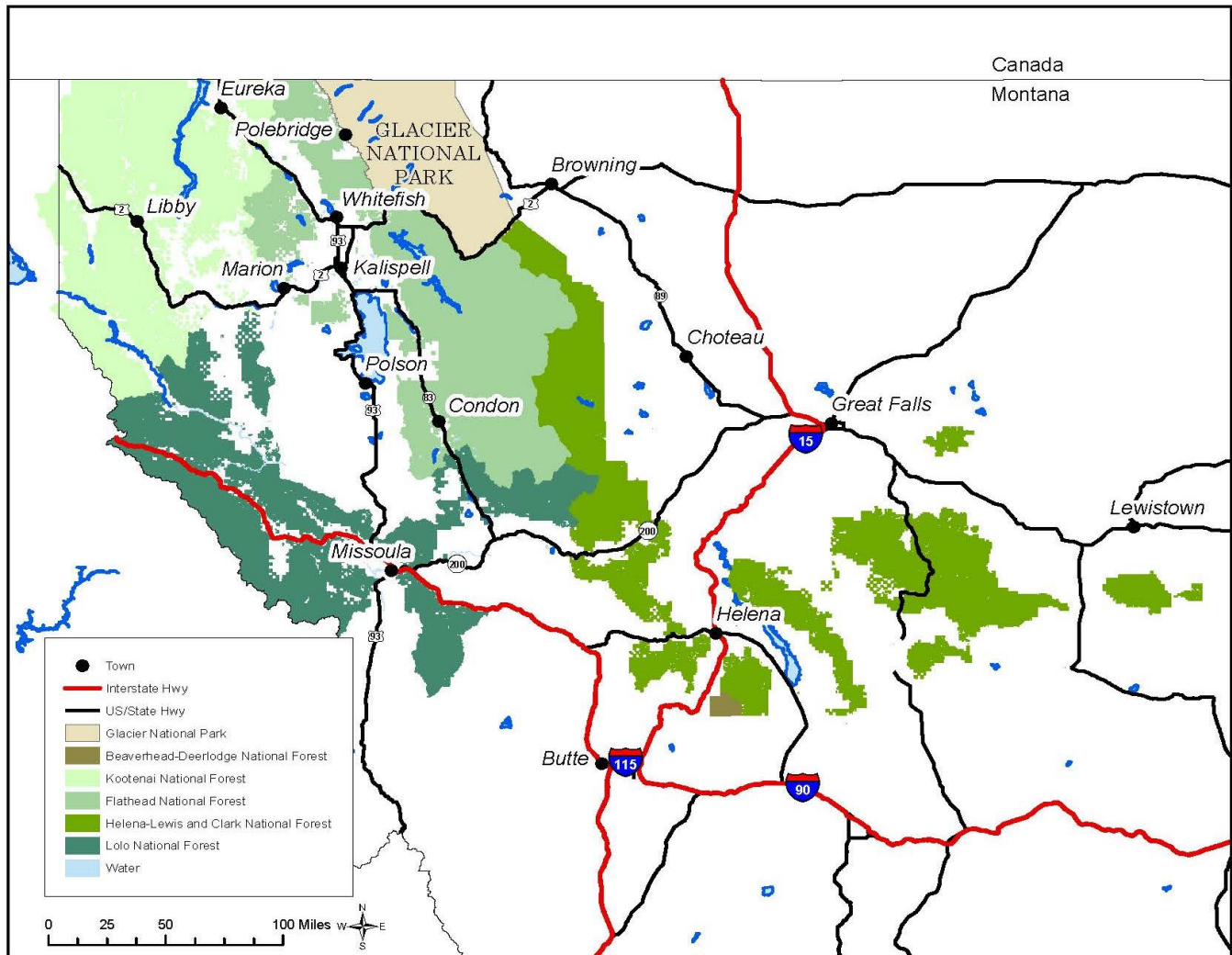
By:  Digitally signed by LEANNE  
MARTEN  
Date: 2023.02.28 11:51:37 -07'00'

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Leanne Marten  
Regional Forester  
Northern Region, USDA Forest Service

Attachment F

**Exhibit A**  
Northern Continental Divide Ecosystem Area, Food/Wildlife Attractant Storage Order  
Order # R1-2023-02



Attachment F

**Exhibit B**

**Food/Wildlife Attractant Storage Special Order Prohibition, Information and Definitions**

It Is Required That:

1. During daytime hours, all attractants, including human, pet, and livestock food (except baled or cubed hay without additives) and garbage shall be stored in a bear resistant manner when not being attended.
2. During nighttime hours, all attractants, including human, pet, and livestock food (except baled or cubed hay without additives) and garbage shall be stored in a bear resistant manner unless it is in immediate control, being prepared for eating, being eaten, being transported, or being prepared for storage, as defined herein.
3. Any harvested animal carcasses (including big game, birds, fish or other animal parts) that are within 1/2-mile of any camp or sleeping area or within 200 yards of a National Forest System Trail shall be stored in a bear-resistant manner by the responsible party (unless the carcass is being field dressed, transported, being prepared for eating, or being prepared for storage, as defined herein). If a wildlife carcass is within an attended camp during daytime hours it may be on the ground.
4. Attractants shall not be buried, discarded, or burned in an open campfire.
  - a. Leftover food or food waste products may be placed in an appropriate, sealed container and packed out with garbage.
  - b. Leftover food or other attractants may be burned in a contained stove fire.
  - c. Attractants may be placed into a suitable container (i.e. tin can) to prevent leaching into the ground and burned over an open campfire. Any remaining attractants unconsumed by burning shall be placed with other garbage and packed out.
5. The responsible party shall report the death and location of any livestock to a Forest Service Official within 24 hours of discovery. In some very remote areas, it may not be possible to meet the 24-hour requirement. In these special cases, the responsible party shall report to a Forest Official the discovery of any dead livestock within 48 hours.
6. Approved bear-resistant containers meet the following criteria: A container included in the most current Interagency Grizzly Bear Committee (IGBC) Certified Bear-Resistant Products list. A container not on the list may also be certified by the local District Ranger or their designated representative(s) if it is inspected and approved based on IGBC criteria.



## Definitions

1. Attended: At least one adult person (attendee) is physically present within 100 feet who is awake and alert and in immediate control of attractants.
2. Attractant: Food as defined below and garbage from human, livestock, or pet foods. Also includes items such as soft drinks, alcoholic beverages, personal hygiene products, and empty food and beverage containers.
3. Food: Any nourishing substance, which includes human food or drink (canned, solid, or liquid), livestock feed (except baled or cubed hay without additives) and pet food.
4. Attendee: An adult, 18 years of age or older, in control of attractants.
5. Bear-resistant container: A container included in the most current Interagency Grizzly Bear Committee (IGBC) Certified Bear-Resistant Products list (<https://igbconline.org/>).
6. Bear-resistant manner: Any attractants, including food and garbage, must be stored in one of the following ways if unattended:
  - a. secured in a hard-sided Recreational Vehicle, vehicle trunk, cab, or trailer cab.
  - b. secured in a hard-sided dwelling or storage building.
  - c. suspended at least 10 feet up (from the bottom of the suspended item) and 4 feet out from any upright support, i.e. tree or pole.
  - d. stored in an approved bear-resistant container.
  - e. stored within an approved and operating electric fence.
  - f. stored in any combination of these methods; or
  - g. stored by methods other than those described in Section #6, a-f, that shall be approved in writing by the Forest Supervisor.
7. Contained fire stove: A metal stove that completely encloses the fire.
8. Daytime: 1/2 hour before sunrise to 1/2 hour after sunset.
9. Nighttime: 1/2 hour after sunset to 1/2 hour before sunrise.
10. Livestock: A domesticated animal, such as mule, horse, llama, or goat.
11. Wildlife carcass: The body, or any parts thereof, of any deceased wild animal, bird, or fish.

Attachment F

12. Approved electric fences will meet, as a minimum, the following specifications:

- a. **7 Strand Fence** (refer to Forest Service publication 9923-2321-MTDC, “Electric Fence Systems: Requirements for Meeting the NCDE Food Storage Special Order, 1999”, for more description of fence specifications and set-up):
  - (1) The fence will be set up as a “tight wire” fence. The wire will be tight and under tension, not loose or sagging.
  - (2) Minimum fence height 4 feet.
  - (3) Minimum post height 5 feet.
  - (4) Maximum spacing between posts 8 feet.
  - (5) Conductors (wire): Minimum of 7 wires, with 6-10 inch spacing between wires. Bottom wire must be within 2 inches of the ground. All wire must be smooth metal fence wire of at least 16 gauge or poly wire, except the top wire which may be poly tape of at least six strand stainless steel.
  - (6) The system will be set up to operate both as a ground wire return and a grounded system. The 2 top wires will be hot, with all other wires alternating hot and ground. The minimum length ground rod is 2 feet.
  - (7) Fence charger (minimum): (1) energizer output of 0.7 joules; (2) tested peak output of 5000 volts; (3) 40 shocks per minute. User must be able to test electrical output in the field.
  - (8) The charger must be made inaccessible to disturbance from a bear. The charger may be stored within the interior of the fence or located a minimum of 10 feet above ground.
  - (9) Minimum distance between fence and items enclosed by fence.....3 feet.
- b. **Portable Electric Mesh Fence** (refer to Forest Service publication 0723- 2305-MTDC, “Specifications for Portable Electric Fence Systems as Potential Alternative Methods for Food Storage, 2007”, for more description of fence specifications and set-up):
  - (1) Portable electric mesh fence shall not be left in any location for more than 16 days.
  - (2) Minimum fence height.....33 inches.
  - (3) Minimum post length.....42 inches.

Attachment F

- (4) Post construction required to be polyethylene with metal spike on bottom.
- (5) Minimum of 3 strands of stainless-steel wire per horizontal wire.
- (6) Minimum number of horizontal wires.....8.
- (7) Horizontal opening in mesh required to be less than 12 inches.
- (8) Minimum length of ground rod required to be 1 foot and earth ground is mandatory.
- (9) Fence charger (minimum): (1) energizer output of 0.11 joules; (2) Minimum tested peak output voltage (on every hot conductor, with no load other than the fence) required to be 5,000 volts. (3) Minimum pulse duration (with a 10,000-ohm load applied) required to be 0.05 milliseconds: (4) Minimum shocks per minute....35.  
**User must be able to test electrical output in the field.**
- (10) Minimum distance between fence and items inside.....1½ feet.
- (11) Readable placard indicating fence is electrified is required.
- (12) Maximum fence length.....60 feet.
- (13) Minimum of 2 LED lights.

# **FOREST SERVICE**

## **SUPPLEMENTAL SPECIFICATIONS**

### **FOR**

### **TEETERS TIMBER SALE**

**USDA Forest Service, Region 1  
Kootenai National Forest  
Libby Ranger District  
Lincoln County, Montana**

**100% FINAL DRAFT SUBMITTAL**

**Prepared by:**

**GREAT WEST ENGINEERING, INC.**

**2501 Belt View Drive**

**Helena, MT 59601**



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## Preface

Preface\_wo\_10\_23\_2019

**Delete all but the first paragraph and add the following:**

The Forest Service, US Department of Agriculture has adopted FP-14 for construction of National Forest System Roads.

## 101 – Terms, Format, and Definitions

101.01\_National\_1\_24\_2022

### **Add the following paragraph to Subsection 101.01:**

#### 101.01 Meaning of Terms.

Delete all references to the FAR (Federal Acquisition Regulations) in the specifications when incorporating into 2400-6(T) Timber Sale or 2400-13(T) Stewardship contracts.

101.01\_National\_11\_9\_2016

### **Add the following paragraph to Subsection 101.01:**

#### 101.01 Meaning of Terms.

Delete all references to the TAR (Transportation Acquisition Regulations) in the specifications.

101.03\_National\_11\_9\_2016

### **Add the following to Subsection 101.03:**

#### 101.03 Abbreviations.

##### **(a) Acronyms.**

AGAR — Agriculture Acquisition Regulations

AFPA — American Forest and Paper Association

FSAR — Forest Service Acquisition Regulations

MSHA — Mine Safety and Health Administration

NESC — National Electrical Safety Code

WCLIB — West Coast Lumber Inspection Bureau

##### **(f) Miscellaneous unit abbreviations.**

MP	—	milepost	location
----	---	----------	----------

ppm	—	parts per million	volume
-----	---	-------------------	--------

STA		station	location
-----	--	---------	----------

**Make the following changes to Subsection 101.04:****101.04 Definitions.****Delete these definitions and replace the following:**

**Bid Schedule** — The Schedule of Items.

**Bridge** — A structure, including supports, erected over a depression or an obstruction such as water along a road, a trail, or a railway and having a deck for carrying traffic or other loads.

**Contractor** — The individual or legal entity contracting with the Government for performance of prescribed work. In a timber sale contract, the contractor is the “Purchaser”.

**Culvert** — Any structure with a bottom, regardless of fill depth, depth of invert burial, or presence of horizontal driving surface, or any bottomless (natural channel) structure with footings that will not have wheel loads in direct contact with the top of the structure.

**Drawings** — (Public Works Contracts) Design sheets or fabrication, erection, or construction details submitted to the CO by the Contractor according to FAR Clause 52.236-21 Specifications and Drawings for Construction. Also refers to submissions and submittals.

**Notice to Proceed** — (Public Works Contracts) Written notice to the Contractor to begin the contract work.

**Right-of-Way** — A general term denoting (1) the privilege to pass over land in some particular line (including easement, lease, permit, or license to occupy, use, or traverse public or private lands), or (2) Real property necessary for the project, including roadway, buffer areas, access, and drainage areas.

**Solicitation**—(Public Works Contracts) The complete assembly of documents (whether attached or incorporated by reference) furnished to prospective bidders.

**Add the following definitions:**

**Adjustment in Contract Price** — “Equitable adjustment,” as used in the Federal Acquisition Regulations, or “construction cost adjustment,” as used in the Timber Sale Contract, as applicable.

**Change** — “Change” means “change order” as used in the Federal Acquisition Regulations, or “design change” as used in the Timber Sale Contract.

**Forest Service** — The United States of America, acting through the Forest Service, U.S. Department of Agriculture.

**Neat Line** — A line defining the proposed or specified limits of an excavation or structure.

**Pioneer Road** — Temporary construction access built along the route of the project.

**Purchaser** — The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through agents, employees, or subcontractors.

**Protected Streamcourse** — A drainage shown on the plans or timber sale area map that requires designated mitigation measures.



## Attachment G

**Road Order** — An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

**Shop Drawings** — (Timber and Stewardship Contracts) Referred to as “Drawings” in FP-14, include drawings, diagrams, layouts, schematics, descriptive literature, illustrations, lists or tables, performance and test data, and similar materials furnished by Purchaser to explain in detail specific portions of the work required by the contract.

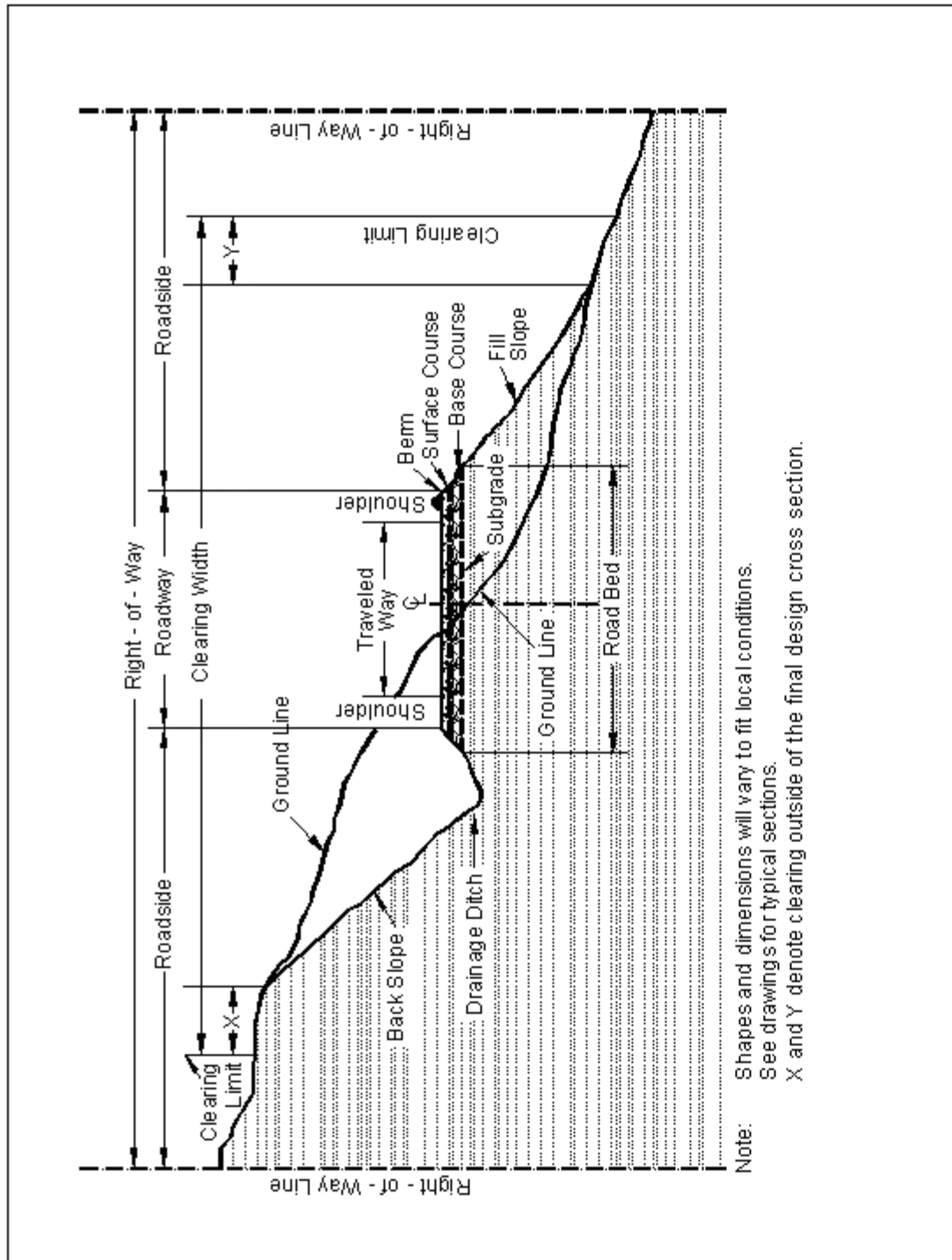
**Utilization Standards** —

The minimum size and percent soundness of trees described in Public Works contract specifications or Timber Sale and IRTC contract provisions to determine merchantable timber.

## Attachment G

Add Figure 101-1—Illustration of road structure terms:

**Figure 101-1—Illustration of road structure terms.**



## 102 – Bid, Award, and Execution of Contract

102.00\_National\_11\_9\_2016

**Delete Section 102 in its entirety.**

Delete Section 102.

## 103 - Scope of Work

103.00\_National\_11\_9\_2016

**Delete all of Section 103 except Subsection 103.01 Intent of Contract.**

Delete Subsections 103.02, 103.03, 103.04, 103.05.

## 104 - Control of Work

104.00\_National\_11\_9\_2016

**Delete Subsections 104.01, 104.02, and 104.04.**

Delete Subsections 104.01, 104.02, 104.04.

104.03\_National\_1\_24\_2022

**Delete Subsection 104.03 and replace with the following:****104.03 Specifications and Drawings.**

Refer to B(T) 5.211 in the 2400-6(T)) or the 2400-13(T) contracts for requirements under this subsection.

104.06\_National\_11\_9\_2016

**Add the following to Subsection 104.06:****104.06 Use of Roads by Contractor.**

The Contractor is authorized to use roads under the jurisdiction of the Forest Service for all activities necessary to complete this contract, subject to the limitations and authorizations designated in the Road Order(s) or described in the contract, when such use will not damage the roads or national forest resources, and when traffic can be accommodated safely.

## 105 - Control of Material

105.02\_National\_2\_25\_2019

**Add the following to Subsection 105.02c:**

**105.02(c) Contractor-located sources.**

All material (e.g., soil, gravel, sand, borrow, aggregate, etc.) transported onto National Forest System land or incorporated into the work shall be weed-free. The Contracting Officer may request written documentation of methods used to determine the weed-free status of any and all materials furnished by the contractor.

Contractor-provided expertise and methods to establish weed-free status must be appropriate for the weeds of concern in the local area. The following applies to this contract:

A Forest Service weed specialist will inspect proposed sources to determine weed-free status. Provide the Contracting Officer written notification of proposed material sources **30** calendar days prior to use. Written approval of the specific source will be provided to the contractor by the CO. If weed species are present in the proposed source, appropriate mitigation measures may allow conditional use of the source as required by the Contracting Officer.

105.05\_National\_2\_25\_2019

**Delete 105.05 (a) and (b) and the last sentence of the second paragraph and substitute the following:**

**105.05 Use of Material Found in the Work.**

Materials produced or processed from Government lands in excess of the quantities required for performance of this contract are the property of the Government. Place excess material safely at government-approved location, at no additional cost to government.

## 106 - Acceptance of Work

106.01\_National\_7\_18\_2017

### **Delete Subsection 106.01 and replace with the following:**

#### 106.01 Conformity with Contract Requirements.

Follow the requirements of FAR Clause 52.246-12 Inspection of Construction.

References to standard test methods of AASHTO, ASTM, GSA, and other recognized standard authorities refer to the methods in effect on the date of solicitation for bids.

Perform all work to the lines, grades, cross-sections, dimensions, and processes or material requirements shown on the plans or specified in the contract.

Incorporate manufactured materials into the work according to the manufacturer's recommendations or to these specifications, whichever is stricter.

Plan dimensions and contract specification values are the values to be strived for and complied with as the design values from which any deviations are allowed. Perform work and provide material that is uniform in character and reasonably close to the prescribed value or within the specified tolerance range. The purpose of a tolerance range is to accommodate occasional minor variations from the median zone that are unavoidable for practical reasons.

When standard manufactured items are specified (such as fence, wire, plates, rolled shapes, pipe conduits, etc., that are identified by gauge, unit mass, section dimensions, etc.), the identification will be considered to be nominal masses or dimensions. Unless specific contract tolerances are noted, established manufacturing tolerances will be accepted.

The Government may inspect, sample, or test all work at any time before final acceptance of the project. When the Government tests work, copies of test reports are furnished to the Contractor upon request. Government tests may or may not be performed at the work site. If Contractor testing and inspection is verified by the Government, the Contractor's results may be used by the Government to evaluate work for acceptance. Do not rely on the availability of Government test results for process control.

Acceptable work conforming to the contract will be paid for at the contract unit bid price. Four methods of determining conformity and accepting work are described in Subsections 106.02 to 106.05 inclusive. The primary method of acceptance is specified in each Section of work. However, work may be rejected at any time it is found by any of the methods not to comply with the contract.

Remove, repair, or replace work that does not conform to the contract, or to prevailing industry standards where no specific contract requirements are noted. Removing, repairing, or replacing work; providing temporary traffic control; and any other related work to accomplish conformity will be at no cost to the Government.

**(a) Disputing Government test results.** If the accuracy of Government test results is disputed, promptly inform the CO. If the dispute is unresolved after reasonable steps are taken to resolve the dispute, further evaluation may be obtained by written request. Include a narrative describing the dispute and a proposed resolution protocol that addresses the following:

1. Sampling method;
2. Number of samples;

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3. Sample transport;
4. Test procedures;
5. Testing laboratories;
6. Reporting;
7. Estimated time and costs; and
8. Validation process.

If the evaluation requires additional sampling or testing be performed, mutually agree with the Government on witnessing procedures and on sampling and testing by a third-party laboratory. Use a third-party laboratory accredited by the AASHTO accreditation program. Provide proof of the laboratory's accreditation for the test procedures to be used. Do not use the same laboratory that produced the disputed Government test results or that produced the test results used as a basis for the dispute.

The CO will review the proposed resolution protocol and may modify it before final approval and execution.

The Government will use the approved resolution protocol test results to determine the validity of the disputed testing. If the Government test results are validated, the Contractor will be responsible for all costs associated with developing and performing the resolution protocol. If the Government test results are not validated, the Government will be responsible for all costs associated with developing and performing the resolution protocol. If the validity of the Government test results cannot be determined, the Contractor and Government will equally share all costs associated with developing and carrying out the resolution protocol.

**(b) Alternatives to removing and replacing non-conforming work.** As an alternative to removal and replacement, the Contractor may submit a written request to:

1. Have the work accepted at a reduced price; or
2. Be given permission to perform corrective measures to bring the work into conformity.

The request must contain supporting rationale and documentation. Include references or data justifying the proposal based on an evaluation of test results, effect on service life, value of material or work, quality, aesthetics, and other tangible engineering basis. The CO will determine disposition of the nonconforming work.

106.02\_National\_11\_9\_2016

**Delete Subsection 106.02 and replace with the following:**

#### 106.02 Visual Inspection.

Acceptance is based on visual inspection of the work for compliance with the specific contract requirements. Use prevailing industry standards in the absence of specific contract requirements or tolerances.

106.07\_National\_1\_24\_2022

**Delete Subsection 106.07.**

#### 106.07 Partial and Final Acceptance.



## 107 - Legal Relations and Responsibility to the Public

107.05\_National\_7\_18\_2017

**Delete Subsection 107.05.**

Delete Subsection 107.05.

107.08\_National\_1\_24\_2022

**Delete Subsection 107.08 and replace with the following:**

107.08 Sanitation, Health, and Safety.

Refer to specific provisions under B(T) 6.0 in the 2400-6(T) or the 2400-13(T) contracts for requirements under this subsection.

## 108 - Prosecution and Progress

108.00\_National\_11\_9\_2016

**Delete Section 108 in its entirety.**

Delete Section 108.

## 109 - Measurement and Payment

109.00\_National\_11\_9\_2016

**Delete Subsections 109.06, 109.07, 109.08, and 109.09:**

Delete Subsections 109.06, 109.07, 109.08, 109.09.

109.01\_National\_2\_22\_2019

**Delete the third paragraph and Table 109-1 of Subsection 109.01 and replace with the following:**

### 109.01 Measurement of Work.

Take measurements as described in Subsection 109.02 unless otherwise modified by the Measurement Subsection of the section controlling the work being performed. Table 109-1 indicates the accuracy required for quantities of the various pay units used in the Schedule of Items. Use this guide to determine the decimal placement in the final payment.

**Table 109-1**  
**Decimal Accuracy of Quantities for Final Payment**

Pay Item	Level of Precision
Linear Foot	1
Exception--Timber, Steel, and concrete Piles	0.1
Station	0.1
Mile	0.01
Square Foot	0.1
Square Yard	0.1
Each	1
Acre	0.01
Gallon	1
M-Gals.	0.1
Cubic Yard	1
Exception--Structure Excavation; Sheathing Materials; Bedding, Bed Course, and Backfill Materials; Gabions;	0.1
Exception--Concrete; Masonry	0.01
Pound	1
Ton	0.1
Exception--Calcium Chloride; Sodium Chloride; Hydrated Lime; Bituminous Materials; Pavements; Bed Course Materials	0.01
Hour	0.1
MFBM	0.01
Station Yard	1
Cubic Yard Mile	1
Ton Mile	1

**Add the following sentence to Subsection 109.02(b):**

109.02 Measurement Terms and Definitions.

**(b) Contract quantity.**

Contract quantities will be adjusted only when there are errors in the original design of 15% or more.

## 153 - Contractor Quality Control

153.00\_Regional\_2\_6\_2023

**Delete Section 153 in its entirety and replace with the following.**

### Section 153. — CONTRACTOR QUALITY CONTROL

#### Description

**153.01** This work consists of planning and implementing a construction quality process to ensure work conforms to the contract. This work also includes quality control inspection and documentation, recording and submitting measurement notes, and process control sampling and testing. See FAR Clause 52.246-12 Inspection of Construction.

#### Construction Requirements

##### **153.02 Qualifications.**

Submit the following for approval with the quality control plan:

**(a) Quality control manager (QCM).** Name and title of the individual to be responsible for quality control. For timber sales the Purchaser's Representative will be designated as the QCM unless otherwise identified by the Purchaser and agreed to by the Forest Service.

**(b) Testers.** Provide testers with at least one year experience in the type of sampling and testing required, and with one of the following for the type of sampling and testing performed:

- (1) NICET Level II certification in highway material or equivalent state or industry certification;
- (2) Certification by a regional certification program (such as Western Alliance for Quality Transportation Construction (WAQTC), Northeast Transportation Technician Certification Program (NETTCP), Southeast Task Force for Technician Training and Qualification (STFTTQ), or Multi Regional Training and Certification (M-TRAC)); or
- (3) At least one year employment by an AASHTO accredited laboratory performing equivalent sampling and testing.

**153.03 Quality Control Plan (QCP).** Develop a QCP addressing all contract work categories. The QCP shall include the following:

**(a) Quality control procedures.** Description of tests, measurements, or inspections to be performed to ensure work conforms to the contract. Submit written proposals for approval of alternate AASHTO or State approved test methods. Alternate methods may be allowed based on documented equivalence to the specified method.

As a minimum perform process control testing according to the Sampling, Testing, and Acceptance Requirements tables included at the end of each Section where applicable.

**(b) Records.** Describe the reporting format for all quality control records.

At least 14 days before the start of work, submit the QCP for approval. Do not perform work on a work category unless the quality control for that category is accepted. Approval does not imply that the QCP will result in contract compliance.

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Revise the QCP when contract quality requirements are not achieved and when changes occur in the contract, work progress, or personnel.

**153.04 Prosecution of Work.** Complete the following:

**(a) Preparatory phase.** When required by a pay item hold a preparatory phase meeting to discuss requirements of the work and the associated quality control process.

**(b) Start-up phase.**

**(1)** When required by a pay item hold a start-up meeting to review the planned quality control process.

**(c) Production phase.**

**(1)** Inspect, test, and report according to the QCP and evaluate the acceptability of the work produced.

**(2)** Identify and correct deficiencies.

**(3)** Request Government inspection and acceptance.

**153.05 Sampling and Testing.** Inspect commercial laboratory equipment within 45 days of project use.

Have mobile laboratory equipment inspected and calibrated after the laboratory is moved to the project and every time it is moved thereafter. Keep laboratory facilities clean and maintain equipment in proper working condition. Certify that equipment conforms to testing requirements and submit evidence of current calibrations.

Allow the CO unrestricted access to the laboratory for inspection and review. When requested by the CO, provide additional inspections and tests to demonstrate sampling and testing proficiency. Submit proficiency sample test results within 48 hours of sample receipt.

Perform quality control sampling and testing according to the QCP and the sampling, testing, and acceptance requirements table in applicable sections.

When no sampling frequencies are specified, submit the proposed sampling and testing frequencies.

**153.06 Certifications.** Obtain, review, and verify certifications for work. Submit certifications when required.

**153.07 Records and Control Charts.** Maintain complete testing and inspection records by road number and pay item number. Make them accessible to the CO.

**(a) Quality control and construction operations reports.** Prepare weekly, or otherwise agreed to interval, measurement notes showing construction progress by listing quantities of completed work for each pay item per road.

**(b) Government Inspection and Acceptance.** Requests for Government inspection and acceptance, unless otherwise agreed to, shall include measurement notes listing quantities of completed work by pay item, be signed by the Quality Control Manager, and be certified with the following statement:

*"I certify that the information contained in this record is accurate and that work documented herein complies with the contract. Exceptions to this certification are documented as a part of this record."*

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**153.08 Acceptance.** The Contractor's quality control system will be evaluated under Subsection 106.02 based on its demonstrated effectiveness to ensure work conforms to the contract.

**Measurement and Payment**

**153.09** Measure contractor quality control according to Subsection 109.02. The accepted quantities will be paid at the contract price per unit of measurement for the Section 153 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

## 155 - Schedules for Construction Contracts

155.00\_National\_11\_9\_2016

**Delete Section 155 in its entirety.**

Delete Section 155.



## 201 - Clearing and Grubbing

201.03\_Regional\_1\_24\_2022

**Delete the last sentence in the second paragraph of Subsection 201.03.**

**201.03 General.**

201.04\_Regional\_1\_24\_2022

**Delete paragraph (c) and (d) of Subsection 201.04 and replace with the following:**

**201.04 Clearing.**

1. (c) In areas outside the excavation, embankment, and slope rounding limits, cut stumps to within 6 inches or one-third of the stump diameter of the ground, whichever is higher, measured on the side adjacent to the highest ground. For timber sales, stump heights will meet the requirements of the Timber Sale contract; and
2. (d) Trim tree branches that extend over the road surface and shoulders to attain a clear height of 14 feet. If required, remove other branches to present a balanced appearance. Trim according to accepted tree surgery practices. Treat wounds with tree wound dressing.

201.06\_National\_1\_24\_2022

**Delete the first sentence of this Subsection 201.06 and replace the following:**

**201.06 Disposal.**

Dispose of merchantable timber designated for removal according to the provisions of the timber sale contract.

## 202 – Additional Clearing and Grubbing

202.04\_National\_2\_25\_2019

**Add the following paragraph to Subsection 202.04:**

202.04 Selective Clearing.

(a) Cut all brush and small trees, 6 inches in diameter or less at the point of cut, inside the roadside clearing limits and outside the roadway no higher than 12 inches above the ground level. If rocks or other obstructions are encountered, cut no higher than 6 inches above the obstruction. Limb live trees with a diameter larger than 6 inches to a height of 14 feet above the road surface

202.06\_National\_2\_25\_2019

**Add the following paragraph to Subsection 202.06:**

202.06 Special Clearing and Grubbing.

(a) **Roadway and Roadside Clearing and Grubbing.** Clear within the roadside clearing limits. Grub the roadway and horizontally 2 feet beyond each shoulder. Dispose of merchantable timber according to subsection 201.06.

## 203 - Removal of Structures and Obstructions

203.01\_Project\_6\_18\_2024

### **Delete and replace Subsection 203.01 with the following:**

#### 203.01 General.

This work consists of slash filter windrows, salvaging, removing and disposing of buildings, fences, structures, pavements, culverts, utilities, curbs, sidewalks, and other obstructions.

203.04\_National\_2\_25\_2019

### **Make the following changes to Subsection 203.04(b):**

#### 203.04 (b) General.

### **Delete the fifth paragraph of Subsection 203.04(b) and replace with the following:**

Remove structures and obstructions in the roadbed to 12 inches (300 millimeters) below subgrade elevation. Remove structures and obstructions outside the roadbed to 12 inches (300 millimeters) below finished ground or to the natural stream bottom.

### **Delete the seventh paragraph of Subsection 203.04(b) and replace with the following:**

When abandoning an existing culvert pipe, remove the upstream and downstream portion of the culvert to within 12 inches (300 millimeters) of the subgrade or embankment slope. Ensure the abandoned pipe is at least 48 inches (1200 millimeters) from a new culvert or structure. Seal the abandoned culvert ends with a tight-fitting plug of concrete at least 6 inches (150 millimeters) thick. Ensure the structure does not entrap water.

203.05\_National\_2\_25\_2019

### **Add the following to Subsection 203.05:**

#### 203.05 Disposing of Material.

**(e) Windrowing Construction Slash.** Place construction slash outside the roadway in neat, compacted windrows approximately parallel to and along the toe line of embankment slopes. Do not permit the top of the windrows to extend above subgrade. Use construction equipment to matt down all material in a windrow to form a compact and uniform pile. Construct breaks of at least 15 feet at least every 200 feet in a windrow. Do not place windrows against trees.

**(f) Scattering.** Scatter construction slash in designated areas without damaging trees. Limb all logs. Place logs and stumps away from trees, positioned so they will not roll, and are not on top of one another. Limb and scatter other construction slash to reduce slash concentrations. When scattering for erosion control, place construction slash as flat as practicable on the completed slope.

**(g) Chipping.** Use an approved chipping machine to chip slash longer than 3 feet. Deposit chips on embankment slopes or outside the roadway to a loose depth less than 6 inches. Minor amounts of chips or ground woody material may be permitted within the roadway if they are thoroughly mixed with soil and do not form a layer.

**(h) Debris Mat.** Use tree limbs, tops, cull logs, split stumps, wood chunks, and other debris to form a mat upon which construction equipment is operated. Place stumps upside down and blend stumps into the mat.

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**(i) Decking.** Remove brush from designated log deck areas. Limb and top logs.

Logs not meeting the Utilization Standards described in Subsection 201.04(c) shall be cut to lengths less than **10** feet and decked in designated log deck location.

Merchantable timber not associated with an existing timber sale shall be cut to length meeting the Utilization Standards described in Subsection 201.04(c).

Deck logs so that logs are piled parallel to one another; can be removed by standard log loading equipment; will not damage standing trees; will not interfere with drainage and will not roll. Keep logs in log decks free of brush and soil.

**(j) Removal to designated locations.** Remove construction slash to designated locations.

**(k) Piling.** Pile construction slash in designated areas. Place and construct piles so that if the piles are burned, the burning will not damage remaining trees. Keep piles free of dirt from stumps.

## 204 - Excavation and Embankment

204.00\_National\_2\_25\_2019

**Delete Section 204 in its entirety and replace with the following.**

### Section 204. — EXCAVATION AND EMBANKMENT

#### Description

**204.01** This work consists of excavating material and constructing embankments. This work also includes furnishing, hauling, stockpiling, placing, disposing, sloping, shaping, compacting, and finishing earthen and rocky material.

#### **204.02 Definitions.**

**(a) Excavation.** Excavation consists of the following:

**(1) Roadway excavation.** Material excavated from within the right-of-way or easement areas, except subexcavation covered in Subsection 204.02(a)(2) and structure excavation covered in Sections 208 and 209. Roadway excavation includes all material encountered regardless of its nature or characteristics.

**(2) Subexcavation.** Material excavated from below subgrade elevation in cut sections or from below the original ground-line in embankment sections. Subexcavation excludes the work required by Subsection 204.05 or 204.06.

**(3) Borrow excavation.** Material used for embankment construction that is obtained from outside the roadway prism. Borrow excavation includes unclassified borrow, and topping.

**(b) Embankment construction.** Embankment construction consists of placing and compacting roadway or borrow excavation. This work includes:

- (1)** Preparing foundation for embankment;
- (2)** Constructing roadway embankments;
- (3)** Benching for side-hill embankments;
- (4)** Constructing dikes, ramps, mounds, and berms; and
- (5)** Backfilling subexcavated areas, holes, pits, and other depressions.

**(c) Conserved topsoil.** Excavated material conserved from the roadway excavation and embankment foundation areas that is suitable for growth of grass, cover crops, or native vegetation.

**(d) Waste.** Excess and unsuitable roadway excavation and subexcavation that cannot be used.

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**Material****204.03** Conform to the following Subsections:

Topping	704.05
Unclassified borrow	704.06
Water	725.01(c)

**Construction Requirements**

**204.04 Preparation for Roadway Excavation and Embankment Construction.** Clear the area of vegetation and obstructions according to Sections 201 and 203.

Road pioneering, slash disposal, and grubbing of stumps may proceed concurrently with excavation and embankment. Maintain drainage during pioneering operations.

**204.05 Conserved Topsoil.** When designated, conserve topsoil from roadway excavation and embankment foundation areas. Stockpile conserved topsoil in low windrows immediately beyond the rounding limits of cut and embankment slopes or in other approved locations. Separate conserved topsoil from other excavated material. When designated, place conserved topsoil on completed slopes according to Section 624.

**204.06 Roadway Excavation.** Excavate as follows:

**(a) Rock cuts.** Blast rock according to Section 205. Excavate rock cuts to 6 inches (150 millimeters) below subgrade within the roadbed limits. Backfill to subgrade with topping or other suitable material. Compact the material according to Subsection 204.11.

**(b) Earth cuts.** Scarify earth cuts to 6 inches (150 millimeters) below subgrade within the roadbed limits. Compact the scarified material according to Subsection 204.11.

**(c) Pioneer Roads.** Conduct excavation and placement operations so material to be treated under Section 201 will not be incorporated into the roadway unless specified in the slash treatment method. Maintain drainage during pioneering operations.

Remove snow and ice in advance of the work and deposit beyond the roadway limits in a manner that will not waste material or generate sediment. Do not incorporate snow and ice into embankments. Place snow or ice in a manner to prevent resource damage.

**(d) Drainage Feature.** Drainage feature includes construction of all ditches, minor channel changes, drainage dips, catch basins, surface water deflectors, and other minor drainage structures. Compact the material according to Subsection 204.11. Excavate on a uniform grade between control points.

Do not disturb material and vegetation outside the construction limits. Retrieve material deposited outside the construction limits. Dispose of unsuitable or excess excavation material according to Subsection 204.14. Replace shortage of suitable material caused by premature disposal of roadway excavation.

Shape to drain and compact the work area to a uniform cross-section at the end of each day's operations.

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**204.07 Subexcavation.** Excavate material to the required limits. Dispose of unsuitable material according to Subsection 204.14. Take cross-sections according to Section 152. Backfill subexcavated area with suitable material in horizontal layers not exceeding 12 inches (300 millimeters) in compacted thickness and compact according to Subsection 204.11. Prevent unsuitable material from mixing with suitable backfill material.

**204.08 Borrow Excavation.** Use suitable roadway excavation in embankment construction. Do not use borrow excavation when it results in excess roadway excavation. Deduct excess borrow excavation from the total borrow excavation quantity.

Obtain borrow source approval according to Subsection 105.02. Develop and restore borrow sources according to Subsections 105.03 and 105.06. Do not excavate beyond the established limits. When applicable, shape the borrow source to permit accurate measurements when excavation is complete.

**204.09 Preparing Foundation for Embankment Construction.** Prepare foundation for embankment construction as follows:

**(a) Embankment over natural ground.** Remove topsoil and break up the ground surface to a minimum depth of 6 inches (150 millimeters) by plowing or scarifying. Compact the ground surface according to Subsection 204.11.

**(b) Embankments over an existing asphalt, concrete, or gravel road surface.** Scarify gravel roads to a minimum depth of 6 inches (150 millimeters). Scarify or pulverize asphalt and concrete roads to 6 inches (150 millimeters) below the pavement. Reduce particles to a maximum size of 6 inches (150 millimeters) and produce a uniform material. Compact the surface according to Subsection 204.11.

**(c) Embankment across ground not capable of supporting equipment.** Dump successive loads of embankment material in a uniformly distributed layer to construct the lower portion of the embankment. Limit the layer thickness to the minimum depth necessary to support the equipment.

**(d) Embankment on an existing slope steeper than 1V:3H.** Cut horizontal steps in the existing slope to a sufficient width to accommodate placement and compaction operations and equipment. Step the slope as the embankment is placed and compacted in layers. Begin each step at the intersection of the original ground and the vertical cut of the previous step.

**204.10 Embankment Construction.** Incorporate only suitable roadway excavation material into the embankment. When the supply of suitable roadway excavation is exhausted, furnish unclassified borrow to complete the embankment. Obtain written approval before beginning construction of embankments over 6 feet (2 meters) high at subgrade centerline. Construct embankments as follows:

**(a) General.** At the end of each day's operations, shape to drain and compact the embankment surface to a uniform cross-section. Eliminate ruts and low spots that could hold water.

During all stages of construction, route and distribute hauling and leveling equipment over the width and length of each layer of material.

Compact embankment side slopes with a tamping foot roller, by walking with a dozer, or by over-building the fill and then removing excess material to the final slope line. For slopes 1V:1¾H or steeper, compact the slopes as embankment construction progresses.

**(b) Embankment within the roadway prism.** Place embankment material in horizontal layers not exceeding 12 inches (300 millimeters) in compacted thickness. Incorporate oversize boulders or rock fragments into the

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12-inch (300-millimeter) layers by reducing them in size or placing them individually as required below. Compact each layer according to Subsection 204.11 before placing the next layer.

Material composed predominately of boulders or rock fragments too large for 12-inch (300-millimeter) layers may be placed in layers up to 24 inches (600 millimeters) thick. Incorporate oversize boulders or rock fragments into the 24-inch (600-millimeter) layer by reducing them in size or placing individual rock fragments and boulders greater than 24 inches (600 millimeters) in diameter as follows:

- (1) Reduce rock to less than 48 inches (1200 millimeters) in the largest dimension;
- (2) Distribute rock within the embankment to prevent nesting;
- (3) Place layers of embankment material around each rock to a depth not greater than that permitted above. Fill voids between rocks; and
- (4) Compact each layer according to Subsection 204.11(a) before placing the next layer.

**(c) Embankment outside of roadway prism.** When placing embankment outside the staked roadway prism, place material in horizontal layers not exceeding 24 inches (600 millimeters) in compacted thickness. Compact each layer according to Subsection 204.11.

**204.11 Compaction.** Compact the embankment using one of the following methods as specified.

**(a) Placement Method 1.** Use AASHTO T 27 to determine the quantity of material retained on a No. 4 (4.75-millimeter) sieve. Compact as follows:

**(1) More than 80 percent retained on a No. 4 (4.75-millimeter) sieve.** Adjust the moisture content to a level suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Compact each layer of material full width with one of the following and until there is no visible evidence of further consolidation:

- (a) Four roller passes of a vibratory roller having a minimum dynamic force of 40,000 pounds (180 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute;
- (b) Eight roller passes of a 20-ton (20-metric ton) compression-type roller; or
- (c) Eight roller passes of a vibratory roller having a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute.

Increase the compactive effort for layers deeper than 12 inches (300 millimeters) as follows:

- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 204.11(a)(1)(a), by four passes; or
- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 204.11(a)(1)(b) and (c), by eight passes.

**(2) 50 to 80 percent retained on a No. 4 (4.75-millimeter) sieve.** Classify the material according to AASHTO M 145. Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content. Use AASHTO T 99 to determine the optimum moisture content of the



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portion of the material passing a No. 4 (4.75-millimeter) sieve. Multiply this number by the percentage of material passing a No. 4 (4.75-millimeter) sieve and add 2 percent to determine the optimum moisture content of the material.

Use nonvibratory rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Compact each layer of material full width according to Subsection 204.11(a)(1).

**(3) Less than 50 percent retained on a No. 4 (4.75-millimeter) sieve.** Classify the material according to AASHTO M 145. For material classified A-1 or A-2-4, determine the maximum density according to AASHTO T 99, Method C.

Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content.

Use compression-type or vibratory rollers. Compact each layer of material full width to at least 95 percent of the maximum density. Determine the in-place density and moisture content according to AASHTO T 310 or other approved test procedures. When required, use AASHTO T 224 to correct for coarse particles.

**(b) Placement Method 2.** Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate roller compaction equipment over the full width of each layer until there is no visible evidence of further consolidation or, if when a sheepsfoot roller is used, the roller “walks out” of the layer. Make at least three complete passes. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Ensure rollers meet the following requirements:

- (1)** Steel wheeled rollers, other than vibratory, capable of exerting a force of not less than 250 pounds per inch (4.5 kilogram/millimeter) of width of the compression roll or rolls.
- (2)** Vibratory steel wheeled rollers equipped with amplitude and frequency controls with a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration, specifically designed to compact the material on which it is used.
- (3)** Pneumatic-tired rollers with smooth tread tires of equal size that will provide a uniform compacting pressure for the full width of the roller and capable of exerting a ground pressure of at least 80 psi (550 Kilopascals).
- (4)** Sheepsfoot, tamping, or grid rollers capable of exerting a force of 250 pounds per inch (4.5 kilogram/millimeter) of width of roller drum.

**(c) Placement Method 3.** Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer until there is no visible evidence of further consolidation. Make at least three complete passes.

**(d) Placement Method 4.** Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer.

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**(e) Placement Method 5.** Adjust the moisture content of the material to a moisture content suitable for compaction. Compact the complete surface with a bucket of an excavator larger than 39,000 pounds (18 metric ton) Gross Vehicle Weight using a minimum of three blows. Overlap compaction by ½ width of bucket.

**(f) Placement Method 6.** Adjust the moisture content of the material to a moisture content suitable for compaction. Compact using an approved mechanical tamper for a minimum of three complete passes.

When compacting with rollers or hauling and spreading equipment is not practical, use approved mechanical tampers for a minimum of three complete passes.

**204.12 Drainage Features.** Slope, grade, and shape all drainage features. Remove projecting roots, stumps, rock, or similar matter. Maintain all drainage features in an open condition and without sticks, and other debris.

Form furrow ditches by plowing or using other acceptable methods to produce a continuous furrow. Place excavated material on the downhill side so the bottom of the ditch is approximately 18 inches (450 millimeters) below the crest of the loose material. Clean the ditch using a hand shovel or other suitable method. Shape to provide drainage without overflow.

**204.13 Sloping, Shaping, and Finishing.** Complete subgrade, slopes, drainage features, culverts, riprap, and other underground minor structures before placing aggregate courses. Slope, shape, and finish to the designated tolerance class as defined in Table 204-2 as follows:

**(a) Sloping.** Leave earth slopes with uniform roughened surfaces, except as described in Subsection 204.13(b), with no noticeable break as viewed from the road. Except in solid rock, round tops and bottoms of slopes including the slopes of drainage ditches. Round material overlaying solid rock to the extent practical. Scale rock slopes. Slope rounding is not required on tolerance class D through M roads.

If a slide or slipout occurs on a cut or embankment slope, remove or replace the material and repair or restore damage to the work. Bench or key the slope to stabilize the slide. Reshape the cut or embankment slope to an acceptable condition.

**(b) Stepped slopes.** Where required, construct steps on slopes of 1½V:1H to 1V:2H. Construct the steps approximately 18 inches (450 millimeters) high. Blend the steps into natural ground at the end of the cut. If the slope contains non-rippable rock outcrops, blend steps into the rock. Remove loose material found in transitional area. Except for removing large rocks that may fall, scaling stepped slopes is not required.

**(c) Shaping.** Shape the subgrade to a smooth surface and to the cross-section required. Shape slopes to gradually transition into slope adjustments without noticeable breaks. At the ends of cuts and at intersections of cuts and embankments, adjust slopes in the horizontal and vertical planes to blend into each other or into the natural ground.

**(d) Finishing.** Ensure that the subgrade is visibly moist during shaping and dressing; smooth and uniform, and shaped to conform to the typical sections. Remove material larger than 6 inches (150 millimeters) from the top 6 inches (150 millimeters) of the roadbed. Remove unsuitable material from the roadbed, and replace it with suitable material. Scarify to 6 inches (150 millimeters) below the bottom of low sections, holes, cracks, or depressions and bring back to grade with suitable material.

Maintain proper ditch drainage.

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**204.14 Disposal of Unsuitable or Excess Material.** Dispose of unsuitable or excess material at designated sites or according to Subsection 203.05(a)

When there is a pay item for waste, shape and compact the waste material in its final location. Do not mix clearing or other material not subject to payment with the waste material.

**204.15 Acceptance.** See Table 204-1 for sampling, testing, and acceptance requirements.

Material for embankment and conserved topsoil will be evaluated under Subsections 106.02 and 106.04.

Excavation and embankment construction will be evaluated under Subsections 106.02 and 106.04.

Subexcavation will be evaluated under Subsections 106.02 and 106.04.

### Measurement

**204.16** Measure the Section 204 pay items listed in the bid schedule according to Subsection 109.02 and the following as applicable:

**(a) Roadway excavation.** Measure roadway excavation in its original position as follows:

**(1)** Include the following volumes in roadway excavation:

- (a) Roadway prism excavation;
- (b) Rock material excavated and removed from below subgrade in cut sections;
- (c) Unsuitable material below subgrade and unsuitable material beneath embankment areas when a pay item for subexcavation is not listed in the bid schedule;
- (d) Ditches, except furrow ditches measured under a separate pay item;
- (e) Conserved topsoil;
- (f) Borrow material used in the work when a pay item for borrow is not listed in the bid schedule;
- (g) Loose scattered rocks removed and placed as required within the roadway;
- (h) Conserved material taken from pre-existing stockpiles and used in Section 204 work, except topsoil measured under 624; and
- (i) Slide and slipout material not attributable to the Contractor's method of operation.

**(2)** Do not include the following in roadway excavation:

- (a) Overburden and other spoil material from borrow sources;
- (b) Overbreakage from the backslope in rock excavation;
- (c) Water or other liquid material;
- (d) Material used for purposes other than required;
- (e) Roadbed material scarified in place and not removed;
- (f) Material excavated when stepping cut slopes;

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- (g) Material excavated when rounding cut slopes;
- (h) Preparing foundations for embankment construction;
- (i) Material excavated when benching for embankments;
- (j) Slide or slipout material attributable to the Contractor's method of operation;
- (k) Conserved material taken from stockpiles constructed at the option of the Contractor;
- (l) Material excavated outside the established slope limits; and
- (m) Road pioneering for the convenience of the Contractor.

**(3)** When both roadway excavation and embankment construction pay items are listed in the bid schedule, measure roadway excavation only for the following:

- (a) Unsuitable material below subgrade in cuts and unsuitable material beneath embankment areas when a pay item for subexcavation is not listed in the bid schedule;
- (b) Slide and slipout material not attributable to the Contractor's method of operations; and
- (c) Drainage ditches, channel changes, and diversion ditches.

**(b) Unclassified borrow, and topping.** When measuring by the cubic yard (cubic meter) measure in its original position. If borrow excavation is measured by the cubic yard (cubic meter) in-place, take initial cross-sections of the ground surface after stripping overburden. Upon completion of excavation and after the borrow source waste material is returned to the source, retake cross-sections before replacing the overburden. Do not measure borrow excavation until suitable roadway excavation is depleted.

**(c) Embankment construction.** Measure embankment construction in its final position. Do not make deductions from the embankment construction quantity for the volume of minor structures.

**(1)** Include the following volumes in embankment construction:

- (a) Roadway embankments;
- (b) Material used to backfill subexcavated areas, holes, pits, and other depressions;
- (c) Material used to restore obliterated roadbeds to original contours; and
- (d) Material used for dikes, ramps, mounds, and berms.

**(2)** Do not include the following in embankment construction:

- (a) Preparing foundations for embankment construction;
- (b) Adjustments for subsidence or settlement of the embankment or of the foundation on which the embankment is placed; and
- (c) Material used to round fill slopes.

**(d) Rounding cut slopes.** If a pay item for slope rounding is included in the bid schedule measure rounding cut slopes horizontally along the centerline of the roadway. If a pay item is not included for slope rounding is not included in the bid schedule payment will be considered indirect to roadway excavation.

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**(e) Waste.** Measure waste by the cubic yard (cubic meter) in its final position. Take initial cross-sections of the ground surface after stripping over-burden. Upon completion of the waste placement, retake cross-sections before replacing overburden.

**(f) Slope scaling.** Measure slope scaling by the cubic yard (cubic meter) in the hauling vehicle.

**(g) Subexcavation.** Measure subexcavation by the cubic yard (cubic meter) in its original position.

**(h) Drainage features.** Measurement includes all excavation, embankment, shaping, and grading necessary for a completed drainage feature.

**Payment**

**204.17** The accepted quantities will be paid at the contract price per unit of measurement for the Section 204 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

**Table 204-1  
Sampling, Testing, and Acceptance Requirements**

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
<b>Source</b>								
Topping (704.05)	Measured and tested for conformance (106.04 & 105)	Classification <sup>(1)</sup>	—	AASHTO M 145	1 per soil type and source of material	Processed material	Yes	Before using in work
Unclassified borrow (704.06)	"	"	—	"	"	"	"	"
<b>Production</b>								
Topping (704.05) and (204.11(a))	Measured and tested for conformance (106.04)	Moisture-density	—	T 99, Method C <sup>(2)</sup>	1 per soil type, but not less than 1 per each 13,000 yd <sup>3</sup> (10,000 m <sup>3</sup> )	Processed material	Yes	Before using in work
		Density	—	AASHTO T 310 or other approved procedures	1 per 3500 yd <sup>2</sup> (3000 m <sup>2</sup> ), but not less than 3 per layer	In-place	No	Before placement of next layer
Unclassified borrow (704.06) and (204.11(a))	"	Moisture-density	—	T 99, Method C <sup>(2)</sup>	1 per soil type, but not less than 1 per each 13,000 yd <sup>3</sup> (10,000 m <sup>3</sup> )	Processed material	Yes	Before using in work
		Density	—	AASHTO T 310 or other approved procedures	1 per 3500 yd <sup>2</sup> (3000 m <sup>2</sup> ), but not less than 3 per layer	In-place	No	Before placement of next layer

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Production (continued)								
Earth embankment (204.11(a))	Measured and tested for conformance (106.04)	Classification	–	AASHTO M 145	1 per soil type	Source of material	Yes	Before using in work
		Moisture-density	–	T 99, Method C <sup>(2)</sup>	1 per soil type, but not less than 1 per each 13,000 yd <sup>3</sup> (10,000 m <sup>3</sup> )	"	"	"
		Density	–	AASHTO T 310 or other approved procedures	1 per 3500 yd <sup>2</sup> (3000 m <sup>2</sup> ), but not less than 3 per layer	In-place	No	Before placement of next layer
Top of subgrade (204.11(a))	"	Density	–	AASHTO T 310 or other approved procedures	1 per 2500 yd <sup>2</sup> (2000 m <sup>2</sup> ), but not less than 3 per layer	In-place	No	Before placement of next layer
Finished Product								
Roadbed (204.13)	Measured and tested for conformance (106.04)	Final line & grade	–	Field measured	Determined by the CO	Determined by the CO	No	Before placement of next layer

(1) Not required when using Government-provided source.

(2) Minimum 5 points per proctor.

Table 204-2 Construction Tolerances													
Location Description	Tolerance Class (a)												
	A	B	C	D	E	F	G	H	I	J	K	L	M
Roadbed width (ft)	+0.5	+0.5	+1.0	+1.0	+1.0	+1.0	+1.5	+1.0	+2.0	+2.0	+2.0	+2.0	+2.0
Subgrade elevation (ft)	+0.1	+0.2	+0.2	+0.5	+0.5	+1.0	+1.0	+1.5	+2.0	+3.0	+2.0	+3.0	(c)
Centerline alignment (ft)	+0.2	+0.2	+0.5	+0.5	+1.0	+1.0	+1.5	+1.5	+2.0	+3.0	+3.0	+5.0	(c)
Slopes, excavation, and embankment (% slope <sup>(b)</sup> )	+3	+5	+5	+5	+5	+5	+10	+10	+10	+10	+20	+20	+20
(a) Maximum allowable deviation from construction stakes and drawings. (b) Maximum allowable deviation from staked slope measured from slope stakes or hinge points. (c) Unless otherwise shown the centerline alignment and subgrade elevation, as built, have no horizontal curves with a radius of less than 80 feet, and no vertical curves with a curve length of less than 80 feet when the algebraic difference in the grade change is less than 10 percent, or a curve length of less than 100 feet when the algebraic difference of the grade change is greater than or equal to 10 percent. The centerline grade is not to exceed 20 percent in 100 feet of length.													



## 205 - Rock Blasting

205.00\_National\_1\_24\_2022

**Add the following to Subsection 205.03:**

### 205.03 Regulations

**(e) Forest Service.** For projects in National Forest Service lands, comply with Forest Service Manual (FSM) 6745, *Explosives and Blasting Materials*.

**Add the following to Subsection 205.06:**

### 205.06 Preblast condition survey and vibration monitoring and control.

Limit blasting induced vibrations in saturated soils or on steep slopes as designated or as directed by the CO.

Notify the owners of nearby utilities at least 24 hours before blasting.

**Add the following to Subsection 205.07:**

### 205.07 Test Blasting.

Test blast at all new sources, when rock type changes, and when blast layout changes due to slope or other changes.

**Add the following to the bulleted list in the eighth paragraph of Subsection 205.08:**

### 205.08 Blasting.

- Precipitation exceeds 1 inch in any 24-hour period.
- Precipitation exceeds 3 inches in any 96-hour period.
- Precipitation exceeds 4 inches in any 144-hour period.
- A landslide occurs within 300 feet of a blast site under any precipitation conditions.

## 209 - Structure Excavation and Backfill

209.01\_Regional\_11\_17\_2022

**Delete Section 209 in its entirety and replace with the following.**

### Section 209. — STRUCTURE EXCAVATION AND BACKFILL

#### Description

**209.01** This work consists of excavating material for the construction of structures, except those specifically designated under Section 208. This work also includes preserving channels, shoring and bracing, sealing foundations, dewatering, preparing foundations, bedding, and backfilling.

#### Material

**209.02** Conform to the following Sections and Subsections:

Backfill material	704.03
Bedding material	704.02
Foundation fill	704.01
Lean concrete backfill	614
Structural concrete, Class S (Seal)	552
Unclassified borrow	704.06

#### Construction Requirements

**209.03 General.** Clear the area of vegetation and obstructions according to Sections 201 and 203.

Excavate trenches or foundation pits according to Subsection 208.03. Excavate to foundation grade without disturbing the trench or foundation surface. Foundation grade is the elevation at the bottom of the bedding for installing the structure.

**209.04 Channel Preservation.** Preserve channels according to Subsection 208.04, except excavate inside separations such as dikes or sandbags.

**209.05 Foundation Seal.** When foundation seals are necessary, construct a foundation seal according to Subsection 208.06.

**209.06 Dewatering.** When dewatering is necessary, dewater according to Subsection 208.07.

**209.07 Foundation Preparation.** Excavate unsuitable material when encountered at foundation grade as directed by the CO.

Where a footing is required to be keyed into undisturbed material, prepare foundation and construct footing according to Subsection 208.08(c).

Backfill and compact with foundation fill according to Subsection 208.08(d).

**209.08 Bedding.** Place bedding as follows:

**(a) For box culverts and structures other than pipe culverts.** Construct bedding when specified. Place and grade bedding material in compacted layers not exceeding 6 inches (150 millimeters) in depth. Compact each layer according to Subsection 209.10.

**(b) For pipe culverts.** Level the foundation. Place uncompacted bedding material over the foundation in a layer of uniform thickness. Lay a 4-inch (100-millimeter) thickness of bedding for pipes with diameters of 12 to 54 inches (300 to 1350 millimeters). Lay a 6-inch (150-millimeter) thickness of bedding for pipe with diameters larger than 54 inches (1350 millimeters). Recess the bedding to receive the joints for pipes with belled joints. Place the culvert on the uncompacted bedding layer and backfill according to Subsection 209.09(b).

**(c) For pipe culverts less than 96 inches in diameter.** Unless otherwise shown on the plans provide material for bedding consisting of selected 3 inch minus mineral soil that is readily compactible and free of frozen lumps, chunks of highly plastic clay (with a PI greater than 10), or other objectionable material. Bed the pipe according to subsection 209.08(b). Material for bedding shall be evaluated according to Subsection 106.02.

**209.09 Backfill.** Backfill as follows:

**(a) General.** Place backfill layers evenly on all sides of the structure. Extend each layer to the limits of the excavation or natural ground.

Place backfill material in compacted layers not exceeding 6 inches (150 millimeters) in depth.

Do not place backfill material against concrete until 80 percent of the design strength is achieved.

Compact each layer according to Subsection 209.10.

Backfill without damaging or displacing the culvert or structural plate structure. Replace any pipe that is distorted by more than 5 percent of nominal dimensions, or that is ruptured or broken.

**(b) Pipe culverts.** Backfill according to one of the following:

**(1) Pipe culverts.** Place and compact backfill material in evenly balanced layers on each side of the pipe to a height of 24" inches (300 millimeters) above the top of the pipe culvert. Complete backfilling to the top of the trench. Place and compact backfill material in the trench in layers not exceeding 6 inches (150 millimeters) in depth according to Subsection 209.10.

**(2) Pipe culverts with lean concrete backfill.** Place and anchor pipe to prevent floating and movement. Backfill using lean concrete according to Section 614.

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**(3) Pipe culverts less than 96 inches in diameter.** Unless otherwise shown on the plans provide material for backfill consisting of selected 3 inch minus mineral soil that is readily compactible and free of frozen lumps, chunks of highly plastic clay (with a PI greater than 10), or other objectionable material. Backfill according to subsection 209.09(b)(1). Material for backfill shall be evaluated according to Subsection 106.02.

Do not place or backfill pipe that meets any of the following conditions until the excavation and foundation have been approved in writing by the CO:

- Embankment height greater than 10 feet at subgrade centerline.
- Installation in a protected stream course.
- Round pipe with a diameter of 48 inches or greater.
- Pipe arches with a span of 50 inches or greater.
- Any box culvert or structure other than pipe culverts.

**(c) Structural plate structures.** Place and compact backfill material to a height of 12 inches (300 millimeters) above the top of the structural plate structure. When applicable, complete backfilling and compacting according to Subsection 204.10.

**(d) Repair existing pavement areas.** See Subsection 418.04.

**209.10 Compacting.** Compact the embankment using one of the following methods as specified.

**(a) Compaction Method 1.** Use AASHTO T 27 to determine the quantity of material retained on a No. 4 (4.75-millimeter) sieve. Compact as follows:

**(1) More than 80 percent retained on a No. 4 (4.75-millimeter) sieve.** Adjust the moisture content to a level suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Compact each layer of material full width with one of the following and until there is no visible evidence of further consolidation:

**(a)** Four roller passes of a vibratory roller having a minimum dynamic force of 40,000 pounds (180 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute;

**(b)** Eight roller passes of a 20-ton (20-metric ton) compression-type roller; or

**(c)** Eight roller passes of a vibratory roller having a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute.

Increase the compactive effort for layers deeper than 12 inches (300 millimeters) as follows:

- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 209.10(a)(1)(a), by four passes; or
- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 209.10(a)(1)(b) and (c), by eight passes.

**(2) 50 to 80 percent retained on a No. 4 (4.75-millimeter) sieve.** Classify the material according to AASHTO M 145. Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content. Use AASHTO T 99 to determine the optimum moisture content of the portion of the material passing a No. 4 (4.75-millimeter) sieve. Multiply this number by the percentage of material passing a No. 4 (4.75-millimeter) sieve, and add 2 percent to determine the optimum moisture content of the material.

Use nonvibratory rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Compact each layer of material full width according to Subsection 209.10(a)(1).

**(3) Less than 50 percent retained on a No. 4 (4.75-millimeter) sieve.** Classify the material according to AASHTO M 145. For material classified A-1 or A-2-4, determine the maximum density according to AASHTO T 99, Method C.

Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content.

Use compression-type or vibratory rollers. Compact each layer of material full width to at least 95 percent of the maximum density. Determine the in-place density and moisture content according to AASHTO T 310 or other approved test procedures. When required, use AASHTO T 224 to correct for coarse particles.

**(b) Compaction Method 2.** Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate roller compaction equipment over the full width of each layer until there is no visible evidence of further consolidation or, if when a sheepsfoot roller is used, the roller “walks out” of the layer. Make at least three complete passes. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Ensure rollers meet the following requirements:

**(1)** Steel wheeled rollers, other than vibratory, capable of exerting a force of not less than 250 pounds per inch (4.5 kilogram/millimeter) of width of the compression roll or rolls.

**(2)** Vibratory steel wheeled rollers equipped with amplitude and frequency controls with a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration, specifically designed to compact the material on which it is used.

**(3)** Pneumatic-tired rollers with smooth tread tires of equal size that will provide a uniform compacting pressure for the full width of the roller and capable of exerting a ground pressure of at least 80 psi (550 Kilopascals).

**(4)** Sheepsfoot, tamping, or grid rollers capable of exerting a force of 250 pounds per inch (4.5 kilogram/millimeter) of width of roller drum.

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**(c) Compaction Method 3.** Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer until there is no visible evidence of further consolidation. Make at least three complete passes.

**(d) Compaction Method 4.** Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer.

**(e) Compaction Method 5.** Adjust the moisture content of the material to a moisture content suitable for compaction. Compact the complete surface with a bucket of an excavator larger than 39,000 pounds (18 metric ton) Gross Vehicle Weight using a minimum of three blows. Overlap compaction by  $\frac{1}{2}$  width of bucket.

**(f) Compaction Method 6.** Adjust the moisture content of the material to a moisture content suitable for compaction. Compact using an approved mechanical tamper for a minimum of three complete passes.

When compacting with rollers or hauling and spreading equipment is not practical, use approved mechanical tampers for a minimum of three complete passes.

**209.11 Acceptance.** See Table 209-1 for sampling, testing, and acceptance requirements.

Material for backfill, bedding, and foundation fill will be evaluated under Subsections 106.02 and 106.04, except lean concrete for bedding or backfill will be evaluated according to Section 614.

Structural excavation and backfill work will be evaluated under Subsections 106.02 and 106.04.

Shoring and bracing will be evaluated under Subsections 106.02 and 106.04.

Clearing and removal of obstructions will be evaluated under Sections 201 and 203.

Seal concrete will be evaluated under Section 552.

### **Measurement and Payment**

**209.12** Do not measure structure excavation and backfill for payment. See Subsection 109.05.

Measure foundation fill under Section 208.

Do not measure excavation and concrete for cofferdam seals for payment.

**Table 209-1**  
**Sampling, Testing, and Acceptance Requirement**

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
<b>Source</b>								
Backfill material <sup>(1)</sup> (704.03)	Measured and tested for conformance (106.04 & 105)	Classification	–	AASHTO M 145	1 per soil type	Source of material	Yes	Before using in work
		Gradation	–	AASHTO T 27 & T 11	"	"	"	"
Bedding material <sup>(1)</sup> (704.02)	"	"	–	"	"	"	"	"
Foundation fill <sup>(1)</sup> (704.01)		Classification	–	AASHTO M 145	"	"	"	"
		Gradation	–	AASHTO T 27 & T 11	"	"	"	"
Unclassified borrow <sup>(1)</sup> (704.06)	"	Classification	–	AASHTO M 145	"	"	"	"

**Table 209-1 (continued)**  
**Sampling, Testing, and Acceptance Requirements**

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
<b>Production</b>								
Backfill material (704.03)	Measured and tested for conformance (106.04)	Moisture-density	—	AASHTOT 99, Method C <sup>(2)</sup>	1 per soil type	Source of material	Yes	Before using in work
		Density	—	AASHTO T 310 or other approved procedures	2 per lift	In-place	No	Before placing next layer
Bedding material (704.02)	"	Moisture-density	—	AASHTOT 99, Method C <sup>(2)</sup>	1 per soil type	Source of material	Yes	Before using in work
		Density	—	AASHTO T 310 or other approved procedures	2 per lift	In-place	No	Before placing next layer
Foundation fill (704.01)	"	Moisture-density	—	AASHTO T 99, Method C <sup>(2)</sup>	1 per soil type	Source of material	Yes	Before using in work
		Density	—	AASHTO T 310 or other approved procedures	2 per lift	In-place	No	Before placing next layer
Unclassified borrow (704.06)	"	Moisture-density	—	AASHTOT 99, Method C <sup>(2)</sup>	1 per soil type	Source of material	Yes	Before using in work
		Density	—	AASHTO T 310 or other approved procedures	2 per lift	In-place	No	Before placing next layer

(1) Not required when using Government-provided source. (2) Minimum of 5 points per proctor.



## 212 – Linear Grading

212.03\_Regional\_1\_24\_2022

**Delete the first and second paragraph of Subsection 212.03 and replace with the following:**

### 212.03 Roadway Excavation and Embankment.

Construct the roadbeds according to the requirements of Section 204, except as modified herein.

Adjust the moisture content of embankment material to a moisture content suitable for compaction.

Place embankment material in 12-inch layers and compact each layer according to Subsection 204.11.

Where compacting with rollers is not practical, use approved mechanical or vibratory compaction equipment.

212.04\_Project\_6\_23\_2024

**Delete Subsection 212.04(a) and replace with:**

### 212.04 Grading Tolerance

(a) Alignment (centerline). Alignment may be shifted a maximum of 10 feet (3 meters) left or right of the planned centerline. Curve radii may be reduced by up to 50 percent. Do not construct curves with radii less than <50> feet. Compound curves are permitted.

## 301 - Untreated Aggregate Courses

301.00\_Regional\_10\_26\_2022

**Delete Section 301 in its entirety and replace with the following.**

### Section 301. — UNTREATED AGGREGATE COURSES

#### Description

**301.01** This work consists of constructing one or more courses of aggregate on a prepared surface.

Subbase and base aggregate grading is designated according to Table 703-2. Surface course aggregate grading is designated according to Table 703-3.

#### Material

**301.02** Conform to the following Subsections:

Subbase, base, and surface course aggregate	703.05
Water	725.01(c)

#### Construction Requirements

**301.03 General.** Prepare the surface on which the aggregate course is placed according to Section 204 or 303 as applicable.

Written approval of the roadbed is required before placing aggregate.

For pit run or grid-rolled material, furnish material smaller than the maximum size, no gradation will be required otherwise. After processing on the road, remove all oversize material from the road and dispose as directed by the CO.

Provide additives or binder, if required, at the proportions specified.

When provided and specified on plans, develop and use Government furnished sources according to Section 105.

If the aggregate is produced and stockpiled before placement, handle and stockpile according to Section 314.

**301.04 Mixing and Spreading.** Obtain moisture content in accordance with the compaction method specified. If moisture content is not specified by the compaction method adjust the moisture content to a level suitable for compaction. Mix the aggregate and adjust the moisture content to obtain a uniform mixture. Spread and shape the mixture on the prepared surface in a uniform layer.

Do not place the mixture in a layer exceeding 6 inches (150 millimeters) in compacted thickness. When more than one layer is necessary, compact each layer according to Subsection 301.05 before placing the next layer. Route hauling equipment uniformly over the full width of the surface to minimize rutting or uneven compaction.

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**301.05 Compacting.**

Compact each layer full width. Roll from the sides to the center, parallel to the centerline of the road. Along curbs, headers, walls, and all places not accessible to the roller, compact the material with approved tampers or compactors.

Compact the aggregate using one of the following methods as specified:

- (a) **Compaction A.** Operating spreading and hauling equipment over the full width of the travelway.
- (b) **Compaction B.** Operate rollers and compact as specified in Subsection 204.11(a)(1).
- (c) **Compaction C.** Moisten or dry the aggregate to a uniform moisture content between 5 and 7 percent based on total dry weight of the mixture. Operate rollers and compact as specified in Subsection 204.11(a)(1).
- (d) **Compaction D.** Compact to a density of at least 95 per-cent of the maximum density, as determined by AASHTO T 180, method C or D.

For all compaction methods, blade the surface of each layer during the compaction operations to remove irregularities and produce a smooth, even surface. When a density requirement is specified, determine the in-place density and moisture content according to AASHTO T 310 or other approved test procedures.

**301.06 Surface Tolerance.** Remove irregularities and shape to a uniform surface. Ensure that the thickness and width of the compacted aggregate conform to the dimensions SHOWN ON THE DRAWINGS, and that measurements on the compacted aggregate meet the following criteria:

- (a) The maximum variation from the specified thickness is 1 inch.
- (b) The compacted thickness is not consistently above or below the specified thickness, and the average thickness of measurements for any one mile of road segment is within  $\pm \frac{1}{4}$  inch of the specified thickness.

**301.07 Maintenance.** Maintain the aggregate course to the correct line, grade, and cross-section by blading, watering, rolling, or combination thereof until placement of the next course. Correct defects according to Subsection 301.06.

**301.08 Acceptance.** See Table 301-1 for sampling, testing, and acceptance requirements; including the category for quality characteristics.

Aggregate gradation and surface course plasticity index will be evaluated under Subsection 106.04 (Measured or Test Conformance). Subsection 106.05 (Statistical Evaluation of Work and Determination of Pay Factors) shall be the basis for evaluating non-conforming aggregate gradations in accordance with 106.01(b). If Subsection 106.05 is used the target value for each sieve shall be the midpoint between the upper and lower specification limits shown in Table 703-2 or 703-3.

Other aggregate quality properties will be evaluated under Subsections 106.02 (Visual Inspection) and 106.04 (Measured or Tested Conformance).

(a) **Aggregate gradation.** The upper and lower specification limits are equal to the calculated mean of all test results plus or minus the allowable deviations shown in Tables 703-2 and 703-3, except as follows:

## Attachment G

**(b) Plasticity index.** The upper and lower specification limits for surface courses are shown in Subsection 703.05(b)(3).

Construction of untreated aggregate courses will be evaluated under Subsections 106.02 (Visual Inspection) and 106.04 (Measured or Tested Conformance).

**Measurement**

**301.09** Measure the Section 301 pay items listed in the bid schedule according to Subsection 109.02 and the following as applicable:

When measuring aggregate by the cubic yard (cubic meter), measure in place.

When measuring aggregate by the square yard (square meter), measure the length horizontally along the centerline of the roadway. Measure the width horizontally to include the top of aggregate width, including designed widenings.

**Payment**

**301.10** The accepted quantities will be paid at the contract price per unit of measurement adjusted according to Subsection 106.05 for the Section 301 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.

Attachment G

**Delete Table 301-1 and replace with the following table:**

**Table 301-1**  
**Sampling, Testing, and Acceptance Requirements**

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time	Remarks
<b>Source</b>									
Aggregate quality (703.05(a) (b) (c))	Measured and tested for conformance (106.04 & 105)	LA abrasion (coarse)	-	AASHTO T96	1 per type & source of material	Source of material	Yes	Before using in work	Not required when using Gov't-provided sources
		Soundness using sodium sulfate (coarse & fine)	-	AASHTO T104	"	"	"	"	"
		Fractured faces	-	ASTM D5821	"	"	"	"	"
		Liquid Limit	-	AASHTO 58 & T89 Method A	"	"	"	"	"
Surface course aggregate (703.05(c))	"	Plasticity index	—	AASHTO R 58, T 89, & T 90	"	Crusher belt or after processing	"	"	"

## Attachment G

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time	Remarks
<b>Source (continued)</b>									
Subbase, base, or surface course aggregate (703.05(b) (c))	Process control (153.03)	Gradation	-	AASHTO T 11 & T27	2 per day per stockpile (minimum)	Crusher Belt	No	24 Hours	Not required when using a pre-crushed commercial source
		Fractured faces	-	ASTM D5821	“	“	“	“	“
Surface course aggregate (703.05(c))	“	Plasticity index	—	AASHTO R 58, T 89, & T 90	“	Crusher belt or after processing	“	“	“
<b>Production</b>									
Subbase course Grading A & B	Measured and tested for conformance (106.04)	Gradation No. 4 (4.75 mm)	II	AASHTO T27 & T11	1 per 1000 tons (900 metric tons)	From Windrow, roadbed after processing, or other approved location	Yes	24 hours	-
		No. 200 (75um)	II						
		Other specified sieves	II						
Base course Grading C, D, & E	Measured and tested for conformance (106.04)	Gradation ¾ inch (9.5 mm)	II	AASHTO T 27 & T 11	1 per 1000 tons (900 metric tons)	From Windrow, roadbed after processing, or other approved location	Yes	24 hours	—
		No. 4 (4.75 mm)	II						
		No. 200 (75um)	II						
		Other specified sieves	II						

## Attachment G

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time	Remarks
<b>Production (continued)</b>									
Subbase & base course Grading A, B, C, D, & E	Measured and tested for conformance (106.04)	Liquid limit	-	AASHTO R58 & T89 Method A	1 per 1000 tons (900 metric tons)	From Windrow, roadbed after processing, or other approved location	Yes	24 hours	-
		Moisture-density (max density)	-	AASHTO T180 Method D <sup>(1)</sup>	1 per type & source of material		“	“	-
		Density	-	AASHTO T310 or other approved procedures	1 per 500 tons (450 metric tons)	In-place after compaction	No	End of shift	-
		Moisture content (in-place)	-	“	“	“	“	“	-

## Attachment G

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time	Remarks
<b>Production (continued)</b>									
Surface course aggregate	Measured and tested for conformance (106.04)	Gradation	II	AASHTO T 27 & T 11	per 1000 tons (900 metric tons)	From Windrow, roadbed after processing, or other approved location	Yes	24 hours	-
		All Sieves in the specified gradation							
		Plasticity index		AASHTO R 58, T 89, & T 90	“	“	“	“	-
	Measured and tested for conformance (106.04)	Moisture-density (max density)	-	AASHTO 180 Method D <sup>(1)</sup>	1 per type & source of material	Stockpile or production output	Yes	“	-
		Density	-	AASHTO T310 or other approved procedures	1 per 500 tons (450 metric tons)	In-place after compaction	No	End of shift	-
		Moisture content (in-place)	-	“	“	“	“	“	-
		Fractured faces	-	ASTM D5821	1 per 1000 tons (900 metric tons)	From windrow, roadbed after processing, or other approved location	Yes	24 hours	-
Subbase, base, and surface course	Measured and tested for conformance (106.04)	Surface tolerance & grade	—	Subsection 301.06	2 per 1000 feet of road segment Determined by the CO	Roadbed after processing and compacting	No	Before placement of next layer or as requested	—

(1) Minimum of 5 points per proctor



## 302 - Minor Crushed Aggregate

302.04\_National\_1\_24\_2022

**Add the following to Subsection 302.04 and 302.04(a)**

### 302.04 Placing Crushed Aggregate.

Written approval of the surface is required before placing aggregate.

**(a) Roadway aggregate.**

For pit run or grid-rolled material, furnish material smaller than the maximum size, no gradation will be required otherwise. After processing on the road, remove all oversize material from the road and dispose as directed by the CO.

302.05\_National\_1\_24\_2022

**Replace the first paragraph of subsection 302.05(a) with the following:**

### 302.05 Compacting and Finishing Crushed Aggregate

**(a) Roadway aggregate.** Unless otherwise specified compact according to method 2. Finish surface according to Subsection 301.06.

## 303 - Road Reconditioning

303.05\_Regional\_1\_24\_2022

**Delete Subsection 303.05 and replace with the following:**

### 303.05 Roadbed Reconditioning.

Remove organic, deleterious, and material larger than 6 inches brought to the surface during reconditioning. Scarify potholes, ruts, and areas shown in the plans to a 6-inch depth or the bottom of the pothole, whichever is less. Dispose of waste at designated sites or according to Subsection 204.14. Repair soft and unstable areas according to Subsection 204.07. Remove irregularities and shape to a uniform surface. Perform the work, including mixing or spreading, when the moisture content is suitable for the specified compaction method. Compact the surface according to Subsection 204.11. Shape the surface according to 204.13(c).

303.06\_Regional\_1\_24\_2022

**Delete Subsection 303.06 and replace with the following:**

### 303.06 Aggregate Surface Reconditioning.

Repair soft and unstable areas to the full aggregate surface depth and according to Subsection 204.07. Scarify potholes, ruts, and areas shown in the plans to a 6-inch depth or the bottom of the pothole, whichever is less. Remove irregularities and shape to a uniform surface. Perform the work, including mixing or spreading, when the moisture content is suitable for the specified compaction method. Compact the surface according to Subsection 204.11. Shape the surface according to 204.13(c).

## 602 - Culverts and Drains

602.03\_Regional\_1\_24\_2022

**Replace the sixth paragraph of Subsection 602.03 with the following:**

### 602.03 General.

Construct a piping plug when shown in the plans unless the culvert inlet is protected with a full-height headwall, slope paving, or an embankment consisting of AASHTO M 145 classification A-6 or A-7 material. Construct the piping plug with AASHTO M 145 classification A-6, A-7, or other approved material with a permeability not exceeding 0.004 inches (0.1 millimeters) per second.

602.05\_National\_1\_24\_2022

**Replace the first paragraph of Subsection 602.05 with the following:**

### 602.05 Laying Metal Pipe.

Position the pipe with a longitudinal joint so the joint is opposite the invert. Unless otherwise specified fully join pipe sections to control the infiltration of soil according to AASHTO M 36 or AASHTO M 196. Use one of the following:

**Add the following to Subsection 602.05:**

(c) **Standard Connecting bands.** Band corrugation shall match that of the pipe sections being joined or the annular rerolled ends of those pipe sections.

## 625 - Turf Establishment

625.00\_Regional\_6\_26\_2018

**Delete Section 625 in its entirety and replace with the following:**

### Section 625. — TURF ESTABLISHMENT

#### Description

**625.01** This work consists of soil preparation, watering, fertilizing, seeding, and mulching. Seeding and mulching methods are designated as dry or hydraulic.

#### Material

**625.02** Conform to the following Subsections:

Agricultural limestone	713.02
Fertilizer	713.03
Mulch	713.05
Seed	713.04
Tackifiers	713.11
Water	725.01(b)

#### Construction Requirements

**625.03 General.** Apply turf establishment to prepared ground or any disturbed area between **April 15** and **October 31**. Apply turf establishment to the areas shown on the plans or worklists within **10** calendar days after completion of ground disturbing activities.

Seeded areas damaged by construction activities shall be reseeded. Do not seed during windy weather or when the ground is excessively wet, frozen, or snow covered.

Assure that all seed and mulch used in the work conforms to the weed free requirements of Section 713.

**625.04 Preparing Seedbed.** Ensure that the surface soil is in a roughened condition favorable for germination and growth.

**625.05 Watering.** Maintain moisture as follows:

#### **Not Applicable**

**625.06 Fertilizing.** Apply fertilizer by the following methods:

**(a) Dry Method.** Apply the fertilizer with approved mechanical equipment. Hand operated methods are satisfactory on areas inaccessible to mechanical equipment.

**(b) Hydraulic Method.** Use hydraulic-type equipment capable of providing a uniform application using water as the carrying agent. Add fertilizer to the slurry and mix before adding seed. Add the tracer material when designated by the CO.

Apply fertilizer at the rate of **N/A** pounds per acre. Follow manufacture's recommendation for product and site conditions. Use an organic (bio-based), slow-release fertilizer meeting the following chemical analysis:

Nutrient	Percent
Nitrogen, N	N/A
Phosphorus, P <sub>2</sub> O <sub>5</sub>	N/A
Potassium, K	N/A

**625.07 Seeding.** Apply seed by the following methods:

**(a) Dry Method.** Apply the seed in a uniform application with approved power-driven seeders, drills, or other mechanical equipment. Hand-operated seeding methods are satisfactory on areas inaccessible to mechanical equipment; or

**(b) Hydraulic Method.** Use hydraulic-type equipment capable of providing a uniform application using water as the carrying agent. Add a tracer material consisting of either wood or grass cellulose fiber mulch to the water. Apply the tracer material at a rate of 400 pounds per acre (450 kilograms per hectare) to provide visible evidence of uniform application. Add the seed to the water slurry no more than 30 minutes before application. Seed by hand areas inaccessible to seeding equipment.

Furnish and apply the following kinds and amounts of pure live seed:

Species of Seed	PLS lbs/ac	PLS Per/lb	Seeds/ ft <sup>2</sup>	Acceptable Cultivars
<i>Elymus glaucus</i> Blue wildrye	8	0.308 lb.	25	Arlington or
<i>Pseudoroegneria spicata</i> Bluebunch wheat grass	4	0.154 lb.	13	Goldar or Anatone
<i>Elymus trachycaulus</i> Slender Wheatgrass	4	0.154 lb.	15	Primar Pryor Or Revene
<i>Bromus marginatus</i> Mountain Brome	4	0.154 lb.	6	Bromar or Garnet
Cover Crop of Annual Rye <i>Lolium multifolrum</i>	6	0.230 lb.	31	
TOTALS	26 lbs/ ac	1 lb	90 seeds/acre	

**Government Furnished Seed.** Upon receipt of written request, Government shall supply seed within 5 days excluding weekends and Federal holidays. Amount of seed requested shall be in 50lb increments.

**625.08 Mulching.****Mulching:**

Mulch material shall be weed free straw and shall be applied at a uniform rate to adequately cover the seed. The weed free straw shall be from a grain crop such as barley straw, wheat straw or oat straw.

Mulch will be applied in a one-step operation with the seed at the rate of 1 Ton per Acre.

**625.09 Protecting and Caring for Seeded Areas.** Protect and care for seeded areas including watering according to 625.05. Repair or apply supplemental applications of seed, mulch, fertilizer, and water according to 625.05 as many times as needed until turf is established or final acceptance.

**625.10 Acceptance.** Material for turf establishment will be evaluated under Subsections 106.02 and 106.03.

Placing of turf establishment will be evaluated under Subsections 106.02 and 106.04.

**Measurement**

**625.11** Measure the Section 625 pay items listed in the bid schedule according to Subsection 109.02 and the following as applicable:

When measuring turf establishment and supplemental applications by the acre (hectare), measure on the ground surface.

When measuring water by volume or mass, measure in the hauling vehicle or by metering.

**Payment**

**625.12** The accepted quantities will be paid at the contract price per unit of measurement for the Section 625 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

## 705 - Rock

705.02\_National\_2\_25\_2019

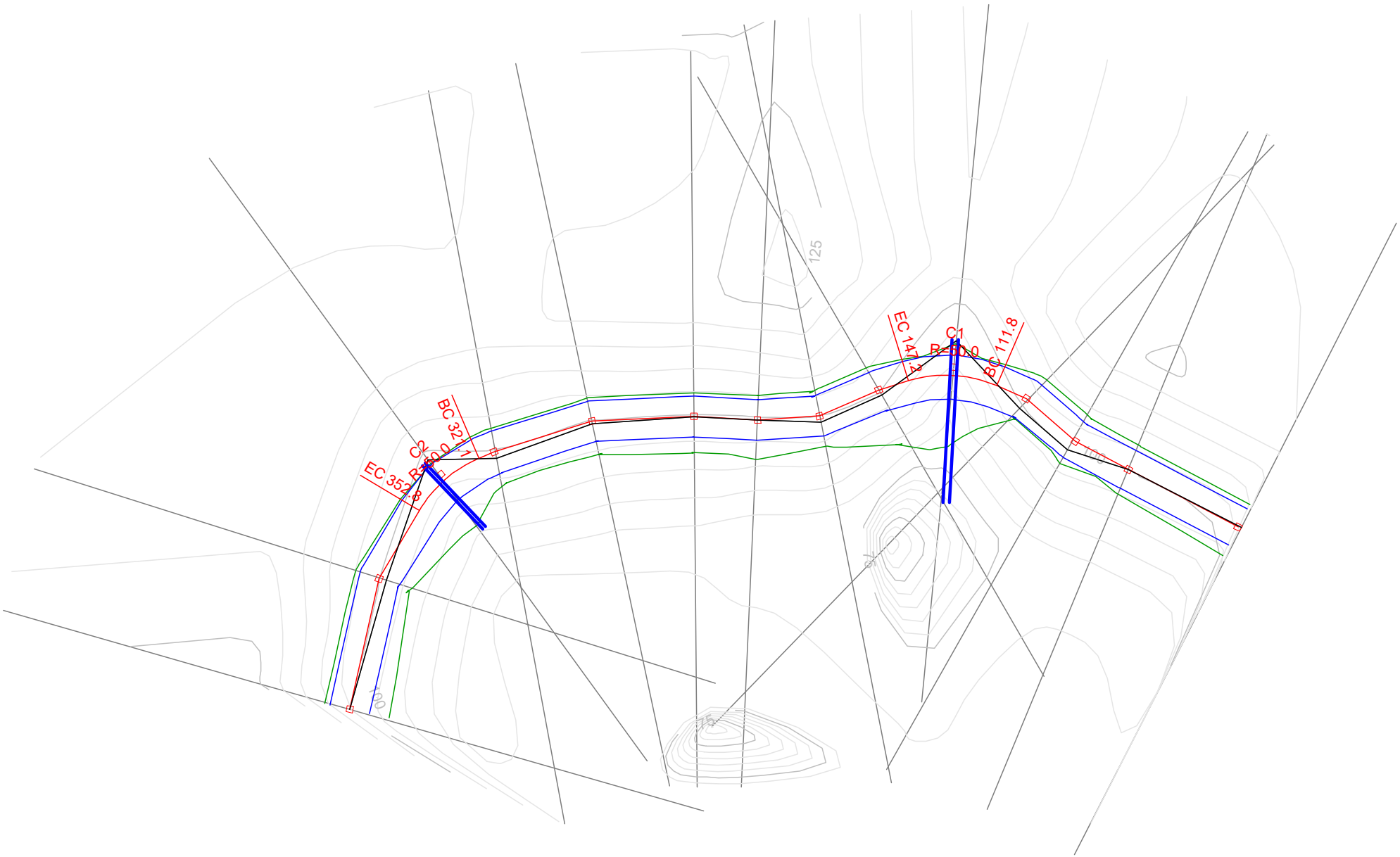
**Add the following Class to Table 705-1 in Subsection 705.02:**

705.02 Riprap. Table 705-1.

**Table 705-1  
Gradation Requirements for Riprap(1)**

<b>Class</b>	<b>% of Rock Equal or Smaller by Count, DX</b>	<b>Range of Intermediate Dimensions,(2) inches (millimeters)</b>	<b>Range of Rock Mass,(3) pounds (kilograms)</b>
0	100	6 – 8 (150 – 200)	17 – 41 (8 – 19)
	85	5 – 6 (150 – 150)	10 – 17 (5 – 8)
	50	2 – 5 (50 – 125)	0.6 – 10 (0.3 – 5)
	15	0 – 2 (0 – 50)	0 – 0.6 (0 – 0.3)

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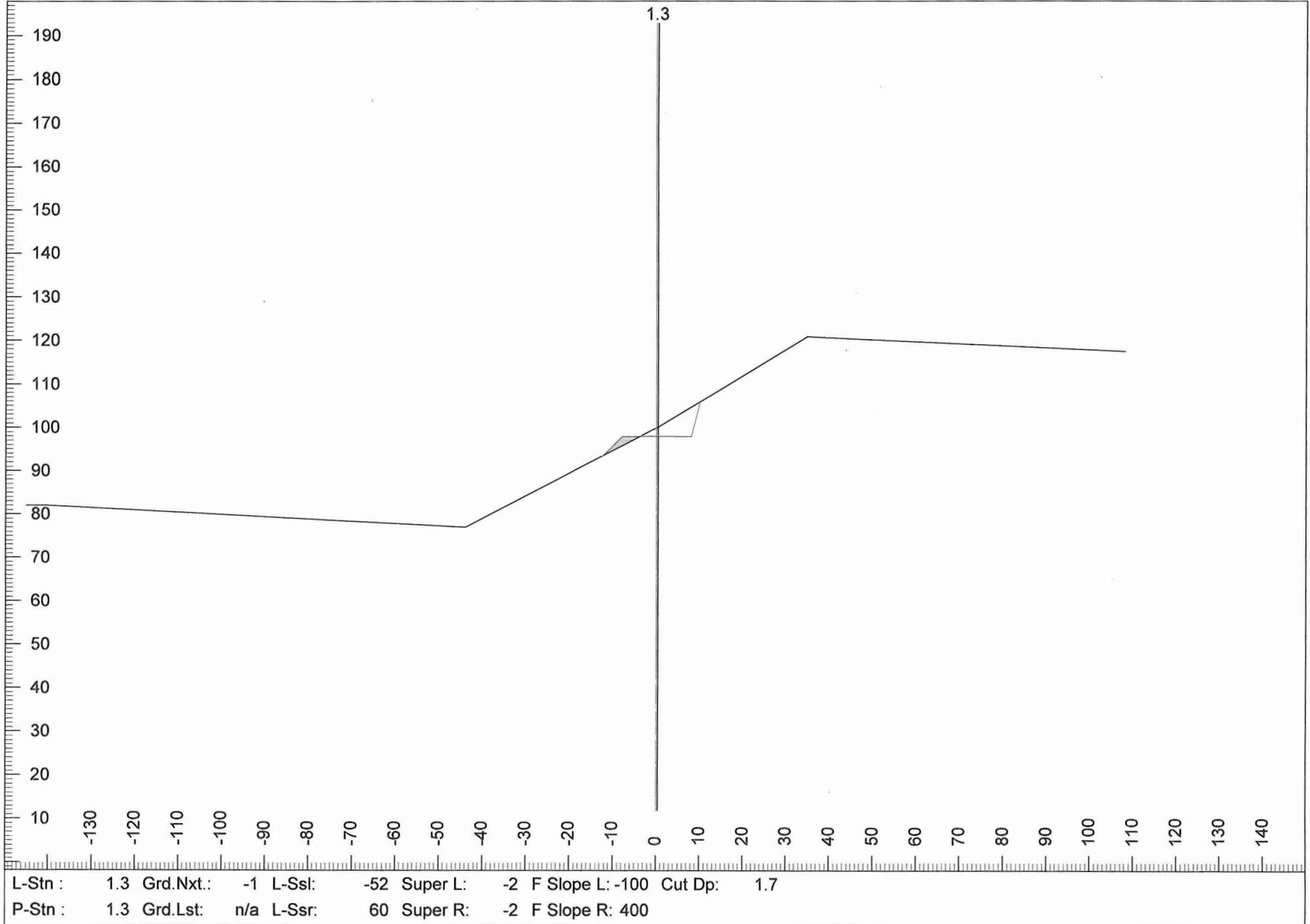






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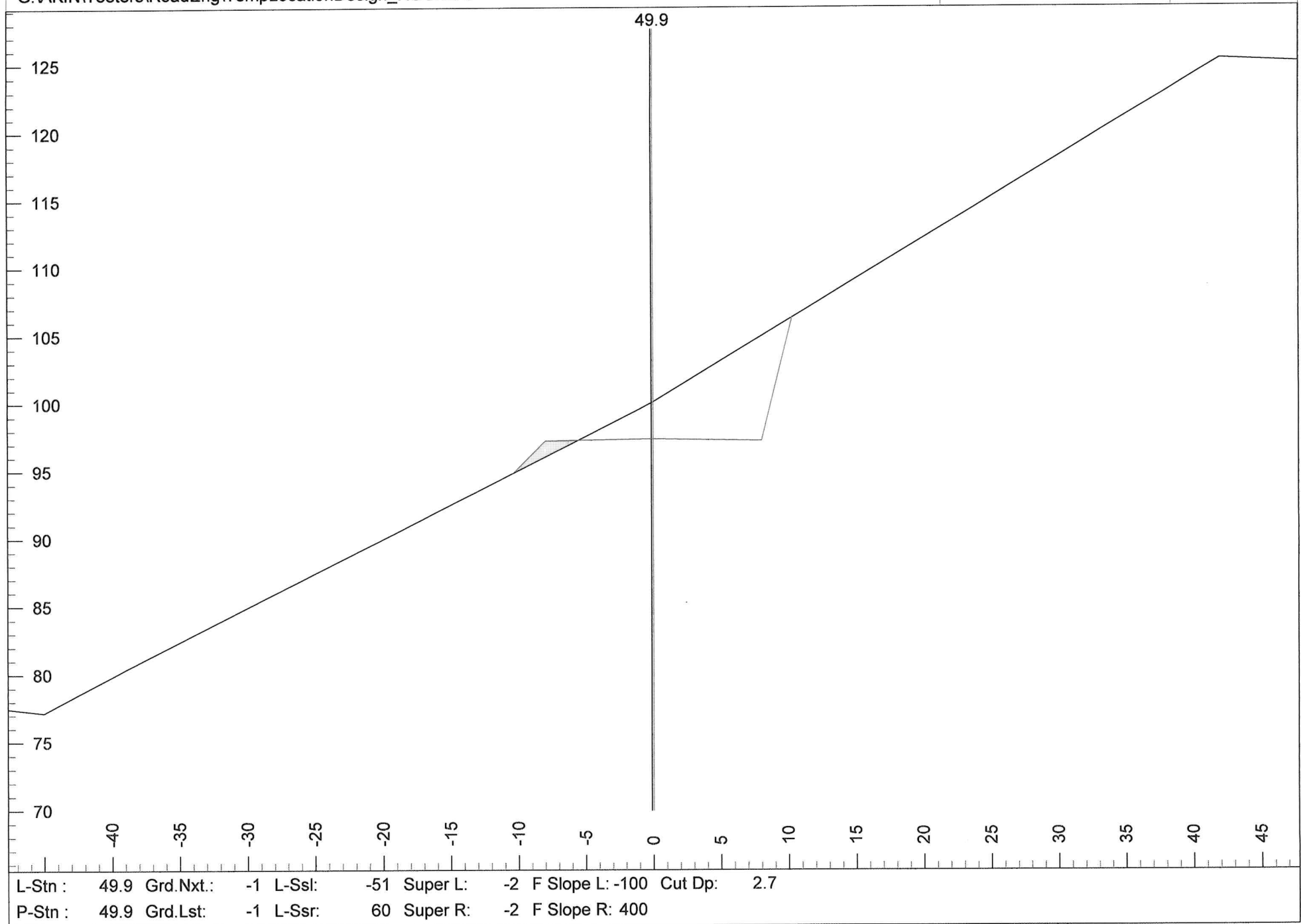
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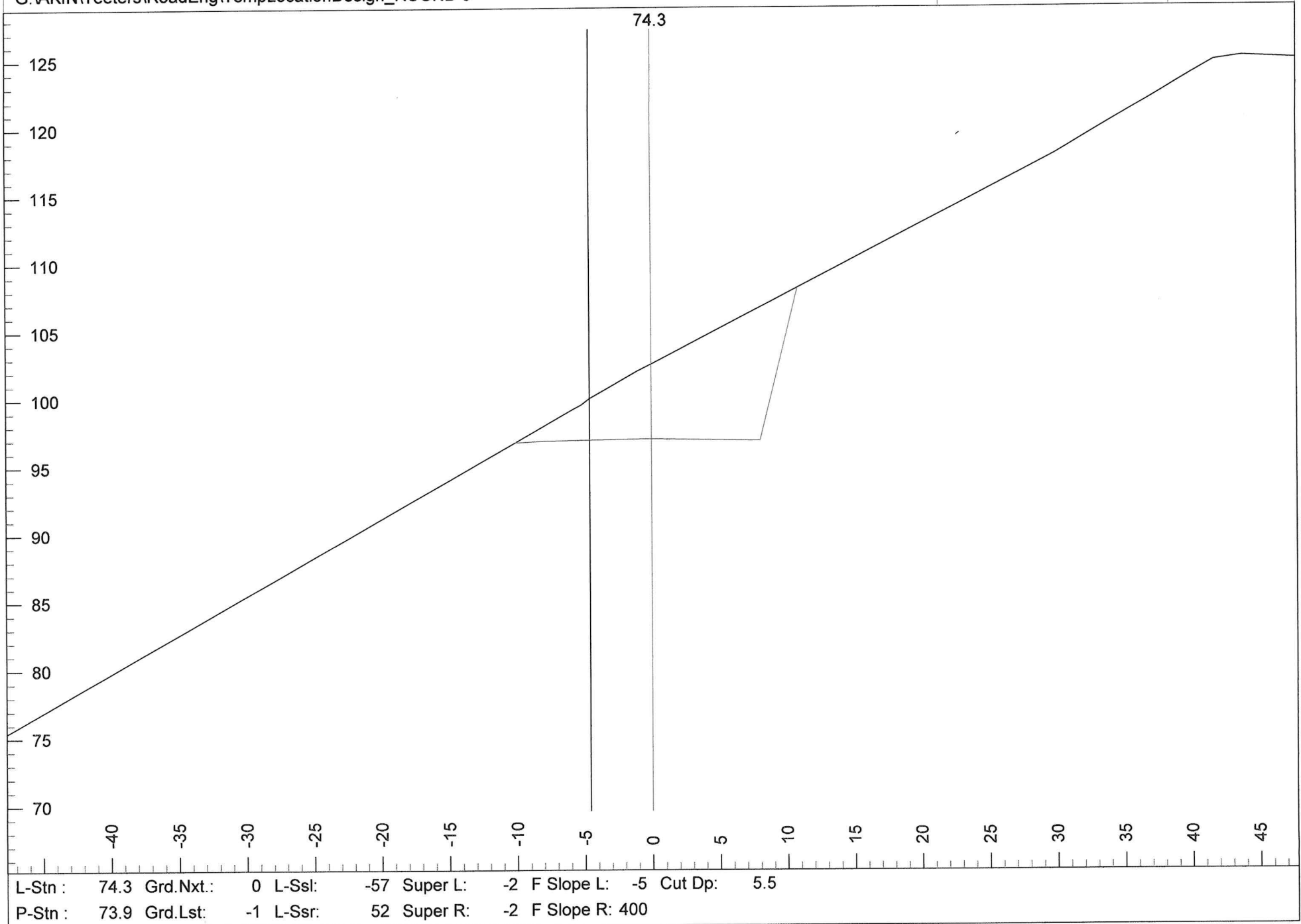
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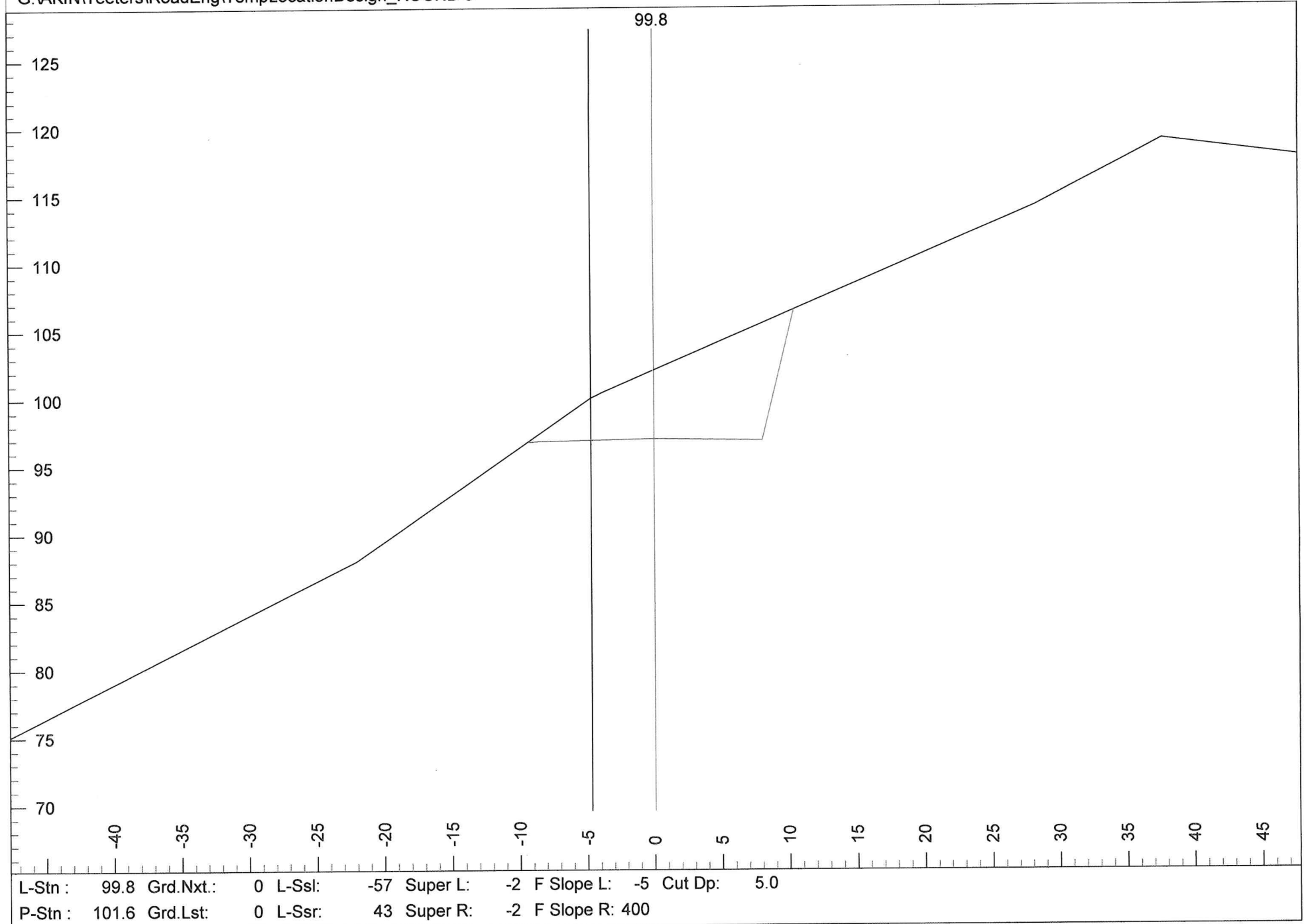
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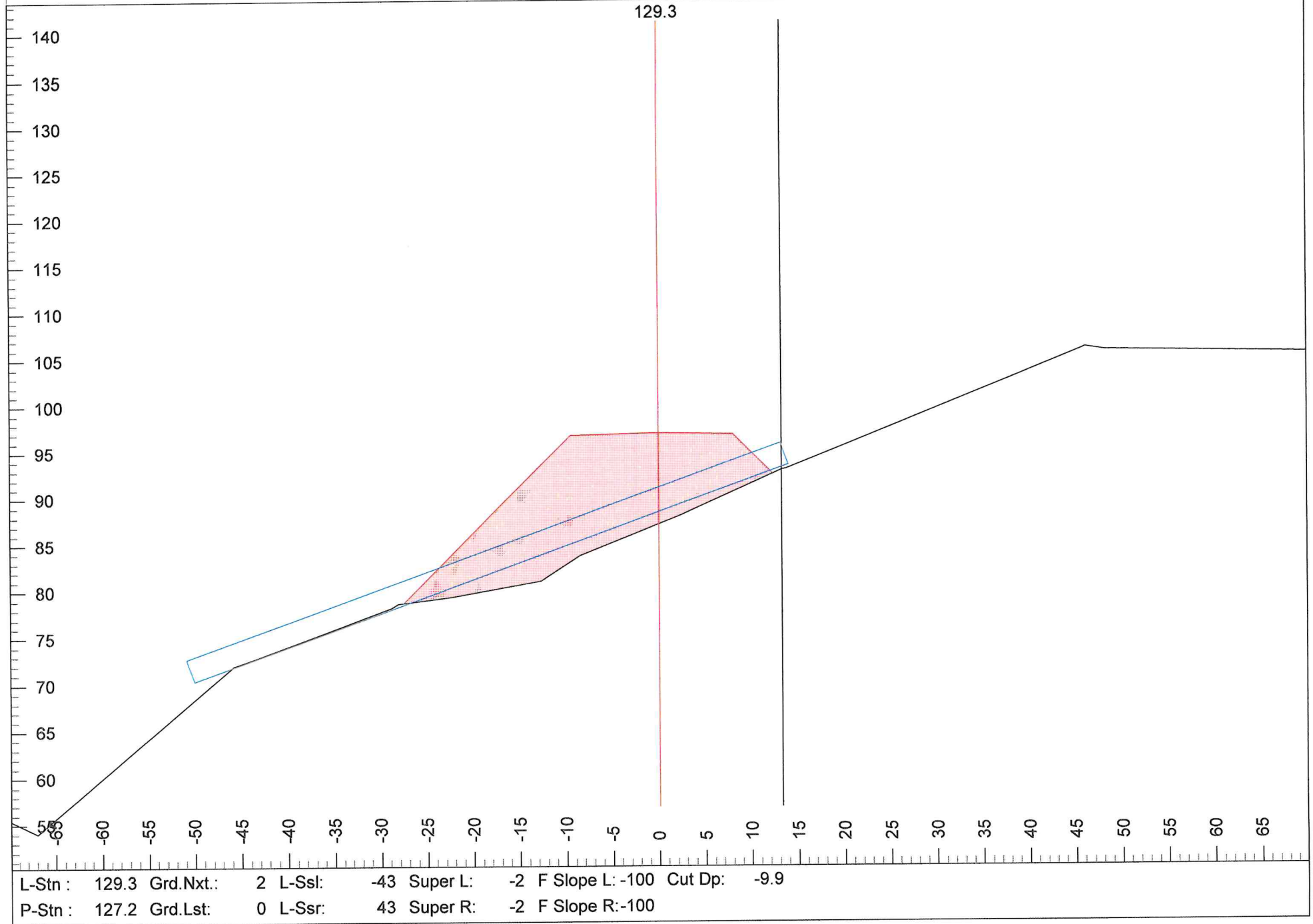
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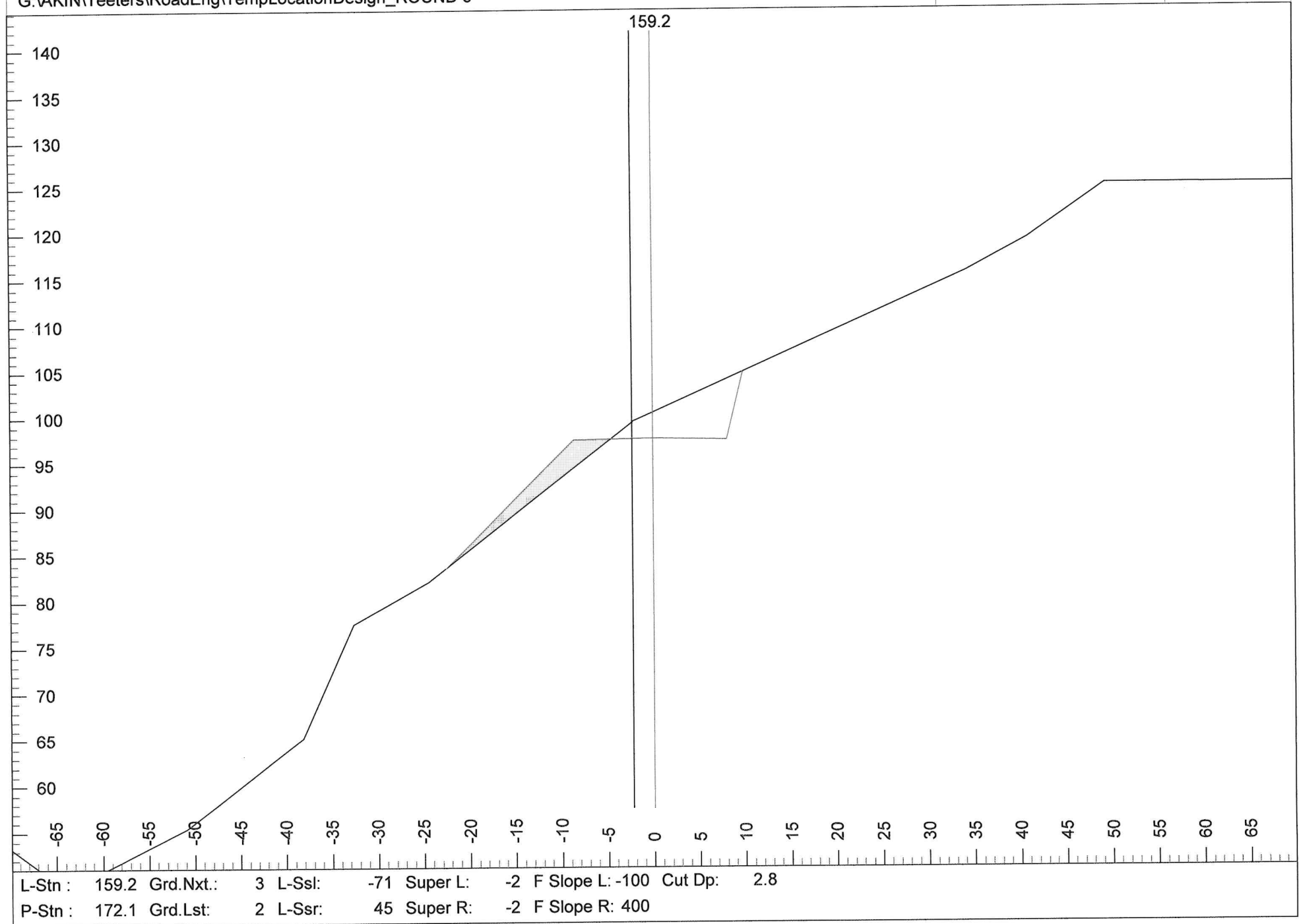
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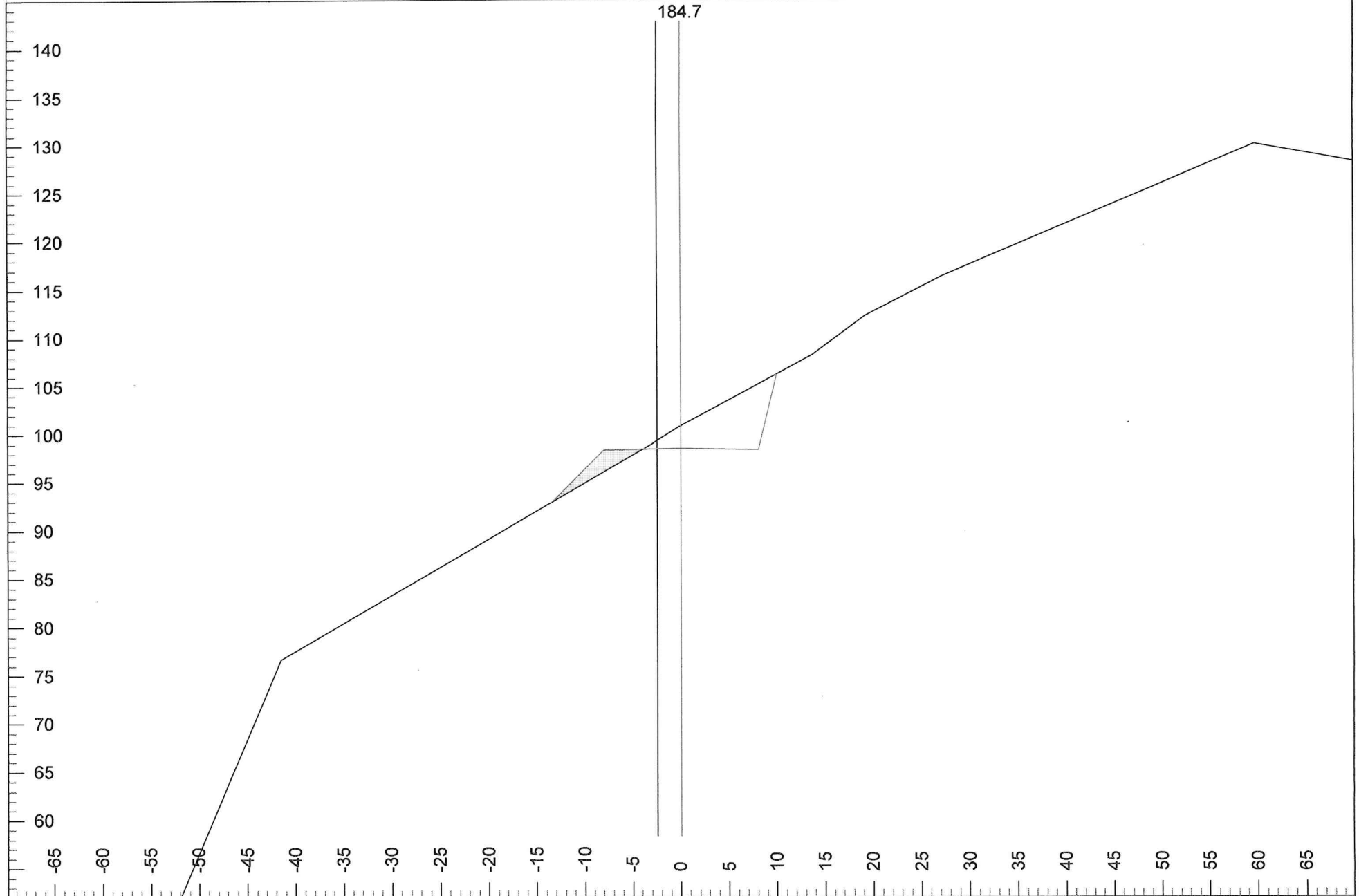
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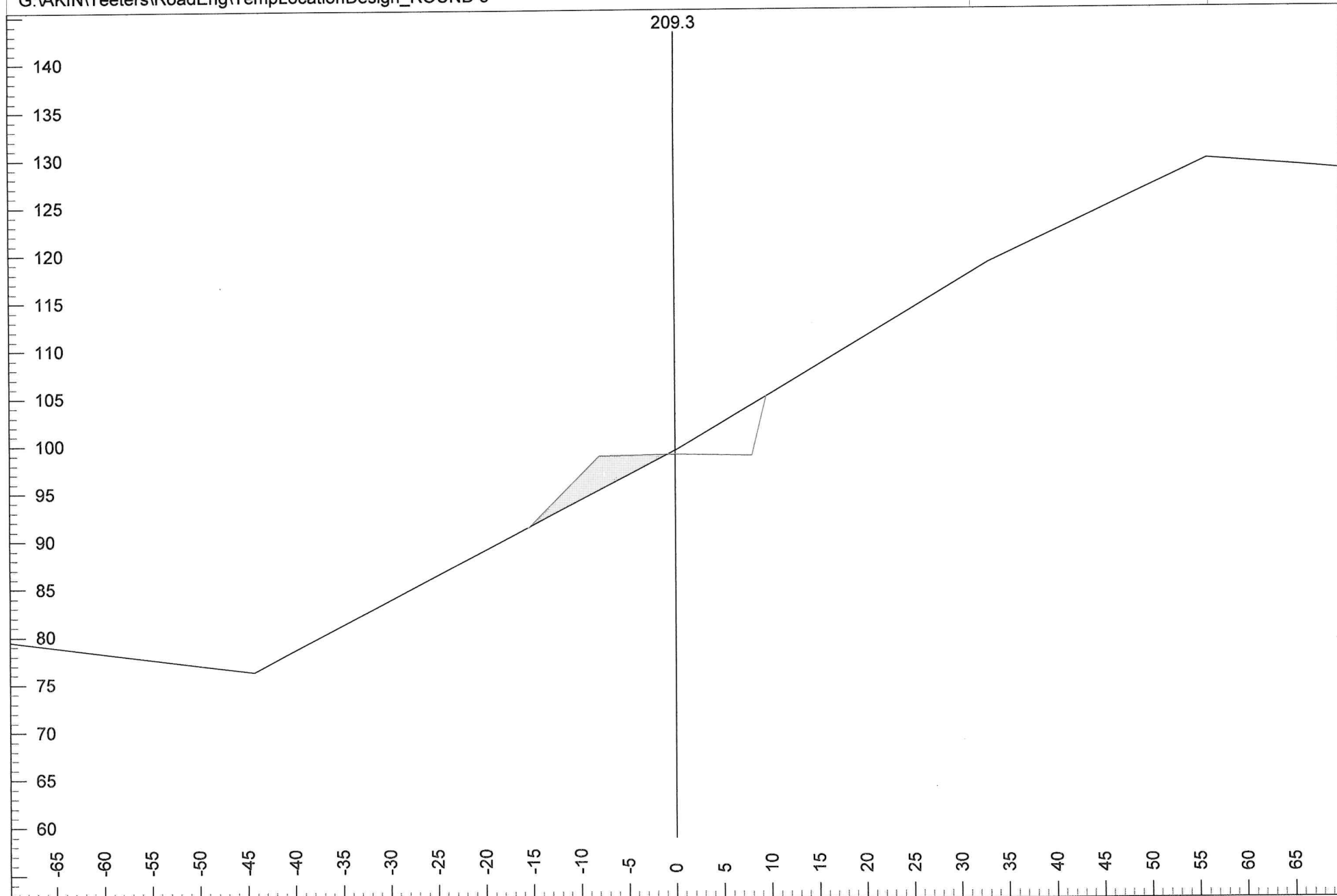
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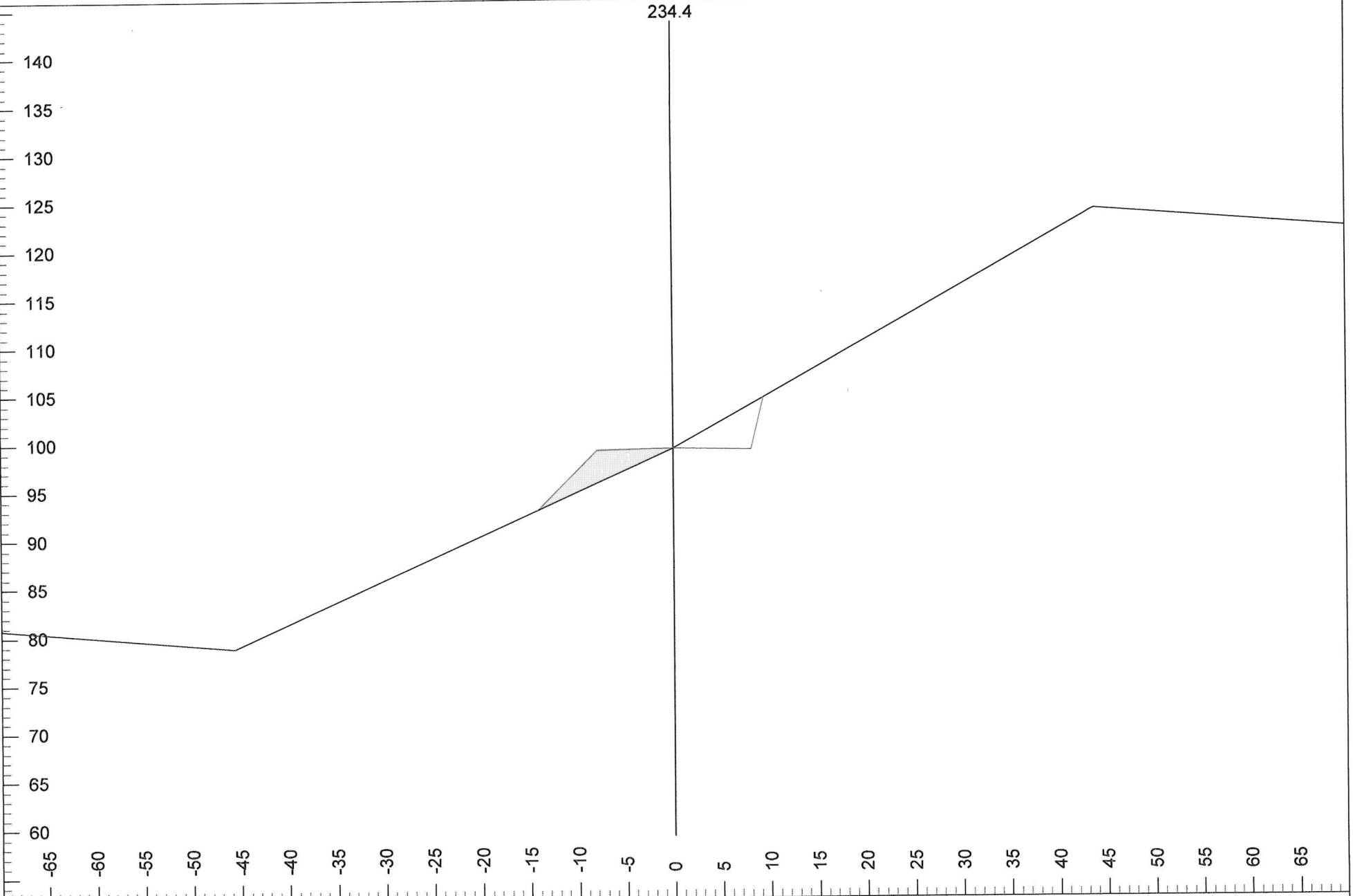
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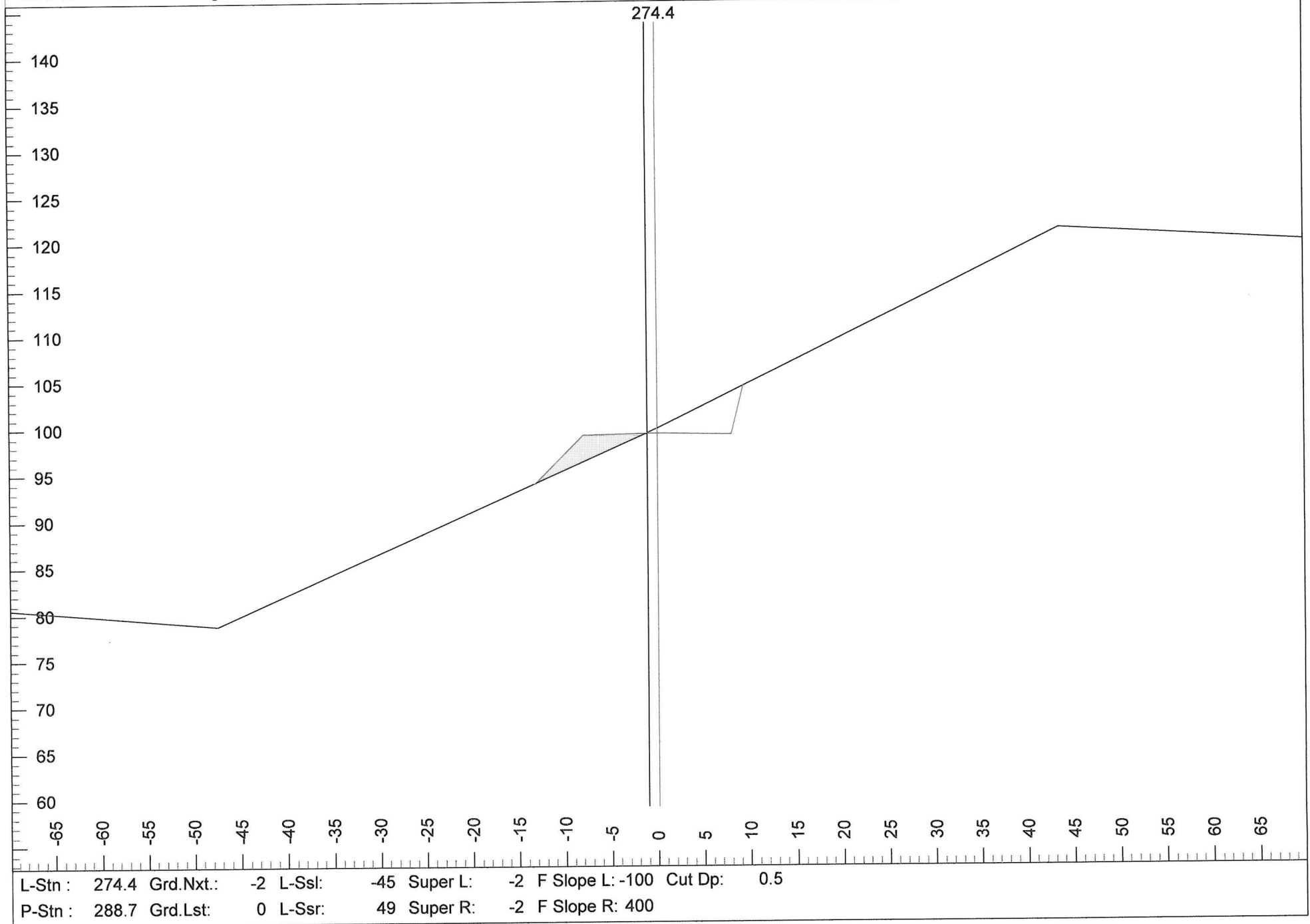
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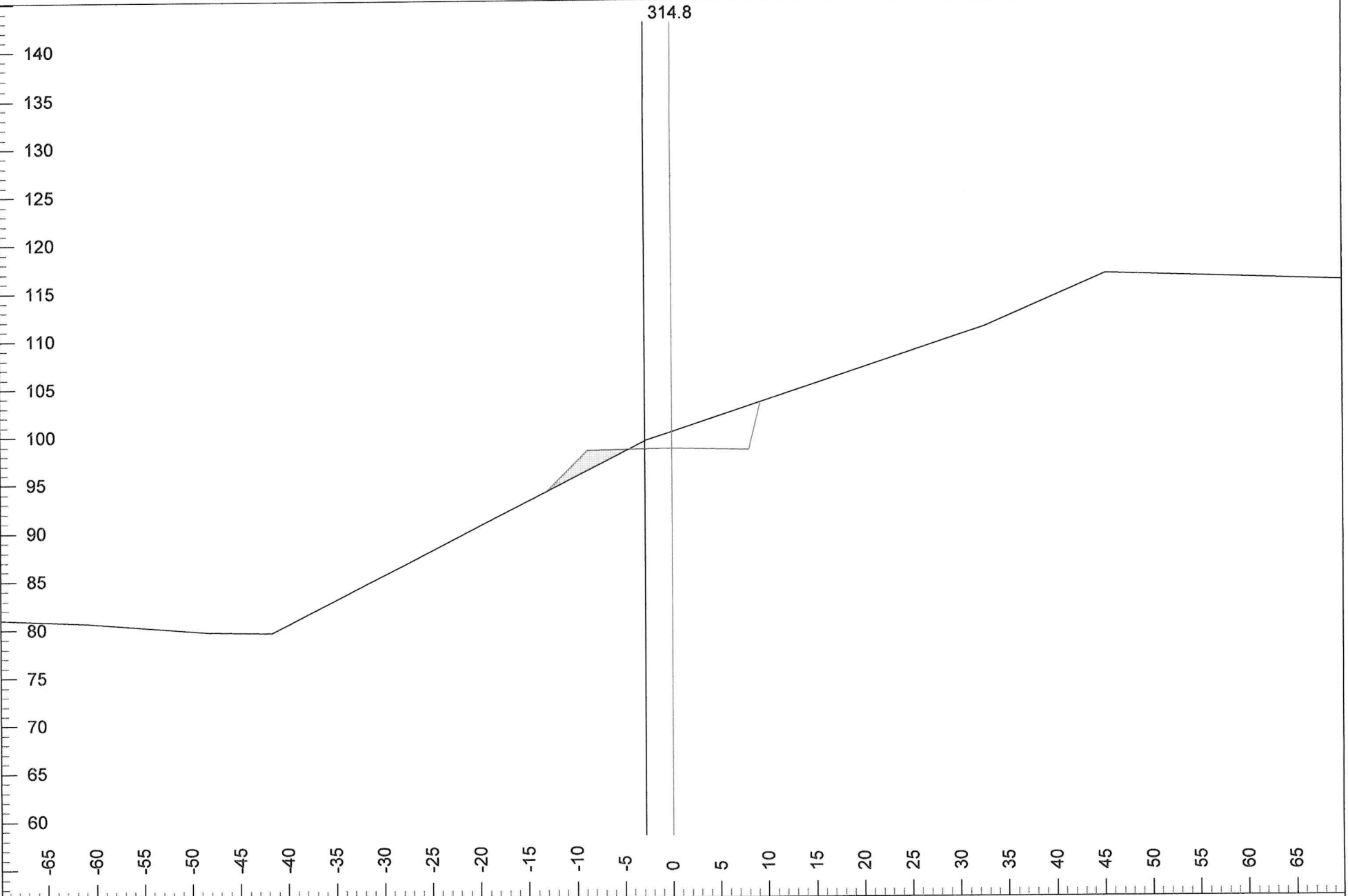
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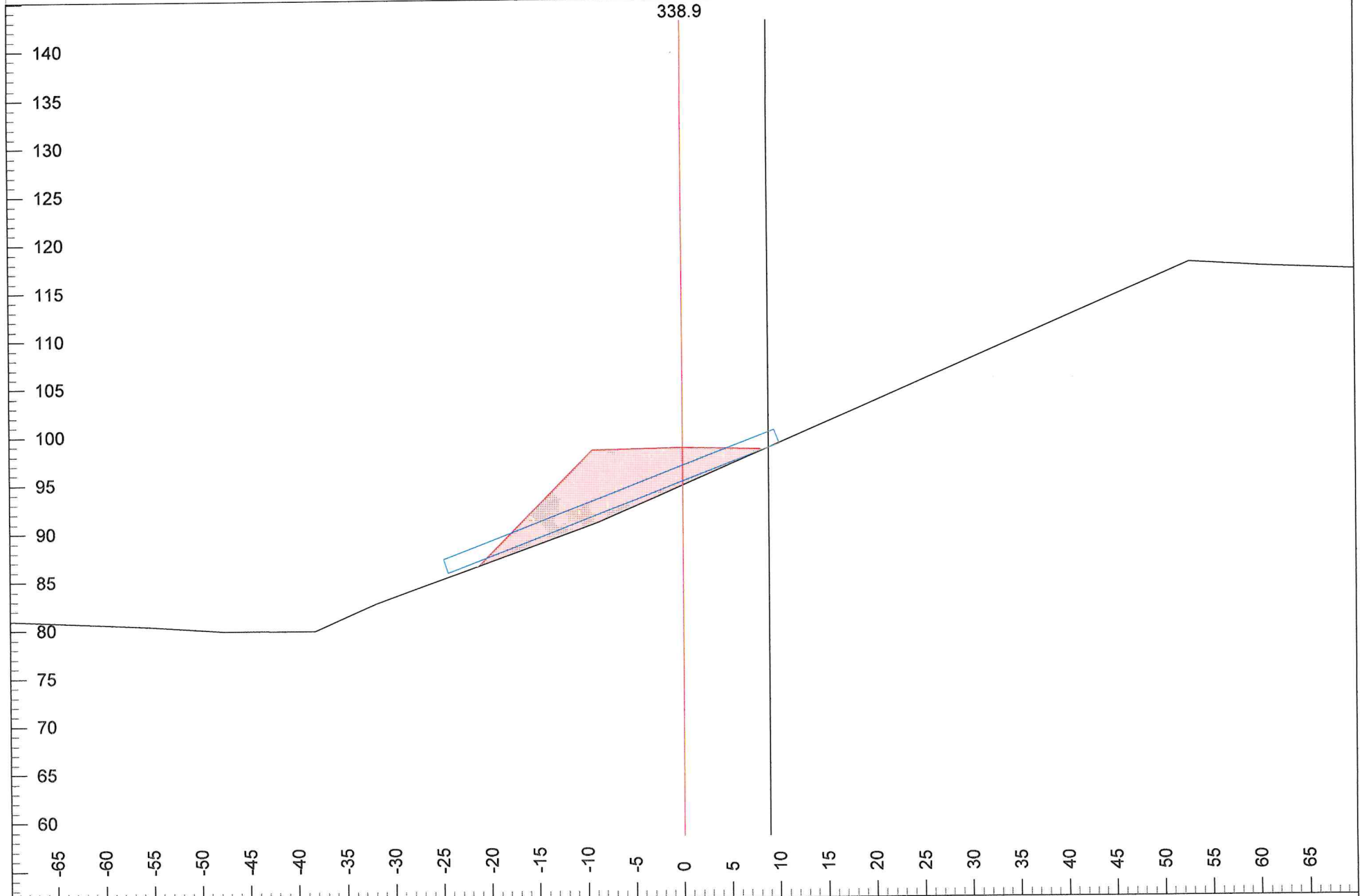
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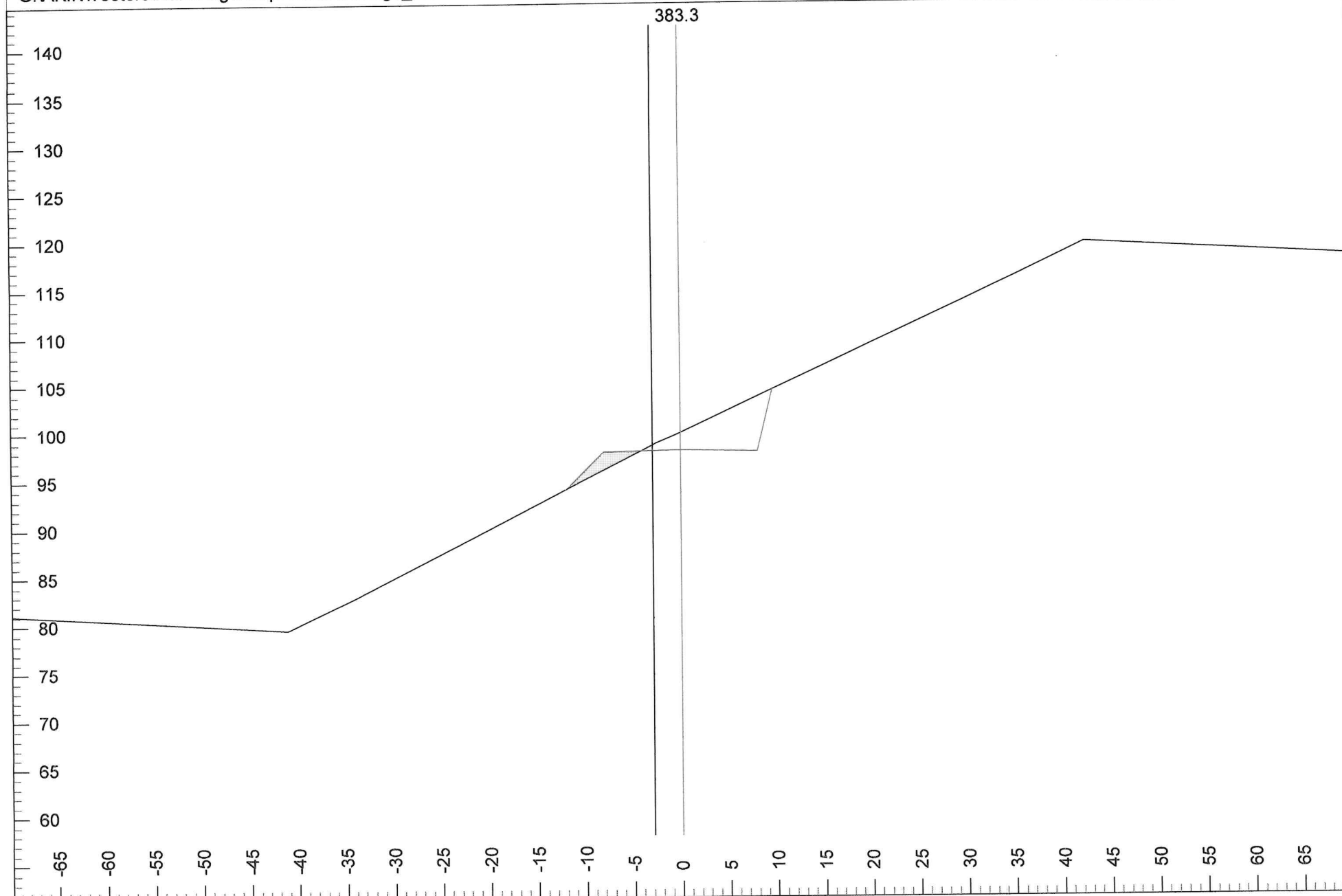
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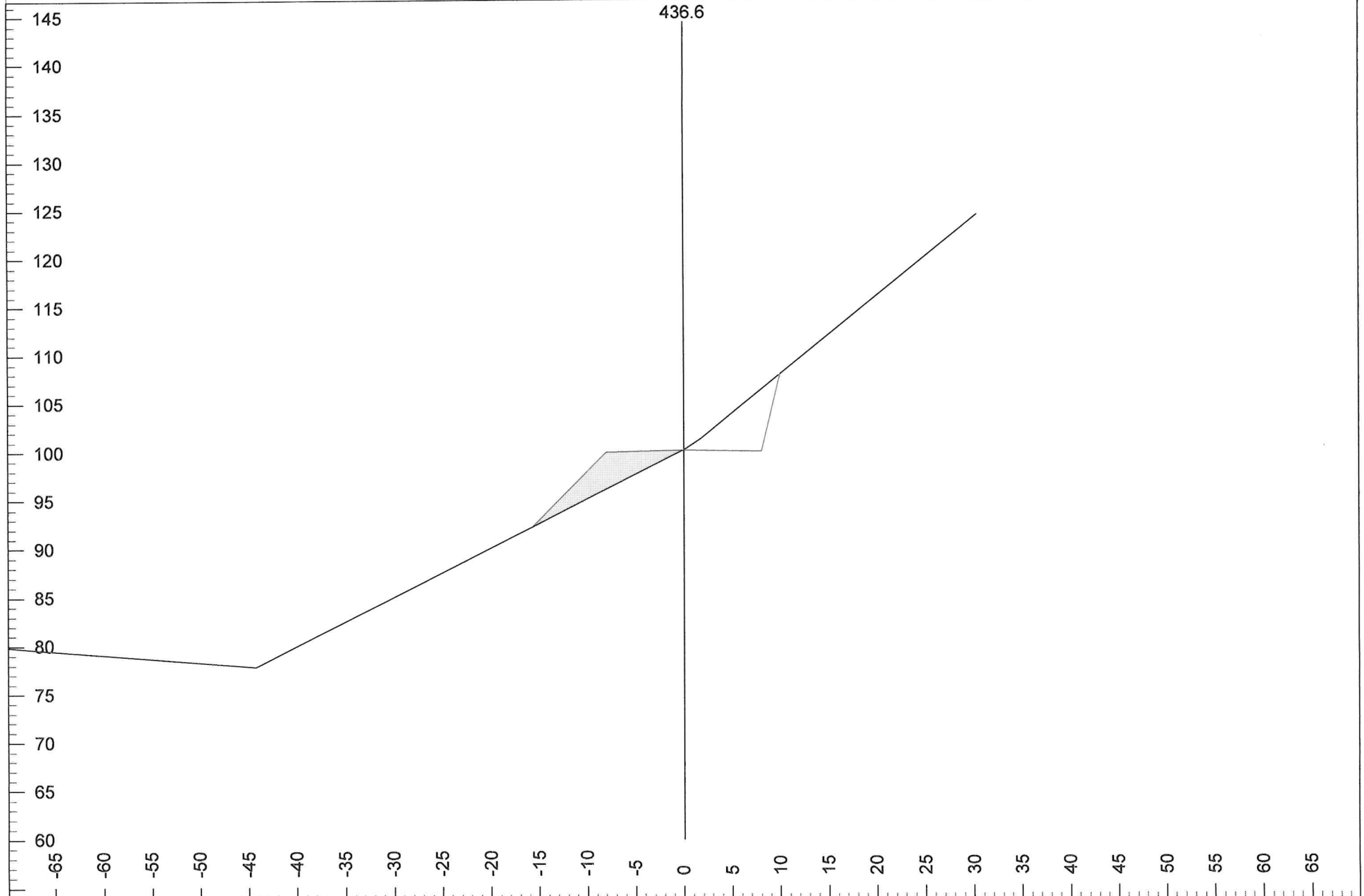
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