



CALIFORNIA DEER ASSOCIATION
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South Whitlow Stewardship Sale Request for Bids

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CALIFORNIA DEER ASSOCIATION (CDA)
Request for Bids (RFB)
for
South Whitlow Stewardship Sale

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1. STATEMENT OF WORK

A. BIDDER QUALIFICATIONS

I. Bidder Minimum Qualifications:

- a. Bidder, Bidder’s principal, or Bidder’s staff shall have been regularly engaged in the business of logging, chipping/grinding or mechanical thinning within forest environments for at least 3 years.
- b. Bidder shall possess all permits, licenses, and professional credentials necessary to perform services as specified under this Request for Bids (RFB).

B. SCOPE

It is the intent of these specifications, terms, and conditions to describe the services CDA is seeking. CDA intends to award a contract to the Bidder(s) who best meets the requirements. The term of the contract shall begin the date the contract is executed by CDA and terminate on October 31, 2027.

The Contract Area is located in Township 40N, Range 2E, Sections 13, 24, and 25; Township 40N, Range 3E, Sections 18, 19, 30, 31; *Mount Diablo Meridian; Siskiyou County*. This project lies entirely within the Shasta-Trinity National Forest Lands. CDA is implementing this project under a Supplemental Project Agreement.

The South Whitlow Stewardship Sale is 440.2 acres and aims to mechanically thin and remove commercial sized sawlog trees, and mechanically thin and remove residual biomass where present. Material for removal will be designated by the CDA via Forest Service language. The purpose is to reduce the stand density to mitigate fuel loads and reduce the likelihood of a stand-replacing canopy fire. Project work will also directly benefit forest health and wildlife habitat. The purchaser shall purchase forest products that will then be hauled from the site to their preferred facility. Where possible, different modes and methods of improving loading and unloading forest products and transportation shall be utilized to maximize product utilization.

Specifications for treatments are described below. Additional specifications are described in Exhibit E, F, and G. A Contract Area map is provided in Exhibit A of this RFB.

C. SPECIFIC REQUIREMENTS

Timber Volume Estimates & Utilization Standards

Volume quantities listed below are made available with the understanding that values shown are estimates and are not guaranteed. For these reasons, bidders are urged to examine the timber sale area and make their own estimates. The South Whitlow Stewardship Sale is being sold as an indefinite quantity sale.

Commercial Timber Bid			
<i>(Contractor will be responsible for Sawtimber & biomass delivery to a local end use facility)</i>			
		Timber Payment Bid	
Species	Product	Estimated Quantity	Unit of Measure
Mandatory Bid Items			
Combined Softwood	Sawtimber	26,752	Ton
Combined Softwood	Grn Bio Cv	5,721	Ton
Total Quantity		32,473	Ton
Timber Subject to Agreement			
Unit 861 - Other Softwood	Sawtimber	unestimated	Ton
Unit 861 - Other Softwood	Grn Bio Cv	unestimated	Ton

Additional Specifications for Operations: Applies to all items.

Refer to Exhibit E, F, G, and H for specifications on operations including, but not limited to, resource protection specifications, limited operating periods, timber specifications, road maintenance specifications, and fire precautions.

2. CALENDAR OF EVENTS

EVENTS	DATE/LOCATION
Show Me Trip	December 10 th , 2025
Response/Proposal Due	January 9 th , 2026
Pre-work Conference	TBD
Anticipated Contract Date	January 23 rd , 2026
Contract Termination Date	October 31 st , 2027

*Please RSVP to Alexandra Bandeian by email or phone by Monday December 8th, 2025, for the Show Me Trip. *

For process flexibility, note that all CALENDAR dates may be subject to change.

A. SITE VISIT

Bidder is strongly encouraged to perform an independent site visit to the units to be treated in order to view the project setting and understand the site conditions and other factors potentially relevant to responding to this RFB. In addition to an independent site visit, CDA and USFS will be holding a Show Me Trip on Wednesday December 10th, 2025. All interested parties shall meet at the front parking lot of the McCloud Ranger Station at 0900. Please contact the CDA representative listed on the front page of this RFB if you plan on attending the Show Me Trip.

B. PRE-WORK CONFERENCE

Bidder agrees that if awarded a contract, Bidder and its principals will attend a pre-work conference with CDA and U.S. Forest Service prior to starting operations to discuss job requirements. The date will be determined after the RFB award.

3. INSTRUCTIONS FOR BID DEVELOPMENT

A. BIDDER'S QUALIFICATIONS

Before an offer is considered for award, the Bidder may be required to submit a technical and price proposal, as described in Exhibit B, and comply with all other provisions stated herein. The proposal should be practical and be prepared simply and economically, providing a straightforward, concise delineation of what it is the Bidder will do to satisfy the requirements of the contract. Upon contract award, this technical proposal will become a binding part of this contract.

B. PREPARATION OF PROPOSALS

Offers shall be manually signed, prices entered in Exhibit B for timber values and for the cost of additional service items and all fill-in blocks completed. The total offer for mandatory timber cutting units entered in Exhibit B must be equal to or greater than the minimum acceptable total offer for mandatory timber cutting units listed. If erasures or other changes appear on the forms, the person signing the offer must initial each erasure or change.

C. PROPOSAL REQUIREMENTS

1. **Technical Proposal:** The technical proposal will be used to make an evaluation and arrive at a determination as to whether the proposal will meet the requirements of CDA. Therefore, the technical proposal must present sufficient information to reflect a thorough understanding of the requirements and a detailed description of the techniques, procedures, and program for achieving the objectives of the specifications/statement of work. Proposals which merely paraphrase the requirements of the specifications/statement of work or use phrases such as "will comply" or "standard techniques will be employed" will be considered unacceptable and will not be further considered.
 - a. Technical proposals will be evaluated and ranked on the basis of the following criteria. As a minimum, the proposal must clearly provide the following:
 - (i) Technical Approach
 1. Describe your plan of operations for both timber harvest and any listed service work. Include a timeline and the rationale for the work activities identified to ensure all contractual requirements will be completed by the termination date.
 2. Describe your quality control plan for both the harvesting and any listed service items.
 3. Provide names and resumes for your contract manager and your on-the-ground supervisor(s).
 4. Describe the equipment you propose to use to complete this contract, including both harvest and any service items.
 5. Define your production capability to accomplish this contract within the contract period.
 6. Describe methods and plans to protect resources, maximize utilization of harvested material

including both sawtimber and non-sawtimber, and to minimize the number of entries into stands to be treated.

(ii) **Capability and Past Performance**

1. Provide a list of the experience of your key personnel who will be working on this contract.
2. Identify all subcontractors you propose to use for this contract and the work activities planned for subcontracting. Describe subcontractor's past performance using the criteria identified in (ii). If any subcontractors are certified in their area of expertise, provide information as to when, what, and by whom they are certified.
3. Submit a list of similar or related contracts that your firm has completed in the past 3 years. This listing must include the contract type; contract amount or contract size; location, the year completed, the Agency, company or individual contracted with, and a current telephone number.

(iii) **Utilization of Local Work Force.**

1. Local labor is defined as local and regional communities. Identify how you intend to utilize labor, subcontractors, and other workforce from the local area. Additional evaluation preference will be given for the use of labor or subcontractors located closest to the contract area.

2. **Price Proposal.** All Bidders must furnish a total offer value in Exhibit B for the mandatory timber cutting units. If a bid is entered for the optional bid items, timber removal will be required where applicable.

4. RFB RESPONSE SUBMITTAL INSTRUCTIONS AND INFORMATION

A. CDA CONTACTS

All contact during the competitive process is to be through the contact person listed on the first page of this RFB.

B. SUBMITTAL OF RFB RESPONSE

- a. Late responses will not be accepted.
- b. RFB responses must be received at the specified address/email by 5:00 p.m. on the due date specified in the Calendar of Events. Any RFB response received after that time or date cannot be considered and will be returned to the Bidder.
- c. RFB responses are to be addressed/delivered as follows:
Emailed : a.bandeian@caldeer.org Mailed: **California Deer Association**
1884 Keystone Court Suite A
Redding, California 96003
Attn: Alexandra Bandeian
- d. Please include "South Whitlow Stewardship Sale" in the Subject Line for emailed bid packages.
- e. Bidders are to submit one (1) RFB response (Exhibit B – RFB Response Packet including all additional documentation stated in the "Required Documentation and Submittals" section of Exhibit B). Response Packet, and all additional documentation stated in the "Required Documentation and Submittals" section of Exhibit B.
- f. All costs required for the preparation and submission of an RFB response shall be borne by the Bidder.
- g. Bidder expressly acknowledges that it is aware that if a false claim is knowingly submitted (as the terms "claim" and "knowingly" are defined in the California False Claims Act, Cal. Gov. Code, §12650 et seq.), CDA will be entitled to civil remedies set forth in the California False Claim Act.
- h. It is understood that CDA reserves the right to reject any or all RFB responses.

C. RESPONSE FORMAT

1. Bidders shall not modify any part of Exhibits or qualify their RFB responses. Bidders shall not submit to CDA a re-typed or otherwise re-created version of these documents or any other CDA-provided document.
2. RFB responses, in whole or in part, are NOT to be marked confidential or proprietary. CDA may refuse to consider any RFB response or part thereof so marked. RFB responses submitted in response to this RFB may be subject to public disclosure. CDA shall not be liable in any way for disclosure of any such records.

5. CDA PROCEDURES, TERMS, AND CONDITIONS

A. RFB ACCEPTANCE AND AWARD

1. RFB responses will be evaluated by a selection committee.
2. The committee will recommend award to the Bidder who, in its opinion, is best qualified to perform the work described in this RFB. Award may not necessarily be made to the Bidder with the lowest bid. (Best Value)
3. CDA reserves the right to award to a single or to multiple General Service Providers, dependent upon what is in the



- best interest of CDA.
4. CDA has the right to decline to award this contract or any part of it for any reason.
 5. Any specifications, terms, or conditions issued by CDA, or those included in the Bidder's submission, in relation to this RFB, may be incorporated into any contract that may be awarded as a result of this RFB.
 6. CDA reserves the right to reject any or all proposals, or to accept one part of a proposal and reject the other, unless the bidder stipulates to the contrary, and to waive technical defects, as the interest of CDA may require. Award will be made by CDA Habitat Program Manager.

B. EVALUATION CRITERIA

All bids to be evaluated by the Selection Committee (SC). The SC will be composed of CDA staff and other individuals who have expertise or experience in this type of procurement. The SC will select/recommend a Bidder in accordance with the evaluation criteria set forth in this RFB. Evaluation criteria include technical approach, key personnel, past performance and benefits to local communities. The evaluation of the RFB responses shall be within the sole judgment and discretion of the SC.

One award will be made to the Bidder (a) whose proposal is technically acceptable and (b) whose technical/price relationship is the most advantageous to CDA. All technical evaluation factors including those listed in section 3Ca(i)-(iii) of these instructions and any additional factors listed in the RFB when combined, are approximately equal to cost or price. The critical factor in making any technical/price trade-off is not the spread between the technical ratings, but rather the significance of that difference. The significance of the spread in ratings will be determined on the basis of what that difference might mean in terms of performance and what it would cost CDA to take advantage of it. Where technical proposals are determined to be substantially equal, any cost/price advantage to CDA may control award.

Proposals must be submitted initially on the most favorable terms from a technical and price standpoint which the Bidder can submit to CDA. Therefore, CDA reserves the right to award without discussions with the Bidders. However, after receipt of initial offers, written or oral discussions may be conducted with all responsible Bidders whose offers are determined to be in the competitive range. Discussions conducted after receipt of an offer do not constitute a rejection or counteroffer by CDA.

Firms lacking a past performance record (new firms or those with no relevant experience within their organization) will be treated as an unknown performance risk, and will receive a neutral rating in this criterion. A neutral rating will be established as the average of all other competing Bidders.

The SC will base the award decision on a tradeoff between price and non-price factors, comparing the relative risk to CDA of poor or non-performance posed by each of the Bidders, and making a judgement as to whether or not reduced risk of performance is worth additional cost. In some cases this will result in award to a lower-ranked but lower-priced offer, in other cases award may be to a higher-ranked but higher-priced offer. CDA may, when in its interest, reject any or all offers or waive any informality in offers received.

C. PRICING

1. Prices quoted shall be firm for the term of any contract that may be awarded pursuant to this RFB.
2. All prices quoted shall be in United States dollars.
3. Bidders are advised that in the evaluation of cost, if applicable, it will be assumed that the unit price quoted is correct in the case of a discrepancy between the unit price and extended price.

D. PROTESTS

Protests must be in writing and received no later than seven (7) business days after CDA issues the Notice of Intent to Award, which is sent by electronic mail to all entities who submitted a proposal. CDA will reject the protest as untimely if it is received after this specified time frame. Protests will be accepted from Bidders or potential Bidders only. If the protest is mailed and not received by CDA, the protesting party bears the burden of proof to submit documentation (e.g., certified mail receipt) that the protest was timely sent to be otherwise received by CDA within the RFB protest period.

Bid protests must contain a detailed and complete written statement describing the reason(s) for protest. The protest must include the RFB title and number, the name of the firm protesting, and include a name, telephone number, email address and physical address of the protestor. If a firm is representing the protestor, they shall include their contact information in addition to that of the protesting firm.

Protests must be mailed or hand delivered to **Alexandra Bandeian, 1884 Keystone Court Suite A, Redding, California 96003**. Facsimile and electronic mail protests to **Alexandra Bandeian (A.Bandeian@caldeer.org)** and must be followed by a mailed or hand delivered identical copy of the protest and must arrive within the seven-day time limit.

The CDA Habitat Program Manager, in consultation with CDA legal team, will investigate the protest and if determined to be valid the CEO may reject and re-bid or not re-bid the work, or recommend award to the remaining best qualified Bidder. Affected Bidders will be notified by electronic mail within 7 business days of the action taken.

The bid protester can appeal the CEO's determination to CDA Board of Directors. The appeal must be submitted to CDA CEO no later than five working days from the date of receipt of CDA's determination on the initial protest.

Such an appeal must be made in writing and must include all grounds for the appeal and copies of the original protest and CDA response. The appeal will be scheduled for the next Board of Director's special or regular meeting. CDA CEO will advise the protestor of the date, time, and location of the Board of Directors meeting at which staff will make a recommendation for award and inform the protester it may request to address the Board of Directors at that meeting.

CDA may transmit copies of the protest and any attached documentation to all other parties who may be affected by the outcome of the protest. The decision of CDA as to the validity of any protest is final. CDA's final decision will be transmitted to all affected parties in a timely manner.

E. CONTRACT AND BOND

The Bidder whose offer is accepted, will, within 30 days of the award letter's date, or any written extension thereof by CDA, execute a contract which shall be provided by CDA and be based on the sample contract referenced in the prospectus. Simultaneously, the awarded Bidder shall furnish a satisfactory performance bond, in accordance with the provisions of such contract, in the penal sum as prescribed in the RFB for this contract, and otherwise complete the process described on this form and pages attached hereto. Bidder agrees that its failure to comply with this paragraph shall result in a termination of this contract.

F. INVOICING

1. Completed work will need to be inspected and accepted by both a designated CDA and U.S. Forest Service representative prior to invoicing.
2. Invoices, if applicable, shall be submitted monthly during project operations.
3. CDA shall notify General Service Provider of any invoice adjustments required.
4. Invoices shall contain, at a minimum, CDA Contract number, invoice number, remit to address, and itemized services description.
5. CDA will pay General Service Provider in an amount not to exceed the negotiated amount(s) which will be referenced in the contract signed by both parties.
6. Prior to making any payment, CDA may require Contractor to conform to the requirements of California Civil Code section 8120, et seq., receipts or other evidence of payment from all persons performing work and supplying material to Contractor.
7. Contractor shall be required to make cash deposits for included timber and required deposits in advance of project work and within 45 days of invoicing by CDA. Advanced deposits will be in such amounts as to maintain an unobligated balance sufficient to cover the value of material. Contractor and CDA will agree on a systematic approach to provide sufficient advanced deposits.



EXHIBIT A – Contract Area Map

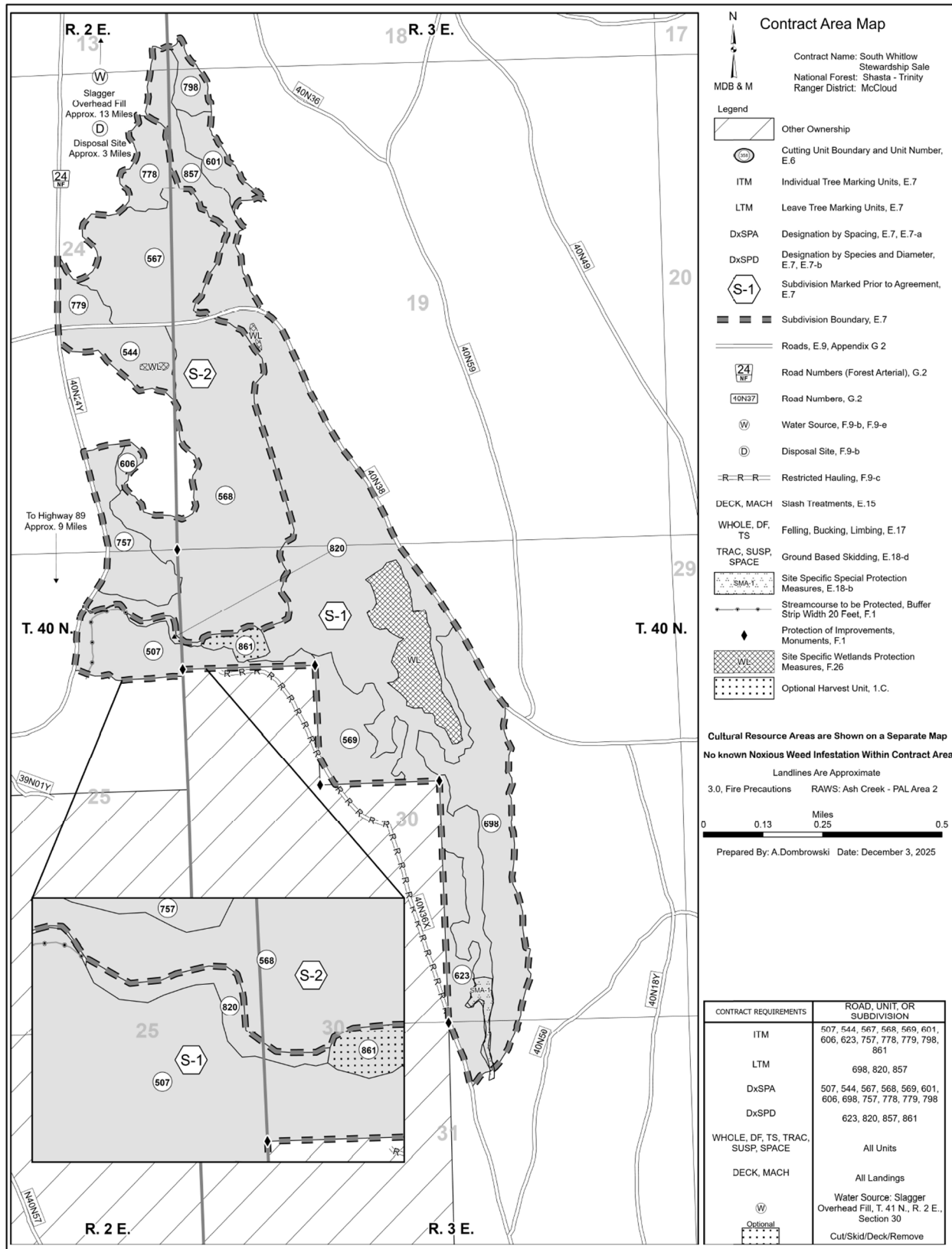




EXHIBIT B - RFB Response Packet

To: *CALIFORNIA DEER ASSOCIATION (CDA)*

From (Name and Official Title of Bidder): _____

Preferred electronic mail (email) address: _____

RFB RESPONSE PACKET GUIDELINES

- As described in section IV- RFB response submittal instructions and information, bidders are to submit one (1) RFB response containing the following, in their entirety:
 - Exhibit B – RFB response packet, including all additional required documentation as described in Exhibit B- required documentation and submittals
- Bidders that do not comply with the requirements, and/or submit an incomplete RFB response may be subject to disqualification and their RFB response rejected in total.
- If bidders are making any clarifications and/or amendments, or taking exception to any part of this RFB, these must be submitted in the exceptions, clarifications, and amendments section of this Exhibit B – RFB response packet. CDA, at its sole discretion, may accept amendments/exceptions, or may deem them to be unacceptable, thereby rendering the RFB response disqualified.



Proposal Bid Sheet

Cost shall be submitted on this Bid Form as is. No alterations or changes of any kind to the Proposal Form(s) are permitted. RFB responses that do not comply may be subject to rejection in total. The cost quoted below shall be the cost the CDA will pay for the term of any contract that is a result of this RFB process. Quantities listed herein are an estimated quantity based on CDA volume estimates and are not to be construed as guarantees. No minimum or maximum is guaranteed or implied.

Commercial Timber

Cost Proposal				
Species	Product	Unit of Measure	Estimated Quantity	Bid Price
<i>Mandatory Bid Item</i>				
Combined Softwoods	Sawtimber	Ton	26,752	\$ _____
Combined Softwoods	Grn Bio Cv	Ton	5,721	\$ _____
<i>Minimum Acceptable Total Offer for Mandatory Timber Cutting Units: \$115,603.89</i>				
<i>Timber Subject to Agreement</i>				
Other Softwoods	Sawtimber	Ton	-	\$ _____
Other Softwoods	Grn Bio Cv	Ton	-	\$ _____

Required Deposits

Cutting Unit Number	Approx. Acres	Rates Per Unit of Measure						
		Species	Product	Quantity	Unit of measure	Rate of Payment \$/UOM	Deposits for Slash Disposal	Surface Replacement
<i>All</i>	<i>436.2</i>	<i>CS</i>	<i>Sawtimber</i>	<i>26,752</i>	<i>Ton</i>		\$0.44	\$1.85
<i>All</i>	<i>436.2</i>	<i>CS</i>	<i>Grn Bio Cv</i>	<i>5,721</i>	<i>Ton</i>		\$0.44	\$1.85

EXCEPTIONS, CLARIFICATIONS, AMENDMENTS

Bidder's Name: _____

List below requests for clarifications, exceptions, and amendments, if any, to the RFB and associated RFB documents, and submit with your RFB response. CDA is under no obligation to accept any exceptions and such exceptions may be a basis for RFB response disqualification.

Reference to:		Description	
Page No.	Section	Item No.	



BIDDER INFORMATION AND ACCEPTANCE

- 1) The undersigned declares that all RFB documents, including, without limitation, the RFB, Addenda, and Exhibits, have been read and that the terms, conditions, certifications, and requirements are agreed to.
- 2) The undersigned is authorized to offer, and agrees to furnish, the articles and services specified in accordance with the RFB documents.
- 3) The undersigned acknowledges acceptance of all addenda related to this RFB. List Addenda for this RFB on the Line below:

Addendum #	Date

- 4) The undersigned hereby certifies to CDA that all representations, certifications, and statements made by the Bidder, as set forth in this RFB Response Packet and attachments, are true and correct and are made under penalty of perjury pursuant to the laws of California.
- 5) The undersigned acknowledges that the Bidder is, and will be, in good standing in the State of California, with all the necessary licenses, permits, certifications, approvals, and authorizations necessary to perform all obligations in connection with this RFB and associated RFB documents.
- 6) It is the responsibility of each Bidder to be familiar with all of the specifications, terms, and conditions, and the site condition. By the submission of an RFB response, the Bidder certifies that if awarded a Contract it will make no claim against CDA based upon ignorance of conditions or misunderstanding of the specifications.
- 7) Patent indemnity: General or Professional Service Providers who do business with CDA shall hold CDA, its Directors, officers, agents, and employees harmless from liability of any nature or kind, including cost and expenses, for infringement or use of any patent, copyright or other proprietary right, secret process, patented or unpatented invention, article, or appliance furnished or used in connection with the contract or purchase order.
- 8) Insurance certificates are not required at the time of submission. However, by signing Exhibit B – RFB Response Packet, the Bidder agrees to meet the minimum insurance requirements stated in the RFB. This documentation must be provided to CDA prior to execution of a Contract by CDA and shall include an insurance certificate which meets the minimum insurance requirements, as stated in the RFB.
- 9) The undersigned Bidder hereby submits this RFB response and binds itself to CDA. The RFB, subsequent Addenda, Bidders Response Packet, and any attachments, shall be used to form the basis of a Contract, which once executed shall take precedence.



Official Name of Bidder (exactly as it appears on Bidder’s corporate seal and invoice):

Street Address Line 1: _____

Street Address Line 2: _____

City: _____ State: _____ Zip Code: _____

Webpage: _____

Type of Entity / Organizational Structure (check one):

- Corporation Joint Venture
- Limited Liability Contractorship Contractorship
- Limited Liability Corporation Non-Profit
- Other: _____

Primary Contact Information:

Name / Title: _____

Telephone Number: _____

Email Address: _____

Street Address Line 1: _____

City: _____ State: _____ Zip Code: _____

SIGNATURE: _____

Name and Title of Signer (printed): _____

Dated this _____ day of _____, 2025

EXHIBIT C - Insurance Requirements

Insurance certificates are not required at the time of submission; however, by signing Exhibit B – RFB Response Packet, the Bidder agrees to meet the minimum insurance requirements stated in the RFB. This documentation must be provided to CDA, prior to award. The following are the minimum insurance limits, required by CDA, to be held by the GENERAL SERVICE PROVIDER performing on this RFB.

INDEMNIFICATION AND INSURANCE

A. Indemnification

Contractor expressly agrees to defend, indemnify, and hold harmless California Deer Association and its Directors, officers, agents, and employees from and against any and all loss, liability, expense, claims, suits, and damages, including attorneys' fees, arising out of or resulting from Contractor, its associates', employees', Contractors', or other agents' negligent acts, errors or omissions, or willful misconduct, in the operation and/or performance under this Contract.

B. Insurance Requirements

Contractor shall take out and maintain during the life of the Contract all the insurance required in this section and, if requested, shall submit certificates for review and approval by California Deer Association. The Notice to Proceed shall not be issued, and Contractor shall not commence work until such insurance has been approved by the California Deer Association. The certificates shall be on forms approved by the California Deer Association. Acceptance of the certificates shall not relieve the Contractor of any of the insurance requirements nor decrease the liability of the Contractor. California Deer Association reserves the right to require Contractor to provide insurance policies for review by California Deer Association.

C. Workers Compensation Insurance

Contractor shall take out and maintain during the life of the Contract, Workers Compensation Insurance for all its employees on the project. In lieu of evidence of Workers' Compensation Insurance, California Deer Association will accept a Self-Insured Certificate from the State of California. Contractor shall require any Contractor to provide it with evidence of Workers Compensation Insurance.

D. Commercial General Liability Insurance

Contractor shall take out and maintain during the life of the Contract Commercial General Liability, Umbrella Liability, and Automobile Liability Insurance that provides protection from claims that may arise from operations or performance under this Contract. California Deer Association shall require any Contractor to provide evidence of liability insurance coverages.

The amounts of insurance shall be not less than the following:

- \$1,000,000/Occurrence, Bodily Injury, Property Damage -- Automobile.
- \$1,000,000/Occurrence, Bodily Injury, Property Damage -- General Liability.
- \$3,000,000/Occurrence, General Aggregate – General Liability.
- \$3,000,000/Occurrence, Products – Comp/OP AGG – General Liability.
- \$4,000,000/Occurrence, and General Aggregate – Umbrella Insurance.

The following coverages or endorsements must be included in the policy(ies):

1. California Deer Association, its directors, officers, and employees are Additional Insureds in the policy(ies) as to the work being performed under the contract.
3. The coverage is Primary and non-contributory to any other applicable insurance carried by the Contractor.
4. The policy(ies) covers contractual liability.
5. The policy(ies) is written on an occurrence basis.
6. The policy(ies) covers California Deer Association's Property in Contractors care, custody, and control.
7. The policy(ies) covers personal injury (libel, slander, and wrongful entry and eviction) liability.
8. The policy(ies) covers explosion, collapse, and underground hazards, fire suppression expense, property damage to land due to fire, and property damage to non-owned automobiles and equipment due to fire.
9. The policy(ies) covers products and completed operations.
10. The policy(ies) covers the use of owned, non-owned, and hired automobiles.
11. The policy(ies) and/or a separate pollution liability policy(ies) shall cover pollution liability for claims related to the release of the threatened release of pollutants into the environment arising out of or resulting from the Contractor's performance under this contract.
12. The policy(ies) will not be canceled, nor the above coverages/endorsements be reduced without 30 days' written notice to **California Deer Association, 1884 Keystone Court, Suite A, Redding, California 96003.**

EXHIBIT D – General Requirements GENERAL SERVICES CONTRACT

1. DEFINITIONS

The following terms shall be given the meaning shown unless context requires otherwise, or a unique meaning is otherwise specified.

- a. “CDA” means California Deer Association, its employees acting within the scope of their authority, and its authorized representatives.
- b. “USFS” or “FS” means United States Forest Service, its employees acting within the scope of their authority, and its authorized representatives.
- c. “Change Order” A Change Order is a written instrument used for modifying the contract with regards to the Scope of Work, Contract Sum, and/or Contract Time. An approved Change Order is a Change Order signed by CDA. An executed Change Order is a Change Order signed by both CDA and the Contractor.
- d. “Contract” means the contract between the Contractor and California Deer Association as memorialized in the Contract Document.
- e. “Business Entity” means any individual, business, nonprofit, joint venture, corporation, sole proprietorship, or other private legal entity recognized by statute.
- f. “Contract Documents” comprise the entire contract between CDA and the Contractor and can include CDA’s contract form if used, any purchase order, and any addenda, appendices, and CDA-approved changes or amendments. The Contract Documents are intended to be complementary and include all items necessary for the proper execution and completion of the Work. Any part of the Work not shown or mentioned in the Contract Documents that is reasonably implied or is necessary or usual for proper performance of the Work shall be provided by the Contractor at its expense.
- g. “Contractor” means the Business Entity with whom CDA enters into a contractual contract. Contractor shall be synonymous with “supplier,” “vendor,” “consultant” or other similar term.
- h. “Day” unless otherwise specified, days are calendar days, measured from midnight to the next midnight.
- i. “Goods” means off the shelf software and all types of tangible personal property, including but not limited to materials, supplies, and equipment.
- j. “Project Manager” shall be CDA designated individual responsible for administering and interpreting the terms and conditions of the Contract Documents, for matters relating to California Deer Association performance under the Contract with the Contractor, and for liaison and coordination between the Contractor and California Deer Association.
- k. “Work” means all labor, tasks, materials, supplies, and equipment required to properly fulfill the Contractor's obligations as required in the Contract Documents.
- l. “Work Day” Unless otherwise specified, workday includes all days of the year except Saturdays, Sundays and Contractors holidays.

2. MATERIAL AND WORKMANSHIP

- a. All work shall be done and completed in a thorough, workmanlike manner, notwithstanding any omission from these specifications or the drawings, and it shall be the duty of Contractor to call attention to apparent errors or omissions and request instructions before proceeding with the work. The Project Manager may, by appropriate instructions, correct errors and omissions, which instructions shall be binding upon Contractor as though contained in the original Contract Documents.
- b. All work must be satisfactory to the Project Manager. Work not in accordance with the Contract Documents, in the opinion of the Project Manager, shall be made to conform.

3. DEFECTIVE WORK

Contractor shall replace at its own expense any part of the work that has been improperly executed, as determined by the Project Manager. If Contractor refuses or neglects to replace such defective work it may be replaced by CDA at the expense of Contractor, and its sureties shall be liable accordingly.

4. SAFETY AND ACCIDENT PREVENTION

In performing work under the Contract on CDA contract premises, Contractor shall conform to any specific safety requirements contained in the Contract or as required by law or regulation. The Contractor shall take any additional precautions as CDA may reasonably require for safety and accident prevention purposes. Any violation of such rules and requirements, unless promptly corrected, shall be grounds for termination of this Contract or Contractor’s right to proceed in accordance with the default provisions of the Contract Documents.

5. CHARACTER OF WORKFORCE

The Contractor shall employ none but skilled, competent, qualified personnel to perform the work and shall always maintain

discipline and order in the conduct of the work.

6. EMPLOYMENT OF APPRENTICES

- a. In the performance of the contract, any Contractor shall comply with the provisions concerning the employment of apprentices in Section 1777.5 of the Labor Code and any amendments thereof.
- b. In the event the Contractor willfully fails to comply with the aforesaid section, such Contractor shall be subject to the penalties for noncompliance in Labor Code, Section 1777.7.

7. CHANGES

- a. Changes in the Work can only be made in writing signed by an authorized employee of CDA. If the change causes an increase or decrease in the contract sum, or a change in the time for performance under the Contract, an adjustment may be made as determined by the Project Manager.
- b. CDA reserves the right to make changes in the design of materials, equipment, or machinery, to make alterations or additions to or deviations or subtractions from the Contract and any specifications and drawings, to increase or decrease the required quantity of any item or portion of the Work or to omit any item or portion of the Work, as may be deemed by the Project Manager to be necessary or advisable and to order such extra work as may be determined by the Project Manager to be required for the proper execution and completion of the whole Work contemplated. Any such changes will be requested in writing by the Project Manager. The determination of the Project Manager on all questions relating to changes, including extra work, shall be conclusive and binding.
- c. Prior to issuing an amendment or change to the Contract, the Project Manager may request that Contractor submit a proposal covering the changes. Within 10 business days of receiving the request, Contractor shall submit its proposal to the Project Manager of all costs associated with the proposed amendment or change and any request for an extension of Contract time. Contractor proposal shall include detailed estimates with cost breakdowns, including labor, material, equipment, overhead, and profit. Labor shall be broken down into hours and rate per hour. If applicable, the proposal shall include a breakdown for off-site labor (including factory labor, engineering, etc.). Contractor proposal shall include an analysis of schedule impact when Contractor is requesting an adjustment in contract time. The Contractor shall be responsible for any delay associated with its failure to submit its change proposal within the time specified. If the Project Manager decides not to issue an amendment or change after requesting a proposal from Contractor, Contractor will be notified in writing. Contractor is not entitled to reimbursement for Change Order preparation costs if Contractor proposal is not accepted by the Project Manager.
- d. If Contractor agrees with the terms and conditions of the approved Change Order, Contractor shall indicate its acceptance by signing the original copy and returning it to the Project Manager within 10 Work Days after receipt or with reasonable promptness and in such sequence as to not delay the Work of Contractor. Payment in accordance with the terms and conditions set forth in the executed Change Order shall constitute full compensation for all Work included in the Change Order, and CDA will be released from any and all claims for direct, indirect, and impact expenses and additional time impact resulting from the Work. If Contractor disagrees with the terms and conditions of the approved Change Order, Contractor shall indicate specific areas of discontract and return the approved Change Order to the Project Manager with a detailed written dispute. No payment will be made on the disputed work until the approved Change Order is returned to the Project Manager. However, whether or not Contractor agrees with the terms and conditions of an approved Change Order, Contractor shall immediately revise its sequence of operations as required to facilitate timely completion of the changed work and shall proceed with the revised work sequence.
- e. The Project Manager may, after having received a written cost quotation from Contractor, order Contractor, in writing, to proceed with the work prior to issuance of an approved Change Order through a change directive. The change directive will authorize Contractor to proceed with the work subject to the cost quotation submitted to California Deer Association. Within five days following receipt of the change directive, Contractor shall submit to the Project Manager, a detailed change proposal documenting the amount of compensation. Until the approved Change Order is received, Contractor shall keep full and complete time and material records of the cost of the ordered work and shall permit the Project Manager to have access to such records. An approved Change Order shall supersede any previously issued written change directive covering the same Work.

8. EFFECT OF EXTENSIONS OF TIME

The granting, or acceptance, or extensions of time to complete the Work or furnish the labor supplies, materials or equipment, does not alter any terms or conditions contained herein, other than the termination date of the contract. Extensions can be granted by the CDA Project Manager to the contractor through a written agreement that both parties agree to.

9. DELAYS

- a. Contractor shall take reasonable precautions to foresee and prevent delays to the Work. When Contractor foresees a delay event, and upon the occurrence of a delay event, Contractor shall immediately notify the Project Manager of the probability or the actual occurrence of a delay, and its cause. With respect to all delays (compensable, excusable, or inexcusable),

Contractor shall reschedule the Work and revise its operations, to the extent possible, to mitigate the effects of the delay. Within 15 days from the beginning of a delay Contractor shall provide the Project Manager with a detailed written description of the delay, its cause, its impact, and Contractor mitigation plans. Failure to provide the notification required above waives Contractor's right to any additional time or compensation resulting from the delay for whatever cause. The Project Manager will investigate the facts and ascertain the extent of the delay, and the Project Manager's findings thereon shall be final and conclusive, except in the case of gross error. An extension of time must be approved by the Project Manager to be effective, but an extension of time, whether with or without consent of the sureties, shall not release the sureties from their obligations, which shall remain in full force until the discharge of the contract. the extent of the delay, and the Project Manager's findings thereon shall be final and conclusive, except in the case of gross error. An extension of time must be approved by the Project Manager to be effective, but an extension of time, whether with or without consent of the sureties, shall not release the sureties from their obligations, which shall remain in full force until the discharge of the contract.

- b. For inexcusable delays (delays caused by circumstances within Contractor's control, or supplies of any tier, or within the scope of Contractor's contract responsibilities) Contractor shall not be entitled to an extension of time or additional compensation for any loss, cost, damage, expense, or liability resulting directly or indirectly from the inexcusable delay.
- c. For excusable delays (delays to completion of the Work within the time limits set forth in the Contract Documents directly caused by events beyond the control of Contractor, which delay is not concurrent with an inexcusable delay, and which could not have been avoided by Contractor through reasonable mitigation measures).
- d. For compensable delays (delays to completion of the Work within the time limits set forth in the Contract Documents that could not be avoided by Contractor mitigation, caused directly and solely by Contractor or by causes within the exclusive control of Contractor, and which were not concurrent with any other type of delay) the Project Manager will grant Contractor an extension of the time to perform under the Contract and compensation in an amount that represents Contractor actual direct costs incurred as a direct result of the compensable delay. Contractor may recover its direct costs only and may not recover (and waives) all other types of indirect, consequential, special and incidental damages.
- e. For concurrent delays (two or more independent causes of delay directly preventing Contractor from completing the Work within the time limits set forth in the Contract Documents where the delays occur at the same time during all or a portion of the delay period being considered, and where each of the delays would have caused delay to Contractor even in the absence of any of the other delays, and none of the delays could have been avoided by Contractor mitigations) the following rules apply:
 - i. One or more of the concurrent delays are excusable or compensable, then the period of concurrent delay will be treated as an excusable delay; and
 - ii. All of the concurrent delays are inexcusable; then, the period of concurrent delay will be inexcusable.

10. TERMINATION

- a. Termination by Contractor for Cause:
 - i. CDA may terminate Contractor's right to proceed under the Contract, in whole or in part, for cause at any time after the occurrence of any of the following events, each of which constitutes a default:
 1. Contractor becomes insolvent or files for relief under the bankruptcy laws of the United States.
 2. Contractor makes a general assignment for the benefit of its creditors or fails to pay its debts as the same become due.
 3. A receiver is appointed to take charge of Contractor's property.
 4. Contractor fails to supply skilled supervisory personnel, an adequate number of properly skilled workers, proper materials, or necessary equipment to prosecute the Work in accordance with the Contract Documents.
 5. Contractor fails to make progress so as to endanger performance of the Work within the contractually required time.
 6. Contractor disregards legal requirements of agencies having jurisdiction over the Work.
 7. Contractor fails to provide CDA with a written plan to cure a CDA identified default within five business days after CDA's request for a plan to cure; CDA does not accept the Contractor's plan for curing its default; or Contractor does not fully carry out an accepted plan to cure.
 8. Contractor abandons the Work. Abandonment is conclusively presumed when CDA requests a written plan to cure a default, and Contractor does not submit the plan within five business days of CDA's request.
 9. Contractor materially fails to meet its obligations in accordance with the Contract Documents.
 10. Contractor is in default of any other material obligation under the Contract Documents.
 - ii. If any of the above events occur, CDA may, in its discretion, require that Contractor submit a written plan to cure its default, which plan must be provided to CDA within 5 business days of the request and must include a realistic, executable plan for curing the noted defaults.
 - iii. Upon any of the occurrences referred to in Article 18.a.i. above, CDA may, at its election and by notice to

- Contractor, terminate the Contract in whole or in part; accept the assignment of any or all of the subcontracts; and then complete the Work by any method CDA may deem expedient. If requested by CDA, Contractor shall remove any part or all of the Contractor's materials, supplies, equipment, tools, and machinery from the site of the Work within seven days of such request; and, if Contractor fails to do so, CDA may remove or store, and after 90 days sell, any of the same at Contractor's expense.
- iv. No termination or action taken by CDA after termination shall prejudice any other rights or remedies of CDA provided by law or by the Contract Documents.
 - v. Conversion: If, after termination for other than convenience, it is determined that Contractor was not in default or material breach, or that the default or material breach was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for convenience pursuant to Article 18.b. below.
- b. Termination by CDA for Convenience
- i. CDA may, at its option and for its convenience, terminate the Contract at any time by giving written notice to Contractor specifying the effective date of termination. Upon such termination, Contractor agrees to comply with the notice and further agrees to waive any claims for damages, including loss of anticipated profits, on account of the termination; and, as the sole right and remedy of Contractor, CDA shall pay Contractor as set forth below
 - ii. Upon receipt of a notice of termination for convenience, Contractor shall, unless the notice directs otherwise, do the following:
 1. Immediately discontinue its performance of the Contract to the extent specified in the notice.
 2. Place no further orders or subcontracts for materials, equipment, services, or facilities, except as may be necessary for completion of a portion of the Work that is not discontinued or that is necessary for an orderly cessation of the Work.
 3. Promptly cancel, on the most favorable terms reasonably possible, all subcontracts to the extent they relate to the performance of the discontinued portion of the Work.
 4. Thereafter, do only such Work as may be necessary to preserve and protect Work already in progress and to protect materials, plants, and equipment in transit to or on the site of performance.
 - iii. Upon such termination for convenience, CDA will pay to Contractor the sum of the following:
 1. The amount of the contract sum allocable to the portion of the Work properly performed by Contractor as of the effective date of termination, less sums previously paid to Contractor.
 2. Previously unpaid costs of any items delivered to the project site that were already fabricated for subsequent incorporation into the Work.
 3. Any proven losses with respect to materials and equipment directly resulting from the termination.
 4. Reasonable demobilization costs.
 - iv. The above reimbursement is the sole and exclusive remedy to which Contractor is entitled in the event the contract is terminated for convenience; and Contractor expressly waives any other claims, damages, demands, compensation, or recovery related to this contract or project. The Contractor agrees to sign a general release incorporating this waiver.
- c. Effect of Termination: Upon termination, the obligations of the Contract shall continue as to portions of the Work already performed and, subject to the Contractor's obligations under Article 18.b.ii, as to bona fide obligations assumed by Contractor prior to the date of termination.
- d. Force Majeure: If the contract is suspended or terminated by CDA because Contractor's performance is prevented or delayed by an event including an irresistible, superhuman cause, or by the act of public enemies of the State of California or of the United States ("Force Majeure"), Contractor will be paid for Work performed prior to the Force Majeure event at either (i) the unit prices named in the Contract; or (ii) in the event no unit prices are named, a sum equal to the percentage of the total contract amount that matches the percentage of the total contract Work performed prior to the Force Majeure event.

11. DAMAGES

All losses or damages to material or equipment to be furnished pursuant to the Contract Documents occurring prior to receipt and final acceptance of the Work shall be sustained by Contractor. Contractor shall sustain all losses arising from unforeseen obstructions or difficulties, either natural or artificial, encountered in the prosecution of the Work, or from any action of the elements prior to final acceptance of the work, or from an act or omission on the part of Contractor not authorized by the Contract Documents.

12. ORDER OF PRECEDENCE

- a. In the case of conflicts, errors, or discrepancies in any of the Contract Documents, the order of precedence is as follows. Within the same order of precedence, specific requirements shall take precedence over general requirements.
 - i. Approved Change Orders
 - ii. Addenda

- iii. RFQ or RFB.
- iv. Referenced Standard Specifications and Drawings
- v. Contractor Response Packet

13. INDEMNIFICATION/RESPONSIBILITY

- a. Contractor shall indemnify, keep, and save harmless CDA and each of its directors, officers, agents, and employees against any and all suits, claims or actions arising out of any of the following:
 - i. Any injury to persons or property that may occur, or that may be alleged to have occurred, arising from the performance or implementation of this Contract; or
 - ii. Any allegation that materials or services developed, provided, or used for this Contract infringe or violate any copyright, trademark, patent, trade secret, or any other intellectual-property or proprietary right of any third party.
- b. Contractor further agrees to defend any and all such actions, suits or claims and pay all charges of attorneys and all other costs and expenses of defenses as they are incurred. If any judgment is rendered, or settlement reached, against CDA or any of the other agencies or individuals enumerated above in any such action, Contractor shall, at its expense, satisfy and discharge the same.
- c. This indemnification shall survive termination or expiration of the Contract.

14. PROHIBITION OF ASSIGNMENT

Contractor shall not assign, transfer, or otherwise dispose of any of its rights, duties, or obligations under this Contract.

15. NEWS RELEASES

Contractor, its employees, contractors, and agents shall not refer to CDA, or use any logos, images, or photographs of CDA for any commercial purpose, including, but not limited to, advertising, promotion, or public relations, without CDA's prior written consent.

16. TRANSFER OF INTEREST

Contractor shall not assign, transfer, or otherwise substitute its interest in the Contract or any of the contract obligations without prior written consent from CDA.

17. SEVERABILITY

Should any part of the Contract be declared by a final decision by a court or tribunal of competent jurisdiction to be unconstitutional, invalid or beyond the authority of either party to enter into or carry out, such decision shall not affect the validity of the remainder of the Contract, which shall continue in full force and effect, provided that the remainder of the Contract can be interpreted to give effect to the intentions of the parties.

18. COVENANT AGAINST GRATUITIES

Contractor warrants that no gratuities (in the form of entertainment, gifts, or otherwise) were offered or given by Contractor, or any agent or representative of Contractor, to any officer or employee of CDA with a view toward securing the Contract or securing favorable treatment with respect to any determinations concerning the performance of the Contract. For breach or violation of this warranty, CDA shall have the right to terminate the Contract, either in whole or in part, and any loss or damage sustained by CDA in procuring on the open market any items which Contractor agreed to supply shall be borne and paid for by Contractor. The rights and remedies of CDA provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or in equity.

19. RIGHTS AND REMEDIES OF CDA

The rights and remedies of CDA provided herein shall not be exclusive and are in addition to any other rights and remedies provided by law or under the Contract.

20. WAIVER OF RIGHTS

Any action or inaction by CDA or the failure of CDA on any occasion, to enforce any right or provision of the Contract, shall not be construed to be a waiver by CDA of its rights and shall not prevent CDA from enforcing such provision or right on any future occasion. Rights and remedies are cumulative and are in addition to any other rights or remedies that CDA may have at law or in equity.

21. CONFIDENTIALITY

Contractor agrees to maintain in confidence and not disclose to any person or entity, without CDA's prior written consent, any trade secret or confidential information, knowledge or data relating to the products, process, or operation of CDA. Contractor further agrees to maintain in confidence and not to disclose to any person or entity, any data, information, technology, or material



developed or obtained by Contractor during the term of the Contract. The covenants contained in this paragraph shall survive the termination of this Contract for whatever cause.



EXHIBIT E - Product Removal Specifications

The California Deer Association will be seeking fair market value on the products listed below. Amendments may be utilized when contractor(s) are selected by CDA. These amendments will be utilized to update actual rates, minor modifications, and map updates. Actual rates will be reviewed by the U.S. Forest Service and CDA staff to ensure fair market value was achieved.

E.1. Location and Area

This Contract Area of: South Whitlow Stewardship Sale	<i>Approx. 440.2 acres</i>	Acres more or less are in located in:	Township 40N, Range 2E, Sections 13, 24, and 25; Township 40N, Range 3E, Sections 18, 19, 30, 31; <i>Mount Diablo Meridian; Siskiyou County</i>
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E.2. Volume Estimate and Utilization Standards

Species	Product	Estimated Quantity	Unit of Measure	Minimum Specifications				
				Merchantable Tree		Piece Required to be Removed		
				Diameter at Breast Height (D.B.H) (inches)	Number of Minimum Pieces per Tree	Length (feet)	Diameter Inside Bark at Small End (inches)	Net Scale in % of Gross Scale
Mandatory Bid Items								
Combined Softwood	Sawtimber	26,752	Ton	10.0	1	10.0	6.0	12
Combined Softwood	Biomass	5,721	Ton	3.0	1	6.0	N/A	16
Total Quantity		32,473						
Optional Bid Items								
Combined Softwood	Sawtimber	-	Ton	10.0	1	10.0	6.0	12
Combined Softwood	Grn Bio Cv	-	Ton	3.0	1	6.0	N/A	16

E.2.1. Utilization and Removal of Included Timber

“Utilization Standards” for trees and minimum pieces are stated in E.2. To meet minimum tree specifications, trees must equal or exceed tree diameters listed in E.2 and contain at least one minimum piece. Except for timber required or authorized to be left, the Contractor shall fell and buck such trees and shall remove from Contract Area all pieces that:

- a) Meet minimum piece standards in E.2
- b) Do not meet such standards but would have qualified as part of minimum pieces if bucking lengths were varied to include such material.

E.2.1.1. Standard Timber

Live and dead trees and portions thereof that meet Utilization Standards are designated for cutting.

E.2.1.1. Substandard Timber

Live and dead trees that:

- a) Do not meet Utilization Standards, and
- b) Are located in Clearcutting Units or construction clearings or are otherwise designated for cutting.

E.2.2. Damaged Timber

E.2.2-a. Damaged by the Contractor

Undesignated live trees meeting Utilization Standards (a) within 200 feet slope distance from centerline of roads constructed hereunder which are damaged by the Contractor’s construction to the extent that considerable deterioration or mortality is



imminent and are designated by Forest Service for felling before the nearest road segment is substantially completed; or (b) which are damaged by the Contractor in logging and are subsequently Marked before the Contractor has completed skidding or yarding operations in the immediate area. By agreement, such trees may be left without charge if their removal would cause undue damage or be grossly uneconomic.

E.2.2-b. Negligent or Willful Damage

Undesignated timber meeting Utilization Standards and unnecessarily damaged or negligently or willfully cut by the Contractor, if included by Forest Service.

E.2.2-c. Minor Damage by Natural Causes

Undesignated trees within the Contract Area and meeting Utilization Standards, that become insect infested, wind thrown, suffer serious damage, or die, as designated by agreement.

E.2.3. Unintentionally Cut Timber

Trees within or immediately adjacent to Contract Area, or to road construction or other authorized clearing outside Contract Area, not designated for cutting but that are cut through mistake by Contractor, when included by Forest Service.

E.2.4. Other Material

Species or products not listed in the agreement, upon written approval of Forest Service.

E.3. High Stumps

Species	Product	Maximum Stump Height (inches)	Minimum Stump Height (inches)
Combined Softwood	01 (Saw timber)	12.0	4.0
Combined Softwood	20 (Grn Bio Cv)	12.0	4.0

E.4 . Timber Rates (Scaled)

Cutting Unit Number	Approx. Acres					Rates Per Unit of Measure		
		Species	Product	Estimated Quantity	Unit of measure	Rate of Payment \$/UOM	Deposits for Slash Disposal	Surface Replacement
<i>Mandatory Bid Items</i>								
All	436.2	CS	Sawtimber	26,752	Ton		\$0.44	\$1.85
All	436.2	CS	Grn Bio CV	5,721	Ton		\$0.44	\$1.85
<i>Timber Subject to Agreement</i>								
		Other Softwood	Sawtimber	-	Ton		\$0.44	\$1.85
		Other Softwood	Grn Bio CV	-	Ton		\$0.44	\$1.85

E.5. Timber Designations.

Timber designated for cutting shall be confined to the Contract Area. No undesignated timber shall be cut without prior notification to and written approval by Forest Service. Prescriptions and timber designations are included in this Exhibit.

	Number	Acres
Clearcutting Units		
Specified Road Clearing		
Overstory Removal Units		
Understory Removal Units		
Individual Trees		436.2

Incompletely Marked Timber		
Biomass Piles		

E.6. Cutting Unit Boundary Designation

The boundaries of cutting units are designated as shown in the following table. The trees used for boundary designation are not to be cut.

Cutting Unit	Boundary Paint Color	Boundary Designation
All Units	Orange	Unit boundaries are designated with three orange vertical paint stripes (middle stripe faces into the unit) and two butt marks, yellow unit boundary tags, unit corner tags, and roads as shown on Contract Area Map. Unit boundaries are flagged with BLUE flagging.
Equipment Exclusion Zones (EEZ) – streamcourses and wetlands	None	Areas posted with Blue and White candy striped flagging and “Tractor Prohibited” signs. No wheeled or tracked equipment is allowed within the area unless prior written approval by Forest Service.

E.7. Tree Designation / Prescriptions

Cutting Unit / Subdivision / Area / Payment Unit	Tree Paint Color	Product	Designation or Specification
Contract Area	Green	Sawlogs/ Biomass 01/20	<u>Hazard Tree</u> . All dead and unstable live trees which are leaning towards a road or are otherwise hazardous to a road, and are sufficiently tall to reach Contractor’s landings or the roadbed of National Forest System roads within the Contract Area, shall be felled by Contractor when Marked in the specified paint color above and below stump height in advance of felling any other timber in the vicinity. Pieces meeting Utilization Standards from such dead and unstable live trees shall be removed unless Contractor is notified in writing that removal would cause unacceptable damage to areas requiring special protection such as residual timber, roads, administrative sites, streamside management zones, and areas identified on the Contract Area Map or on the ground.
Units 507, 544, 567, 568, 569, 601, 606, 623, 757, 778, 779, 798, Optional Unit 861	Blue	Sawlogs 01	<u>Individual Tree Mark</u> . Individual trees are designated for cutting only if Marked above and below stump height with the specified paint color.
Units 698, 820, 857	Orange	Sawlogs 01	<u>Leave Tree Mark</u> . All live <u>conifer sawtimber</u> are designated for cutting unless Marked as leave trees. Leave trees are Marked above and below stump height with the specified paint color. Contract Area Map indicates areas plainly identified on the ground where leave trees are Marked and left uncut.
Units 507, 544, 567, 568, 569, 601, 606, 623, 757, 778, 779, 798, Optional Unit 861	Black	Sawlogs 01	<u>Marked Out Trees</u> . When it is necessary to delete previously marked trees, an unique tree marking paint color will be Marked over or adjacent to the original mark, but will not obscure the original marking. Trees Marked with the original marking paint color and the unique tree marking paint color are not Included Timber.
Units 507, 544, 567, 568, 569, 601, 606, 698, 757, 778, 779, 798	N/A		Designation by Spacing (DxSPA)
Units 623, 820, 857, optional unit 861	N/A		Designation by Species and Diameter (DxSPD)



E.7-a. Designation by Spacing.

Within Subdivision(s) or cutting unit(s) as shown below and on the Contract Area Map, trees that meet Utilization Standards and one or more of the following criteria below are designated for cutting. Other trees to be left uncut are described below.

Subdivision(s) or cutting units 757, 778, 779, 798

All live conifers (except removal all knobcone pine) species trees, except trees Marked with orange color paint or described below to be left uncut, and one or more of the following criteria are designated for cutting:

- a) The tree is within 22 feet of a live tree that has a larger diameter than it; and the larger tree is not designated for cutting.
- b) The tree is within 22 feet of a live sugar pine (SP) and black oak (BO) tree greater than or equal to 10 inches in diameter; and this tree is not designated for cutting.
- c) The tree is Marked with blue color paint.

Subdivision(s) or cutting units 507, 544, 567, 568, 569, 601, 606, 698

All live conifers (except remove all knobcone pine) species trees, except trees Marked with orange color paint or described below to be left uncut, and one or more of following criteria are designated for cutting:

- a) The tree is within 20 feet of a live tree that has a larger diameter than it; and the larger tree is not designated for cutting.
- b) The tree is within 20 feet of a live SP and BO tree greater than or equal to 10 inches in diameter; and this tree is not designated for cutting.
- c) The tree is Marked with blue color paint.

Distances are measured horizontal distance, outside bark to outside bark, at the nearest point on each tree stem, at the stump height specified below for diameter measurement.

All diameters are measured outside the bark at 12 inches above ground on the uphill side of the tree. Diameters shall be measured using a “diameter equivalents of circumference” tape measure, caliper, electronic laser method, or equivalent method by agreement.

All live SP and BO shall be left as leave trees, unless Marked with blue color paint.

No tree greater than or equal to the below listed diameters shall be cut, unless Marked with blue color paint:

- a) No tree greater than or equal to 12 inches in **cutting units** 507, 544, 567, 568, 569, 601, 606, 698
- b) No tree greater than or equal to 26 inches in **cutting units** 757, 778, 779, 798

Other trees that shall be left uncut are Marked with orange color paint.

E.7-b. Designation by Species and Diameter.

Trees that meet Utilization Standards are designated for cutting, as shown on the Tree Designation Table and Contract Area Map, except trees Marked with orange paint or described to be left uncut.

Tree Designation Table			
<i>Subdivision(s) or Cutting Unit(s)</i>	<i>Designated Species</i>	<i>More than Diameter (inches)</i>	<i>Less than Diameter (inches)</i>
623, 820, 857, optional unit 861	All live conifers	5	12

Additional trees to be cut, if any, are Marked with blues color paint. Trees that shall be left uncut are Marked with orange color paint.

All diameters are measured outside the bark at 12 inches above ground on the uphill side of the tree. Diameters shall be measured using a “diameter equivalents of circumference” tape measure, caliper, electronic laser method, or equivalent method by agreement.

E.8 Control of Operations.

E.8-a. Schedule of Operations

Unless otherwise agreed in writing, Operations shall be performed in accordance with the following:

Schedule of Operations Table		
Contract Area	All Grn Bio Cv products shall be removed from each landing with 180 days of completion of the Sawtimber products removal. This requirement may be waived by Forest Service upon written agreement.	Reduce the risks of infestation from slash breeding insects.
Contract Area	Contractor shall deck separately Sawtimber and Non-Sawtimber products prior to the removal of products from the landing. Product decks shall be removed from the Contract Area in separate operations with all Sawtimber removed from each landing prior to the removal of Non-Sawtimber. Forest Service shall inspect and approve utilization and removal of Sawtimber products prior to the initiation of Non-Sawtimber product removal on a landing-by-landing basis.	Accountability for agreement having two products with different pricing.
Contract Area	Complete falling and substantially complete removal of included products in one Subdivision prior to entering another Subdivision, unless waived in writing by Forest Service. .	To ensure harvest and removal of all included products in each Subdivision and to improve control of operations.

E.8-b. Site Specific Special Protection Measures.

Additional areas needing special measures for protection may be discovered or identified; protective measures may be revised or newly prescribed, and additional species of plants and/or animals may be added to federal lists of protected species. In such event, the CDA/Forest Service may delay or interrupt the Contractors operations, under this agreement and/or modify the agreement. Discovery, by either the Contractor or CDA, of additional areas, resources, species, or members of species needing special protection shall be promptly reported to the other party.

Unless agreed otherwise, the following special protection measures apply:

Special Measures Areas (SMA) Table		
<i>SMA Type</i>	<i>Designation Method</i>	<i>Special Protection Measure</i>
SMA1	B	No equipment or other ground disturbing activities within the designated areas. Upon Forest Service written approval this restriction may be modified during periods of snow cover (with minimum 6 inches) and frozen ground conditions.
SMA2	A	No equipment or other activities within the designated areas. Upon Forest Service written approval this restriction may be modified during periods of snow cover, which must have at least 12 inches depth of compacted snow or ice throughout the duration of undertaking activities on site. A separate map will be provided to the contractor showing locations.



SMA Designation Methods:

- A. SMA boundary designated by solid red with red/white candy-striped flagging and yellow “Tractors Prohibited” signs.
- B. SMA is shown on Contract Area Map and SMA boundary designated by red and white striped flagging.
- C. SMA is only shown on Contract Area Map.

Site Specific Special Wildlife Survey Measures:

Notwithstanding Conditions listed in table above, when agreed to in writing Contractor may request a waiver of operating restrictions. If granting such a request requires on the ground surveys prior to approval or denial, Forest Service will have 10 days to commence such surveys following the acceptance of Contractor’s request by Forest Service. If the Forest Service cannot proceed with these surveys, the Contractor may request that a qualified wildlife biologist selected by the Contractor, and approved by the Forest Service, be allowed to conduct the survey based on protocol provided by the Forest Service. The biologist may be an employee of the Contractor. The survey of the biologist will be conducted at no cost to the Forest Service. All surveys will document survey methodology, locations, time and dates, personnel and results. The Forest Service will have 5 working days to determine whether a waiver is granted after the results are presented. If no decision is made by the Forest Service, the waiver is considered denied. The waiver is only granted for the operating season in which the surveys were performed.

E.9. Roads.

Contractor is authorized to construct and maintain roads, bridges, and other transportation facilities, as needed for conducting treatments on National Forest and other lands where Forest Service has such authority. As used in this Supplemental Project Agreement, “construct” includes “reconstruct.”

E.9-a. Specified Roads.

E.9-b. Road Maintenance Requirements.

CDA shall maintain roads in accordance with the following Road Maintenance Requirements.

Road Maintenance Requirements Summary

Road	Termini		Miles	Applicable Pre-Haul Road Maintenance Specifications										
	From	To		801	802	803	804	805	806	807	808	809	810	
40N36X	Unit 623 SW Corner	40N50	0.41											
40N50	40N36X	40N18Y	0.69											
40N18Y	40N50	40N38.1	0.33											
40N38.1	40N18Y	Unit 698 NW Corner	0.53											
40N38.2	Unit 698 NW Corner	Unit 568 NE Corner	0.64											
40N38.3	Unit 568 NE Corner	40N24Y.1	0.30											
40N24Y.1	40N38.3	Unit 757 NW Corner	0.23				P							
40N24Y.2	Unit 757 NW Corner	40N24.3	2.73				P							
40N24Y.3	40N24.2	1S002	4.23				P							

*P = Contractor Performance Item



Road	Termini		Miles	Applicable During-Haul Road Maintenance Specifications									
	From	To		801	802	803	804	805	806	807	808	809	810
40N36X	Unit 623 SW Corner	40N50	0.41			P			P				
40N50	40N36X	40N18Y	0.69			P			P				
40N18Y	40N50	40N38.1	0.33			P			P				
40N38.1	40N18Y	Unit 698 NW Corner	0.53										
40N38.2	Unit 698 NW Corner	Unit 568 NE Corner	0.64										
40N38.3	Unit 568 NE Corner	40N24Y.1	0.30										
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40N24Y.2	Unit 757 NW Corner	40N24.3	2.73										
40N24Y.3	40N24.2	1S002	4.23										

*P = Contractor Performance Item

Road	Termini		Miles	Applicable Post-Haul Road Maintenance Specifications									
	From	To		801	802	803	804	805	806	807	808	809	810
40N36X	Unit 623 SW Corner	40N50	0.41			P							
40N50	40N36X	40N18Y	0.69			P							
40N18Y	40N50	40N38.1	0.33			P							
40N38.1	40N18Y	Unit 698 NW Corner	0.53										
40N38.2	Unit 698 NW Corner	Unit 568 NE Corner	0.64										
40N38.3	Unit 568 NE Corner	40N24Y.1	0.30										
40N24Y.1	40N38.3	Unit 757 NW Corner	0.23										
40N24Y.2	Unit 757 NW Corner	40N24.3	2.73										
40N24Y.3	40N24.2	1S002	4.23										

*P = Contractor Performance Item

E.9-c. Use of Roads By the Contractor.

Contractor's use of existing roads identified on the Contract Area map by the following codes is prohibited or subject to restrictive limitations, unless agreed to otherwise:

Code	Use Limitations
X	Hauling prohibited
R	Hauling restricted
U	Unsuitable for hauling prior to completion of agreed reconstruction
P	Use prohibited



A	Public use restriction
W	Regulation waiver

Roads coded A will be signed by Forest Service to inform the public of use restrictions. Contractor’s use of roads coded R, A, or W shall be in accordance with the following restriction:

Restricted Road List					
Road Number	Road Name	Termini		Map Legend	Description of Restrictions
		From	To		
40N36X	Whitlow East	Unit 507	Unit 569	R	Hauling Restricted without written Forest Service approval
40N36X	Whitlow East	Unit 569	Unit 623	R	Hauling Restricted without written Forest Service approval

F.9-d. Road Maintenance Deposit.

When CDA requests payment in lieu of Contractor's performance of road maintenance, Contractor shall make Required Deposits (16 USC 537) for current and/or deferred road maintenance. Such deposits are based on the estimated volume and distance hauled and Contractor’s commensurate use of each road listed in the Road Maintenance Plan in E.9-b. Contractor and CDA may agree in writing on adjustment of such rates. If Contractor uses roads under jurisdiction of Forest Service other than those listed in the Road Maintenance Plan, Forest Service shall establish rates commensurate with Contractor's use of such roads. The Required Deposits for Forest Service work in lieu of Contractor performance are \$0.22 per Ton for recurrent maintenance.

E.9-e. Road and Water Supply Use.

National Forest water supply locations, access, method of filling trucks, period of water availability and procedures designed to maintain water quality at each location shall be agreed in advance of use. Such use shall at no time reduce water supplies to the level that further use may be detrimental to aquatic resources or other established use. Waterholes and other improvements relating to said water supplies shall be put into condition, prior to expected seasonal periods of precipitation or runoff, to avoid resource damage.

Damage to resources at such locations caused by Contractor’s operations, other than fire suppression activities, shall be repaired by the Contractor in a timely and agreed manner to the extent practicable to restore and prevent further resource damage.

Unless otherwise agreed, Contractor’s use of roads and other water supply requirements shall conform to the following table.

Requirements of Road and Water Supply Use	
Load Limitations	<p>Contractor shall notify CDA in writing of the planned size and load distribution for equipment which exceeds the State of California Vehicle Code legal size and weight, and the National Forest System roads to be used. Such notice may be part of plan of operation. Within 15 days after receipt of the written notice, Forest Service shall notify Contractor in writing of any regulations or restrictions that may be needed to protect National Forest Transportation Facilities.</p> <p>A written permit shall be required for moving any vehicle which is in excess of the established legal size and weight which is not listed in the above plan, except as may be authorized in prior written agreements.</p>
Existing Non-National Forest System Roads	Roads not shown on Contract Area Map may be used as Temporary Roads if there is agreement before use is started.
Snow Removal	<p>If Contractor removes snow from roads, such work shall be done with CDA approval and in a manner that will protect roads and adjacent resources.</p> <p>Snow berms shall be removed or placed to avoid accumulation of melt water on the road and prevent water concentration on erosive slopes or soils.</p> <p>Snow must not be removed to the road surface. A minimum 4-inch snow depth must be left to protect the roadway. If the road surface is damaged, Contractor shall replace lost surface material and</p>



	<p>repair structures damaged in blading operations prior to hauling, unless climatic conditions prevent necessary work from being accomplished or as otherwise agreed in writing.</p> <p>Single lane roads shall be plowed full width including turnouts. In event double lane roads are not plowed to full width, warning signs shall be required and plowing shall be no less than single lane (12 feet) with intervisible turnouts.</p>																																																							
Water Supply Deposits	<p>If Contractor utilizes the water site located T41, R2E, Section 30, for any listed activity, Contractor shall make deposit with CDA for that activity at the time and in the amount shown in the Water Supply Deposit Schedule below.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="4" style="text-align: center;">Water Supply Deposit Schedule</th> </tr> <tr> <th style="text-align: center;"><i>Activity</i></th> <th style="text-align: center;"><i>Unit of Payment</i></th> <th style="text-align: center;"><i>Unit Cost</i></th> <th style="text-align: center;"><i>Time of Payment</i></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Water</td> <td style="text-align: center;">Load</td> <td style="text-align: center;">\$5.00</td> <td style="text-align: center;">Due upon billing</td> </tr> </tbody> </table>	Water Supply Deposit Schedule				<i>Activity</i>	<i>Unit of Payment</i>	<i>Unit Cost</i>	<i>Time of Payment</i>	Water	Load	\$5.00	Due upon billing																																											
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Surface Replacement Deposits	<p>Contractor shall make Required Deposits for deferred surface replacement (16 U.S.C. 537) for use of existing surfaced roads. If applicable, such deposits shall be based upon the volume and distance hauled on the roads and at the applicable rates listed in the table below titled Surface Replacement Deposit Schedule. If Contractor uses surfaced roads under jurisdiction of Forest Service other than those listed, CDA may establish applicable rates for such surfaced roads.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="5" style="text-align: center;">Surface Replacement Deposit Schedule</th> </tr> <tr> <th style="text-align: center;"><i>Road No.</i></th> <th style="text-align: center;"><i>From</i></th> <th style="text-align: center;"><i>To</i></th> <th style="text-align: center;"><i>Miles</i></th> <th style="text-align: center;"><i>Rate Per Ton</i></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">40N36X</td> <td style="text-align: center;">Unit 623 SW Corner</td> <td style="text-align: center;">40N50</td> <td style="text-align: center;">0.41</td> <td style="text-align: center;">\$0.000</td> </tr> <tr> <td style="text-align: center;">40N50</td> <td style="text-align: center;">40N36X</td> <td style="text-align: center;">40N18Y</td> <td style="text-align: center;">0.69</td> <td style="text-align: center;">\$0.000</td> </tr> <tr> <td style="text-align: center;">40N18Y</td> <td style="text-align: center;">40N50Y</td> <td style="text-align: center;">40N38.1</td> <td style="text-align: center;">0.33</td> <td style="text-align: center;">\$0.010</td> </tr> <tr> <td style="text-align: center;">40N38.1</td> <td style="text-align: center;">40N18Y</td> <td style="text-align: center;">Unit 698 NW Corner</td> <td style="text-align: center;">0.53</td> <td style="text-align: center;">\$0.040</td> </tr> <tr> <td style="text-align: center;">40N38.2</td> <td style="text-align: center;">Unit 698 NW Corner</td> <td style="text-align: center;">Unit 568 NE Corner</td> <td style="text-align: center;">0.64</td> <td style="text-align: center;">\$0.048</td> </tr> <tr> <td style="text-align: center;">40N38.3</td> <td style="text-align: center;">Unit 568 NE Corner</td> <td style="text-align: center;">40N24Y.1</td> <td style="text-align: center;">0.30</td> <td style="text-align: center;">\$0.047</td> </tr> <tr> <td style="text-align: center;">40N24Y.1</td> <td style="text-align: center;">40N38.3</td> <td style="text-align: center;">Unit 757 NW Corner</td> <td style="text-align: center;">0.23</td> <td style="text-align: center;">\$0.036</td> </tr> <tr> <td style="text-align: center;">40N24Y.2</td> <td style="text-align: center;">Unit 757 NW Corner</td> <td style="text-align: center;">40N24.3</td> <td style="text-align: center;">2.73</td> <td style="text-align: center;">\$0.575</td> </tr> <tr> <td style="text-align: center;">40N24Y.3</td> <td style="text-align: center;">40N24.2</td> <td style="text-align: center;">1S002</td> <td style="text-align: center;">4.23</td> <td style="text-align: center;">\$1.092</td> </tr> </tbody> </table> <p>Sale Area Average Rate: <u>\$1.85 / Ton</u></p>	Surface Replacement Deposit Schedule					<i>Road No.</i>	<i>From</i>	<i>To</i>	<i>Miles</i>	<i>Rate Per Ton</i>	40N36X	Unit 623 SW Corner	40N50	0.41	\$0.000	40N50	40N36X	40N18Y	0.69	\$0.000	40N18Y	40N50Y	40N38.1	0.33	\$0.010	40N38.1	40N18Y	Unit 698 NW Corner	0.53	\$0.040	40N38.2	Unit 698 NW Corner	Unit 568 NE Corner	0.64	\$0.048	40N38.3	Unit 568 NE Corner	40N24Y.1	0.30	\$0.047	40N24Y.1	40N38.3	Unit 757 NW Corner	0.23	\$0.036	40N24Y.2	Unit 757 NW Corner	40N24.3	2.73	\$0.575	40N24Y.3	40N24.2	1S002	4.23	\$1.092
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E.10. Scaling Instructions and Specifications

Name and Date of Governing Instructions: FSH 2409.11a, National Forest Cubic Log Scaling Handbook, as amended and supplemented. Governing instructions for products contained in E.2.

E.11. Scaling Services

Species	Product	Unit of Measure	Site and Geographic Location	Method	Standard Estimated Cost per Unit
Combined Softwood	All	Ton	As approved and agreed to by CDA	100% Weight Scale	\$0.00

E.12. Advance Deposits.

Contractor agree(s) to make advanced deposits in advance of cutting. These deposits may be in the form of cash, acceptable payment bond, or a combination thereof. Advanced deposits will be in such amounts as to maintain an unobligated balance sufficient to cover the value of timber to be cut. CDA and Contractor will agree on a systematic approach for providing sufficient advanced deposits. If the credit balance is less than the amount due for timber, CDA will suspend all or any part of Contractor’s operations until payment or acceptable payment guarantee is received.

E.13. Title Passage.

Scaled.

All right, title, and interest in and to any included timber shall remain with the Forest Service until it has been cut, scaled, and removed from the Contract Area or other authorized cutting area, and paid for, at which time title shall then vest with CDA. Timber



cut under cash deposit or acceptable payment guarantee shall be considered to have been paid for. Title to any included timber that has been cut, scaled and paid for, but not removed from the Contract Area or other authorized cutting area by the Contractor on or prior to the termination date, shall remain with the Forest Service.

Tree Measurement.

All right, title, and interest in and to any included timber shall remain with the Forest Service until it has been measured, paid for, and removed from the Contract Area or other authorized cutting area, at which time title shall then vest with CDA. Timber cut under cash deposit or acceptable payment guarantee shall be considered to have been paid for. Title to any included timber that has been measured and paid for but not removed from the Contract Area or other authorized cutting area by Contractor on or prior to the termination date, shall remain with the Forest Service.

E.14. Liability

Liability for Loss.

If Included Timber is destroyed or damaged by an unexpected event that significantly changes the nature of Included Timber, such as fire, wind, flood, insects, disease, or similar cause, the party holding title shall bear the timber value loss resulting from such destruction or damage; except that such losses after removal of timber from the Contract Area, but before scaling, shall be borne by Contractor at current Contract Rates and Required Deposits. Deterioration or loss of value of salvage timber is not an unexpected event.

In the event Included Timber to which Forest Service holds title is destroyed, Contractor will not be obligated to remove and pay for such timber. In the event Included Timber to which Forest Service holds title is damaged, the Forest Service shall make an appraisal to determine for each species the difference between the appraised unit value of Included Timber immediately prior to the value loss and the appraised unit value of timber after the loss. Current Contract Rates in effect at the time of the value loss shall be adjusted by differences to become the redetermined rates. There shall be no obligation for the Forest Service to supply, or for Contractor to accept and pay for, other timber in lieu of that destroyed or damaged. This Subsection shall not be construed to relieve either party of liability for negligence.

Limited Liability for Operations Fires.

Maximum Amount of Contractor's Obligation per Operation's Fire. Entry should be determined as follows and rounded up to the nearest \$100. The minimum amount will be \$1,000.00. If State statute or law defines limited liability, use that determination (e.g. Oregon), otherwise calculate the amount using the following formula:

$[(1) \times (2) + (3) \times (4)] \times (5) = \text{Maximum Amount of Cooperator's Obligation per Operations Fire. Round up to the next } \$100.$

- (1) Equals the number of workers normally required to operate the size of the proposed project.

8 Workers

- (2) Equals the daily (12 hour) wage rate for semi-skilled (AD-1) firefighter.

$\$22.16 / \text{Hr} \times 12 \text{ hours} = \underline{\$252.96 / 12 \text{ hr}}$

- (3) Equals the number of pieces of equipment normally required to operate the size of proposed project that can effectively cut and clear fire lines.

6 Pieces of Equipment

- (4) Average daily rate for each piece of equipment, including cost of operator, from current local engineering cost guide.

$\$148.70 / \text{Hr} \times 12 \text{ hours} = \underline{\$1,784.40 / 12 \text{ hr}}$

- (5) Equals the number of days normally required to control and mop up such fires to a point where control lines can reasonably be expected to hold under foreseeable conditions. Minimum is one day and maximum is 10 days.

2 Days



Cooperator’s Obligation per Operations Fire,

Maximum Amount: \$25,500.00

E.15. Slash Treatment.

Contractors shall pile, scatter, yard, construct firelines or otherwise treat slash defined in specifications below, within designated areas. Work required of Contractor shall be in accordance with the following slash plan and specifications, and the Contract Area Map.

Vegetative debris larger than 1 inch in diameter outside bark and 3 feet long resulting from Contractor’s Operations, other than Construction Slash, is Logging Slash. Measures to be taken by Contractor for treatment of Logging Slash are set forth below unless otherwise agreed in writing.

CDA and Contractor shall jointly develop a schedule for completion of slash treatment on the various portions of Contract Area prior to Contractor’s Operations.

Removing may be substituted for treatment of any other specified method.

By agreement in writing, certain slash may be left for fuelwood. When the specified treatment is by a combination of methods, Logging Slash not treated by one of the methods shall be treated by the other(s).

See the slash treatment specification table below.

Specific slash treatment methods shall be shown on Contract Area Map or listed in the following tables by the following symbols:

Slash Treatment Methods		
<i>Symbol</i>	<i>Method</i>	<i>Definition</i>
Deck	“Decking” large material	Logging Slash 10 inches or larger in large end d.o.b. and 1- feet or more in length shall be Decked for disposal by Forest Service by piling pieces parallel to each other.
Mach	“Machine Piling”	Concentrations of Logging Slash, excluding scattered individual pieces, shall be Machine Piled by tractor equipped with brush rake for disposal by Forest Service.

Piling Specifications.

All piles shall be reasonably compact and free of soil to facilitate burning and shall be constructed of such size and at such distance from trees so that burning shall not result in unnecessary damage to residual timber. Such Logging Slash shall be bucked into lengths not exceeding ten feet prior to piling. Maximum width of tractor, with brush rake attached, shall not exceed 120 inches. Machine Piling is not required on areas where use of tractors would cause undue damage to residual timber or where slopes exceed 35 percent. Piles shall be located a distance of at least twice their height in feet from the outer edge of tree crowns or snags. Piles shall be no less than four feet in height or greater than N/A feet in height. Material extending three feet or more outside the edge of a pile shall be trimmed. An eight foot fuelbreak shall be cleared of all but fine material around each Machine Pile and an 18 inch wide fireline shall be cleared to mineral soil around the outer ring of the fuelbreak. For hand piles, Contractor shall construct a fireline cleared to mineral soil and at least 3 feet wide around each pile. In areas where there is a potential for burning material to roll, firelines, including those for Machine Piles, shall be trenched on the downhill side of each pile to adequately prevent material from crossing firelines. Trenches shall be constructed by hand unless otherwise agreed.

Unit and Subdivision Slash Treatment Specifications.

<i>Subdivision or Unit No.</i>	Slash Treatment	
	<i>Specified Method</i>	<i>Prohibited Method</i>



Landings and Disposal Sites.

Unutilized logs accumulated at landings and disposal sites shall be Decked by Contractor for disposal by Forest Service. The maximum height of decks is shown in the following table. Other slash accumulated at landings and disposal sites shall be kept separate from unutilized logs and treated by the method shown in the following table.

		Slash Treatment	
	Subdivision or Unit No.	Specified Method	Prohibited Method
Landings	All Landings	MACH, DECK	25 feet
Disposal Sites			

E.17. Felling, Bucking, and Limbing.

Unless otherwise agreed to in writing, Contractor’s felling, bucking, and limbing operations shall be conducted as described below:

Felling, Bucking, and Limbing Specifications		
Cutting Unit	Treatment Method & Applicable Map Symbol	Felling, Bucking, and Limbing Specifications
All	Limbing “Limbing”	Outside of construction clearings, Clearcutting Units and regeneration units, unless otherwise provided by E.17, Contractor shall, prior to skidding/yarding operations, cut exposed limbs from products which are to be skidded/yarded. Such limbing of stems shall be done to a top diameter of approximately N/A inches, at which point the top shall be cut from the remainder of the stem.
All	Whole Tree Yarding “Whole”	Notwithstanding the requirements above, within units or subdivisions designated “Whole” on Contract Area Map, trees smaller than 24 inches DBH shall be skidded/yarded to agreed landing locations prior to limbing, bucking, and lopping. Trees larger than or equal to 24 inches DBH shall be bucked into two or more pieces with the butt portion being no longer than 41 feet prior to skidding/yarding. The butt log shall be limbed prior to skidding/yarding.
All	Directional Felling “DF”	Within areas designated DF on Contract Area Map, Included Timber shall be directionally felled away from survey monuments, improvements, streamcourses, and site-specific protection areas with the use of specialized equipment. Such directional felling shall not be required when in the faller’s judgment it is unsafe to do so and shall be left standing.
All	Treatment of Stumps “TS”	<p>Within areas shown on Contract Area Map, Contractor shall treat stumps of all live conifer trees equal to or greater than 14 inches stump diameter, (measured inside bark) unless otherwise agreed in writing. Treatment shall be with a borate compound registered by EPA in the State of California for prevention of annosus root disease.</p> <p>Treatment shall consist of removal of sawdust and other loose debris from the cut surface of the stump and application of a thin layer of the borate compound uniformly over the entire cut surface, including exposed wood surfaces on the stump sides, at the rate specified on the product label. Any surface irregularities on the stump preventing application of a uniform layer of borate compound shall be cut level prior to treatment. Unless waived in writing, Contractor shall also apply an approved colorant mixed with the borate compound to insure complete coverage. Treatment should be done as soon as possible but shall be completed no later than 24 hours after felling, otherwise stumps shall be re-cut and treated.</p> <p>Contractor shall not apply borate compound during heavy rain fall or when such precipitation rate is predicted within 24 hours of application to cause borate compound to be flushed off the stump and become ineffective, in that case treatment shall be reapplied. Application shall be completed within 24 hours of the precipitation having ceased. Borate compound also shall not be applied to stumps located within 20 feet of live streamcourses and meadows/wetlands shown on Contract Area Map and/or 20 feet of sensitive plant location boundaries as flagged on the ground.</p> <p>Contractor shall provide the borate compound and colorant and apply it in compliance</p>

		<p>with the State of California laws and regulations pertaining to pesticides and pest control operations. Borate compound storage shall be located such that any spillage will not contaminate water. All spills shall be promptly cleaned up and spilled material disposed of according to the product label. All spills occurring in water or over < any amount > pounds shall be reported to CDA within <immediately > hours.</p> <p>Contractor shall submit at the end of each month a “Monthly Summary of Pesticide Use Reports” to the appropriate County Agricultural Commissioner with a copy to the District Ranger.</p>						
All	Minimum Stump Height	<table border="1"> <tr> <td>Unit / Subdivision</td> <td>Minimum Stump Height (inches)</td> <td>Purpose or Reason</td> </tr> <tr> <td>Contract Area</td> <td>4</td> <td>Accountability</td> </tr> </table>	Unit / Subdivision	Minimum Stump Height (inches)	Purpose or Reason	Contract Area	4	Accountability
Unit / Subdivision	Minimum Stump Height (inches)	Purpose or Reason						
Contract Area	4	Accountability						

E.18-d. Ground Based Skidding.

Unless otherwise agreed to in writing, the method of skidding Included Timber shall be as shown on the Contract Area Map, by areas, with symbols defined as follows:

Ground Based Skidding Table	
<i>Map Symbol</i>	<i>Requirements</i>
TRAC	<p>Skid road pattern shall be agreed in advance of felling and main skid roads shall be flagged on the ground in advance of felling. Contractor shall stage-log by felling and skidding Included Timber in two or more separate operations when necessary to prevent undue damage to the resources or residual stand. Needed tractor trails shall be constructed in advance of skidding.</p> <p>Products shall be end-lined as needed to protect resources or residual timber from unnecessary damage. The number of chokers shall be limited as necessary to avoid unnecessary damage to resources or residual timber. By agreement, tractors may be used to separate products to prevent stain.</p>
SUSP	Products shall be skidded with leading end clear of ground.
SPACE	Skid roads will average 120 feet from center to center, except where converging.

EXHIBIT F - Guidelines for Operations

The following Guidelines for Operations apply to activities under this Contract, when relevant to the project. These guidelines are intended to clarify the expectations of the parties related to these specific areas of operations.

F.1 Contract Area Map.

This is the boundary of the Contract Area Map as shown in Exhibit A and designated on the ground by CDA to meet the anticipated needs of the parties. A detailed map will be provided to Contractor prior to the start of operations. The following are identified on the Map:

- a) Identified patented claims.
- b) Boundaries of all harvest and any additional service treatment units.
- c) Diameter limits for overstory and understory removal units.
- d) Areas where leave trees are marked to be left uncut.
- e) Specified roads.
- f) Sources of base course, surface rock, and rock riprap listed in the Schedule of Items;
- g) Roads where log hauling or use is prohibited or restricted.
- h) Roads and trails to be kept open.
- i) Improvements to be protected.
- j) Locations of known wildlife or plant habitat and cave resources to be protected.
- k) Locations of areas known to be infested with specific invasive species of concern.
- l) Maximum stump heights when more than one height is listed by areas.
- m) Skidding or yarding methods.
- n) Streamcourses to be protected.
- o) Locations of meadows requiring protection.
- p) Locations of wetlands requiring protection.
- q) Locations of temporary roads to be kept open.
- r) Payment units, if required

F.2 Use of Roads by the Contractor.

Contractor is authorized to use existing National Forest system roads and specified roads approved by Forest Service. Contractor and Forest Service will determine that such use will not cause damage to the roads or resources.

F.3 Plan of Operations for Roads.

Annually, prior to start of operations, Contractor will prepare a supplement to the Technical Proposal that shall include a schedule of proposed maintenance and description of planned measures to be taken to provide erosion control for work in progress, including special measures to be taken on any segments of construction not substantially completed prior to periods of seasonal precipitation or runoff. The Contractor shall submit a revised schedule when they propose a significant deviation from the progress schedule. Prior to beginning construction on any portion of specified roads identified as sensitive on plans, the parties shall agree on the proposed method of construction and maintenance.

F.4 Protection of Residual Trees.

Contractor operations shall not unnecessarily damage young growth or other trees to be reserved.

F.5 Safety.

Contractor's operations shall facilitate the Forest Service's safe and practical inspection of Contractor's operations and conduct of other official duties on the Contract Area. Contractor has/have all responsibility for compliance with safety requirements for Contractor's employees.

When operations are in progress adjacent or on Forest Service controlled roads and trails open to public travel, Contractor shall furnish, install, and maintain all temporary traffic controls that provide the user with adequate warning of hazardous or potentially hazardous conditions associated with operations occurring in the area. CDA and the Contractor shall agree to a specific traffic control plan prior to commencement of work. Devices shall be appropriate to current conditions and shall be covered or removed when not needed.

During periods of general recreation activity within Contract Area or vicinity, CDA may restrict road construction, timber cutting, yarding, and other harvesting operations to days other than Saturdays, Sundays, and holidays.

LOGGING AND MAINTENANCE OPERATIONS SIGNING STANDARDS

All signs must be manufactured & installed as specified in the FHWA "Manual on Uniform Traffic Control Devices" (MUTCD) & FS publication "Standards for CDA via Forest Service language Signs & Posters"(EM 7100-15).

SIGN STANDARDS

SHAPE & COLOR: Generally, signs for logging and maintenance operations are either diamond-shaped or rectangular. All signs are *reflective orange background with black legend and border* unless shown otherwise. Handpainted, homemade signs are not legal. Fluorescent paint is not reflectorized.

SUBSTRATE: Sign substrate material may be High Density Overlay (HDO) Plywood, Aluminum, Fiberglass Reinforced Plastic, Corrugated Plastic or Roll-up Fabrics.

SIGN SIZE: Sign size is a factor of speed and MUTCD & FS standards. Where conditions of speed, volume, or special hazard require greater visibility or emphasis, larger signs should be used. Minimum sizes for the most common signs can be found in Figure 4. Refer to the EM-7100-15 for additional sign sizes.

LEGEND: All lettering shall be Series "C" alphabet, conforming to Standard Alphabets for Highway Signs. Letter size is also a function of speed - use letter size and word messages as specified in MUTCD and EM-7100-15.

SIGN PLACEMENT

Signs are to be installed in locations as agreed to in the traffic control plan. All signs are to be removed, covered, or folded when operations are not in progress or the sign message is not applicable. Signs should generally be located on the right-hand side of the roadway. When special emphasis is needed, signs may be placed on both the left and right sides of the road. Sign message shall be clearly visible to road users, mounted on posts or portable sign stands.

LATERAL CLEARANCE

From the edge of the road - 2 foot minimum, where slope limits to less than 6 feet. 6-12 foot preferred.

HEIGHT

Minimum of 7 feet, measured from the bottom of the sign to the near edge of the travelway. The height to the bottom of a supplemental sign mounted below the primary sign will be 6 feet.

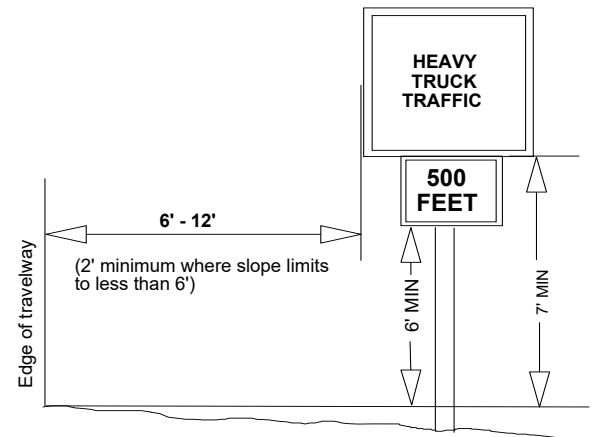


Figure 1: Sign Placement Dimensions

PLACEMENT DISTANCE

Signs must be located 100-500 feet prior to the activity, (both ends if a through road) and maintained at that distance. This distance is based on speed. Refer to Figure 2 , Table II-1, MUTCD, a portion of which is reproduced here, to determine correct placement distance.

Posted or 85 percentile speed MPH	Declaration to listed advisory speed MPH				
	10	20	30	40	50
20	NA				
25	100				
30	150	100			
35	200	175			
40	275	250	175		
45	350	300	250		
50	425	400	325	225	
55	500	475	400	300	
60	575	550	500	400	300
65	650	625	575	500	375

Figure 2: A Portion of MUTCD TABLE II-1

SIGN SUPPORTS

POSTS: Signs are to be mounted on separate posts. Supplemental signs such as Speed Advisory plates are to be mounted on the same post as the primary sign. **Do not mount signs on trees or other signs.** Posts may be wood, metal, carsonite or similar material.

Where sign supports cannot be sufficiently offset from the road edge, supports will meet breakaway standards. Single wood posts with less than 24 square inches do not require breakaway design.

TEMPORARY/PORTABLE SUPPORTS: Portable supports may be used for short-term, short-duration, and mobile conditions. MUTCD defines this time period as one work shift, 12 hours or less. All portable supports must meet MUTCD standards, including breakaway. These must be a minimum of 1 foot above the road surface or more if visibility requires it.

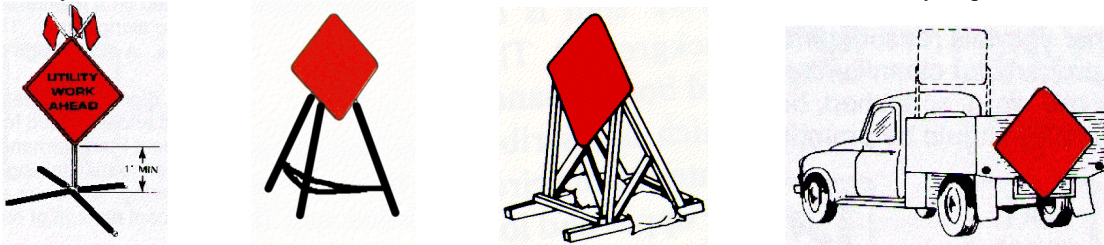
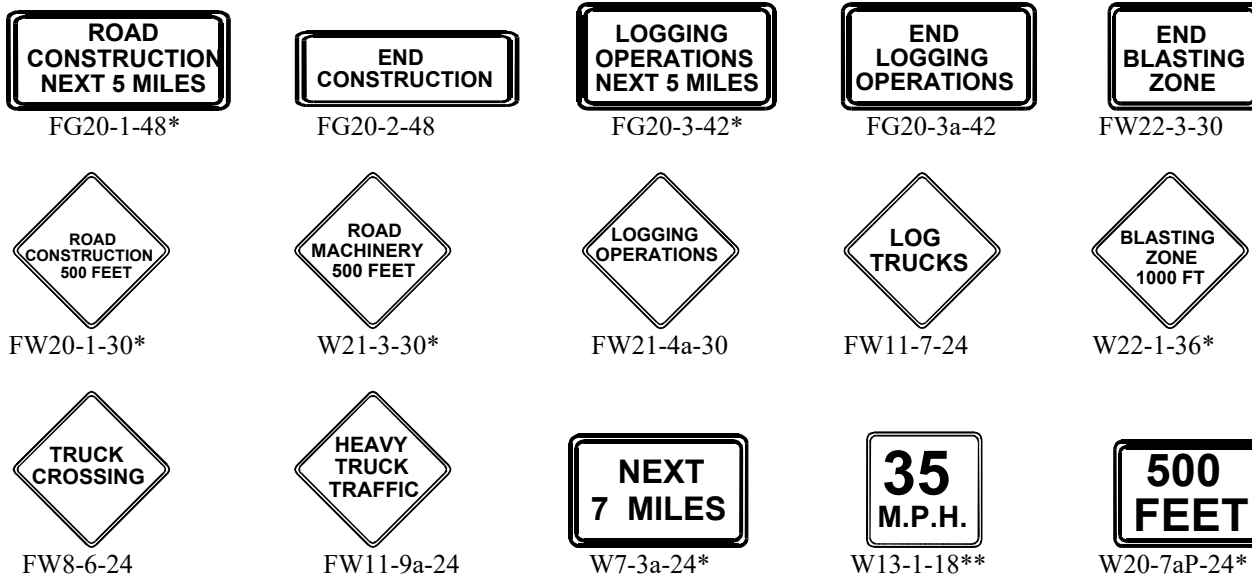


Figure 3: Examples of Temporary/Portable Supports

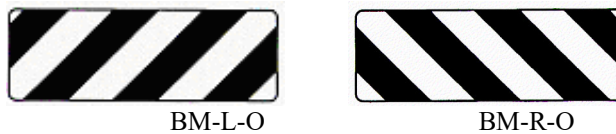
SIGNS

The following signs meet the intent of the Safety standard. *This is not a complete listing of signs that may be needed.*



* Specify Distance

** Specify Speed



Barricade Markers (See MUTCD for length and stripe size)

F.6 Safety (Timber Hauling).

The Contractor shall secure all products transported by truck with at least two chain or cable wrappers over the load, such wrappers being securely fastened to effectively contain every bolt or log in at least two places.

F.7 Accident and Injury Notification.

Contractor shall notify CDA of any lost time personal injury accident or any accident or vandalism resulting in personal property damage over \$400 in value that occurs as a result of or is associated with Contractor's operations.

Contractor shall notify CDA within 8 hours of any personal injury accident. For vandalism and personal property accidents, Contractor shall notify CDA at the same time notification is given to the state and local law enforcement authorities.

Contractor shall take all reasonable measures after an accident or vandalism event to preserve the scene of the incident and provide information to facilitate a CDA investigation.

F.8 Sanitation and Servicing.

Contractor shall take all reasonable precautions to prevent pollution of air, soil, and water by operations. Precautions shall include if facilities for employees are established on the Contract Area, they shall be operated in a sanitary manner. The parties shall agree to the cleanup and restoration of a polluted site. Contractor shall maintain all equipment operating on Contract Area in good repair and free of abnormal leakage of lubricants, fuel, coolants, and hydraulic fluid. Contractor shall not service tractors, trucks, or other equipment on National Forest lands where servicing is likely to result in pollution to soil or water. Contractor shall furnish oil-absorbing mats for use under all stationary equipment or equipment being serviced to prevent leaking or spilled petroleum-based products from contaminating soil and water resources. Contractor shall remove from National Forest lands all contaminated soil, vegetation, debris, vehicle oil filters (drained of freeflowing oil), batteries, oily rags, and waste oil resulting from use, servicing, repair, or abandonment of equipment.

F.9 Prevention of Oil Spills.

If Contractor maintain(s) storage facilities for oil or oil products on the Contract Area, they shall take appropriate preventive measures to ensure that any spill of such oil or oil products does not enter any stream or other waters of the United States or any of the individual States. If the total oil or oil products storage exceeds 1,320 gallons in containers of 55 gallons or greater, Contractor shall prepare a Spill Prevention Control and Countermeasures Plan. Such plan shall meet applicable EPA requirements (40 CFR 112), including certification by a registered professional engineer. Contractor shall notify CDA/Forest Service and appropriate agencies of all reportable (40 CFR 110) spills of oil or oil products on or in the vicinity of the Contract Area that are caused by Contractor's employees, agents, contractors or their employees or agents, directly or indirectly, as a result of operations. Contractor will take whatever initial action may be safely accomplished to contain all spills.

F.10 Hazardous Substances.

Contractor shall notify the National Response Center and CDA/Forest Service principal contact of all releases of reportable quantities of hazardous substances on or in the vicinity of the Contract Area that are caused by Contractor's employees, agents, contractors or their employees or agents, directly or indirectly, as a result of Contractor's operations, in accordance with 40 CFR 302.

F.11 Washing Equipment.

In order to prevent the spread of noxious weeds into the Contract Area, Contractor shall be required to clean all off-road logging and construction equipment **prior** to entry on to the Contract Area. This cleaning shall remove all soil, plant parts, seeds, vegetative matter, or other debris that could contain or hold seeds. Only logging and construction equipment that is inspected by Forest Service will be allowed to operate within the Contract Area. All subsequent move-ins of equipment to the Contract Area shall be treated in the same manner as the initial move in. "Off-road equipment" includes all logging and construction machinery, except for log trucks, chip vans, service vehicles, water trucks, pickup trucks, cars, and similar vehicles.

Contractor shall employ whatever cleaning methods are necessary to ensure that off-road equipment is free of noxious weeds. Equipment shall be considered free of soil, seed, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools is not required.

As agreed, Contractor shall inspect equipment at cleaning location and provide documentation of inspection to CDA.

New infestations of noxious weeds that are of concern to CDA and identified by either Contractor or CDA, on the Contract Area or on the haul route, shall be promptly reported to the other party. Contractor and CDA shall agree on treatment methods to reduce or stop the spread of noxious weeds when new infestations are found. A current list of noxious weeds of concern to CDA will be available to Contractor.

F.12 Conduct of Logging.

Unless otherwise specifically provided herein, Contractor shall fell trees designated for cutting and shall remove the portions that meet Utilization Standards, prior to acceptance of work for completion of logging and any additional service projects. Forest Service may make exceptions for occasional trees inadvertently not cut or trees or pieces not removed for good reasons, including possible damage to forest resources or gross economic impracticability at the time of removal of other timber.

F.13 Felling and Bucking.

Felling shall be done to minimize breakage of included timber and damage to residual timber. Unless agreed otherwise, felling shall be done by saws or shears. Bucking shall be done to permit removal of all minimum pieces. Contractor may buck out cull material when necessary to produce pieces meeting utilization standards. Such bucked out material shall contain a minimum amount of sound wood, not in excess of the net scale in percentage of gross scale, or based on the merchantability factor. If necessary to assess extent of defect, Contractor shall make sample saw cuts or wedges.

F.14 Felling in Clearings.

Insofar as ground conditions, tree lean, and shape of clearings permit, trees shall be felled so that their tops do not extend outside clearcutting units, construction clearings, and areas of regeneration cutting.

F.15 Stump Heights.

Stumps shall not exceed, on the side adjacent to the highest ground, the maximum heights set forth in this RFB except that occasional stumps of greater heights are acceptable when Contractor determine(s) that they are necessary for safe and efficient conduct of logging. Unless otherwise agreed, Contractor shall re-cut high stumps so they will not exceed heights specified in this RFB and shall dispose of severed portions in the same manner as other logging debris. The stump heights shown in this document were selected with the objective of maximum reasonable utilization of the timber, unless the Map shows special areas where stump heights are lower for aesthetic, land treatment, or silvicultural reasons.

F.16 Bucking Lengths.

Trees shall be bucked in various lengths to obtain the greatest utilization of material meeting utilization standards.

F.17 Limbing.

Contractor shall cut exposed limbs from products prior to skidding, as necessary to minimize damage to the residual stand during skidding. Contractor may leave uncut those limbs that cannot be cut with reasonable safety.

F.18 Skidding and Yarding.

Methods of skidding or yarding specified for particular areas, if any, are indicated on the Map. Outside clearcutting units and construction clearings, insofar as ground conditions permit, products shall not be skidded against reserve trees or groups of reproduction and tractors shall be equipped with a winch to facilitate skidding.

F.19 Rigging.

Insofar as practicable, needed rigging shall be slung on stumps or trees designated for cutting.

F.20 Landings and Skid Trails.

Location of all landings, tractor roads, and skid trails shall be agreed upon prior to their construction. The cleared or excavated size of landings shall not exceed that needed for efficient skidding and loading operations.

F.21 Arches and Dozer Blades.

Skidding tractors equipped with pull-type arches or dozer blades wider than tractor width or C-frame width, whichever is greater, shall not be used in residual timber outside clearcutting units and other authorized clearings, except on constructed tractor roads or landings, unless there is written agreement that residual timber will not be damaged materially by such use.

F.22 Protection of Streamcourses.

CDA's Operations shall be conducted to prevent debris from entering streamcourses, except as may be authorized under paragraph (d). In event CDA cause(s) debris to enter streamcourses in amounts that may adversely affect the natural flow of the stream, water quality, or fishery resource, CDA shall remove such debris as soon as practicable, but not to exceed 2 days, and in an agreed manner that will cause the least disturbance to streamcourses.

- a) Culverts or bridges shall be required to cross streamcourses. Such facilities shall be of sufficient size and design and installed in a manner to provide unobstructed flow of water and to minimize damage to stream courses. Trees or products shall not be otherwise hauled or yarded across streamcourses unless fully suspended.
- b) Wheeled or track-laying equipment shall not be operated in streamcourses, except at crossings agreed to by Contractor and CDA or as essential to construction or removal of culverts and bridges.
- c) Flow in streamcourses may be temporarily diverted only if such diversion is necessary for Contractor's planned construction and CDA gives written authorization. Such flow shall be restored to the natural course as soon as practicable and, in any event, prior to a major storm runoff period or runoff season

F.23 Erosion Prevention and Control.

The Contractor's operations shall be conducted reasonably to minimize soil erosion. Equipment shall not be operated when ground conditions are such that excessive damage will result. The Contractor shall adjust the kinds and intensity of erosion control work done,



to ground conditions and weather conditions and the need for controlling runoff. Erosion control work shall be kept current immediately preceding expected seasonal periods of precipitation or runoff.

Prior to periods of accelerated water runoff, especially during the spring runoff and periods of heavy rainfall, the Contractor shall inspect and open culverts and drainage structures, construct special cross ditches for road runoff, and take other reasonable measures needed to prevent soil erosion and siltation of streams.

Unless otherwise agreed in writing, the Contractor shall complete erosion prevention and control work, including streamcourse protection, within 15 calendar days after completion of skidding operations for each landing.

Designation of on the groundwork shall be done as promptly as feasible unless it is agreed that the location of such work can be established without marking on the ground.

During periods of accelerated water runoff, especially during the spring runoff and periods of heavy rainfall, the Contractor shall inspect and open culverts and drainage structures, construct special cross ditches for road runoff, and take other reasonable measures needed to prevent soil erosion and siltation of streams.

When operations are active, erosion control work will be kept current and will be completed as soon as practicable.

Additional erosion control requirements of this SPA are listed in the following table:

Erosion Prevention and Control													
Vegetative Soil Stabilization	N/A												
Special Erosion Prevention Measures	N/A												
Soil Scarification	N/A												
Backblading	N/A												
Tillage	<p>In addition to meeting the requirements above, unless otherwise agreed in writing, tillage shall be required on the areas listed in the following table.</p> <p>Tillage shall be accomplished by equipment that will lift and fracture the soil by vertical and lateral shattering, leaving soil loosened through the full width and depth of the compacted layer with the topsoil remaining substantially in place rather than being inverted.</p> <p>Tillage depth is shown in the following table. Agreement in writing may be made to a lesser depth if rocks or other limiting site conditions are encountered.</p> <p>Tillage shall be limited to periods when soil dryness will result in crumbled soil, avoiding the formation of large clods. Contractor and CDA shall agree in writing on the timing of completion of such work to coordinate with desirable soil moisture conditions.</p> <table border="1"> <thead> <tr> <th>Areas to Till</th> <th>Tillage Depth (Inches)</th> <th>Maximum Acres to Treat</th> </tr> </thead> <tbody> <tr> <td>Landings</td> <td>18</td> <td>4</td> </tr> <tr> <td>Main Skid Roads and Tractor Roads designated by Forest Service</td> <td>18</td> <td>2</td> </tr> <tr> <td>Temporary Roads</td> <td>18</td> <td>1</td> </tr> </tbody> </table>	Areas to Till	Tillage Depth (Inches)	Maximum Acres to Treat	Landings	18	4	Main Skid Roads and Tractor Roads designated by Forest Service	18	2	Temporary Roads	18	1
Areas to Till	Tillage Depth (Inches)	Maximum Acres to Treat											
Landings	18	4											
Main Skid Roads and Tractor Roads designated by Forest Service	18	2											
Temporary Roads	18	1											

F.24 Protection of Improvements.

So far as practicable, the Contractor shall protect specified roads and other improvements (such as roads, trails, telephone lines, ditches, and fences):

- a) Existing in the operating area,
- b) Determined to have a continuing need or use, and
- c) Designated on the Map.

The Contractor shall keep roads and trails needed for fire protection or other purposes and designated on the Map reasonably free of equipment and products, slash, and debris resulting from the Contractor's operations. The Contractor shall make timely restoration of any such improvements damaged by the Contractor's operations and, when necessary because of such operations, shall move such improvements.

F.25 Meadow Protection.

Reasonable care shall be taken to avoid damage to the cover, soil, and water in meadows shown on the Map. Vehicular or skidding equipment shall not be used on meadows, except where roads, landings, and tractor roads are approved. Unless otherwise agreed, trees felled into meadows shall be removed by endlining. Resulting logging slash shall be removed where necessary to protect cover, soil, and water.

F.26 Wetlands Protection.

Wetlands requiring protection under Executive Order 11990 are shown on the Map. Vehicular or skidding equipment shall not be used in such wetlands, except where roads, landings, and tractor roads are approved.

F.27 Temporary Roads.

As necessary to attain stabilization of roadbed and fill slopes of temporary roads, Contractor shall employ such measures as outsliping, drainage dips, and water-spreading ditches. After a temporary road has served Contractor's purpose, Contractor shall give notice to Forest Service Representative and shall remove bridges and culverts, eliminate ditches, outslope roadbed, remove ruts and berms, effectively block the road to normal vehicular traffic where feasible under existing terrain conditions, and build cross ditches and water bars, as staked or otherwise agreed to. When bridges and culverts are removed, associated fills shall also be removed to the extent necessary to permit normal maximum flow of water.

F.28 Temporary Roads to Remain Open.

All bridges and culverts shall remain in place and ditches shall not be eliminated on Temporary Roads, shown as "Remained Open on the Map. All drainage structures shall be left in functional condition.

F.29 Landings.

After landings have served Contractor's purpose, Contractor shall ditch and slope them to permit water to drain or spread. Unless agreed to otherwise, cut and fill banks around landings shall be sloped to remove overhangs and otherwise minimize erosion.

F.30 Skid Trails and Fire Lines.

Contractor shall construct cross ditches and water-spreading ditches on tractor roads and skid trails, where needed to prevent erosion. By agreement, Contractor may use other comparable erosion control measures, such as backblading skid trails, in lieu of cross ditching.

F.31 Current Operating Areas.

Where logging, road construction, or other service work is in progress but not completed, unless agreed to otherwise, Contractor shall, before operations cease annually, remove all temporary log culverts and construct temporary cross drains, drainage ditches, dips, berms, culverts, or other facilities needed to control erosion. Such protection shall be provided, for all disturbed, unprotected ground that is not to be disturbed further prior to end of operations each year, including roads and associated fills, tractor roads, skid trails, and fire lines. When weather permits operations, Contractor shall keep such work on any additional disturbed areas as up to date as practicable.

F.32 Erosion Control Structure Maintenance.

During the period of this Contract, Contractor shall provide maintenance of soil erosion control structures constructed by Contractor until they become stabilized, but not for more than one year after their construction.

F.33 Slash Disposal.

Contractor's timing of product removal and preparatory work shall not unnecessarily delay slash disposal. Specific slash disposal measures to be employed by Contractor are stated in Exhibit E.

F.34 Scaling.

Scaling includes:

- a) Various volume determination methods, such as log rule, sampling, measuring, linear measuring, counting, weighing, or another method or combination of methods.
- b) Various sites, such as truck Scaling stations, rollways, weighing stations, woods landings, water Scaling stations, or other sites.

- c) Various geographic locations.

F.35 Scaling Services.

Scaling services shall be performed by Forest Service personnel or parties under contract to Forest Service, except that weighing services may be performed by personnel or parties approved by the Forest Service. Scaling shall be provided in accordance with the instructions and specifications in Exhibit E. Scalers shall be currently certified to perform accurate Scaling services. The scaling services provided shall be selected exclusively by the Forest Service. Scaling services may be continuous, intermittent, or extended.

- a) Continuous scaling services is scaling at one site five (5) 8-hour shifts a week, exclusive of Sundays and Federal holidays.
- b) Intermittent scaling services are non-continuous scaling services.
- c) Extended scaling services are scaling services exceeding continuous scaling services and may include Sundays and designated Federal holidays.

As mutually agreed to by the parties, Contractor may provide other services, such as but not limited to grading, tagging, or marking of Scaled logs.

F. 36 Scaling Location.

The Forest Service shall provide scaling services at the scaling site(s) shown in Appendix E. The Scaling site(s) shown in Appendix E normally will be a nonexclusive site where more than one National Forest may be served. Contractor may request, in writing, an alternate scaling site, such as at a private mill yard, private truck ramp, or a privately operated log transfer facility. The Forest Service may approve an alternate scaling site, when the Forest Service determines that scaling conditions at an alternate site are acceptable. Such conditions shall include at a minimum:

- a) Scaler safety and comfort,
- b) Product accountability and security,
- c) Facilities and practices conducive to accurate and independent Scaling, and
- d) The ability to provide for remote check Scaling.

Upon approval of an alternate scaling site, Forest Service and the Contractor shall enter into a written memorandum of agreement governing Scaling at that alternate location. Contractor agrees that Forest Service personnel shall perform scaling services at an alternative scaling site. In no instance shall Contractor perform scaling services.

F.37 Scaling Adjustments.

The Forest Service shall check the accuracy of the scaling performed on National Forest logs. Scaling will be satisfactory if performed within the accuracy standards in governing instructions identified in Appendix E. In the event the Forest Service check scale(s) shows a variance in net scale in excess of the allowable variance, an adjustment to volume reported scaled may be made by the Forest Service. Such adjustment will be based on the difference between Forest Service check Scale(s) and original Scale for Contract volume Scaled within the adjustment period. The volume to which this difference will be applied will be:

- a) One-half of the volume Scaled between the last satisfactory check Scale and the first unsatisfactory check Scale or, if a period of 120 days or more occurs without Scaling National Forest timber for stumpage, the adjustment will be applied to 100 percent of the volume Scaled after this period and
- b) 100 percent of the volume Scaled between unsatisfactory check Scales and
- c) One-half of the volume Scaled between the last unsatisfactory check Scale and the next satisfactory check Scale, or if no satisfactory check Scale is completed and a period of 120 days or more occurs without Scaling of National Forest timber for stumpage, the adjustment will be applied to 100 percent of the volume Scaled since the last unsatisfactory check Scale.

Adjustments may increase or decrease the original Scaled volume. Adjustments will be applied to Integrated Resource Account to correct charges for Included Timber, plus deposits, Scaled during the adjustment period.

F.38 Weighing Services.

Weighing services for stumpage payment purposes may be provided by either public or privately owned and operated weighing facilities. A "Weighing Services Agreement," approved by the landowner, must be executed at each weighing facility providing weighing services.

Scales used to weigh National Forest products for payment purposes must be a currently certified scale in accordance with State law and be capable of weighing the entire load of logs in a single operation. The weighing of less than the entire load or weighing two loads at once is prohibited. Unless otherwise agreed, the minimum sized weighing facility shall be a 60-ton capacity scale with a 10 foot by 70 foot platform or larger. The weighmaster must work in a position where it is possible to verify that the truck wheels are on or off the scales. Weighing facilities shall meet the following minimum requirements:

- a) Be an electronic design,
- b) Use electronic load cells or have a fully enclosed and sealed weigh-beam,

- c) Have digital weight meters sealed with a seal approved by the State,
- d) Have a zero interlocking device on the printer,
- e) Have an automatic zero-setting mechanism,
- f) Have an automatic motion-detecting device,
- g) Be shielded against radio or electromagnetic interference, and
- h) Have a date and time stamp and gross and tare weights that print electronically with each weighing. The Forest Service may waive electronic printing for public or third-party weighing facilities. CDA shall bear all charges or fees for weighing services.

F.39 Presentation for Scaling.

Contractor shall present products so that they may be Scaled in an economical and safe manner.

F.40 Accountability.

When Scaling is performed away from Contract Area, products shall be accounted for in accordance with Forest Service written instructions, as follows:

- a) Contractor shall plainly mark or otherwise identify products prior to hauling;
- b) Forest Service shall issue removal receipts to Contractor;
- c) Contractor shall assign a competent individual at the landing to complete removal receipts and attach them to each load of products removed from Contract Area;
- d) Removal receipts shall be returned to Forest Service at periodic intervals;
- e) When products are in transit, the truck driver shall possess or display removal receipt and show it upon request as evidence of authority to move products;
- f) The scaler's portion of removal receipt shall be surrendered at point of Scaling, the unloading point, or as requested by Forest Service; and
- g) The Contractor shall notify Forest Service of lost or off-loaded logs and their location within 12 hours of such loss. Contractor shall not place products in storage for deferred Scaling until an accountability system has been agreed to in writing for a stated period.

F.41 Route of Haul.

As part of the annual Operating Schedule, Contractor shall furnish a map showing the route of haul over which unscaled products will be transported from the Contract Area to the approved Scaling location. Such route of haul shall be the shortest, most economical haul route available between the points.

Upon advance written agreement, other routes may be approved. All unscaled products removed from Contract Area shall be transported over the designated routes of haul. Contractor shall notify CDA when a load of products, after leaving Contract Area, will be delayed for more than 12 hours in reaching Scaling location. Contractor shall require truck drivers to stop, if requested by CDA/Forest Service, for the following reasons:

- a) For accountability checks when products are in transit from Contract Area to the designated Scaling location or
- b) For a remote check Scale when products are in transit after being truck Scaled at the designated Scaling location.

Contractor and CDA shall agree to locations for accountability checks and remote check Scales in advance of haul. Such locations shall be established only in areas where it is safe to stop trucks. CDA shall notify Contractor of the methods to be used to alert truck drivers of an impending stop.

F. 42 Product Identification.

Before removal from the Contract Area, unless Forest Service determines that circumstances warrant a written waiver or adjustment, Contractor shall:

- a) Hammer brand all products that are eight (8) feet or more in length and one-third (1/3) or more sound, on each end that is seven (7) inches or more in diameter.
- b) West of the 100th meridian, paint with a spot of highway-yellow paint all domestic processing products that are eight (8) feet or more in length and one-third (1/3) or more sound, on each end that is seven (7) inches or more in diameter. Each paint spot must be not less than three (3) square inches in size.

The Forest Service shall assign a brand and, if the Contract Area is within a State that maintains a log brand register, brands shall be registered with the State. Contractor shall use assigned brand exclusively on logs under this Contract until Forest Service releases brand. The Contractor will furnish and apply highway-yellow paint of a lasting quality (oil-base or equivalent).

All hammer brands and/or highway-yellow paint must remain on logs until they are domestically processed. The Contractor shall replace identifying marks if they are lost, removed, or become unreadable. The Contractor may remanufacture products into different

log lengths. Except for logs remanufactured as part of the mill infeed process immediately before processing, remanufactured products must be rebranded with the assigned Contract brand and repainted with highway-yellow paint, unless otherwise agreed to in writing by the Forest Service Representative. For such remanufactured products, Forest Service may approve use of a brand to be used exclusively as a catch brand.

F.45 Scaling Lost Products.

The volume of lost products shall be determined by the best methods currently available, using data from the records for the period in which the loss occurred or the most applicable period if loss should occur substantially after cutting. In the absence of specific information indicating size or species of lost products, species distribution and volume for entire truckloads shall be assumed to be the same as the average volume Scaled per truck during the report period, and for individual products it shall be assumed that the volume and species were the average volume of the highest priced species Scaled during the report period.

F.46 Scaling Lost Sample Loads.

If Scaling is being done by sampling loads of logs, Contractor shall present such sample loads for Scaling by Forest Service. If loads of logs selected to be sample Scaled are placed in the decks before they are Scaled, they will be considered as lost sample loads. It will be difficult, if not impossible, to determine the volume and species contained in such loads for payment purposes. Therefore, lost sample loads will be deemed to have a Scale volume and species composition equal to that of the highest value load Scaled during the sampling period, as established by Forest Service. If no sample loads were Scaled during the period, the Scale data for the high valued load will be taken from the most current preceding sampling period with Scale. Sample loads lost as a result of Forest Service actions shall be treated as non-Scaled loads.

F.47 Scale Reports.

CDA/Forest Service shall provide Contractor a copy of scaler's record, if requested in writing.

F.48. Temporary Roads and Skid Trails.

CDA shall locate Temporary Roads and Skid Trails on locations approved by the Forest Service. Such location shall include the marking of road centerline or grade-line and the setting of such construction stakes as are necessary to provide a suitable basis for economical construction and the protection of National Forest lands.

Temporary road surface width shall be limited to truck bunk width plus four (4) feet, except for needed turnouts which shall not exceed two (2) times the bunk width plus four (4) feet. If shovels or cranes with revolving carriage are used to skid or load, temporary road surface width equal to track width plus tail swing shall be permitted.

EXHIBIT G – Fire Plan

1. SCOPE

The provisions set forth below outline the responsibility for fire prevention and suppression activities and establish a suppression plan for fires within the Contract Area. The Contract Area is defined upon contract award with associated maps and delineations. The Contractor shall ensure that all following precautions are taken during the contract period within the awarded Contract Area. The provisions set forth below also specify conditions under which contracted activities will be curtailed or shut down.

2. RESPONSIBILITIES

A. Contractor

- (1) Shall abide by the requirements of this Fire Plan.
- (2) Shall take all steps necessary to prevent his/her employees, subcontractors and their employees from setting fires not required in completion of the contract, shall be responsible for preventing the escape of fires set directly or indirectly as a result of contract operations, and shall extinguish all such fires which may escape.
- (3) Shall permit and assist in periodic testing and inspection of required fire equipment. Contractor shall certify compliance with specific fire precautionary measures in the fire plan, before beginning operations during Fire Precautionary Period and shall update such certification when operations change.
- (4) Shall designate in the Fire Plan and furnish on the Contract Area, during operating hours, a qualified fire supervisor authorized to act on behalf of Contractor in fire prevention and suppression matters.

B. Contractor, CDA, or Forest Service

The Contractor or Forest Service may conduct one or more inspections for compliance with the Fire Plan. The number, timing, and scope of such inspections will be at the discretion of agency employees responsible for contract administration. Such inspections do not relieve the Contractor of responsibility for correcting violations of the fire plan or for fire safety in general, as outlined in paragraph 2.A above.

3. FIRE PRECAUTIONARY PERIOD AND FIRE PRECAUTIONS

Specific fire precautionary measures are set forth below.

The following requirements shall apply during the period May 1 through December 31 and during other such periods as specified by Forest Service:

1. Contractor or a designated Contractor's Representative shall certify compliance with specific Timber Contract and California Public Resources Code (CPRC) fire precautionary measures in Exhibit G – Fire Plan. Certification shall be provided prior to starting operations during Fire Precautionary Period and shall be updated as needed.
2. Plans.
Prior to initiating Contractor's operations during Fire Precautionary Period, Contractor shall file with CDA a Fire Prevention and Control Plan providing for the prevention and control of fires on the Contract Area and other areas of Contractor's Operations. Such plan shall include a detailed list of personnel and equipment at Contractor's disposal for implementing the plan.
3. Fire Precautions.
Specific fire precautionary measures listed in this Exhibit shall be applicable during Contractor's Operations in "Fire Precautionary Period" described. The dates of Fire Precautionary Period may be changed by agreement, if justified by unusual weather or other conditions. Required tools and equipment shall be kept in serviceable condition and immediately available for firefighting at all times during Contractor's operations in Fire Precautionary Period.
4. Substitute Precautions.
The Forest Service may authorize substitute measures or equipment, or waive specific requirements by written notice, if substitute measures or equipment will afford equal protection or some of the required measures and equipment are unnecessary.
5. Emergency Precautions.



The Forest Service may require the necessary shutting down of equipment on portions of Contractor's Operations, as specified by the emergency fire precautions schedule. Under such conditions, after cease(s) active operations, shall release for hire by Forest Service, if needed, Contractor's shutdown equipment for fire standby on the Contract Area or other areas of Contractor's Operations and personnel for fire standby or fire patrol, when such personnel and equipment are not needed by for other firefighting or protection from fire. Equipment shall be paid for at firefighting equipment rates common in the area or at prior agreed rates and, if request(s), shall be operated only by personnel approved by the Personnel so hired shall be subject to direction and control by Forest Service and shall be paid by Forest Service at firefighting rates common in the area or at prior agreed rates.

3. DEFINITIONS

The following definitions shall apply:

Active Landing: A location the contractor may be skidding logs into, or performing other operations such as delimiting, log manufacturing, and chipping logs. Except for EV and E days, loading logs or stockpiling chips only, on a cleared landing, does not constitute an Active Landing.

Hot Saw: A harvesting system that employs a high-speed (>1100 rpm) rotating felling head, i.e., full rotation lateral tilt head.

Mechanical Operations: The process of felling, skidding, chipping, shredding, masticating, piling, log processing and/or yarding which requires the use of motorized power which includes chainsaws, chippers, motorized carriages, masticators, stroke delimiters, skidders, dozers etc.

4. TOOLS AND EQUIPMENT

The Contractor shall comply with the following requirements during the fire precautionary period, as defined by unit administering contracts:

The Fire Precautionary Period is set by the State of California which is May 1 through December 1 of any year.

A. Fire Tools and Equipment.

Unless agreed otherwise, Fire tools kept at each Active Landing shall be sufficient to equip all employees in the felling, yarding, loading, chipping, and material processing operations associated with each landing. Fire equipment shall include two tractor headlights for each tractor dozer used in Contractor's Operations. Tractor headlights shall be attachable to each tractor and served by an adequate power source. Fire tools shall be kept in a sealed fire toolbox adjacent to the Active Landing and readily accessible in event of fire.

Where cable yarding is used, Contractor shall provide a size 0 or larger shovel with an overall length of not less than 46 inches and a serviceable 5 gallon backpack pump filled with water or a fire extinguisher bearing a label showing at least a 4-A rating must be within 25 feet of each tail and corner block.

Trucks, tractors/skidlers, pickups and other similar mobile equipment shall be equipped with and carry at all times a size 0 or larger shovel with an overall length of not less than 46 inches and a 2-1/2 pound axe or larger with an overall length of not less than 28 inches.

All required fire tools shall be maintained in suitable and serviceable condition for firefighting purposes.

This equipment and accessories shall be deliverable to a fire in the area of operations and is subject to the requirements for each specific activity level identified in Section 6.

B. Fire Extinguishers.

Contractor shall equip each internal combustion yarder, fuel truck, and loader with a (4-A:60-B:C) fire extinguisher for oil and grease fires.

Skidders and tractors shall be equipped with a minimum 5-BC fire extinguisher. Fire extinguishers shall be mounted, readily accessible, properly maintained and fully charged.

Contractor shall equip all mechanized harvesting machines and log processors with hydraulic systems, powered by an internal combustion engine (e.g. masticator, chipper, feller/buncher, harvester, forwarder, Hot Saw, stroke delimeter, etc.),



with at least two 4-A:60-B:C fire extinguishers or an acceptable CAFS substitute identified in Section K.

C. Spark Arresters and Mufflers.

Except for tractors and other equipment with exhaust-operated turbochargers, Contractor shall equip each operating tractor and any other internal combustion engine with an approved spark arrester. There shall be no exhaust bypass on any system.

Spark Arresters shall be a model tested and approved under Forest Service Standard 5100-1a as shown in the National Wildfire Coordinating Group Spark Arrester Guide, Volumes 1 and 2, and shall be properly mounted and maintained according to manufacturer’s specifications.

Every motor vehicle subject to registration shall at all times be equipped with an adequate exhaust system meeting the requirements of the California Vehicle Code.

D. Power Saws.

Each power saw shall be equipped with a spark arrester approved and maintained in effective working order as identified in the Spark Arrester Guide in Section C. above and according to applicable parts of CPRC Section 4442 or 4443. An Underwriters Laboratories (UL) approved fire extinguisher containing a minimum 14 ounces of fire retardant shall be kept with each operating saw.

A size 0 or larger shovel with an overall length of not less than 38 inches shall be kept with each gas can, but not more than 300 feet from each power saw when used off cleared landing areas.

F. Tank Truck or Trailer.

Contractor shall provide a water tank truck or trailer on or in proximity to Contract Area during Contractor's Operations hereunder during Fire Precautionary Period. When Project Activity Level B or higher is in effect, a tank truck or trailer shall be on or immediately adjacent to each active landing, unless otherwise excepted when Hot Saws or Masticators are being used. See Section 6 for specific contract requirements.

The tank shall contain at least 300 gallons of water available for fire suppression. Ample power and hitch shall be readily available for promptly and safely moving tank over roads serving Contract Area. Tank truck or trailer shall be equipped with the following:

- (1) Pump, which at sea level, can deliver 23 gallons per minute at 175 pounds per square inch measured at the pump outlet. Pumps shall be tested on Contract Area using a 5/16-inch orifice in the Forester One Inch In-Line Gauge test kit. Pump shall meet or exceed the pressure value in the following table for nearest temperature and elevation:

T E M P	Sea Level		1000 Feet		2000 Feet		3000 Feet		4000 Feet		5000 Feet		6000 Feet		7000 Feet		8000 Feet		9000 Feet		10000 Feet	
	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G
55	179	23	174	23	169	23	165	22	161	22	157	22	153	22	150	21	146	21	142	21	139	21
70	175	23	171	23	166	22	162	22	158	22	154	22	150	21	147	21	143	21	139	21	136	20
85	171	23	168	23	163	22	159	22	155	22	151	21	147	21	144	21	140	21	136	20	133	20
100	168	23	164	23	159	22	155	22	152	22	148	21	144	21	141	21	137	20	133	20	131	20
	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G
	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P
	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M

The pump outlet shall be equipped with 1-1/2 inch National Standard Fire Hose thread. A bypass or pressure relief valve shall be provided for other than centrifugal pumps.

- (2) 300 feet of 3/4-inch inside diameter rubber-covered high-pressure hose mounted on live reel attached to pump with no segments longer than approximately 50 feet, when measured to the extreme ends of the couplings. Hose shall have reusable compression wedge type 1-inch brass or lightweight couplings (aluminum or plastic). One end of hose shall be equipped with a coupling female section and the other end with a coupling male section. The hose shall, with the nozzle closed, be capable of withstanding 200 PSI pump pressure without leaking, distortions, slipping of couplings, or other failures.



(3) A shut-off combination nozzle that meets the following minimum performance standards when measured at 100 P.S.I. at the nozzle:

	G.P.M.	Horizontal Range
Straight Stream	10	38 feet
Fog Spray	6 - 20	N/A

(4) Sufficient fuel to run the pump at least 2 hours and necessary service accessories to facilitate efficient operation of the pump.

When Contractor is using Hot Saws or Masticators, an additional 250 feet of light weight hose, approved by the Forest Service, shall be immediately available for use and be capable of connecting to the 300 feet of hose and appurtenances in (2) and (3) above.

G. Compressed Air Foam System.

A Compressed Air Foam System (CAFS) is a fire suppression system where compressed air is added to water and a foaming agent. By agreement, Contractor may substitute a CAFS or functional equivalent in lieu of the tank truck, trailer or fire extinguishers, provided it meets or exceeds the following specifications and requirements:

1. Variable foam expansion ratio – 10:1 to 20:1.
2. Units shall be kept fully charged with air; water and foam concentrate as recommended by the manufacturer and have the appropriate tools to service the system.
3. The unit shall contain enough energy to empty tank and clear hose prior to exhausting propellant.
4. The unit shall be capable of being completely recharged within 10 minutes.
5. When used on cable yarding landings, the unit shall be outfitted for immediate attachment to carriage and transported without damage to the unit.

Fire extinguishers required for Hot Saws, Masticators and similar equipment identified in Section 4 B. above may be substituted with a 3 gallon CAFS.

Tank truck, trailer or equivalent may be substituted with a 30 Gallon CAFS with at least 550 feet of one inch hose and an adjustable nozzle with enough water, air and foam concentrate for at least one recharge.

H. Helicopter Yarding Fire Precautions

Contractor shall provide and maintain fire equipment as follows:

1. The fire toolbox required under this provision shall be equipped for attachment to the helicopter long line so that it may be hauled to needed locations. Such attachment device shall not interfere with access to fire tools. Unless agreed otherwise, the fire toolbox shall be located at the Active Landing ready for immediate dispatch.
2. An external Heli bucket readily attachable to the helicopter, with a capacity of at least 500 gallons, and having a remote control door mechanism adequate for rapid dropping of water. The Heli bucket shall be located at the helicopter service landing and shall be filled with water ready for immediate dispatch unless otherwise agreed.
3. All aircraft used in conjunction with Contractor’s Operations shall be equipped with an operable radio system capable of meeting Region Five avionics requirements.
4. For protection of fuel servicing operations, fire extinguishers which have the following ratings based on the open hose discharge capacity, i.e., "broken hose," of the aircraft fueling system shall be readily available:
 - a. Where said capacity does not exceed 200 gallons per minute, at least one approved extinguisher having a minimum rating of 20-B.
 - b. Where said capacity is in excess of 200 gallons per minute, but not over 350 gallons per minute, one approved extinguisher having a minimum rating of 80-B.
 - c. Where said capacity is in excess of 350 gallons per minute, two approved extinguishers, each having a minimum rating of 80-B.
5. By agreement, a suitable CAFS may also be used in lieu of the above extinguishers.



- 6. Extinguishers of over 50 pounds gross weight shall be of wheeled type or be mounted on carts to provide mobility and ease of handling.

5. GENERAL

- a. **State Law:** In addition to the requirements in this Fire Plan, the Contractor shall comply with all applicable laws of the State of California. In particular, see California Public Resource Codes.
- b. **Fire Supervisor & Fire Patrolperson:** Contractor shall designate in the fire plan required by B7.1 and furnish on Contract Area during operating hours a fire supervisor, named in writing and authorized to act on behalf of Contractor in fire prevention and suppression matters.

Unless agreed otherwise, Contractor shall furnish and designate in writing, a Fire Patrolperson each operating day when Project Activity Level C or higher is in effect. When on duty, the Fire Patrolperson is required to patrol the operation for the prevention and detection of fires, to take suppression action where necessary and to notify Forest Service as required under Sections I. Reporting Fires and L. Communications. This Fire Patrol is required on foot, unless otherwise agreed.

By written agreement, one Fire Patrolperson may provide patrol on this and adjacent projects or Projects. No Fire Patrolperson shall be required on Specified Road construction jobs except during clearing operations unless otherwise specified.

Title	Name	Telephone Number
Fire Supervisor		
Fire Patrolperson		

- c. **Reporting Fires:** As soon as feasible but no later than 15 minutes after initial discovery, Contractor shall notify Forest Service of any fires on Contract Area or along roads used by Contractor. Contractor's employees shall report all fires as soon as possible to any of the following Forest Service facilities and/or personnel listed below, but not necessarily in the order shown:

	Name	Office Address	Office telephone
Dispatch Center	Northern California Service Center	6101 Airport Road, Redding, CA 96002	(530) 226-2800
Nearest FS Station	McCloud Ranger Station	2019, McCloud, CA 96057	
Nearest Fire Lookout	Siskiyou Bear		
Forest Service Representative	Kori Kelly	3644 Avtech Parkway, Redding, CA 96002	(530) 643-0124
California Deer Association Representative	Alexandra Bandeian	1884 Keystone Court Suite A Redding, California 96003	(530) 227-4331
California Deer Association Representative	Doug Patterson	1884 Keystone Court Suite A Redding, California 96003	(530) 983-2375

When reporting a fire, provide the following information:

- Your Name
- Call back telephone number
- Project Name
- Location: Legal description (Township, Range, Section); and Descriptive location (Reference point)
- Fire Information: Including Acres, Rate of Spread and Wind Conditions.



- d. **Communications:** Contractor shall furnish a serviceable communications system such as a telephone, radio-telephone, radio system or satellite phone connecting each operating side within the Contract Area with Contractor’s headquarters, and capable of notifying emergency services, CDA, and/or Forest Service within 15 minutes of discovery of any fires on the Contract Area or along Contractor’s haul route. When such headquarters are at a location which makes communication to it clearly impractical, CDA may agree to a reasonable alternative notification method.

A Citizen’s Band (CB)radio is not acceptable communications.

- e. **Clearing of Fuels:** Contractor shall clear away, and keep clear, fuels and logging debris as follows:

Welding equipment and stationary log loaders, yarders and other equipment listed in California State Law:	10 feet slope radius
Tail or corner haulback blocks:	All running blocks shall be located in the center of an area cleared to mineral soil at least 15 feet in diameter.
Lines near, between or above blocks:	Sufficient clearing to prevent line from rubbing on snags, down logs and other dead woody material.

- f. **Storage and Parking Areas.** Equipment service areas, parking areas, and gas and oil storage areas shall be cleared of all flammable material for a radius of at least 10 feet unless otherwise specified by local administrative unit. Small mobile or stationary internal combustion engine sites shall be cleared of flammable material for a slope distance of at least 10 feet from such engine. The CDA/FS Representative shall approve such sites in writing.
- g. **Permits Required:** The Contractor must secure a special written permit from CDA/FS Representative before burning, welding or cutting metal or starting any warming fires. If contract requires Blasting and Storing of Explosives and Detonators, an Explosives Permit may be required pursuant to the California Health and Safety Code, Section 12101.
- h. **Blasting:** Contractor shall use electric caps only unless otherwise agreed in writing. When blasting is necessary in slash areas, a Fire Patrolperson equipped with a size 0 or larger shovel with an overall length of not less than 46 inches and a filled backpack can (4 or 5 gallon) with hand pump shall remain in the immediate area for an hour after blasting has been completed.
- i. **Smoking:** Smoking shall not be permitted during fire season, except in a barren area or in an area cleared to mineral soil at least three feet in diameter. In areas closed to smoking, CDA may approve special areas to be used for smoking. The Contractor shall sign designated smoking areas. Contractor shall post signs regarding smoking and fire rules in conspicuous places for all employees to see. Contractor's supervisory personnel shall require compliance with these rules. Under no circumstances shall smoking be permitted during fire season while employees are operating light or heavy equipment or walking or working in grass and woodlands.

6. EMERGENCY PRECAUTIONS

Contractor's Operations shall conform to the limitations or requirements in the Project Activity Level (PAL) table below. Project Activity Levels applicable to this project shall be the predicted activity levels for the Fire Danger Rating Area(s), or fire weather station(s) stated in the Contract Area Map Legend on Integrated Resource Service Contracts (IRSC’s), and other contracts where applicable.

Fire Danger Rating Area/Fire Weather Station for Project

Ash Creek – PAL Area 2

The Forest Service, in its sole discretion, may change the predicted activity level if the current fire suppression situation, weather and vegetation conditions warrant an adjustment. If practicable, Forest Service will determine the following day’s activity level by 6:00 PM. Contractor shall obtain the predicted Project Activity Level from the appropriate Ranger District Office before starting work each day.



Phone Number or Website to obtain Predicted Activity Levels: (530) 226-2457

Forest Service may change the Project Activity Level Table to other values upon revision of the National Fire Danger Rating System. When Contractor is notified, the revised Project Activity Levels will supersede the levels in the Project Activity Level Table below.

PROJECT ACTIVITY LEVEL

Level	<i>Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.</i>
A	Minimum requirements noted above in Sections 4 and 5.
B	1. Tank truck, trailer, or approved CAFS substitute shall be on or adjacent to the Active Landing.
C	1. When Hot Saws or Masticators are operating, a tank truck, trailer or approved CAFS substitute shall be within ¼ mile of these operations. Effective communications shall exist between the operator and the Active Landing. 2. Immediately after Mechanical Operations cease, Fire Patrol is required for two hours.
D	1. Immediately after Hot Saw or Masticator operations cease, Fire patrol is required for three hours. 2. No Dead Tree felling after 1:00 PM, except recently dead. 3. No Welding or cutting of metal after 1:00 PM, except by special permit.
Ev	1. The following activities may operate all day: <ul style="list-style-type: none"> a. Loading and hauling logs decked at approved landings. b. Loading and hauling chips stockpiled at approved landings. c. Servicing equipment at approved sites. d. Dust abatement, road maintenance (Chainsaw use prohibited), culvert installation within cleared area, chip sealing, paving, earth moving or rock aggregate stock pile loading and installation (does not include pit or quarry development). e. Chainsaw and log processing operations associated with loading logs or other forest products at approved landings. 2. Hot Saws or Masticators may operate until 1:00 PM; provided that: <ul style="list-style-type: none"> a. A tractor or other equipment with a blade capable of constructing fireline is on or adjacent to the active landing or within ¼ mile of the operating equipment. This piece of equipment shall have effective communication with the Hot Saw or Masticator. b. Any additional restrictions specified by the Forest. 3. All other conventional Mechanical Operations are permitted until 1:00 PM. 4. Some operations may be permitted after 1:00 PM, on a case-by- case basis, under the terms of a PAL Ev Variance Agreement. Activities for which a Variance may be issued are: <ul style="list-style-type: none"> a. Rubber Tire Skidding b. Chipping on Landings c. Helicopter Yarding d. Fire Salvage 5. When approved by a Line Officer, a Variance Agreement can be implemented when the criteria specified in the agreement are met and mitigation measures are in place. This approval is good for ten (10) days unless cancelled sooner or extended by the Contracting Officer for an additional ten (10) days. Variance approval can be withdrawn at the sole discretion of Forest Service. Variance approval is contingent on the 7-day fire weather forecast, fuel conditions, site characteristics, current fire situation, state of Contractor’s equipment for prevention and suppression readiness, type of operation and social and community considerations etc. (See attached Project Activity Level Variance Agreement).
E	The following activities may operate all day: <ul style="list-style-type: none"> 1. Loading and hauling logs decked at approved landings. 2. Loading and hauling chips stockpiled at approved landings. 3. Servicing Equipment at approved sites. 4. Dust abatement, road maintenance (chainsaw use prohibited) or loading stock piles and rock aggregate installation (does not include pit or quarry development). 5. Chainsaw operation associated with loading at approved landings. All other activities are prohibited.



Expected Days per Month at each PAL value for the "normal operating season" is shown below:

Project Activity Level Climatology (data collected May 15 through October 31)							
Station/SIG/Unit	Ash-Creek - PAL Area 2				Years Analyzed: 2001-2020		
	A	B	C	D	Ev	E	Days Analyzed
Month	Expected Days per Month at Each PAL Value						Days Analyzed
January	28.3	2.5	0.3	0.0	0.0	0.0	593
February	25.0	2.7	0.2	0.0	0.0	0.0	531
March	27.3	2.7	1.1	0.0	0.0	0.0	598
April	21.5	6.3	2.2	0.1	0.0	0.0	569
May	14.7	8.6	6.7	0.9	0.0	0.0	593
June	5.7	10.5	13.2	0.6	0.0	0.0	597
July	4.7	23.0	2.3	0.3	0.0	0.0	617
August	0.6	2.5	21.6	5.8	0.6	0.0	620
September	2.1	2.8	15.0	7.6	2.6	0.0	600
October	7.5	7.3	13.0	2.9	0.5	0.0	620
November	20.3	7.0	2.5	0.2	0.1	0.0	599
December	26.7	4.0	0.3	0.0	0.0	0.0	613

7. Fire Control.

Contractor shall, both independently and in cooperation with Forest Service, take all reasonable and practicable action to prevent and suppress fires resulting from Contractor’s Operations and to suppress any forest fire on Contract Area. Contractor’s independent initial fire suppression action on such fires shall be immediate and shall include the use of all necessary personnel and equipment at Contractor’s disposal on Contract Area or within the distance of Contract Area: 25 miles.

- a. **The Contractor’s Reinforcement Obligations.** Whenever an Operations Fire or Negligent Fire, whether on or off Contract Area or any other forest fire on Contract Area, has not been suppressed by initial action and appreciable reinforcement strength is required, Forest Service may require further actions by Contractor until such fire is controlled and mopped up to a point of safety. Such actions may include any or all of the following as necessary to fight such fire:
 - i. *Suspend Operations.* To suspend any or all of Contractor’s Operations.
 - ii. *Personnel.* To release for employment by Forest Service any or all of Contractor’s personnel engaged in Contractor’s Operations or timber processing within the distance of Contract Area: (fill-in miles). Any organized crew so hired shall include Contractor’s supervisor, if any. Personnel so employed shall be paid at Forest Service standard emergency firefighting rates.
 - iii. *Equipment.* To make available for Forest Service rental at firefighting equipment rates common in the area or at prior agreed rates any or all of Contractor’s equipment suitable for firefighting and currently engaged in Contractor’s Operations within the distance of Contract Area: (fill-in miles). Equipment shall be operated only by personnel approved by Contractor, if so requested by Contractor.

EXHIBIT H – Road Maintenance Specifications

T-800 DEFINITIONS

Wherever the following terms or pronouns are used in Specifications T-801 through T-810, the intent and meaning shall be interpreted as follows:

800-1.1 - Agreement. Maintenance projects require a mutually acceptable method to resolve the problems which arise when incompatible situations arise between drawings and specifications and actual conditions on the ground to allow orderly and satisfactory progress of the maintenance.

These specifications have been developed in anticipation of those problem areas and have provided that such changes will be by Agreement.

It is intended that drawings and specifications will govern unless "on-the-ground" conditions warrant otherwise, when specifications call for "Agreement", "agreed", or "approval" such Agreement or approval shall be promptly confirmed in writing.

800-1.2 - Annual Road Maintenance Plan. A plan prepared by various users of one or several roads. The plan is an Agreement on maintenance responsibilities to be performed for the coming year.

800-1.3 - Base Course. Material used to reinforce Subgrade or as shown on drawings, placed on Subgrade to distribute wheel loads.

800-1.4 - Berm. Curb or dike constructed to prevent Roadway runoff water from discharging onto embankment slope.

800-1.5 - Borrow. Select Material taken from designated borrow sites.

800-1.6 - Crown, Inslope, and Outslope. The cross slope of the Traveled Way to aid in drainage and traffic maneuverability.

800-1.7 - Culverts. A conduit or passageway under a road, trail, or other obstruction. A culvert differs from a bridge in that it is usually entirely below the elevation of the Traveled Way.

800-1.8 - Drainage Dip. A dip in the Traveled Way which intercepts surface runoff and diverts the water off the Traveled Way. A Drainage Dip does not block the movement of traffic.

800-1.9 - Drainage Structures. Manufactured structures which control the runoff of water from the Roadway including Inslope, overside drains, aprons, flumes, downdrains, downpipes, and the like.

800-1.10 - Dust Abatement Plan. A table which lists the road, dust palliative, application rates, and estimated number of subsequent applications.

800-1.11 - Lead-off Ditches. A ditch used to transmit water from a Drainage Structure or Drainage Dip outlet to the natural drainage area.

800-1.12 - Material. Any substances specified for use in the performance of the work.

800-1.13 - Prehaul Maintenance. Road maintenance work which the Purchaser determines must be accomplished to maintain the roads to a satisfactory condition commensurate with the Purchaser's use, provided Purchaser's Operations do not damage improvements under B6.22 or National Forest resources and hauling can be done safely. This work will be shown in the Annual Road Maintenance Plan as provided in C/CT5.31.

Prehaul Maintenance work the Purchaser elects to perform will be in compliance with the Road Maintenance T-Specifications.

800-1.14 - Roadbed. The portion of a road between the intersection of Subgrade and sideslopes, excluding that portion of the ditch below Subgrade.

800-1.15 - Road Maintenance Plan. A table which shows applicable road maintenance specifications to be performed by Purchaser on specific roads.

800-1.16 - Roadside. A general term denoting the area adjoining the outer edge of the Roadway.

800-1.17 - Roadway. The portion of a road within the limits of excavation and embankment.

800-1.18 - Shoulder. That portion of Roadway contiguous with Traveled Way for accommodation of stopped vehicles, for emergency use, and lateral support of base and Surface Course, if any.

800-1.19 - Slide. A concentrated deposit of Materials from above or on backslope extending onto the Traveled Way or Shoulders, whether caused by mass land movements or accumulated raveling.

800-1.20 - Slough. Material eroded from the backslope which partially or completely blocks the ditch, but does not encroach on the Traveled Way so as to block passage of traffic.

800-1.21 - Slump. A localized portion of the Roadbed which has slipped or otherwise become lower than that of the adjacent Roadbed and constitutes a hazard to traffic.

800-1.22 - Special Project Specifications. Specifications which detail conditions and requirements peculiar to the individual project.

800-1.23 - Subgrade. Top surface of Roadbed upon which Base Course or Surface Course is constructed. For roads without Base Course or Surface Course, that portion of Roadbed prepared as the finished wearing surface.

800-1.24 - Surface Course. The Material placed on Base Course or Subgrade primarily to resist abrasion and the effects of climate. Surface Course may be referred to as surfacing.

800-1.25 - Surface Treatment Plan. A table which lists the roads and surface treatments to be applied.

800-1.26 - Traveled Way. That portion of Roadway, excluding Shoulders, used for the movement of vehicles.

800-1.27 - Turnouts. That portion of the Traveled Way constructed as additional width on single lane roads to allow for safe passing of vehicles.

800-1.28 - Water Source. A place designated on the Road Maintenance Map for acquiring water for road maintenance purposes.

800-1.29 - Waterbar. A dip in the Roadbed which intercepts surface runoff and diverts the water off the Roadway. A Waterbar is not designed to be traversable by logging trucks.



T-802 DITCH CLEANING

DESCRIPTION

1.1 Ditch cleaning is removing and disposing of all Slough Material from Roadway ditches to provide a free-draining waterway.

REQUIREMENTS

2.1 Ditch cleaning shall be repeated during the year as often as necessary to facilitate proper drainage.

2.2 All Slough Material or other debris which might obstruct water flow in the Roadway ditch shall be removed. Material removed from the ditch, if suitable, may be blended into existing native road surface or Shoulder or placed in designated Berms in conjunction with Surface Blading T-803 operations.

Material removed from ditches that is not by Agreement blended into existing roads or placed in Berms shall be loaded and hauled to the disposal site shown on Area Map.

2.3 Roadway backslope or Berm shall not be undercut.

T-803 SURFACE BLADING

DESCRIPTION

1.1 Surface blading is keeping a native or aggregate Roadbed in a condition to facilitate traffic and provide proper drainage. It includes maintaining the Crown, Inslope or Outslope of the Traveled Way, Turnouts, and Shoulder; repairing Berms; blending approach road intersections; and cleaning bridge decks, Drainage Dips, and Lead-off Ditches.

REQUIREMENTS

- 2.1 Surface blading shall be performed before, during, and after Contractor's use as often as necessary to facilitate traffic and proper drainage.
- 2.2 The surface blading shall preserve the existing cross-section. Surface irregularities shall be eliminated and the surface left in a free-draining state and to a smoothness needed to facilitate traffic. Surface Material which has been displaced to the Shoulders or Turnouts shall be returned to the Traveled Way. The blading operation shall be conducted to prevent the loss of surface Material and to provide for a thorough mixing of the Material being worked.
- 2.3 Water, taken from Water Sources designated on Contract Area Map, shall be applied during blading if sufficient moisture is not present to cut, mix, or compact the surface Material.
- 2.4 On native surfaced roads, Material generated from backslope Sloughing, and ditch cleaning may be blended with the surface Material being worked. On aggregate surfaced roads this Material shall not be blended with Surface or Base Course Material unless agreed otherwise.
- 2.5 Roadway backslopes or Berms shall not be undercut, nor shall new Berms be established unless agreed otherwise.

Berms shall be repaired by placing Material, as needed to restore the Berm, to reasonably blend with existing line, grade, and cross-section.
- 2.6 Drainage Dips and Lead-off Ditches shall be cleaned and maintained to reasonably blend with existing line, grade, and cross-section.
- 2.7 Intersecting roads shall be bladed for a distance of 50 feet to assure proper blending of the two riding surfaces.
- 2.8 Rocks or other Material remaining on the Traveled Way after the final pass that are larger than 4 inches in diameter or are larger than the maximum size of imported surfacing shall be removed from the Traveled Way. Unless otherwise designated by Forest Service, the oversized Material shall be disposed of by sidecasting. Sidecasting into streams, lakes, or water courses will not be permitted.
- 2.9 Material resulting from work under this specification shall not remain on or in structures, such as Culverts, overside drains, cattleguards, ditches, Drainage Dips, and the like.
- 2.10 Material resulting from work under this specification, plus any accumulated debris, shall be removed from bridge decks and the deck drains opened.

T-804 SURFACING REPAIR

DESCRIPTION

- 1.1 Surfacing repair is repairing potholes or small soft areas in the Traveled Way. It includes area preparation and furnishing and placing all necessary Materials, and other work necessary to repair the surface.

MATERIALS

- 2.1 Material used in the repair of soft areas on aggregate or native surfaced roads may be acquired from approved commercial sources, Forest Service Borrow areas shown on Sale Area Map, or Borrow sources agreed to. The quality and quantity of the imported Material used in the repair will be limited to that needed to provide a stable Traveled Way for hauling and to minimize damage to the road and adjacent resources. The quantity of imported surface repair Material used in the appraisal estimate will be shown on Road Maintenance Plan. However, the magnitude of the work may vary depending on Purchaser's hauling schedule and ground conditions.
- 2.2 Material used in the repair of bituminous pavements may be acquired from local commercial sources. If a mixing table is required, the location shall be approved by the Forest Service. The bituminous mixture to be used by the Purchaser shall be approved by the Forest Service. The Purchaser's share of the quantity of bituminous mixture used in the appraisal estimate will be shown on Road Maintenance Plan. However, Purchaser's share of the work may vary depending on Purchaser's hauling schedule, ground conditions, other traffic, etc.

REQUIREMENTS

- 3.1 Work under this specification shall be performed in a timely manner to reduce further deterioration of the Traveled Way.
- 3.2 Soft spots on aggregate or native surfaces shall be repaired by placing the imported Surface Course on top of the soft spot. Layers of imported Material shall be placed until a firm surface is produced.
- 3.3 Bituminous Pavement Repairs. The areas to receive bituminous pavement repairs will be marked on the road surface by the Forest Service just prior to Purchaser performing the work.
- 3.4 Potholes (deep patch). Surface Course and Base Course Materials shall be excavated to a depth necessary to reach firm, suitable Material. The minimum depth of excavation shall be 2 inches and the maximum depth of excavation shall be to the top of the Subgrade.

The edges of the prepared hole shall be extended to form a vertical face in unfractured asphalt surfacing. The prepared hole shall generally be circular or rectangular in shape, dry, and cleaned of all loose Material.

Prepared potholes shall be patched or barricaded immediately.

The faces of the prepared hole shall be tacked with a slow-setting emulsified asphalt.

The bituminous mixture shall be placed in layers not exceeding a compacted depth of 2 inches. Each layer shall be compacted thoroughly with hand or mechanical tampers or rollers. Compaction shall not be done with equipment wheels.

Upon completion, the compacted patch in the pothole shall be flush, with a tolerance or approximately ¼ inch to ½ inch above the level of the adjacent pavement.

- 3.5 Skin Patches. Bituminous mixture shall be distributed uniformly with feathered edges in layers not to exceed 2 inches compacted depth. When multiple layers are ordered, joints shall be offset at least 6 inches between layers.

Each layer shall be compacted by two passes with a 7-10 ton steel roller or comparable vibratory roller.

- 3.6 Asphalt Berm. Damaged segments of Berm shall be removed and the exposed ends beveled at approximately 45 degrees from vertical. The Berm foundation shall be cleaned and patched as necessary. The foundation and joining surfaces shall be coated with a slow-setting emulsified asphalt. Asphalt mix shall be placed and compacted to conform with the shape and alignment of the undamaged segment.
- 3.7 Disposal. All Materials removed from potholes, patches, and Berms shall be disposed of at disposal sites shown on Sale Area Map.

Table 2 - Material Types

Road number	Material type*
40N24Y.1 40N24Y.2 40N24Y.3	Cold Mix

T-806 DUST ABATEMENT

DESCRIPTION

1.1 This work shall consist of preparing Traveled Way and furnishing and applying Materials to abate dust.

MATERIALS

2.1 The roads requiring dust abatement, type of dust abatement Material to be used, the rates of application, and frequency of applications will be shown on Dust Abatement Plan. The Dust Abatement Plan may be changed by written Agreement.

2.2 Water. The locations of Water Sources are shown on Contract Area Map.

Operating Guidelines:

1. Operations are restricted to one hour after sunrise to one hour before sunset.
2. Pumping rate shall not exceed 350 gallons per minute.
3. The pumping rate shall not exceed ten percent of the stream flow.
4. Seek streams and pools where water is deep and flowing, as opposed to streams with low flow and small isolated pools.
5. Pumping shall be terminated when the tank is full. The effect of single pumping operations, or multiple pumping operations at the same location, shall not result in obvious draw-down of either upstream or downstream pools.
6. Each pumping operations shall use a fish screen. The screen face should be oriented parallel to flow for best screening performance. The screen shall be designed and used such that it can be submerged with at least one-screen-height clearance above and below the screen.
7. Operators shall keep a log on the truck containing the following information:
 - a. Operator's Name
 - b. Date
 - c. Time
 - d. Pump Rate
 - e. Filling Time
 - f. Screen Cleaned (Y or N)
 - g. Screen condition
 - h. Comments

Screen Construction Criteria:

1. Surface Area:
 - a. The total (unobstructed) surface area of the screen shall be at least 2.5 square feet, based on the upper limit of pumping of 350 gpm. Larger surface areas are recommended where debris buildup is anticipated, and where stream depth is adequate to keep the screen submerged at approximately middepth.
2. Screen Mesh:
 - a. Screen Mesh must be in good repair and present a sealed, positive barrier effectively preventing entry of the "design fish" into the intake. The design fish in this case is an immature (20-30mm) salmon or steelhead fry.
 - b. The screen mesh size shall be: round openings – maximum 3/32 inch diameter (.09 inch)
 - c. Square openings – maximum 3/32 inch diagonal (.09 inch)
 - d. Slotted openings – maximum 1/16 inch width (.07 inch)
3. Screen Design:
 - a. Water drafting screens maybe off-the-shelf products, but they are often custom-made devices appropriate to the scale and duration of pumping operation. To keep the screen supported and correctly positioned in the water column, adjustable support legs are advised. Screen geometry can be configured either as rectangular or cylindrical, e.e. as a shallow "box-shape" or tubular.
 - b. The intake structure shall be designed to promote uniform velocity distribution at all external mesh surfaces. This can be accomplished with a simple internal baffle devise that distributes the flow evenly across the entire surface of the screen. In order to accomplish this, the designer needs to understand the hydraulic characteristics of these devices. There is a tendency for most of the intake water to enter the screen near the hose end, so a typical internal baffle would consist of a pipe (or manifolded set of pipes) which have variable porosity holes at predetermine spacing. We recommend starting near the hose end with approximately 5 – 10% average open area, and gradually increasing the porosity toward the length of the scen. At a point where screen length exceeds three times the



diameter of the suction hose, the baffling effect tends to diminish rapidly. At this point the baffle porosity may approach 100%. A successful baffle system will functionally distribute flow to all areas of the screen. A poorly designed screen may result in high-velocity “hot spots”, which could lead to fish impingement on the screen face.

- c. Hydraulic testing of prototype screen designs is recommended where the application is on-going and extensive.
- 4. Screen Structure:
 - a. The screen frame must be strong enough to withstand the hydraulic forces it will experience. However, the structural frames, braces, and other elements that block the flow, change flow direction, or otherwise decrease the screen surface area should be minimized.
- 5. Screen Cleaning:
 - a. The screen shall be cleaned as often as necessary to prevent approach velocity from exceeding 0.33 feet per second. Operators should withdraw the screen and clean it after each use, or as necessary to keep screen face free of debris. Pumping should stop of screen cleaning when approximately fifteen percent or more of the screen area is occluded by debris. A suitable brush shall be on board the truck for this cleaning operation.
 - b. If the operator notes (1) impingement of any juvenile fish on the screen face or (2) entrainment of any fish through the screen mesh, he/she should stop operations and notify the Department of Fish & Game and/or NMFS hydraulic engineering staff:

National Marine Fisheries Service
 Engineering Section
 777 Sonoma Avenue, Suite 325
 Santa Rosa, CA 95404
 (707) 575-6050

2.3 Dust abatement Materials shall meet the requirements of the following subsections of Forest Service Specifications for Construction of Roads and Bridges or attached Special Project Specifications.

Emulsified Asphalt	702
Blotter Material	703.12
Magnesium or Calcium Chloride Brine	723.01
Calcium Chloride Flake	723.02
Lignin Sulfonate	723.03

2.4 Testing of Materials. Certification and sampling of bituminous Materials lignin sulfonate, and magnesium chloride shall be in accordance with subsections 105.04 or 723.04 of Forest Service Specifications for Construction of Roads and Bridges.

REQUIREMENTS

3.1 General. Dust abatement Materials shall be applied to the road surface as necessary to control road surface loss, provide for road user safety, and minimize damage to adjacent resources.

3.2 Compaction. When the methods listed below specify compaction, Traveled Way shall be compacted by an 8 to 10 ton pneumatic, steel-wheeled or equivalent vibrating roller making 2 passes over the full Traveled Way and Shoulder width, unless compaction is not required on the Dust Abatement Plan (C/CT5.31).

3.3 Preparation to Dust Abatement Materials Other Than Water. The following applies to all methods of preparation:

Bituminous residue shall be scarified and pulverized to produce loosened Material not exceeding 4 inches in greatest dimension.

Traveled Way shall be bladed in accordance with T-803.

Prior to applying DO-6BA, DO-6PA, or DO-8, the top 2 inches of Traveled Way shall contain not less than 80 percent nor more than 120 percent of optimum moisture as determined by AASHTO T-99, Method C. Prior to applying other bituminous Material, Traveled Way shall have a moisture content between 1 and 3 percent.

If surface dusting prevents the bituminous Material from penetrating, a light application of water shall be applied just prior to applying the bituminous Material.

Lignin Sulfonate and magnesium chloride shall be applied when the top 1 inch of Traveled Way contains not less than 3 percent moisture, nor more than 120 percent of optimum moisture as determined by AASHTO T-99, Method C.



Moisture content will be determined in accordance with AASHTO T-217 OR T-239.

One or more of the following methods shall be used, as specified in the Dust Abatement Plan (CT5.31).

Method 1. Compact Traveled Way and apply the dust abatement Material.

Method 2. Develop a layer of loose Material approximately 1 inch in depth for the full width of Traveled Way. Apply the dust abatement Material to this loose Material and compact after penetration. If traffic makes maintenance of the loose Material difficult, 1 inch of the Material may be bladed into a windrow along the Shoulder. The specified moisture content shall be maintained in the windrow and the top 1 inch of Traveled Way. The windrow shall be bladed to a uniform Material. When the dust abatement Material has penetrated, Traveled Way shall be compacted.

Method 3. Blade 1 inch of Material from Traveled Way into a windrow along the Shoulder. Maintain the specified moisture content in the windrow and the top inch of Traveled Way. Apply half the dust abatement Material. When the dust abatement Material has penetrated, the windrow shall be bladed to a uniform depth across dust abatement Traveled Way, and the remaining dust abatement Material shall be applied. Traveled Way shall be compacted.

Method 4. Develop a layer of loose Material approximately 2 inches in depth for the full width of Traveled Way. Apply half the dust abatement Material to the loose Material. Blade the top 2 inches into a windrow along the Shoulder. Apply the remaining dust abatement Material to Traveled Way and the Berm. Spread the Berm evenly across Traveled Way and compact.

3.4 Preparation for Dust Abatement with Water. Traveled Way shall be prepared in accordance with Specification T-803 Surface Blading when required.

3.5 Application Tolerance. Dust abatement Materials other than water shall be applied within 0.05 gallons per square yard of the rate specified.

3.6 Mixing Requirements. DO-6BA, DO-6PA, and DO-8 shall be thoroughly circulated in the distributor within 1 hour of application.

3.7 Weather Limitations. Dust abatement Materials shall not be applied when it is raining. Bituminous Material shall be applied when the surface temperature of Traveled Way is 50 degrees Fahrenheit or higher.

Lignin sulfonate and magnesium chloride shall be applied when the atmospheric temperature is 40 degrees Fahrenheit or higher.

3.8 Blotter Material. Blotter Material shall be spread in a sufficient quantity to prevent tire pickup.

T-807 ROADWAY VEGETATION

DESCRIPTION

- 1.1 This work consists of cutting and disposing of all vegetative growth, including trees on roadway surfaces and roadsides that reduce sight distance and operational capability of the road within the clearing limits as described in the Road Maintenance Plan.

REQUIREMENTS

- 2.1 Cut brush, trees and other vegetative matter within the clearing limits to a maximum height of 6 inches above the ground surface or obstruction such as rocks or existing stumps which reduces sight distance, impedes vehicular travel or interferes with road maintenance operations, such as surface blading and ditch and culvert cleaning shall be removed. Timber meeting utilization standards shall be cut in appropriate lengths and decked along the Roadside in locations where the Traveled Way or sight distances will not be impaired.
- 2.2 Any items to remain will be Designated by Contractor.
- 2.3 Trim tree branches that extend over the road surface and shoulders to attain a clear height of 14 feet. When trees are limbed, cut limbs within 4 inches or less of the trunk. If required, remove other branches to present a balanced appearance.
- 2.4 Work may be performed either by hand or mechanically unless specifically shown in the Road Maintenance Plan. Self-propelled equipment is not allowed on cut and fill slopes or in ditches.
- 2.5 Vegetative matter and nonmerchantable timber cut from the Clearing Limits shall be treated by the specified method as required by Slash Treatment.



T-809 WATER BARS

DESCRIPTION

1.1 This work consists of installing or removing Waterbars in the Roadbed.

REQUIREMENTS

2.1 Waterbars shall be installed on roads shown on Road Maintenance Plan in accordance with the attached drawings and at locations designated or staked on the ground.

All Material excavated shall be used in the installation of the Waterbar. Bermed Material shall be compacted by operating heavy equipment over the length and width of the Berm.

2.2 Waterbars shall be removed on roads shown on Road Maintenance Plan by blading the Berm into the adjacent depression to form a smooth transition along the Traveled Way. The length and width of the fill Material shall be compacted by the equipment performing the work.

2.3 Waterbars may be required to be installed between seasons of use and then removed when haul is resumed. Waterbar installation may also be required when use of a road has been completed.