National Forest Foundation

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Request for Proposals

North Big Bear Fuels Reduction and Forest Health Project – 2027 Units

San Bernardino National Forest, California

NFF Background:

The National Forest Foundation (NFF) is a congressionally chartered nonprofit organization with the simple mission of bringing people together to restore and enhance National Forests and Grasslands. The NFF is the leading organization inspiring personal and meaningful connections to our National Forests, the centerpiece of America's public lands. Working on behalf of the American public, the NFF leads forest conservation efforts, increasing wildfire resilience, restoring lands and watersheds, and improving recreation experiences. We believe these lands, and all they provide, are an American treasure and are vital to the health of our communities.

Project Purpose:

The North Big Bear FY27 Project is intended to improve forest health and reduce wildfire risk by removing excessive vegetation and small-diameter trees that contribute to hazardous fuel conditions. Treatments include thinning trees, removing brush, pruning lower branches, removing non-saw timber, and treating slash generated during operations.

Statement of Work:

The selected Contractor will perform hazardous fuels reduction and forest health treatments on approximately 841.5 acres within the North Big Bear area of the San Bernardino National Forest. The project is designed to reduce wildfire risk, improve forest resilience, and create conditions that support future prescribed fire and effective wildfire suppression. Treatments will occur across multiple units with varying stand conditions and resource protection requirements.

Work will consist of thinning small-diameter trees and ladder fuels, removing designated non-saw timber and woody biomass, pruning residual trees, treating brush, and managing activity-generated slash through piling, mastication, or lop-and-scatter methods. The Contractor will be responsible for protecting sensitive cultural, biological, riparian, and recreational resources while completing treatments in accordance with project specifications and stewardship objectives.

Timeline:

This Request for Proposals will close and all proposals will be due on December 18, 2026 at 5:00 PM PST. Changes in the closing date for this Request for Proposals will be updated on the NFF website at https://www.nationalforests.org/rfp under the link for this

project's Request for Proposals. Please check the website for updates to the solicitation prior to submitting your proposal.

The NFF anticipates being able to enter a contract with any selected bidder(s) by March 5, 2027, with a projected contract start date of April 1, 2027 All contract related dates are estimates and subject to change at the NFF's sole discretion.

I. PROJECT OVERVIEW AND REQUIREMENTS

A. Project Overview

1. Description of Work. This Request for Proposals is for fuel reduction and timber removal services related to the North Big Bear Forest Health project, located on the San Bernardino National Forest. Work on this project will include thinning small-diameter trees and ladder fuels, removing designated non-saw timber and woody biomass, pruning residual trees, treating brush, and managing activity-generated slash through piling, mastication, or lop-and-scatter methods. The selected contractor(s) will be responsible for performing the services and providing the deliverables set forth below:

   a) Mandatory Item 1: Cut and Remove Included Timber: Units 485, 486, 490, 491, 493, 495, 520, 522, 526, 535, 557, 559, 578, 582, and 590 (291.89 Acres)
      i. Cut and remove from Contract Area sawtimber trees which meet the minimum tree specifications as identified in Appendix E – Timber Specifications.
      ii. The boles of old large plated pine trees shall be raked. Rake the duff layer at the base of large plated pine trees with noticeable mounds clearing at least 75% of the duff layer to 24 inches away from the bole of the residual pine.
      iii. 9 logs totaling 180 linear feet shall be retained per acre in the unit. Retained logs shall be at least 12.0 inches small end diameter, at least 20.0 feet in length or greater and left flush with the ground.

   b) Mandatory Item 2: Mechanical (with Hand Work) Thinning: Units 487, 496, 498, 502, 523, 564, 587 and 588 (289.86 Acres)
      i. Thin (primarily) from below all live trees to a target basal area retention of 80 + 10. Directionally fell away from residual trees all understory White Fir, Juniper trees, and Pinyon Pine trees as well as Oak and Jeffrey Pine less than 16.4 inches DBH trees that pose a ladder that allows fire to climb into the tree canopy. Trees with any part of their canopy growing directly underneath the dripline of residual trees are ladder fuels. All residual trees shall be the largest, tallest trees in the unit as well as Jeffrey Pine and Oaks >16.4 inches DBH.
      ii. All tree species shall be pruned up to 6 feet or 50 percent of tree height, whichever is less. Limbs of pruned trees shall be scattered at least 3 feet away from the bole.
      iii. Brush including mountain mahogany will be cleared from the bole out to 10.0 feet slope distance from the dripline of residual trees.
      iv. Existing downed wood shall be cut and moved to at least 3 feet away from the residual boles of trees.
      v. Small Diameter trees shall be removed within 10 feet of the dripline of residual trees.
      vi. The boles of old large plated pine trees shall be raked. Rake the duff layer at the base of large plated pine trees with noticeable

mounds clearing at least 75% of the duff layer to 24 inches away from the bole of residual pine.

c) Mandatory Item 3: Mechanical (with Hand Work) CASPO Thinning Units 497, 500, 528, 531, 536, 540, 558 and 561 (131.47 Acres)
    i. Thin (primarily) from below all live trees to a target basal area retention of 120 + 10. Directionally fell away from residual trees all understory White Fir, Juniper trees, and Pinyon Pine trees as well as Oak and Jeffrey Pine less than 16.4 inches DBH trees that pose a ladder that allows fire to climb into the tree canopy. Trees with any part of their canopy growing directly underneath the dripline of residual trees are ladder fuels. All residual trees shall be the largest, tallest trees in the unit as well as Jeffrey Pine and Oaks >16.4 inches DBH.
    ii. All tree species shall be pruned up to 6 feet or 50 percent of tree height, whichever is less. Limbs of pruned trees shall be scattered at least 3 feet away from the bole.
    iii. Brush including mountain mahogany will be cleared from the bole out to 10.0 feet slope distance from the dripline of residual trees.
    iv. Existing downed wood shall be cut and moved to at least 3 feet away from the residual boles of trees.
    v. Small Diameter trees shall be removed within 10 feet of the dripline of residual trees
    vi. The boles of old large plated pine trees shall be raked. Rake the duff layer at the base of large plated pine trees with noticeable mounds clearing the at least 75% of the duff layer to 24 inches away from the bole of residual pine.

d) Mandatory Item 4: Fishing Hole Units: 578, 582, and 589 (9.39 Acres)
    i. Thin (primarily) from below all live trees to a target basal area retention of 70 + 10. Residual trees shall be the largest and tallest trees regardless of species that meet the basal area objective. After choosing the largest and tallest trees, choose leave tree species based on the following species preference: Black oak>Sugar Pine>Jeffrey Pine >Incense Cedar>White Fir> Western Juniper>Pinyon Pine. Focus on leaving trees with > 30 percent live crown and/or no extensive insect/disease damage. A smaller, healthy tree should be left over an unhealthy larger tree of comparable size (within 8” db.).
    ii. All trees marked with BLUE marking paint
    iii. All live trees marked with white paint and/or tagged with a wildlife tag shall be retained and counted toward the residual basal area of 70 + 10.
    iv. All trees and brush will be removed within 5 feet of the dripline of residual trees except for service berry and manzanita that will only be removed between the bole and the dripline of residual trees.
    v. Retain 75% of woodrat food species (service berry, manzanita, and oak) within open areas.

vi. 9 logs totaling 180 linear feet shall be retained per acre in the unit. Retained logs shall be at least 12.0 inches small end diameter, at least 20.0 feet in length or greater and left flush with the ground. Contractor shall construct a fireline cleared to mineral soil and at least 3 feet wide around each remaining log. In areas where there is a potential for burning material to roll, firelines, 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.

vii. All woodrat middens located outside the dripline of residual trees will be retained. Contractor shall construct a fireline cleared to mineral soil and at least 3 feet wide around each remaining woodrat midden. In areas where there is a potential for burning material to roll, firelines, 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.

viii. Do not add newly cut material to existing piles. Contractor shall construct a fireline cleared to mineral soil and at least 3 feet wide around each existing pile.

e) Mandatory Item 5: HOOP Units 580, 583, 584 (10.21 Acres)

i. Retain existing canopy cover by only thinning live trees within the dripline of larger residual trees. Retain all live pine 16.4 inches DBH, unless otherwise agreed to by the Forest Service in advance of felling for reasons of safety or operations. Dead and dying trees up to 15.9 shall be cut and removed except all dead and dying white fir shall be removed.

ii. All live trees marked with white paint, tagged with a wildlife tag shall be retained.

iii. All oak trees shall be retained.

iv. All trees and brush will be removed within from the bole out to 5 feet beyond the dripline of residual trees.

v. Retain 75% of woodrat food species (service berry, manzanita, and oak) within open areas.

vi. Retain all existing downed logs. Contractor shall construct a fireline cleared to mineral soil and at least 3 feet wide around each remaining log. In areas where there is a potential for burning material to roll, firelines, 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.

vii. All woodrat middens will be retained. Contractor shall construct a fireline cleared to mineral soil and at least 3 feet wide around each remaining woodrat midden. In areas where there is a potential for burning material to roll, firelines, 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.

f) Mandatory Item 6: Hand thin and Pile units 488, 489, and 585 (105.82 Acres)
    i. Thin (primarily) from below all live trees to a target basal area retention of 80 + 10. Directionally fell away from residual trees all understory White Fir, Juniper trees, and Pinyon Pine trees as well as Oak and Jeffrey Pine less than 16.4 inches DBH trees that pose a ladder that allows fire to climb into the tree canopy. Trees with any part of their canopy growing directly underneath the dripline of residual trees are ladder fuels. All residual trees shall be the largest, tallest trees in the unit as well as Jeffrey Pine and Oaks >16.4 inches DBH.
    ii. All tree species shall be pruned up to 6 feet or 50 percent of tree height, whichever is less. Limbs of pruned trees shall be scattered at least 3 feet away from the bole.
    iii. Brush including mountain mahogany will be cleared from the bole out to 10.0 feet slope distance from the dripline of residual trees.
    iv. Existing downed wood shall be cut and moved to at least 3 feet away from the residual boles of trees.
    v. Small Diameter trees shall be removed within 10 feet of the dripline of residual trees
    vi. The boles of old large plated pine trees shall be raked. Rake the duff layer at the base of large plated pine trees with noticeable mounds clearing at least 75% of the duff layer to 24 inches away from the bole of residual pine.
g) Mandatory Item 7: Pebble Plain unit: 586 (2.86 Acres)
    i. All live and dead vegetation, including slash, shall be removed. Whole tree yarding shall be required and no lop. Hardwood (All oaks and mountain mahogany) greater than 4 inches in diameter (DRC) and longer than 4ft shall be limbed and skidded to a roadside landing as approved by the COR. Softwood (All conifer spc.) greater than 5 inches in diameter (dbh) and longer than 6ft shall be limbed and skidded to a roadside landing as approved by the COR. Slash shall be piled outside of the unit. Stumps shall be cut to 3 inches from ground on the uphill side. Mechanical work will only be approved by the COR in coordination with District Botanist once soil conditions are favorable for mechanical operation. No work, hand or mechanical, nor piece of machinery shall enter the Exclusion Zone.
h) Refer to Tree Felling, Yarding, Decking, Pruning, Brush Treatment, Piling, Fungicide Application, and Mastication specifications below for all mandatory items.

2. Specifications. Project work shall be accomplished in accordance with the following specifications:

a) Tree Felling:
    i. All trees shall be directionally felled away from stream courses, structures, survey monuments, and private property, and controlled 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.

ii. 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 3 inches, at which point the top shall be cut from the remainder of the stem.

iii. Small Diameter trees up to 4.9 inches shall be removed within 10 feet of the crowns of residual trees or clumps and slash treated.

iv. Choose leave tree species based on the following species preference: Black Oak>Sugar Pine>Jeffrey Pine >Incense Cedar>White Fir> Western Juniper>Pinyon Pine.

v. All dead conifers less than 16.0 inches at DBH shall be cut and slash lopped and scattered.

vi. All stumps shall be cut so that no vertical surfaces remain. Cut tree stumps shall not exceed 12.0 inches high as measured from the ground on the uphill side of the stump or 4.0 inches above any obstacle.

vii. Live willow shall not be cut. Some trimming of willows may be allowed in order to meet safety road maintenance requirements. Exceptions would be coordinated in writing between the Contractor and Forest Service.

viii. All dead trees, conifers and oaks, within falling distance to roads, trails, and infrastructure shall be cut.

b) Yarding and Decking:

i. 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.

ii. 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.

iii. Products shall be skidded with leading end clear of ground.

iv. Ground-based yarding systems used to remove or treat material are restricted to slopes of less than 35 percent. Exceptions would be coordinated in writing between the Contractor and Forest Service.

v. All cut conifer and hardwood with a diameter of 5 inches at the small end and a minimum of 6 feet long shall be yarded to and decked at a designated landing.

c) Pruning:

i. All other tree species shall be pruned up to 6 feet or 50 percent of tree height, whichever is less.
ii. Limbs shall be cut cleanly within 1.0 inch of the branch collar on all trees
iii. Pruning or trimming trees with a masticator is not acceptable. The only permissible methods and tools for pruning are with a chainsaw, handsaw or motorized pole-saw.

d) Brush Treatment:
   i. All brush treatment shall be accomplished by hand cutting or machine.
   ii. All dead brush shall be treated.
   iii. Throughout the project area, brush and Mountain Mahogany will be cleared from the bole out to 10.0 feet slope distance from the dripline of residual trees.
   iv. Stump Height - All brush shall be severed from the stump parallel to the ground and stumps shall be no greater than 4.0 inches above ground height or any obstacle
   v. No treatment shall occur within the established inner gorge of perennial or intermittent watercourses designated on the Contract Area Maps.

e) Lop and Scatter:
   i. Logging Slash shall be scattered to reduce slash concentrations with slash being generally left within 18 inches of the ground as shown on Contract Area Map. Logging Slash shall be scattered into openings away from and without unnecessary damage to residual trees. All scattered logs shall be limbed, placed away from trees and positioned so they will not roll. When Scattering is specified, another method may be used by agreement.

f) Piling:
   i. 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 7 feet in height. Material extending three feet or more outside the edge of a pile shall be trimmed. 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, 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. No piling allowed on downed logs or stumps.

ii. All piles shall be covered with a durable waterproof covering as approved by Forest Service. The material shall be at least six feet in width. Piles shall not be less than fifty percent covered, with the covering extending not less than halfway down all sides. Pieces of burnable material shall be placed on top of the durable waterproof covering to keep the covering from blowing off the pile.

iii. Note: Avoid making small piles that congest the landscape and create a potential hazard to residual trees, crowns and snags, or inhibit the ability to meet the desired density. This is avoided by making larger piles, as necessary.

iv. Creating small openings by removing trees and/or brush to less than 1/4 acre to facilitate larger piles is permissible, even if thinning below the desired density as the density is an average of the whole unit.

g) Fungicide Application:

i. Within areas shown on Contract Area Map, Contractor shall treat stumps of all live or Recently Dead Conifer trees equal to or greater than 2 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.

ii. 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 borax to insure complete coverage. Treatment should be done as soon as possible but shall be completed no later than 4 hours after felling, otherwise stumps shall be re-cut and treated.

iii. 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 300 feet of live stream courses and meadows/wetlands shown on Contract Area Map and/or 10 feet of sensitive plant location boundaries as flagged on the ground.

iv. Contractor shall provide the borate compound and colorant and apply it in compliance 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 0.5 pounds shall be reported to Forest Service within 3 hours.

v. 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.

h) Mastication:
   i. Additional areas not listed in Schedule of Items not allowed unless permitted in writing by the Forest Service.
   ii. Mastication can only occur on slopes less than 35 percent. Exceptions would be coordinated in writing between the Contractor and Forest Service.
   iii. Masticated material shall not exceed 2.0 inches in depth for over 75 percent of the area or 4 inches over 50 percent of the unit or area and if capacity has been obtained piling must occur for the remaining material.
   iv. Masticated material shall not remain within 10.0 feet of residual tree boles.
   v. Masticated material shall not exceed 2.0 feet in length or 2.0 inches in diameter at the large end. There shall be no evidence of “short cutting” in order to meet this prescription.
   vi. Sub-surface mastication is not allowed unless permitted in writing by the Forest Service.
   vii. Stump Height - All brush shall be severed from the stump parallel to the ground.

Project work shall be accomplished in accordance with the following specifications:

a) Appendix A: Definitions
b) Appendix B: Project Map
c) Appendix C: Additional Specifications
d) Appendix D: Fire Plan
e) Appendix E: Timber Specifications
f) Appendix F: Road Maintenance Specifications
g) Appendix G: Flagging Code Guidelines
h) Appendix H: Invasive Species Handout
i) Appendix I: Determining Basal Area with a Prism

3. Project Location.

a) Project Location: The project is located within the North Big Bear area of the Mountaintop Ranger District, San Bernardino National Forest, in San Bernardino County, California. Work will occur across approximately 292 acres of National Forest System lands distributed among multiple treatment units in the San Bernardino Mountains.
b) Site Conditions: The project is located within the wildland-urban interface of the North Big Bear area on the Mountaintop Ranger District of the San

Bernardino National Forest in San Bernardino County, California. Treatment units are generally accessible via existing paved and unpaved National Forest System roads and consist of forested mountain terrain with varying stand densities, slopes, and operational conditions. Contractors should anticipate a mix of gentle to moderately steep terrain requiring both mechanized and hand-treatment methods, as well as the need to protect sensitive biological, cultural, recreational, and watershed resources while working in and around developed communities and public-use areas.

c) Utilities/Facilities: No utilities or contractor support facilities will be provided. Water, sanitation, electrical service, communications, fuel, equipment storage, waste disposal, lodging, meals, and other contractor support services are generally not available within the project area and shall be the responsibility of the Contractor. Contractors shall furnish all facilities, supplies, and logistical support necessary to perform the work, including transportation of personnel, equipment, and materials to and from the project site.

4. Work Schedule.

a) Work Start: April 1, 2027
b) Project Completion: April 1, 2028

B. Other Requirements

1. Minimum Insurance. In accordance with the terms of the Services Agreement, prior to the start of any work, the successful Bidder (the "Contractor") will be required to maintain, and ensure that its subcontractors performing work described in the proposal (Subcontractors) maintain, the minimum coverages and comply with the insurance requirements indicated below.

a) Coverage Requirements

i. Commercial General Liability Insurance ("CGL"). Commercial general liability insurance, including bodily injury, property damage, personal injury, advertising injury, products and completed operations and contractual liability in the amount no less than:
- $1,000,000 each occurrence;
- $1,000,000 products/completed operations limit;
- $1,000,000 advertising injury and personal injury limit; and
- $2,000,000 general aggregate.

ii. Business Automobile Liability Insurance. If using motor vehicles (owned, hired, or borrowed) to deliver or perform the work described in the proposal, business automobile liability insurance with a minimum limit of $1,000,000 combined single limit each accident for bodily injury and property damage for all owned, rented leased or hired vehicles used in conjunction with the performance of the services.

iii. Workers' Compensation Insurance. Statutory workers' compensation insurance in accordance with all state and local requirements of the state(s) in which services will be performed.

b) Waiver of Subrogation. All insurance policies shall include a waiver of any and all rights of subrogation or recovery of the insurers thereunder against, inter alia, the NFF, and its assigns, successors, undertakings and their subsidiaries, affiliates, employees, insurers and underwriters, and of any right of the insurers to any set-off or counterclaim or any other deduction, whether by attachment or otherwise, in respect of any liability of any such person insured under any such policy or in any way connected with any loss, liability or obligation covered by such policies of insurance.
c) Primary and non-contributory. With the exception of Workers' Compensation and Professional Liability insurance (if applicable), all insurance required to be maintained by Contractor shall be primary with respect to all claims arising out of Contractor's performance and/or activities under this Agreement, and any insurance or self-insurance maintained by the NFF shall be excess only and not be required to contribute with it.
d) "Claims Made" Coverage. Any liability insurance purchased on a "claims made" basis must be continuously maintained for a period equal to the applicable statute of repose, but in any case, not less than 3 years, following final performance or termination of Services, either through the continued purchase of insurance or the purchase of an extended reporting period. The retroactive date applicable to such "claims made" insurance, if any, must precede the first date on which Services are to be performed.
e) Verification of Coverage. Contractor will have furnished to the NFF original certificates of insurance and amendatory endorsements or copies of the applicable policy language effecting coverage required herein prior to or at the time of execution of the Agreement, and shall further provide evidence that the foregoing is in place and will not be cancelled or reduced during the term of the agreement. Contractor's and any Subcontractors' certificates of insurance will list "The National Forest Foundation" as an Additional Insured on its or their commercial general liability policy and business automobile liability policy (as applicable). Contractor will submit updated certificates of insurance upon expiration of the required policies.

2. Additional Insurance Requirements. In addition to the minimum insurances set-forth above, the NFF reserves the right to request additional coverage as reasonably necessary based on the scope, nature, and risks associated with the services to be performed, including, but not limited to:

a) Commercial/Contractor's Pollution Liability Insurance covering clean-up costs, legal fees, and third-party damages from environmental contamination.
b) Herbicide Applicator Endorsement restoring liability protection for chemical-related pollution and property damage to Contractor's CGL policy.
c) Loggers Broad Form Endorsement restoring liability protection for specific property damage and operational risk inherent to forestry operations to Contractor's CGL policy.
d) Umbrella/Excess Liability Insurance raising the limit on existing primary policies if the primary insurance limits are reasonably considered insufficient.

3. Payment/Performance Security. If selected, Bidder(s) shall be required to provide security in the form of cash, a letter of credit, bond, or other financial security that is easily convertible into cash in a form acceptable to the NFF, in its sole determination. The security will be used to ensure completion of the work required under any subsequent agreement and payment of all amounts lawfully due to all persons. All persons shall include, but not be limited to, those supplying or furnishing to the Bidder or Bidder's Subcontractors with labor, laborers, materials, rental machinery, tools or equipment used or to perform the work. Bidders may incorporate required associated costs into mobilization costs or other approved expenses. Payment or Performance Security will be required in the following amounts, as applicable:

a) For work that is classified as construction in accordance with the Miller Act or Little Miller Act or if required per conditions of the funding source, payment and performance bonding will be required in the full amount of the Agreement. For the purposes of this Request for Proposal, construction is defined as "any contract greater than $100,000 for the construction, alteration, or repair of any public building or public work where the federal government is the owner."
b) If Contractor is subcontracting 15% or more of the total contract value, or if the cost of materials is in excess of the larger of $100,000 or 50% of the contract total, payment and performance bonding will be required in the full amount of the Agreement.
c) If the value of the agreement is in excess of $250,000, Contractor will be required to post financial security in a form acceptable to the NFF in the amount of 5% of the total agreement value up to $250,000 in total financial security.

The NFF will not provide blanket waivers of payment/performance security requirements, though reserves the right to negotiate payment and performance security terms and conditions with a selected Bidder based upon legal requirements and organizational needs and policies.

4. Prohibited Telecommunications Services and Equipment. If selected, Bidder(s) are responsible for compliance with the prohibition on certain telecommunications and video surveillance services or equipment identified in 2 CFR 200.216.

5. Flowdown Provisions. NFF funding for projects may vary but will frequently include public funds. As such, any Agreement associated with this RFP may be subject to flowdown requirements under associated federal or state funding agreements, which are included and made part of by this reference. Flowdown requirements are not negotiable and will not be removed or edited. While flowdown provisions may change depending on funding, the NFF has identified the following flowdown provisions as currently being required for any Work performed under this RFP and any resulting contract.

II. PROPOSAL REQUIREMENTS

A. Technical Proposal.

1. Minimum Requirements. Bidders shall submit a technical proposal for the work described in this RFP. Bidders shall consider all relevant factors when submitting proposals for this work. Bidders shall identify in their proposals what they can supply in terms of materials, labor, equipment, supplies, supervision, quality control, and incidentals required to complete the work as described. Proposals should account for the need of the selected contractor to make its own arrangements for temporary utilities and facilities, if required. Proposals shall be sufficient to guarantee that the selected contractor shall be able to perform all work in a safe and conscientious manner and in accordance with all industry standards. At a minimum, each proposal must include the following:

   a) An overview and description of the services, materials, supplies, labor, equipment, utilities, and facilities provided by the Bidder that align with the requests in this RFP.
   b) A description of the project management or administration approach that will be followed by the Bidder to ensure that the identified work is completed on time and within budget.
   c) A project work plan and schedule that lists in detail the stages of work expected to be completed in this project, all identifiable deliverables, and the dates on which the Bidder would anticipate being able to complete delivery of the work.
   d) A project personnel overview identifying key personnel to be utilized if selected to perform the work described in this RFP and any relevant or required credentials or certifications held by the key personnel.

B. Bidder Qualifications. Bidders shall submit a statement of their qualifications for the work described in this RFP. The statement should include the following items in narrative format:

1. Experience.

   a) Please provide a brief explanation of previous work experience with land management agencies, noting specifically any work performed on National Forests or Grasslands.
   b) Please provide a listing of relevant projects of similar size, scope, and total value performed by the Bidder within the past 5 years.

2. References.

   a) Please provide three professional references, identifying as applicable any government or conservation nonprofit references.
   b) Provide the name, email address, and telephone number for each reference, as well as the dates of the projects during which the Bidder worked with each reference.

3. UEI. Successful bidders will be required to provide a Unique Entity Identifier (UEI). If you have a UEI, please provide it in your proposal or quote.
4. Federal Exclusion Verification. Bidder(s) will be required to affirm that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

C. Failed Projects or Legal Actions. Bidders shall identify any past failed projects and the reasoning behind the failure or incompletion. Bidders shall also identify any and all current or pending legal matters in which the Bidder or any of its principals is involved.

D. Pricing Schedule. Bidders shall price work according to the schedule below. If Bidders believe that an alternative method of pricing is more applicable, they may also provide an alternative pricing schedule in addition to the format requested below.

The NFF, in its sole discretion, reserves the right to utilize any alternative pricing schedule proposed by any Bidders.

All quantities and measurements identified in this RFP are based upon the best knowledge available to the NFF and are subject to change.

Due to the dynamic and changing nature of NFF funding, the NFF reserves the right to negotiate an increased cost with the selected Bidder in the event that prevailing wages become required for the work described in this RFP.

If the opportunity to add additional funding to the work described in this RFP arises, the NFF may increase the quantities of work to be performed as part of this project, as agreed upon by the NFF and the selected Bidder.

	Task/Item Description	**Unit of measure**	**# of Units**	**Unit Cost**	**Extended Cost**
(a)	Mandatory Item 1: Cut and Remove Included Timber: Units 485, 486, 490, 491, 493, 495, 520, 522, 526, 535, 557, 559, 578, 582, and 590	Acres	291.89		
(b)	Mandatory Item 2: Mechanical (with Hand Work) Thinning Units 487, 496, 498, 502, 523, 564, 587 and 588	Acres	289.86		
(c)	Mandatory Item 3: Mechanical (with Hand Work) CASPO Thinning	Acres	131.47		

	Units 497, 500, 528, 531, 536, 540, 558 and 561				
(d)	Mandatory Item 4: Fishing Hole Units 578, 582 and 589	Acres	9.39		
(e)	Mandatory Item 5: HOOP Units 580, 583 and 584	Acres	10.21		
(f)	Mandatory Item 6: Hand thin and Pile Units 488, 489 and 585	Acres	105.82		
(g)	Mandatory Item 7: Pebble Plain Unit 586	Acres	2.86		
				Total Bid	

E. Payment Schedule. Bidders shall submit a proposed payment schedule consistent with their proposed pricing structure. Lump sum proposals should identify invoicing milestones tied to deliverables or project phases, while time-and-materials proposals should identify the anticipated invoicing frequency, cost of materials/supplies, and the applicable rates for invoicing. Proposed payment schedules are for evaluation purposes only. The final payment structure and invoicing terms will be negotiated with the selected Bidder and incorporated into the executed agreement.

Invoice Number	**Milestone/Deliverable**	**Corresponding Cost**
1.		
2.		
3.		
4.		
5.		
	Agreement Total	

F. Insurance Information. Bidders must identify the insurance coverage currently in place. If available, please attach sample certificates of insurance.

III. SUBMISSION, EVALUATION, AND CONTACTS

A. Bidder Selection Process

1. Bid Submission. Bidders shall submit proposals containing all of the required information described above via email at the address specified below by the stated deadline:

   a) **Submission Address:** brobey@nationalforests.org
   b) **Submission Deadline:** 5:00 PM, PST on December 18, 2026.

   Proposals submitted after this RFP closes will not be considered unless approved by the NFF. The NFF will review all proposals determined to be responsive using the evaluation factors listed below. Proposals may be deemed non-responsive for failure to submit any required information or for failure to comply with any terms of this RFP. Non-responsive proposals may be disqualified from evaluation in the sole discretion of the NFF.

2. Notification. If a proposal is selected by the NFF to advance to the contracting stage, the NFF will notify the successful Bidder via email. Once the selected Bidder has been notified, the NFF project representative will coordinate the drafting and negotiation of an NFF agreement outlining the terms and conditions of the work to be performed.

   Unsuccessful Bidders will be notified via email as soon as possible after the closing date of this RFP. Please Note: The NFF **will not** share any information about the organizations submitting proposals nor any information regarding the proposals submitted by other organizations. If a Bidder has questions about its proposal, the Bidder may ask the NFF Point of Contact identified below. If an answer can be provided, the NFF will respond via email as soon as it is able to do so.

3. Request for Proposals Only. This is a request for proposals only and bids furnished do not bind the NFF in any way. Selection of a bid will result in the opportunity to contract with the NFF but will not guarantee a resulting contract or any amount of work. The NFF reserves the right to disqualify any incomplete or improper proposal submitted as non-responsive. The NFF may also decide not to select any proposals submitted to this RFP for advancement to contract negotiations. This request does not commit the National Forest Foundation to pay any costs incurred in the preparation or submission of the proposal or to contract for supplies or services.

B. Evaluation Factors and Scoring

The following factors will be used to evaluate any responsive submitted proposals. The factors, as listed, are ordered from highest priority (Level 3) to lowest priority (Level 1). Each factor can receive a score from 1 point to 3 points. The number of points awarded will be multiplied by the priority level to determine the total score for each factor. (Example: If Price/Cost (level 3) is awarded 2 points, the total score for price would be 6 points.)

Level 3 Criteria
- Price / cost
- Equipment and contractor capability
- Timing of when contractor can begin and/or finish the project
- Past performance, references, and USFS feedback

Level 2 Criteria
- Technical proposal / proposed approach to project
- Overall strategic benefits to meeting NFF goals and grant needs, requirements, and timelines

Level 1 Criteria
- Benefits to the local community
- Relationship to local community

C. Point of Contact

Any questions about this Request for Proposals shall be submitted in writing to the NFF contact identified below. Questions determined to be of importance to all potential Bidders will be posted as an attachment to an updated version of this RFP at https://www.nationalforests.org/rfp.

Brian Robey
National Forest Foundation Program Manager
brobey@nationalforests.org

D. Bid Submission

Submit bids via email to brobey@nationalforests.org by December 18, 2026.

E. Equal Opportunity Provider

In accordance with Federal law and U.S. Department of Agriculture policy, the National Forest Foundation is prohibited from discriminating on the basis of race, color, national origin, sex, age, religion, political beliefs, or disability.

APPENDIX A
DEFINITIONS

Technical and Cost Evaluation. The evaluation used by the Forest Service to award projects. Such consideration shall primarily consider criteria other than cost. These non-price criteria include, but are not limited to, extent of mutual cooperation and benefits, past performance, experience, technical approach, and benefits to the local community.

Included Timber. Live and dead trees and portions thereof that meet utilization standards as specified in Appendix F. To meet minimum tree specifications, trees must equal or exceed tree diameters listed in Appendix F and contain at least one minimum piece. NFF shall fell and buck such trees and shall remove them from the designated area by the Forest Service and present for scaling all pieces that meet minimum piece standards or would have qualified as part of minimum pieces if bucking lengths were varied to include such material.

Integrated Resource Service Account. The account maintained by the Forest Service of all NFF 's deposits, credits, payment guarantees, and charges for:

a. Timber at Timber Payment rates;
b. Brush disposal, road maintenance, and agreement scaling rates;
c. Stewardship Credits established; and
d. Other charges provided in this agreement.

Liability for lost value to Included Timber. The party holding title shall bear the timber value loss resulting from damage outlined in Appendix F.

Operations. Any industrial activity involving the felling, skidding, and processing of timber and biomass.

Operations Fire. An "Operations Fire" is a fire caused by NFF 's Operations, in the course of fulfilling the agreement, other than a Negligent Fire.

agrees to reimburse Forest Service for such cost for each Operations Fire, subject to a maximum of the dollar amount stated in Appendix F.15. The cost of NFF 's actions, supplies, and equipment on any such fire provided pursuant to **Appendix G.47 Fire Control**, or otherwise at the request of Forest Service, shall be credited toward such maximum. If NFF 's actual cost exceeds its fire liability limit stated in Appendix F.15, Forest Service shall reimburse NFF for the excess.

Negligent Fire. A "Negligent Fire" is a fire caused by carelessness or fault of NFF 's Operations, including, but not limited to, one caused by smoking by persons engaged in NFF's Operations during the course of their service, or during rest or lunch periods; or if NFF 's failure to comply with the requirements of **Appendix G.46 Fire Precautions and Control** results in a fire starting or permits a fire to spread. Damages and the cost of suppressing Negligent Fires shall be borne by .

Payment Guarantee. In lieu of establishing Stewardship Credits or establishing advanced deposits, Appendix F, for advance payment of Included Timber, NFF may guarantee payment by furnishing and maintaining an acceptable surety bond or deposit in a Federal Depository negotiable security of the United States. The securities shall be deposited through the Regional Fiscal Agent accompanied by a power of attorney and agreement authorizing the bond-approving officer to sell or collect such securities if payment is not made within 30 days of billing by the Forest Service. The penal sum of such surety bond or market value at time of deposit of such negotiable securities shall be the maximum amount of the payment guaranteed. In lieu of surety bond or negotiable securities as a payment guarantee, NFF may use an Irrevocable Letter of Credit when approved by the Forest Service.

Required Deposits. Deposits NFF may be required to pay for brush disposal (16 U.S.C. 490) and road maintenance (16 U.S.C. 537), erosion control, etc.

Retained Receipts. The portion of residual receipts that is deposited in SSCC and retained for transfer to other stewardship contracts or stewardship agreements when approved in advance by the Regional Forester in accordance with sections FSH 2409.19, sections 67.1 and 67.3.

Stewardship Credits. Credits that are earned and established when work listed in the schedule of items has been performed and accepted.

Stewardship Project Proposal. A written request submitted by Forest and Grassland Supervisors to the Regional Forester for review and approval for proposed stewardship projects. The request for approval must include appropriate information about the proposed project, such as land management goals of the project, the total value of the project, products to be removed, the value of services to be received, the value of goods to be exchanged for services, contributed funds or work to be received, and expected residual receipts from the project.

After reviewing a proposed project, the Regional Forester shall approve or disapprove the project through a formal written reply in correspondence to the Forest or Grassland Supervisor. Only the projects and associated work activities approved by the Regional Forester with completed NEPA analysis are to be included in the SPA.

Timber Payment Rates. Included timber that is removed by NFF and presented for weight scaling in the product form stated in Appendix F shall be given cash or earned stewardship credits for at the rates listed in Appendix F.

Weight Scaling. The rate identified in Appendix F multiplied by the volume per unit of measure (tons) of a loaded truck driven over a weight scale as defined in the National Bureau of Standards Handbook 44, current edition.

Acceptable Quality Level (AQL): Acceptance of work will be based on compliance with all specifications corresponding to the appropriate task(s). A minimum AQL is required for all service work – hand or mechanical. The minimum AQL will receive a satisfactory performance rating.

Accessible: Accessibility may be understood in terms of roads or as applied to ground-based equipment. Road accessibility occurs when a road exists closer than ¼ mile to a given treatment unit. An area is considered accessible to ground-based equipment whenever slopes do not exceed 50%, where slopes over 35% do not extend for more than 100 feet in length where a 150 foot endline cable can be stretched to reach after positioning equipment given the two slope and distance limitations.

Activity Fuel: Any hazardous fuel created from logging, felling, chipping, or from other forest treatment activities.

Additional Timber: Any merchantable sized tree that is designated and agreed to by the Contract Officer and Contractor after timber contract award.

Aerial Removal: Removal of woody material by helicopter.

Average Spacing: The average of the distances between all leave trees necessary to provide the desired number of leave trees per acre.

Best Management Practices: A practice or combination of practices (as described in Water Quality Management for Forest System Lands in California, Best Management Practices, September 2000) determined to be the most effective, practicable means of preventing or reducing pollution from non-point sources to a level compatible with water quality goals.

Biomass Trees: Any conifer material 2 feet in height to 4.9 inches DBH.

Biomass: Any portion of any tree, designated for cutting, which does not meet the utilization standards for

merchantable material set forth in the contract. The anticipated product of this material is wood chips for fuel or mulch. This material includes all woody material of a merchantable size. Biomass is sometimes referred to a Miscellaneous Convertible Products (MCP).

Bole Spacing: The horizontal distance in feet from the edge of one leave tree bole to another leave tree bole, measured from the outside bark of each tree.

Brush (Shrub): All woody perennial plants at least 1.0 foot tall having permanent single or multiple stems originating at or near ground level. This includes, but is not limited to chemise, manzanita, sagebrush, deerbrush, buckbrush, snowbrush, whitethorn, chinquapin, dogwood, ribes and several varieties of oak. Black Oaks that are greater than 6.0 inches in DBH or 20.0 feet are not considered brush.

Cable Systems: A yarding system employing cables and winches in a fixed position.

CCF: The unit of measure, representing 100 cubic feet, at which merchantable and biomass are sold through a permit system specified in this service contract (nominal conversion rates of one cord or 500 board feet.

Chip Material: Any woody chunks from bole wood, limbs, brush and other forest debris that exits the chute of a blade and drum type chipping machine.

Circular Plot: A sample plot within a thinning unit that is used to determine the number of desirable trees and other contract specifications.

Clearcut: A cutting prescription in which all trees within a boundary are designated to be cut.

Coarse Woody Debris: Woody material left on the ground to meet wildlife habitat requirements.

Commercial Item: Consistent with the meaning contained in Federal Acquisition Regulation 2.101, Definitions.

Conifer Tree: A live tree with needle shaped or scale like leaves.

Contracting Officer (CO): The Government representative that has the authority to enter into, administer, or terminate contracts and make related documents and findings. Contracting officers may bind the Government only to the extent of the authority delegated to them. Information on the limits of the Contracting Officer's authority shall be readily available to the public and Agency personnel.

Contracting Officer's Representative (COR) : Any individual designated in writing by the Contracting Officer to assist the CO in the administration of a specific contract. The written designation defines the limitations of the COR's authority which usually does not include the authority to change the contract.

Control Areas: Equipment exclusion zones delineated by flagging for the purpose of protecting sensitive plants, heritage resources or other protected resources. In some cases, these areas may be exempt from treatment, yet in others, the specified level of treatment is to be met without the use of ground-based equipment.

Crown Ratio: The ratio of live crown length (tip of leader to base of the crown) to total tree length/height.

Crown Spacing: The horizontal distance in feet between the dripline of a live crown to another live crown.

Crown: The part of a tree or woody plant bearing live, or dead, branches or foliage.

Cull: Stems, bark, logs or branch material 10 inches or less and other material not meeting either merchantable or non-merchantable log standards that accumulates at the landing as the result of the operations.

Cultural and Threatened and Endangered (T&E) Sites: Locations where special protection is required to preserve and protect cultural values and species of plants or animals listed on the T&E list. See also "Control Area."

Culvert: An open or enclosed drainage structure to facilitate water drainage across or beneath a roadway.

Cut Tree: A tree that is designated by the Forest Service for cutting. Designation method will be stipulated by statement of work. Trees that do not possess the characteristics of desirable leave trees and are required to be cut. As described by the contract or otherwise marked to be cut.

Damaged Beyond Recovery: A tree or brush having a defect or deformity, either genetic or mechanical, evidenced by dead or broken tops, stripped crowns, unnaturally leaning, butt scars or severe bark damage exceeding 50% of the bole circumference.

Damaged Trees: Trees damaged beyond recovery. A tree that is larger than 2 feet in height, and has the top knocked out, is leaning more than 10 degrees, has less than one half of its original limbs, or has approximately 50% of bark removed from the circumference of the bole.

DBH: Diameter at breast height, measured at a point of 4.5 feet above the ground level on the uphill side of the tree.

Dead/Dying Trees: Trees with the crown foliage changing from green to red, yellow, or needleless. Any tree that has pitch tubes indicating Mountain Pine Beetle infestation. More than 50% of the crown of pine species or 90% of the foliar crown of cedar and oak species is absent of needles or leaves.

Debris: see cull.

Decking: Stockpiling of trees in a designated area.

Defense Zone: Within the Wildland Urban Interface, the first 300 feet from roads, structures and non-Forest Service lands.

Deferred Area: Non-treatment areas within the work unit boundaries. The deferred areas are designated with flagging. These areas may be down logs, rock outcrops, vegetated areas or others areas stipulated in the statement of work or located on statement of work maps.

Designated Trees/Vegetation: Trees/Vegetation to remain after treatment will be designated by description as stipulated in the statement of work.

Designation By Species and Diameter (DXSD): A cutting prescription in which species and diameter are used to determine which trees will be left and which will be cut.

Developed Areas: Within 200 feet of any location that is accessible to non-off highway motorized vehicles.

Diameter at Breast Height (DBH): The diameter of a tree measured at a point 4.5 feet above the point where the tree bole meets with the ground on the uphill side of the tree.

Diameter at Stump Height (DSH): The diameter measured on the outside bark at a point 6.0 inches above ground level on the uphill side of the tree or stump as specified in the statement of work.

Diameter: Other vegetation (not trees) is measured 1 foot above ground.

DIB: Diameter inside bark.

Diseased: Any tree or any brush with a mistletoe rating of 4 or greater on the Hawksworth 6-class dwarf mistletoe rating system or observable insect infestation to a level that effectively girdles the bole.

Down Log: Woody material exceeding 12.0 inches in diameter and 20.0 feet, in length lying on the forest floor or as stipulated in a statement of work.

Down Woody Material: Down logs, slash, branches and stumps.

Drip Line: The area directly beneath the crown of a tree or shrub.

Duff: The layer of decomposing organic matter found on top of forest soil and composed mainly of leaves and conifer needles.

Dying: More than 50% of the crown of pine species or 90% of the foliar crown of cedar and oak species exhibiting a distinct alteration in normal foliar color of needles or leaves.

Embedded Down Log: A downed log that is fixed firmly and deeply into the ground.

Ephemeral Stream: A stream or portion of a stream that flows only in direct response to precipitation. It receives little or no water from springs and no long-continued supply from snow or other sources.

Flagging: Strips of vinyl, plastic or other like material tied to objects for a purpose to be defined within the statement of work.

Fuelbreak: A break in existing fuel character to that changes fire behavior.

Hang-Up Tree: Any cut tree suspended above ground level.

Hardwood Tree: A broad-leaved tree which usually has a single well defined trunk or attains a height greater than 20 feet. Includes, but not limited to, species such as black oak, canyon live oak, chinquapin, and other oak species. Sprouting hardwood species may be in the form of multi-stemmed clumps.

Hazard Reduction: The planned treatment or manipulation of naturally growing vegetation or any other flammable material for the purpose of reducing rate of spread and output of heat energy from any wildfire occurring in the area treated.

Hazard Tree – Any tree that is dead, dying, a fire threat, or otherwise deemed unsafe or has the potential hit roads, trails, utility lines, structures, facilities, improvements or private property.

Hazard: The existence of a fuel complex that constitutes a threat of wildfire ignition, unacceptable fire behavior and severity, or suppression difficulty.

Inaccessibility: Inaccessibility may be understood in terms of roads or as applied to ground-based equipment. Road inaccessibility occurs when no road exists closer than ¼ mile from a given treatment unit (see **Accessible**). An area is considered inaccessible to ground-based equipment whenever slopes exceed 50%, when slopes over 35% extend for more than 100 feet in length, or where a 150 foot endline cable cannot be stretched to reach after positioning equipment given the two slope and distance limitations.

Inner Gorge: A stream reach bounded by step walls that terminates upslope to a more gentle topography.

Intermittent Stream: A stream or portion of a stream that, in general, flows during wet seasons and is dry during dry seasons.

Intervisible: Mutually visible, or in sight, the one from the other, as stations.

Jackpot: Concentration of slash or natural fuels, heavier than the surrounding areas.

Key Personnel: any individual or individuals authorized to make or enter into agreements with the Government under the contract as designated in writing by the Contractor and accepted by the CO.

Ladder Fuels: Fuels that provide vertical continuity between the ground and the tree crowns, creating a pathway for surface fire to move into the overstory tree crowns.

Landing: Area used to stage and load forest products just prior to removal from the project area.

Leave Shrub Clump: A group shrubs as stipulated by statement of work designated to remain after treatment.

Leave Tree Group: A group of trees as stipulated by statement of work designated to remain after treatment. Groups may contain more than one species of tree. Examples would be a) two healthy ponderosa pine trees growing immediately adjacent to one another. b) a vigorous group white oak trees exhibiting a wide horizontal growth pattern. c) a large old pine with a healthy oak tree growing near its base. The project inspector can show examples of suitable tree groups on the ground.

Leave Tree: Trees that possess desirable characteristics and that serve to create the basis for designated spacing requirements or are otherwise designated to be left after treatment. May include conifers, hardwoods, or hardwood clumps with less than or equal to three sprouts of common origin.

Limited Operating Period (LOP): The period of time in which no project or noise generating activities may occur. LOP locations and periods will be stipulated in the statement of work.

Litter: Needles, duff, twigs, cones and leaves.

Live Crown Ration (LCR): The live crown ration is the percent of the total height of a tree that has branches with live, green vegetation present. Epicormic branches, which are small branches originating from the main tree stem after the tree has been suddenly exposed to sunlight, do not count toward the LCR. One-sided crowns only count as half. Openings in the crown need to be deducted from the total.

Lop: The severing of limbs from the bole of felled trees at the point where the limb attaches to the bole.

Material: Any logs, vegetation, slash or debris.

Meadow: Perennially or seasonally saturated soils that support vegetation dominated by grasses, sedges, rushes and other flowering plants. Meadows will be stipulated by statement of work.

Merchantable Logs: Merchantability standards will be calculated using National Forest Log Scaling Handbook, FSH 2409.11, as amended or as otherwise stated in the statement of work.

Merchantable Tree: A tree that is greater than 10.0 inches at diameter at breast height which is diameter at 4.5 above ground taken from the up-hillside of the tree.

Mistletoe: A parasitic plant disease occurring on conifers which infects the branches and bole of the tree. Aerial shoots and basal cups; excessively swollen branches or boles are positive indicators.

Mobilization: The act of delivering all ordered personnel and equipment to the project area; including labor, material, overhead and profit. The price for mobilization shall be included in the proposed unit prices.

Nest Stand: Areas identified on the unit maps that require a Limited Operating Period from February 1 thru August 15. The nest stand is comprised of the best 30 to 60 acres of contiguous forested habitat around the known or suspected nest tree.

Non-merchantable Logs: Any log that does not meet the definition of merchantable.

Non-Sawtimber Tree: For all conifer species, minimum diameter of 5 inches DBH to minimum diameter by species identified in Appendix B, Division A.

Overstory Removal: A cutting prescription where all trees greater than a specified size are cut. Trees less than the specified size are protected.

Payment Unit: See Treatment Unit.

Percent Cover: Portions of the project area beneath the dripline of vegetation to be cut. Does not include reserve vegetation.

Perennial Stream: A stream or portion of a stream that flows throughout the year.

Piling: Material moved to an agreed upon location shall be piled for future treatment by Forest Service.

Products: Cut woody material that has a commercial value.

Progression Of Work: Work conducted in a progressive, workmanlike and orderly manner by the Contractor.

Project Area: The area being treated with prescribed fire and any escapes or spot fires resulting from the prescribed fire.

Project Inspector (PI): Any individual designated in writing by the Contracting Officer's Representative to assist the CO in the administration of a specific contract. The PI is responsible for the project inspection for a specific statement of work. This person has contract administration experience and is qualified to conduct oversight and evaluations of the Contractor's operations. The PI provides technical expertise to the COR regarding operations conducted under the statement of work.

Protected Area Corridor (PAC): Areas identified on the unit maps that have generally less intensive treatments associated with them. PACs are selected by identifying the 300 most highly suitable spotted owl habitat acres containing, or adjacent to, the nest or territory center within a 1.5 mile radius of the known nesting site or territory center.

Removal: Complete removal of products from National Forest lands under the terms of this contract as stipulated by statement of work.

Reserve Clumps: Groups of trees within a treatment area that are protected from cutting, may also include Individual Reserve trees.

Reserved Trees or Reserved Areas: Individual species of trees or certain areas within a treatment unit that the contract or COR designates are reserved from treatment.

Residual or Retention: a tree or snag remaining after an intermediate or partial cutting of a stand.

Riparian Conservation Area (RCA): A zone established for the protection of riparian areas in which the use of mechanical equipment is restricted. RCA's shall be identified and restrictions stipulated by statement of work.

Riparian Vegetation: Vegetation common to riparian areas. Riparian areas and required vegetation treatments will be stipulated by statement of work.

Sawlog: A log that meets minimum regional standards of diameter, length and defect, intended for sawing.

Sawtimber Tree: Included timber meeting sawlog size specifications as defined in Appendix B, Division A.2.

Skid Trail: A travel way for ground based equipment to move or process forest material.

Slash: Woody material existing or created that has accumulated on the forest floor. Woody material includes logs, pieces of logs, tops, and branches. This includes, but not limited to brush (shrub) trimmings, tree boles, stems, tops, and branches that are larger than 1 inch in diameter and longer than 3 feet or as stipulated by statement of work.

Snag: Any standing dead or living tree that has 10 percent or less live crown greater than 15 inches DBH and at least 40 feet tall or as stipulated by statement of work.

Spike: Sharp pointed top or limb of living or dead vegetation.

Springs and Seeps: Perennially or seasonally saturated soils that may have a flow of water that support vegetation dominated by grasses, sedges, rushes, willows or other riparian vegetation. Springs and seeps will be stipulated by statement of work.

Stream Channel: That area influenced by high water at the time of the year with the highest flow as stipulated by statement of work.

Streamside Management Zone (SMZ): Synonymous with Riparian Conservation Areas.

Structure: Something that is constructed or arranged in a definite pattern of organization. This may include, but is not limited to, buildings, roads, fences, utility lines, non-mobile objects and other forms of infrastructure.

Subcontracting: the transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

Temporary Roads: Non-permanent roads that are constructed by Contractor for the purpose of treatment unit access.

Thinning: Removal of excess trees (conifer and hardwood) as stipulated by statement of work.

Tillage: the thorough loosening of soil to the width and depth of the compacted layer or to a maximum depth of 6.0 inches with topsoil remaining substantially in place and with minimal sub-soil material brought to the surface.

Tons/Acre: Unit of measurement of fuel, usually but not always, of dead and down woody debris (slash). Tons/Acre is determined by using a Photo Series, such as USDA Forest Service GTR-PNW 51 (1976). These documents are available for review by the Contractor by contacting the issuing office.

Tractor Pile: Pushing slash (existing and created) and other undesirable vegetation into piles or windrows using a track mounted machine with a brush rake or equivalent apparatus.

Tractor: Ground based wheeled or tract mounted machines equipped with dozer blades, grapples, cable winches, brush blades, chippers, etc, used to support work associated with this contract.

Treated: Forest vegetative material that is cut, chipped, piled, masticated or yarded for the purposes of reducing hazardous fuels in a prescribed area.

Treatment Unit: An individual area on the ground in which activities will be performed and which may appear as a separate pay item in the Schedule of Items.

Tree: A woody perennial plant, typically large and with a well-defined stem or stems carrying a more or less definite crown. All conifers greater than 1.0 feet tall, and any oaks greater than 6.0 inches diameter at stump height (DBH) or 20.0 feet tall, are considered trees under this statement of work.

Unit: See Treatment Unit.

Unsatisfactory Work: If work quality falls below the AQL, the COR will issue a work order or notice of noncompliance to the Contractor in writing. Untreated or unsatisfactory treated areas shall be reworked to obtain satisfactory work quality.

Water Bar: An earthen barrier constructed to divert water runoff and control soil erosion.

Watercourse: Any well-defined channel with distinguishable bed and bank showing evidence of having contained flowing water indicated by deposit of rock, sand, gravel, or soil, including but not limited to, perennial, intermittent and ephemeral streams.

Whole Tree Yarding: Whole tree logging includes cutting tree and removing the entire tree, including tops and branches, to the landing.

Wildland Urban Interface (WUI): The area where the urban development meets and intermingles with undeveloped land.

Wildlife Island: An area left untreated to provide cover and screening habitat for wildlife species as stipulated by statement of work.

Wildlife Tree: Standing tree marked to be reserved as a wildlife tree. Used by birds and small mammals for feeding, shelter, nesting, perching, etc. Trees may be marked with paint or designated with wildlife tag. Wildlife trees may also be stipulated by statement of work.

Woodrat Nest: A ground nest used by woodrats. It is constructed of dried vegetation, usually sticks and other organic debris.

North Big Bear FY27
Contract Map
San Bernardino National Forest
Mountaintop Ranger District

Spatial Reference
Name: NAD 1983 UTM Zone 11N
PCS: NAD 1983 UTM Zone 11N
Datum: North American 1983
Projection: Transverse Mercator
Central Meridian: -117.0000

Miles
0 0.23 0.45 0.9

N

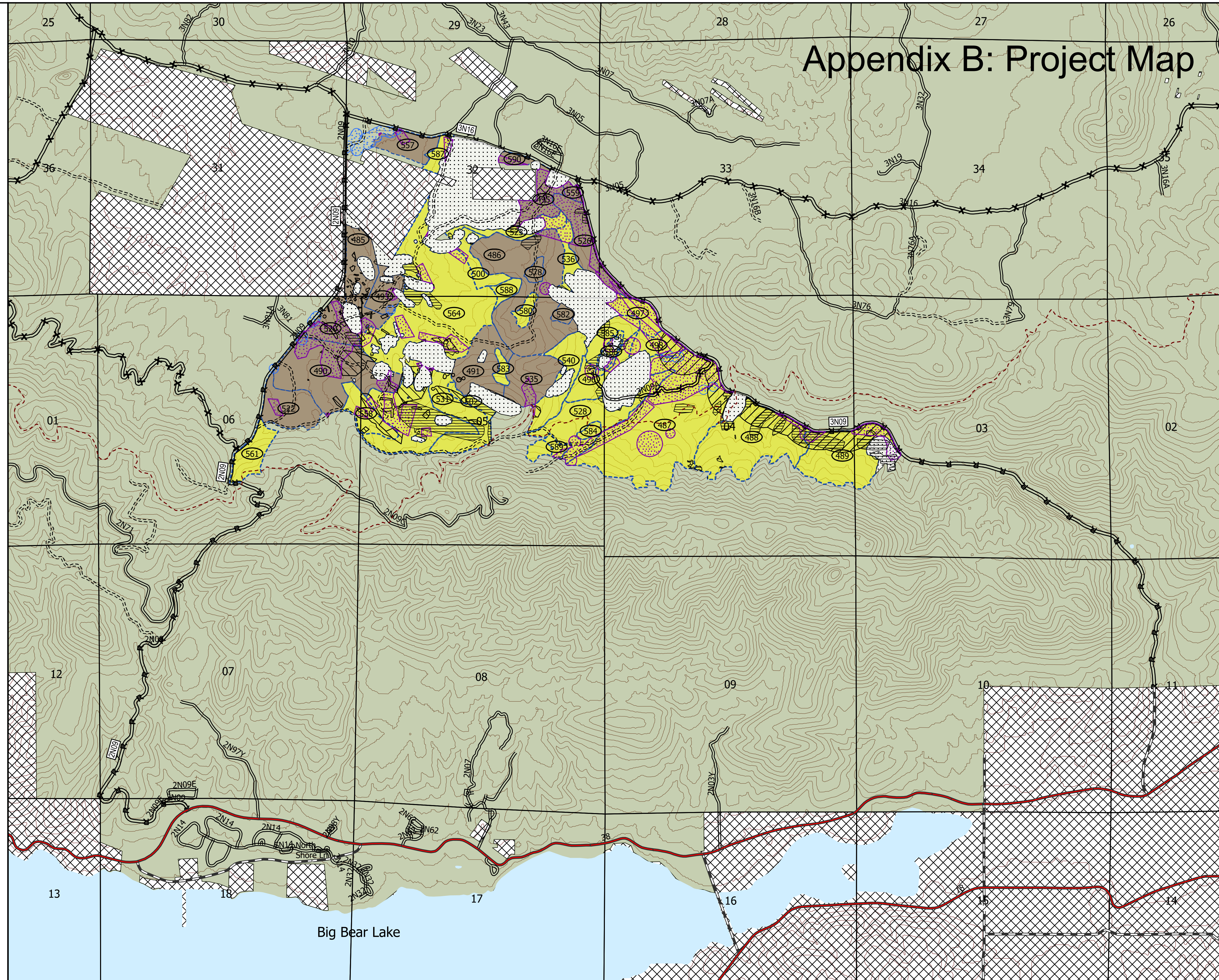
Map Legend

Service Units	RoadUseProhibited
Cutting Units	Forest Road
RCA	Forest Road (Decom)
WIFL LOP 5/1 - 8/31	Non-Forest Road
STA	State Highway
STA1	Pacific Crest Trail
STA2	Water Body
EEA	NON-FS
RoadUseRestricted	USDA FOREST SERVICE

Subdivision Requirements	
Subdivisions	Requirements
485, 486, 490, 491, 493, 495, 520, 526, 535, 537, 559, 578, 590	DBP, DF, Limbing, TOS, TRAC, SUSP, ENDL, SPACE, EPC, Deck, Scat 18"

Requirements Legend	
DBP	Designation By Prescription - CT2.355#
DF	Directional Falling Required - CT6.41#
Limbing	Limbing - CT6.41#
TOS	Treatment of Stumps - CT6.41#
TRAC	Ground Based Skidding - CT6.42#
SUSP	One End Suspension - CT6.42#
ENDL	Endlining To Protect Reasouces - CT6.42#
SPACE	Skid Trail/Road Spacing - CT6.42#
CS	Cable Yarding Specfied - CT6.425
EPC	Erosion Prevention and Control CT6.6#
Scat 18"	Scattering - CT6.7#
R	Road Use Restricted
P	Road Use Prohibited

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North Big Bear FY27 Contract Map
San Bernardino National Forest
Mountaintop Ranger District

Spatial Reference
Name: NAD 1983 UTM Zone 11N
PCS: NAD 1983 UTM Zone 11N
Datum: North American 1983
Projection: Transverse Mercator
Central Meridian: -117.0000

N

0 0.13 0.25 0.5 Miles

Map Legend

- Service Units
- Cutting Units
- RCA
- WIFL LOP 5/1 - 8/31
- STA
- STA1
- STA2
- EEA
- RoadUseRestricted
- RoadUseProhibited
- Forest Road
- Forest Road (Decom)
- Pacific Crest Trail
- NON-FS
- USDA FOREST SERVICE

Subdivision Requirements	
Subdivisions	Requirements
485, 486, 490, 491, 493, 495, 520, 526, 535, 537, 559, 578, 590	DBP, DF, Limbing, TOS, TRAC, SUSP, ENDL, SPACE, EPC, Deck, Scat 18"

Requirements Legend	
DBP	Designation By Prescription - CT2.355#
DF	Directional Falling Required - CT6.41#
Limbing	Limbing - CT6.41#
TOS	Treatment of Stumps - CT6.41#
TRAC	Ground Based Skidding - CT6.42#
SUSP	One End Suspension - CT6.42#
ENDL	Endlining To Protect Reasouces - CT6.42#
SPACE	Skid Trail/Road Spacing - CT6.42#
CS	Cable Yarding Specfied - CT6.425
EPC	Erosion Prevention and Control CT6.6#
Scat 18"	Scattering - CT6.7#
R	Road Use Restricted
P	Road Use Prohibited

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USDA

Appendix C – Additional Specifications

Control of Work

The Contractor agrees to conduct its operations under this contract and other related business activities in compliance with Federal, State, and local statutes, standards, orders, permits and other regulations.

The Contractor shall meet all State and local environmental quality laws applicable to National Forest system lands.

Operations may be allowed with Forest Service approval from December 1 to March 31 under the following conditions: When soil moisture conditions are dry to a minimum of 4 inches and such that compaction, gulling and/or rutting is minimal (<2 inch depth). When the ground is frozen or snow cover is at least 2 feet to prevent soil displacement.

The Contractor shall not operate between 5:00 PM on Friday until 8:00 AM on Monday unless otherwise agreed to by the Forest Service in writing. Hours of operation are restricted and may not begin more than an hour prior to sunrise and must conclude at sunset.

No work shall occur when the Contracting Officer (or designated representative) determines that adverse weather has made access too dangerous or that continued vehicular travel would cause unacceptable road damage, when soil moisture conditions create excessive risk of damage to the soil or when snow depth creates a situation where requirements cannot be met and/or work cannot be inspected.

If a situation occurs for an operational "shutdown" (caused by, but not limited to: adverse seasonal conditions, unexpected or emergency circumstance or for the convenience of the Government), the contractor must return to work within two weeks of a notice of "favorable operating conditions".

If any cultural or archeological sites are discovered during operations of this contract, work will be suspended in the immediate vicinity of the site until a reconnaissance survey is completed by the Forest Archeologist. Areas excluded from treatment shall be deleted from the contract.

If active bird nests are found (tree nests, cavity nests, and ground nests) between March 1 and August 31 during project implementation, the Forest Service shall be contacted to evaluate and recommend protection measures in compliance with the Migratory Bird

Treaty Act. In all other months, consultation with the Forest Service is required only if bird activity is observed around the nest.

All workers are required to review the attached Non-Native Invasive Plants Handout and Rare Animals of the San Bernardino National Forest Handout prior to starting operations. If any of these plants or animals are encountered during implementation, they shall be avoided and be reported to the contract COR or Inspector.

Protection Measures

PROTECTION MEASURES NEEDED FOR PLANTS, ANIMALS, CULTURAL RESOURCES, AND CAVE RESOURCES

Locations of known areas needing special measures for the protection of plants, animals, cultural resources, and/or cave resources are shown on Contract Area Map and/or identified on the ground. Special protection measures needed to protect such known areas are identified in Appendix A.

All identified areas of concern have been recorded and are incorporated into the Special Treatment Areas. The Contractor is solely responsible for avoiding impacts to these, or any other control areas within the project units. During the performance of work under this contract, if previously unidentified archeological or historic sites are encountered, the Contractor shall discontinue work in the general area of the suspected site and contact the Forest Service immediately. Work shall be suspended in that area until proper surveys have been completed by the Forest Service.

In addition to any special protection measures noted, Contractor has a general duty to protect all known and identified resources referenced in this Subsection from damage or removal during Contractor's operations. Discovery of additional areas, resources, or members of species needing special protection shall be promptly reported to the other party, and operations shall be delayed or interrupted at that location, if Contracting Officer determines there is risk of damage to such areas, resources, or species from continued operations.

Wheeled or track-laying equipment shall not be operated in areas identified as needing special measures for the protection of cultural resources, except on roads, landings, tractor roads, or approved skid trails. Unless agreed otherwise, trees will not be felled into such. Contractor may be required to backblade skid trails and other ground disturbed by Contractor's operations within such areas in lieu of required cross ditching.

Contractor shall immediately notify Forest Service if disturbance occurs to any area identified as needing special protection measures and shall immediately halt operations in the vicinity of the disturbance until Forest Service authorizes Contractor to proceed.

Contractor shall bear costs of resource evaluation and restoration to identified sites. Such payment shall not relieve Contractor from civil or criminal remedies otherwise provided by law.

Forest Service has exercised due diligence and followed established protocols in identifying known areas needing special protection measures. Nevertheless, nothing in this provision shall be interpreted as creating any warranty that all locations and special measures for the protection of plants, animals, cultural resources, and cave resources have been described herein, elsewhere in the contract, or designated on the ground.

Label on Contract Area Map	**Restrictions**
Special Treatment Area (STA)	Piles shall not be placed within Special Treatment Areas as indicated on the Contract Area Map. No wheeled or track laying equipment shall be operated in areas identified as STA, except on existing roads. Unless otherwise agreed to by the Forest Service in writing.
Special Treatment Area (STA1)	Piles shall not be placed within areas identified as STA1. A Heritage Monitor is required during all operations. Only rubber-tired equipment and full suspension is allowed with Heritage Monitor present. Hand treatment and hand carry of material out of the STA may be required during monitoring operations.
Special Treatment Area (STA2)	Wheeled and tracked laying equipment is Only allowed when ground conditions are favorable as determined by the Forest Service.
Equipment Exclusion Area (EEA)	Area outside of treatment areas where mechanized equipment is not allowed
WIFL LOP	No operations are allowed between 5/1 - 8/31.
None	Wood rat nests will not be disturbed and, if available, 2-5 nests per acre will have a 10 ft buffer of undisturbed vegetation. 18 inch fireline will be built to prevent their consumption during prescribed fire.

None	Embedded downed logs or logs that are partially below ground shall be left undisturbed, regardless of proximity to Forest Service roads or non-Forest Service property.
None	Piles shall not be placed in the following areas unless otherwise agreed to by the Forest Service in writing: Within 10.0 feet of designated system trails, and roads. If burn piles are created within 300 feet of rock outcrops and existing logs in suitable southern rubber boa habitat, a project wildlife biologist will be consulted to identify additional protection measures.
None	Lop and scatter shall not occur in the following areas unless approved in writing by the Forest Service: Within 10.0 feet of designated trails and roads Within 15.0 feet of the boles of residual trees Within 10.0 feet of logs greater than 12 inches in diameter. Except jackpot Units.
None	To the greatest extent possible, special wildlife habitat features (e.g. downed logs, rock outcrops, active animal dens, woodrat nests, etc.) shall be avoided during project activities where they do not threaten the fuels reduction objectives.

Special treatment areas (STA) for protection of plants, animals, or protected sites are shown on the maps and may or may not be identified on the ground with flagging identified

in the flagging code (Appendix B-Exhibit B), prior to start of operations. When flagged on the ground, the flagged area takes precedent over the Contract Area Map.

STAs are limited to felling, hand pruning, lopping, and removing cut vegetation from the area by hand. Piles are not allowed within STAs. Additional special treatment area's unknown at this time may be identified prior to operations. If protection measures prove inadequate or other such areas are discovered, or if new species are listed or found during the term of the contract, the Forest Service may either cancel or unilaterally modify this contract to provide additional protection regardless of when such facts become known. Discovery of such areas by either party shall be promptly reported to the other party and all work in that area must stop until an acceptable plan to operate has been agreed to by both parties.

Protection of Improvements

So far as practicable, the Contractor shall protect all physical improvements including, but not limited to, roads, trails, ditches, fences, waterlines, and other improvements, existing in the contract area, determined to have continuing need or use, and designated on the Contract Area Map.

The Contractor shall keep all roads and trails needed for fire protection or other purposes and designated on the Contract Area 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 directed (because of such operations) shall move such improvements if and as specified by the Forest Service.

All protected improvements will be protected from damage by the Contractor. If any protected improvements are disturbed, the Contractor shall immediately contact the COR and will be liable for the cost of repairs.

PROTECTED IMPROVEMENTS		
IMPROVEMENT	**DESCRIPTION**	**LOCATION**
Roads	All Roads (including associated features)	As identified on Contract Area Map
Trails	All Trails	As identified on Contract Area Map
Gates	All Gates	As identified on Contract Area Map

Forest Service shall notify all utility companies, or other parties affected, and make arrangements for all necessary adjustments of the public utility fixtures, pipelines, and other appurtenances likely to be affected by Contractor's Operations.

When Contractor's Operations are adjacent to properties of railway, telephone, or power companies, or other property, work shall not begin until Contractor has identified actions necessary to prevent damage.

Contractor shall cooperate with the owners of any underground or overhead utility lines in their removal and/or rearrangement operations in order that these operations may progress in a reasonable manner, utility duplication or rearrangement work may be reduced to a minimum, and services shall not be unnecessarily interrupted.

In the event of interruption to utility services be- cause of accidental breakage or as a result of lines being exposed or unsupported, Contractor shall promptly notify the proper authority and shall cooperate with that authority in the restoration of service until the service is restored.

When materials are to be hauled across the tracks of any railway, Forest Service will make arrangements with the railroad for the use of any existing crossing or for any new crossing required. Contractor shall make arrangements for use of alternate crossings. All construction work to be performed by Contractor on the rail- road right-of-way shall not damage railroad company's property.

Streamcourse Protection

"Streamcourses" that are subject to provisions of this Section are shown on Contract Area Map. Unless otherwise agreed, the following measures shall be observed to protect Streamcourses:

a. Contractor's Operations shall be conducted to prevent debris from entering Streamcourses, except as may be authorized under paragraph (d). In event Contractor causes debris to enter Streamcourses in amounts that may adversely affect the natural flow of the stream, water quality, or fishery resource, Contractor shall remove such debris as soon as practicable, but not to exceed 48 hours, and in an agreed manner that will cause the least disturbance to Streamcourses.

b. Culverts or bridges shall be required on Temporary Roads at all points where it is necessary 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 Streamcourses. Trees or products shall not be otherwise hauled or yarded across Streamcourses unless fully suspended.

c. Wheeled or track-laying equipment shall not be operated in Streamcourses, except at crossings designated by Forest Service or as essential to construction or removal of culverts and bridges.

Flow in Streamcourses may be temporarily diverted only if such diversion is necessary for Contractor's planned construction and Forest Service 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.

Label on Contract Area Map	Restrictions

RCA	Avoid piling in riparian conservation areas to the extent practical. Refueling of equipment and storage of fuel and other hazardous materials will not occur within riparian conservation areas (perennial and seasonal streams, seeps, springs, and meadows). Storage of any quantity of fuel greater than 100 gallons will require a California Engineer Spill Plan. Ground based equipment is not permitted in RCAs. However, slash is permitted to be removed from RCAs through cable winching or cable yarding systems. Remove trees from RCAs and meadows in a fashion to limit soil damage.
Stream or Seep	Piles shall not be placed within 25 feet of any intermittent, perennial stream or seep. No slash, bole or branch material, bark or other operational debris shall be allowed within the stream's inner gorge. Avoid felling trees into streams or waterbodies.

Inspection and Acceptance

For All Work Items:

At any point during the project, the Contractor and/or Project Manager may request (documented through email, text, or hand-written request) an in-the-field consultation with the Forest Service to inspect work progress, review contract specifications, or clarify issues. The Forest Service shall respond to Contractor's request within 5 working days, excluding weekends and federal holidays.

GOVERNMENT QUALITY ASSURANCE SURVEILLANCE PLAN

Government Inspection Procedures - The COR, or a designated inspector (GTM), will make periodic inspections while work is in progress, usually daily at first, as needed to assure work is proceeding satisfactorily. The Contractor shall notify the COR when units are started, when problems are encountered and when contract work needs government oversight.

1. Each unit will be inspected as a separate unit. Unit will not be averaged with other units for acceptance or payment.

2. When units are completed and ready for government inspection, Contractor's designated Project manager shall request unit inspection in writing, prior to moving out of the general area.

3. The COR, or designated inspector, will determine compliance with contract specifications through informal visual inspections. In the event visual inspection indicates work to be in non-compliance with specifications, prompt corrective action and/or rework shall be required.

Government Inspection Procedures – Formal (Plots)

1. In the event visual inspection indicates work and / or rework to be in non-compliance with contract specifications, a series of verification plots shall be installed by the Government to determine compliance with specifications and percent of satisfactory work for treatment of each unit not meeting specification as observed with visual inspection.

2. Government verification plots will consist of a series of fixed area plots and variable radius plots along transects to record whether density, basal area, best tree selection, and other requirements are being met and to what extent.

3. Plots and grid will be distributed so that a representative sample is obtained.

4. The COR or designated inspector will mark the center of each plot on the ground using flagging, stakes, or pin flags. Additional flagging will be hung near the plot center so that it may be seen from a distance. The inspector will include the plot number, their initials and date on the flagging.

5. Plots will be numbered to correlate with the inspection form and transects on a unit map.

6. The minimum number of verification plots, per treatment unit, shall be as follows:

Unit Acreage

Minimum No. of Plots

1 – 9 1 plot per 2 acres

10 – 29 10 plots

30 – 591 plot per 4 acres

60 – 9920 plots

100 1 plot per 5 acres

7. Determination of acceptability of the work performed will be based on Government verification inspections and will be considered conclusive.

8. At each plot, the Government will examine the plot area and record findings on the items listed below:

a. Plot number

b. Number of trees to be left on plot.

c. Number of trees left on plot.

d. Number of satisfactory trees.

e. Number of deficient trees.

f. Number of excess trees.

- Stumps containing live limbs which are not in accordance with specifications herein will be counted as excess trees.

- Cut trees which are still attached at the stump will be counted as excess trees

- Trees meeting cut specifications will be counted as excess trees

- Trees in excess of trees to be left will be counted as excess

9. Work quality will be calculated on the form as follows:

No. Trees Deficient + No. Excess Trees

= % Unsatisfactory work

No. Trees to be left

100% – % Unsatisfactory work = % Work Quality

Unsatisfactory Cutting

1. If the work quality falls below 85 percent, the COR will immediately notify the Contractor, in writing, and order him to improve the quality of subsequent tree cutting. If the quality of subsequent tree cutting is not raised above the 85 percent minimum acceptable standard within 24 business hours after receipt of such written notice, the Contractor's right to proceed may be terminated and the contract considered in default.

2. When the work quality falls below 90 percent as a result of excess trees, the Government may elect to do one of the following:

(a) Order rework to be performed and withhold payment until excess trees are cut and the results of a post-rework Government inspection show work quality to be at least 85 percent or more. No rework shall be performed unless ordered or authorized by the COR.

(b) Order that no rework be performed and payment will either be made at a reduced rate, or not at all, as determined from the Thinning Inspection Report.

3. Repeated failure to produce work quality at or above the 85 percent minimum acceptable standard will be considered reason for contract termination and default action.

Reinspection Upon Contractor Request

1. If Government inspection results are unacceptable to the Contractor, a reinspection may be requested, in writing, within 5 business days after receipt of notice of said inspection results. The same inspection procedure will be used; however, the inspection pattern will be shifted so that new inspection plots will not overlap previously inspected plots.

2. If reinspection results – rounded up to the nearest whole percent – indicate a variance of more than 5 percent from the first inspection, the results of the second

inspection will be used to calculate work quality and payment, and the Government will bear the cost of reinspection.

3. If reinspection results – rounded up to the nearest whole percent – are within 5 percent of the first inspection, plots from the initial inspection and the reinspection will be combined and used to calculate work quality and payment, and the Contractor shall bear the cost of reinspection.

Table 1 – Minimum Acceptable Quality Levels (AQL) of Work

ITEM	DESCRIPTION	SCHEDULE	UNIT	Min AQL
1	Thinning	Mandatory	Acre	90%
2	Brush Removal	Mandatory	Acre	90%
3	Lop and Scatter	Mandatory	Acre	90%
4	Prune	Mandatory	Acre	90%
5	Piling	Mandatory	Acre	90%
7	Mastication	Mandatory	Acre	90%
8	Skid and Deck Non-saw Timber	Mandatory	Acre	90%
9	Fungicide Application	Mandatory	Acre	95%

Payment Methods

Method of Measurement of Acreages

Acreage were determined using Esri ArcGIS Pro. The acreage for each work item will be rounded to the nearest acre and is final unless:

a. The contract is modified or,
b. The Government and/or the NFF makes a determination to remeasure or,
c. The Contractor exercises his/her option under the following Remeasurement provisions:

Remeasurement

1. The Contractor may request, in writing, remeasurement of any units under this contract if he/she feels that acreage stated on the project maps is incorrect. The remeasurement must be within the existing perimeter of the respective unit. No variance of the unit perimeters as laid out on the ground for this contract will be allowed. All requests for remeasurement must be made prior to payment for each completed unit. Remeasurement will be performed by the Government.

2. If remeasurement indicates that a variance of ten percent or less exists on units of 1 to 5 acres, five percent or less exists on units of more than five but less than 20 acres, or if three percent or less exists on units of 20 acres or larger, the Contractor shall pay for the actual costs of the remeasurement. Under this condition, payment will be made on the acreage stated on the project maps. If the remeasurement indicates the actual acreage varies by more than the above factors from that stated on the project maps, the payment will be made on the remeasured acreage and the Forest Service will pay for the cost of the remeasurement.

Acceptance and Payment

1. If informal visual inspection indicates acceptable work quality, the Contractor will be paid 100 percent of their bid rate.

2. In the event that formal inspections are used, the rate of payment to the Contractor will be calculated as follows:

   (a) For work quality of 95 percent or higher, 5 percent (adjustment for statistical variation) will be added and the Contractor will be paid 100 percent of their bid rate.

   (b) For work quality from 85 to 94 percent, the 5 percent will be added to the work quality percent and the Contractor will be paid the total multiplied by the bid rate.

(c) For work quality 84 percent and less, the 5 percent will not be added and there will be no payment made to the Contractor.

(d) If, after rework, the percentage of satisfactory work is between 85% and 94%, payment will be made by the actual percentage. If the percentage is less than 85%, the work is unacceptable, and no payment will be made.

3. Percentages as calculated herein shall be rounded to the nearest whole percent.

4. No allowance for variation or portion of a variation will be added which will create a percentage greater than 100 percent.

5. Payment rate for work quality at or above 85% will be calculated as follows:

% Work Quality + 5 % Statistical Variation (SV) = % Payment rate

Examples:

(a) 2 Trees Deficient + 4 Trees Excess 6
------ = = 5.22% = 5% Unsatisfactory work
115 Trees to be left 115

100% – 5% = 95% Work Quality

95% + 5% (SV) = 100% Payment rate

(b) 2 Trees Deficient + 9 Trees Excess 11
---------- = --------- = 11.96% = 12% Unsatisfactory work
92 Trees to be left 92

100% – 12% = 88% Work Quality

88% + 5% (SV) = 93% Payment rate

2 Trees Deficient + 14 Trees Excess 16
---------- = = 16.84%
= 17% Unsatisfactory work
95 Trees to be left 95

100% – 17% = 83% Work Quality - - No payment made

APPENDIX D - FIRE PLAN FOR CONSTRUCTION AND SERVICE CONTRACTS
08/02/2012

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 delineated by map in the contract. The provisions set forth below also specify conditions under which contract 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 Contract Area, during operating hours, a qualified fire supervisor authorized to act on behalf of Contractor in fire prevention and suppression matters.

B. Forest Service

The 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. DEFINITIONS:

The following definitions shall apply:

Active Landing: A location the contractor may be skidding logs into, or performing other operations such as delimbing, 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 delimbers, 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 year round.

- **This contract ☒ requires, ☐ does not require, a Fire Box and associated Fire Tools according to CPRC Section 4428.**

A. Fire Tools and Equipment: Contractor shall meet minimum requirements of Section 4428 of the California Public Resources Code (C.P.R.C.). Fire tools kept at each operating 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. All required fire tools shall be maintained in suitable and serviceable condition for fire fighting purposes.

Trucks, tractors, skidders, 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.

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 filled backpack can (4 or 5 gallon) with hand pump within 25 feet of each tail and corner block.

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

Skidders and tractors shall be equipped with a minimum 5-BC fire extinguisher.

All Fire Extinguishers shall be mounted, readily accessible, properly maintained and fully charged.

Contractor shall equip each mechanized harvesting machine with hydraulic systems, powered by an internal combustion engine (chipper, feller/buncher, harvester, forwarder, hot saws, stroke delimber, etc), except tractors and skidders, with at least two 4-A:60-B:C fire extinguishers or equivalent.

C. Spark Arresters and Mufflers: Contractor shall equip each operating tractor and any other internal combustion engine with a spark arrester, except for motor vehicles equipped with a maintained muffler as defined in C.P.R.C. Section 4442 or tractors with exhaust-operated turbochargers. Spark Arresters shall be a model tested and approved under Forest Service Standard 5100-1a as shown in the. National Wildlife Coordinating Group Spark Arrester Guide, Volumes 1 and 2, and shall be maintained in good operating condition. 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 according to C.P.R.C. Section 4442 or 4443 and shall be maintained in effective working order. An Underwriters Laboratories (UL) approved fire extinguisher containing a minimum 14 ounces of fire retardant shall be kept with each operating power saw. In addition, 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 powersaw when used off cleared landing areas.

- **This contract X requires, ☐ does not require, Section 4E of the Fire Plan.**

E. 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:

Temp	Sea Level		1000 Feet		2000 Feet		3000 Feet		4000 Feet		5000 Feet		6000 Feet		7000 Feet		8000 Feet		9000 Feet		10000 Feet	
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
	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM

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 appurturances in (2) and (3) above.

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.

F. 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 propellent.
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 besubstituted 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.

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

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. **Permits Required**: The Contractor must secure a special written permit from the District Ranger or designated 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.

C. **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.

D. **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, the CO 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.

E. **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 COR shall approve such sites in writing.

F. **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	**FICC**	**602 S. Tippecanoe Ave. San Bernardino, CA 92408**	**909-383-5654 909-383-5651 (24 Hr)**
Nearest FS Station	Mountaintop RD	40971 North Shore Drive, Hwy 38, Fawnskin, CA 92333	(909) 382-2790
NFF Inspector	TBD	602 S. Tippecanoe Ave. San Bernardino, CA 92408	TBD
COR	Ray Aguayo	40971 North Shore Drive, Hwy 38, Fawnskin, CA 92333	(909) 225-8084
District Ranger	Josh Direen	40971 North Shore Drive, Hwy 38, Fawnskin, CA 92333	(909) 382-2609

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.

▪ This contract ☒ requires, ☐ does not require, Section 5G of the Fire Plan.

G. **Communications**: Contractor shall furnish a serviceable telephone, radio-telephone or radio system connecting each operating side with Contractor's headquarters. When such headquarters is at a location which makes communication to it clearly impractical, Forest Service may accept a reasonable alternative location. The communication system shall provide prompt and reliable communications between Contractor's headquarters (or agreed to alternative) and Forest Service via commercial or Forest Service telephone.

▪ This contract ☒ requires, ☐ does not require, Section 5H of the Fire Plan.

H. **Fire Patrolperson**: Contractor shall furnish a qualified fire patrolperson each operating day when Project Activity Level C or higher is in effect. When on duty, sole responsibility of patrolperson shall be to patrol the operation for prevention and detection of fires, take suppression action where necessary and notify the Forest Service as required. This Fire patrol is required on foot, unless otherwise agreed. By agreement, one patrolperson may provide patrol on this and adjacent projects. No patrolperson shall be required on Specified Road construction jobs except during clearing operations unless otherwise specified.

The Contractor shall, prior to commencing work, furnish the following information relating to key personnel:

Title	Name	Telephone Number
Fire Supervisor		
Fire Patrolperson		

I. **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.

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 **Area 692**

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: 909-382-2997

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	*Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.*
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 burning, blasting, welding or cutting of metal after 1:00 PM, except by special permit.
Ev	1. The following activities may operate all day: 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: 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: • Rubber Tire Skidding • Chipping on Landings • Helicopter Yarding • Fire Salvage 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 the 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).

Level	*Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.*
E	The following activities may operate all day: 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.

This Project utilizes "The Project Activity Level" (PAL), an industrial operation's fire precaution system. The following Climatology Chart indicates the Historic Activity Levels for the Project Fire Danger Rating Area or Fire Weather Station utilized on this Project. This is only a historical average of the Activity Levels for the identified Fire Danger Rating Area or Weather Station.

Project Activity Level Climatology

Fire Danger Rating Area/Weather Station	Area 692			Years Analyzed	2015 to 2020			
	A	**B**	**C**	**D**	**Ev**	**E**	Days	
Month	Expected Days per Month at Each PAL Value						Analyzed	
April	8	5	10	6	1	0	180	
May	7	6	12	5	1	0	186	
June	3	3	7	8	8	1	180	
July	2	7	8	9	5	1	186	
August	0	3	13	8	5	1	180	
September	1	4	14	6	4	0	150	
October	2	4	13	6	5	0	155	
November	3	5	13	6	2	0	150	
December	15	5	7	3	1	0	155	

APPENDIX E
Timber Removal Specifications

F.1 – Location and Area -			
This Stewardship Project Area of:	*[insert number of acres]*	acres more or less are located in:	*[insert exact location of project, i.e., township, range, section]*
San Bernardino County	291.89		T2N, R1E, Sections 3, 4, 5, 6; T3N, R1E, Section 32, 33; (San Bernardino Meridian)

F.2 -Volume Estimate and Utilization Standards.

				Minimum Specifications				
				Merchantable Tree		**Piece Required to be Removed**		
Species	**Product**	**Estimated Quantity**	**Unit of Measure**	**Diameter Breast High (d.b.h.)** *(inches)*	**Number of Minimum Pieces per Tree**	**Length** *(feet)*	**Diameter Inside Bark at Small End** *(inches)*	**Net Merch. Factor 1/**
All	Non-saw Timber	4330	Ton	5.0	1	6.0	NA	16
Total Quantity		**4330**	**Ton**					

1/ Enter Merchantability Factor (Merch. Factor) or Net Scale in % of Gross Scale, whichever is appropriate.

F.3- High Stumps.

Species	Product	Maximum Stump Height (inches)
All	Non-Saw	6

F.4– Timber Rates. ***(Scaled)***

Cutting Unit Number	Approx. Acres	Species	Product	Quantity	Unit of Measure	Rate of Payment $/UOM	Required Deposit per unit of measure
All	285.54	All	Non-saw Timber	4330	Tons	0.10	0.00

F.5 - Timber Rates. ***(Tree Measurement)***

Payment Unit Number	Approx. Acres	Species	Product	Quantity	Unit of Measure	Total Payment	Required Deposit per Payment Unit
NA							

F.6 - Timber Designations. Timber designated for cutting shall be confined to the Stewarship Project Area. No undesignated timber shall be cut without prior notification to and approval of the Forest Service. Prescriptions/timber designations are included later in this subsection.

	Number	Acres
Clearcutting Units		
Specified Road Clearing		
Overstory Removal Units		
Understory Removal Units		
Individual Trees		
Incompletely Marked Timber	485-486, 490- 491, 493, 495, 520, 522, 526, 535, 557, 559, 578, 582 and 590	291.89

F.7 – Timber Subject to Agreement

TIMBER SUBJECT TO AGREEMENT.

In addition, there is within Contract Area an unestimated quantity of:

Species	Product
CS	Fuelwood
CH	Fuelwood

that shall be Included Timber upon written agreement

F.8 - 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/ Subdivision/ Area/ Payment Unit	Tree Paint Color	Designation or Specification
ALL	Blue/ Green	Hazard Tree. Notwithstanding BT2.32 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 Contract Area, shall be felled by Contractor when Marked in the specified paint color above and below stump height by Forest Service 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 Contract Area Map or on the ground.
N/A	Blue	Individual Tree Mark. Individual trees are designated for cutting only if Marked above and below stump height with the specified paint color.
N/A	White	Leave Tree Mark. All live **conifers and oaks** 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 to be left uncut.

Cutting Unit/ Subdivision/ Area/ Payment Unit	Tree Paint Color	Designation or Specification
ALL	White	Wildlife Trees. Notwithstanding the designation for cutting under BT2.31, BT2.32, BT2.34,or BT2.35, trees which are identified by standard Forest Service metal wildlife tree sign or painted with the specified paint color on the uphill and downhill side, shall be left uncut. In event such trees are destroyed in Contractor's Operations, Forest Service may designate alternate trees to be saved.
ALL	Black	Marked Out Trees. 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.
N/A		Designation by Spacing CT2.351#
N/A		Designation by Species and Diameter, CT2.352##
N/A		Designation by Damage Class, CT2.353#
N/A		Designation by Row Spacing, CT2.354#
All		Desgnation by Prescription, CT2.355#

F.9 Tree Designation/Prescriptions.

Within Subdivision(s) or **NBBFY27** cutting unit(s): **485 - 486, 490 - 491, 493, 495, 520, 522, 526, 535, 557, 559 and 590** as shown on Contract Area Map, the following criteria shall be used by Contractor to designate trees and other products for cutting and removal.

(a) The main treatment focus is to reduce ladder fuels and shade tolerant, suppressed and intermediate trees to create stand structure that allows for manageable prescribed burning and wildfire suppression while creating improved forest health and vigor through reduced competition. Treatments are designed to promote structural heterogeneity with the creation of retention areas and openings to promote large diameter trees.

.

1. Thin (primarily) from below live trees greater than 5" DBH to a target basal area listed below. Retain all live pine and oak trees ≥16.4 inches DBH, unless otherwise agreed to by the Forest Service in advance of felling for reasons of safety or operations. A smaller, healthy desired species (JP, PP, SP) should be left over a

larger less desired shade-tolerant species (WF, IC, W. Juniper)) of comparable size (within 8" dbh).

2. Choose leave tree species based on the following species preference: Black Oak>Sugar Pine>Jeffrey Pine >Incense Cedar>White Fir> Western Juniper>Pinyon Pine. Focus on leaving trees with > 30 percent live crown and/or no extensive insect/disease damage. A smaller, healthy tree should be left over an unhealthy larger tree of comparable size (within 8" db.).

a. BA retention of 80 ±10 for Units: 485, 490, 493, 495, 520, 522, 557, 559 and 590
b. BA retention of 120 ±10 for Units: 486, 491, 526, 535

(b) Additional trees to be cut, if any, are Marked by Forest Service with 2/ Blue tracer paint.

(c) Cutting unit boundaries and other trees that shall be left uncut are Marked by Forest Service with 2/ N/A tracer paint.

- Contractor may select cut trees in cutting units 3/ **485 - 486, 490 - 491, 493, 495, 520, 522, 526, 535, 557, 559 and 590** without pre-harvest marking in accordance with the criteria in (a). If specified in (a) Contractor shall Mark leave trees in cutting units 4/ NA with Contractor's non-tracer 2/ NA paint for inspection and approval by Forest Service prior to cutting.

Within Subdivision(s) or **NBBFY27** cutting unit(s): **578 and 582** as shown on Contract Area Map, the following criteria shall be used by Contractor to designate trees and other products for cutting and removal.

Thin (primarily) from below all live trees greater than 5" DBH to a target basal area retention of 70 ± 10. Residual trees shall be the largest and tallest trees regardless of species that meet the basal area objective. After choosing the largest and tallest trees, choose leave tree species based on the following species preference: Black oak>Sugar Pine>Jeffrey Pine >Incense Cedar>White Fir> Western Juniper>Pinyon Pine. Focus on leaving trees with > 30 percent live crown and/or no extensive insect/disease damage. A smaller, healthy tree should be left over an unhealthy larger tree of comparable size (within 8" db.).

All live trees marked with WHITE paint and/or tagged with a wildlife tag shall be retained and counted toward the residual basal area of 70 ± 10.

(b) Additional trees to be cut, if any, are Marked by Forest Service with 2/ Blue tracer paint.

(c) Cutting unit boundaries and other trees that shall be left uncut are Marked by Forest Service with 2/ N/A tracer paint.

- Contractor may select cut trees in cutting units 3/ **578 and 582** without pre-harvest marking in

accordance with the criteria in (a). If specified in (a) Contractor shall Mark leave trees in cutting units 4/__NA_____with Contractor's non-tracer 2/__NA_____ paint for inspection and approval by Forest Service prior to cutting.

F.10- Control of Operations.

CT5.35## – ROAD AND WATER SUPPLY USE. (5/2008) 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 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.

SPECIFICATIONS PURSUANT TO CT5.35# - REQUIREMENTS OF ROAD AND WATER SUPPLY USE

Load Limitations	Contractor shall notify Forest Service 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 under BT6.311. 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. 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.
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	If Contractor removes snow from roads, such work shall be done with Forest Service approval and in a manner that will protect roads and adjacent resources. 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. Snow must not be removed to the road surface. A minimum **3**-inch snow depth must be left to protect the roadway. If the road surface is damaged, Contractor shall replace lost surface material and repair structures damaged in blading operations prior to hauling, unless climatic conditions prevent necessary work from being accomplished or as otherwise agreed in writing. 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.
Water Supply Deposits	NA
Surface Replacement Deposits	NA

CT6.22# - PROTECTION OF IMPROVEMENTS. (5/2008) Contractor shall notify Forest Service at least **10** days prior to any operations in the vicinity of improvements identified on Contract Area Map. Contractor shall protect such improvements from damage and shall be responsible for their timely restoration if damaged by Contractor's Operations. If relocation or removal of said improvements is necessary to avoid foreseeable damage by Contractor's Operations, work and cost shall be borne by the party listed in the table below. If Contractor is required to move or relocate the improvements, they shall move or relocate the improvements listed in the following table to locations and in a manner as specified in drawings or in specifications attached hereto. Improvements shall be returned to their original locations following Contractor's Operations.

See table below for improvements to be protected.

SPECIFICATIONS PURSUANT TO CT6.22# – PROTECTION OF IMPROVEMENTS.

Improvement	Owner's or Permittee's Name	Timing	Specifications	Work and Cost of Removal or Relocation Borne by
Gates	USFS	10 days	Move, Remove, Replace	Partner
Developed Recreation	USFS	10 days	Move, Remove, Replace	Partner

Improvement	Owner's or Permittee's Name	Timing	Specifications	Work and Cost of Removal or Relocation Borne by
Infrustructure (e.g., Kiosks, tables, fire rings, bbqs, etc)				
Fences/Pipe Rail	USFS	10 days	Move, Remove, Replace	Partner

PROTECTION MEASURES NEEDED FOR PLANTS, ANIMALS, CULTURAL RESOURCES, AND CAVE RESOURCES

Locations of known areas needing special measures for the protection of plants, animals, cultural resources, and/or cave resources are shown on Contract Area Map and/or identified on the ground. Special protection measures needed to protect such known areas are identified in Appendix B, if applicable.

In addition to any special protection measures noted, Contractor has a general duty to protect all known and identified resources referenced in this Subsection from damage or removal during Contractor's operations. Discovery of additional areas, resources, or members of species needing special protection shall be promptly reported to the other party, and operations shall be delayed or interrupted at that location, if Contracting Officer determines there is risk of damage to such areas, resources, or species from continued operations.

Wheeled or track-laying equipment shall not be operated in areas identified as needing special measures for the protection of cultural resources, except on roads, landings, tractor roads, or approved skid trails. Unless agreed otherwise, trees will not be felled into such areas. Contractor may be required to backblade skid trails and other ground disturbed by Contractor's operations within such areas in lieu of required cross ditching.

Contractor shall immediately notify Forest Service if disturbance occurs to any area identified as needing special protection measures and shall immediately halt operations in the vicinity of the disturbance until Forest Service authorizes Contractor to proceed. Contractor shall bear costs of resource evaluation and restoration to identified sites. Such payment shall not relieve Contractor from civil or criminal remedies otherwise provided by law.

Forest Service has exercised due diligence and followed established protocols in identifying known areas needing special protection measures. Nevertheless, nothing in this provision shall be interpreted as creating any warranty that all locations and special measures for the protection of plants, animals, cultural resources, and cave resources have been described herein, elsewhere in the contract, or designated on the ground.

Label on Contract Area Map	Restrictions
STA	CAM Label and project/site specific restrictions will be provided to partner during layout and drafting of contracts Piles shall not be placed within Special Treatment Areas as indicated on the Contract Area Map. Piles shall not be placed within Special Treatment Areas as indicated on the Contract Area Map. No wheeled or track laying equipment shall be operated in areas identified as STA, except on existing roads. Unless otherwise agreed to by the Forest Service in writing.
STA1	CAM Label and project/site specific restrictions will be provided to partner during layout and drafting of contracts A Heritage Monitor is required during all operations. Only rubber tired equipment and full suspension is allowed with Heritage Monitor present.
Equipment Exclusion Area (EEA)	Area outside of treatment areas where mechanized equipment is not allowed
WIFL LOP	No operations are allowed between 5/1 - 8/31.
None	Wood rat nests will not be disturbed and, if available, 2-5 nests per acre will have a 10 ft buffer of undisturbed vegetation. 18 inch fireline will be built to prevent their consumption during prescribed fire.
None	Embedded downed logs or logs that are partially below ground shall be left undisturbed, regardless of proximity to Forest Service roads or non-Forest Service property.
None	Piles shall not be placed in the following areas unless otherwise agreed to by the Forest Service in writing: Within 10.0 feet of designated system trails, and roads. If burn piles are created within 300 feet of rock outcrops and existing logs in suitable southern rubber boa habitat, a project wildlife biologist will be consulted to identify additional

Label on Contract Area Map	Restrictions
	protection measures.
None	Lop and scatter shall not occur in the following areas unless approved in writing by the Forest Service: Within 10.0 feet of designated trails and roads Within 15.0 feet of the boles of residual trees Within 10.0 feet of logs greater than 12 inches in diameter. Except jackpot Units.
None	To the greatest extent possible, special wildlife habitat features (e.g. downed logs, rock outcrops, active animal dens, woodrat nests, etc.) shall be avoided during project activities where they do not threaten the fuels reduction objectives.

CT6.314 - RELEASE OF PAYMENT UNITS. (2/2005) Except for Specified Road Payment Units, Forest Service shall not Release for Cutting more Payment Units than can be logged within 60 calendar days at Contractor's normal rate of logging. Unless otherwise agreed in writing, upon completion of all contract requirements in a Payment Unit, additional Payment Units may be Released for Cutting.

CT6.315# - PROJECT OPERATIONS SCHEDULE. (12/2006) Unless otherwise agreed in writing, Contractor's Operations shall be performed in accordance with the following schedule:

SCHEDULE PURSUANT TO CT6.315# - PROJECT OPERATIONS SCHEDULE (12/2006)

Subdivision/ Area/Unit	Conditions of Operation	Purpose
All	Skidding operations will only be permitted when soil moisture conditions are such that compaction, gullying, and/or rutting will be minimal. Equipment may operate on designated skid trails when soils are dry to a minimum of 4 inches. Low-ground pressure equipment may operate off of designated skid trails when soils are dry to a depth of 4 inches. High ground pressure equipment may operate off of designated skid trails when soils are	To protect soil from compaction, gullying, and/or rutting.

Subdivision/ Area/Unit	Conditions of Operation	Purpose
	dry to a depth of 8 inches. Off of designated skid trails, limit all equipment passes over the same piece of ground to reduce the potential for adverse soil compaction. Outside Normal Operating Season (NOS) or during wet periods within the NOS, utilize the TNF Wet Weather Operations Guidelines. All operations will be suspended when soil rutting from machinery exceeds 2 inches depth.	

CT6.331 - LOG TRUCKING. (2/2005) To promote safe operations on National Forest roads and on Specified Roads, loads shall be safely secured before trucks move from the landing or loading location.

CT6.37 - SUBSTITUTE METHODS. (2/2005) Notwithstanding other provisions herein, for minor changes such as changes in logging systems for areas smaller than 5 acres, Contractor and Forest Service may agree in writing that use of substitute methods or equipment will achieve Forest Service objectives under this contract and may be used in lieu of those specified for Contractor's Operations.

CT6.41# - FELLING, BUCKING, AND LIMBING. (8/2007) Unless otherwise agreed in writing, Contractor's felling, bucking, and limbing operations shall be conducted as specified in the table below.

SPECIFICATIONS AND TREATMENTS PURSUANT TO CT6.41# - FELLING, BUCKING AND LIMBING

Treatment Method	Felling, Bucking and Limbing Specifications
Limbing	Outside of construction clearings, Clearcutting Units and regeneration units, unless otherwise provided by BT6.414, Purchaser 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 **3** inches, at which point the top shall be cut from the remainder of the stem.
No Lop "No Lop"	Within units or payment units designated NO LOP on Contract Area Map, trees shall be skidded/yarded to agreed landing locations prior to lopping.
Whole Tree Yarding "Whole"	Notwithstanding the requirements above, within units or payment units 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 not be limbed prior to skidding/yarding.

Treatment Method	Felling, Bucking and Limbing Specifications
Directional Felling	Within areas designated DF on Contract Area Map, Included Timber shall be directionally felled away from **stream courses**, **structures**, **survey monuments**, **and private property**, **and controlled 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.
Treatment of Stumps	Within areas shown on Contract Area Map, Contractor shall treat stumps of all live **or Recently Dead Conifer** trees equal to or greater than **2** 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. 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 borax to insure complete coverage. Treatment should be done as soon as possible but shall be completed no later than **4** hours after felling, otherwise stumps shall be re-cut and treated. 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 **300** feet of live stream courses and meadows/wetlands shown on Contract Area Map and/or **10** feet of sensitive plant location boundaries as flagged on the ground. Contractor shall provide the borate compound and colorant and apply it in compliance 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

<table>
<tr><th>Treatment Method</th><th>Felling, Bucking and Limbing Specifications</th></tr>
<tr><td></td><td>of according to the product label. All spills occurring in water or over 0.5 pounds shall be reported to Forest Service within 3 hours.

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.</td></tr>
<tr><td>Maximum Log Length</td><td>Cut trees shall be bucked prior to skidding so that resulting logs shall not exceed the maximum log length including trim allowance shown in following table:
<table>
<tr><th>Unit Number</th><th>Maximum Log Length</th></tr>
<tr><td>All</td><td>41’</td></tr>
</table></td></tr>
<tr><td>Minimum Stump Height</td><td>
<table>
<tr><th>Unit/Subdivision</th><th>Minimum Stump Height (inches)</th><th>Purpose or Reason</th></tr>
<tr><td>All</td><td>3 inches</td><td>Facilitate timber accountability</td></tr>
</table></td></tr>
</table>

CT6.42# - GROUND BASED SKIDDING. (12/2006) Unless otherwise agreed in writing, the method of skidding Included Timber shall be as shown on the Contract Area Map, by areas, with symbols defined in the following table:

Ground-Based Skidding Table - CT6.42#

Map Symbol	Requirements
TRAC	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. 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.
SUSP	Products shall be skidded with leading end clear of ground.
SPACE	Skid roads will average **75** feet from center to center, except where converging.
ENDL	Endlining shall not be required for distances in excess of **75** feet uphill, and **100** feet downhill.
MAX	Tractors used for skidding outside Clearcutting Units, regeneration units or other authorized clearings, shall be of the type (rubber-tired or track-laying) shown on the Contract Area Map and shall not exceed the overall width designated on Contract Area Map.
MH	Contractor shall cut Included Timber and move it to designated skid trails using equipment with a boom having an operating radius of at least **20** feet for bunching trees, capable of severing, lowering and placing trees up to **24** inches diameter at stump height on the ground prior to skidding. Such equipment must be capable of operating on slopes up to **35**%. Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources from unnecessary damage. Trees which exceed capability of specified equipment may be felled, bucked and skidded in a manner consistent with the requirements of BT6.41 - Felling and Bucking, CT6.41# - Felling, Bucking, and Limbing, and the above “TRAC”, “SUSP”, “SPACE”, “ENDL”, and “MAX” requirements.

Map Symbol	Requirements
CTL	Included Timber shall be felled, limbed and bucked by a self-propelled mechanical harvester capable of producing finished sawlogs or chippable boles. Limbs of Included Timber shall be placed evenly in the machinery skid trail prior to product removal. The harvester shall be an all-wheel drive machine with at least 3 axles and a processing head mounted on a boom having a minimum-operating radius of 20 feet. Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources or residual timber from unnecessary damage. All Products shall be removed by an all-wheel drive forwarder with at least 3 axles capable of self-loading and unloading. The forwarder shall carry all products free of the ground during removal. The loading crane shall have a minimum-operating radius of 15 feet. Log landings and transfer points shall be agreed in advance of harvesting. Included Timber exceeding the harvester's capability may be felled by conventional chainsaw methods, forwarded to nearest skid trail and processed into a finished Product with harvester or chainsaw, consistent with the requirements BT6.61 - Meadow Protection, BT6.41 - Felling and Bucking, CT6.41# - Felling, Bucking, and Limbing, and the above "TRAC", "SUSP", "SPACE", "ENDL", and "MAX" requirements.
PB	NA
HCTL	Included Timber shall be felled, limbed and bucked by a self-propelled mechanical harvester capable of producing finished sawlogs or chippable boles. Such equipment must be capable of operating on slopes up to **85** %. The harvester shall be an all-wheel drive machine with at least 3 axles, or track mounted, and a processing head mounted on a boom having a minimum-operating radius of 20 feet. Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources or residual timber from unnecessary damage. Included Timber exceeding the harvester's capability may be felled by conventional chainsaw methods

CT6.425 - CABLE AND SKYLINE YARDING. (8/2007) Unless otherwise agreed in writing, requirements for cable and skyline yarding equipment are shown on Contract Area Map, by areas, with the following symbols:

CS - Cable yarding specified.

CR - Be capable of yarding from roadway with additional landing excavation to accommodate the yarder held to a minimum consistent with safe yarding operations.

CW - Meet all of above requirements using a swing-boom type yarder.

SY - All yarding except lateral yarding, shall be accomplished by a skyline system, which supports products clear of the ground across Buffer Strips and in other areas yard with one product end suspended.

SL - Meet all of above requirements, have lateral yarding capability hold skyline carriage stationary until products are yarded to skyline corridor.

SR - Meet all of above requirements and be capable of yarding from roadway with additional landing excavation to accommodate the yarder held to a minimum consistent with safe yarding operations.

SW - Meet all of above requirements using a swing-boom type yarder.

For SL, SR, and SW areas, locations of all skyline corridors shall be by agreement and designated on the ground. Such agreement shall be prior to felling unless ground and timber conditions otherwise justify. Width of said skyline corridors shall be kept to a practicable minimum consistent with the related silvicultural prescription.

For all yarding methods, if rigging must be slung on undesignated live trees, these trees shall be protected from damage by special steel plates, nylon tail-hold slings or similar effective protective devices.

Swing Yarding. In areas designated with the following labels on the Contract Area Map, the following requirements are included, unless otherwise agreed in writing:

"Tractor Swing" – all Included Timber shall be tractor skidded from yarder landing to loading areas shown on Contract Area Map or other agreed locations.

"Skyline Swing" – all Included Timber shall be skyline yarded from tractor skidded area to a skyline yarding landing. Location of tractor and skyline landings shall be agreed upon prior to skidding and yarding operations.

CT6.429 - HELICOPTER YARDING. (8/2007) Within subdivisions/payment units so designated on Contract Area Map, yarding shall be by a helicopter capable of lifting and transporting products to landings without unnecessary damage to residual trees.

Unless otherwise agreed in writing, the following conditions apply to this project.

Contractor is not required to cut trees if there is insufficient volume to make a turn of at least 100 cubic feet net scale (500 board feet net scale) within a 100 foot radius from the largest tree.

If trees that would have been exempt from cutting as described above are cut, pieces meeting minimum specifications in AT2 shall be removed, scaled and paid for.

Areas where flight pattern is restricted are shown on the Contract Area Map. Logs and other external loads shall not be flown over these areas.

CT6.5 - STREAMCOURSE PROTECTION. (2/2005) Unless otherwise agreed in writing, wheel or track laying equipment shall not operate within "Buffer Strips" except as necessary for fire suppression activities. "Buffer Strips" are areas marked on the ground or are within the distances identified on the Contract Area Map measured from the apparent high water mark of streamcourses. Boundaries of Buffer Strips may be modified by agreement in writing to meet unforeseen operating conditions.

Culverts, bridges, or other suitable structures shall be required on skid roads and trails only at points where it is necessary to protect Stream courses. The type of crossing structures, method of installation and removal shall be determined by agreement. Contractor in accordance with CT6.6# - Erosion Prevention and Control, shall remove such structures and associated fills.

Damage to Stream course or Buffer Strips caused by unauthorized Contractor's Operations shall be repaired by Contractor in a timely and agreed manner to the extent practical as determined by Forest Service to restore and prevent further damage to Stream courses.

CT6.6# - EROSION PREVENTION AND CONTROL. (5/2008) Erosion prevention and control work, including Streamcourse protection, required by CT6.5 and BT6.6 shall be completed within l5 calendar days after skidding operations related to each landing are substantially completed or after Forest Service designation on the ground of work where such designation is required hereunder. Said time limit shall be exclusive of full days lost in Contractor's Operations due to causes beyond Contractor's control. Such on the ground designation 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. After September 15 and as long thereafter as operations continue the work shall be done as promptly as practicable. Damage resulting from Contractor's Operations due to failure to perform required work shall be repaired by Contractor.

Notwithstanding other provisions in this contract and unless otherwise agreed in writing, any hay, straw, or mulch used in this contract shall be State of California certified weed free.

Additional erosion control requirements of this contract are listed in the following table.

SPECIFICATIONS PURSUANT TO CT6.6# - EROSION PREVENTION AND CONTROL.

Vegetative Soil Stabilization: NA

Special Erosion Prevention Measures: Contractor shall give adequate treatment by spreading slash or wood chips or by agreement giving other treatment to portion of tractor roads, skid trails, landings, cable yarding corridors, tractor-end lined corridors and Temporary Road fills where necessary to supplement other erosion prevention measures required elsewhere in this contract. In no event shall Purchaser be required to treat more acres than that shown in the legend of Contract Area Map. The specific locations to be treated shall be designated on the ground by Forest Service. These special erosion prevention measures are to be done within the same date and time periods as stated above.

Soil Scarification. NA

Backblading: Within recreation development sites and public use areas designated on Contract Area Map, Purchaser shall, at Forest Service request, backblade skid trails in lieu of cross ditching.

Tillage In addition to meeting the requirements of BT6.64, unless otherwise agreed in writing, tillage shall be required on the areas listed in the following table.

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.

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.

Tillage shall be limited to periods when soil dryness will result in crumbled soil, avoiding the formation of large clods. Contractor and Forest Service shall agree in writing on the timing of completion of such work to coordinate with desirable soil moisture conditions.

Areas to Till	Tillage Depth (Inches)	Maximum Acres to Treat
Landings	12	NA
Main Skid Roads and Tractor Roads designated by Forest Service	12	NA
Temporary Roads	12	NA

CT6.7# - SLASH TREATMENT. (12/2006) Contractor 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.

All vegetative debris associated with construction of Specified Roads such as unutilized timber, brush and grubbed stumps is Construction Slash. Measures to be taken by Contractor for treatment of Construction Slash are set forth in the attached road construction specifications and in the attached slash treatment specifications.

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.

Forest Service and Contractor shall jointly develop a schedule for completion of slash treatment on the various portions of Project 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.

SPECIFICATIONS PURSUANT TO CT6.7# - SLASH TREATMENT *(12/2006)*

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

Slash Treatment Methods

Symbol	Method	Definition
Buck-L	"Bucking Large Logging Slash"	Tops and limbs over 4 inches diameter outside bark (d.o.b.), not to be otherwise treated, shall be bucked into lengths not to exceed 6 feet, unless agreed otherwise.
Buck-P	"Bucking and Piling"	Logging Slash smaller than TBD inches and larger than 4 inches in large end d.o.b. shall be bucked into lengths not to exceed <> feet and left in place. Logging Slash 4 inches and smaller in large end d.o.b. shall be hand Piled within Required Disposal Strip for Forest Service disposal.
Bury	"Burying"	Logging Slash shall be buried where agreed in borrow areas, pits, trenches, or other locations reasonably near the area of origin. Logging Slash shall be matted down in layers and shall be covered with at least 2 feet of rock and soil so that the final surface is sloped to drain and relatively smooth.
Chip	"Chipping"	Chippable Logging Slash up to 4 inches in d.o.b. shall be processed through a chipping machine. Chips shall be scattered to a loose depth not exceeding 6 inches.
Deck	"Decking" large material	Logging Slash **10** inches or larger in large end d.o.b. and **8** 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.

Pile	"Piling" small material	Logging Slash smaller than **10** inches in large end d.o.b. and **8** feet long shall be hand Piled for disposal by Forest Service.
Remove	"Removing"	Logging Slash shall be moved or hauled to locations shown on Contract Area Map and designated on the ground where it shall be piled for disposal by Forest Service.
Scat 18" Scat 30"	"Scattering"	Logging Slash shall be scattered to reduce slash concentrations with slash being generally left within 18 or 30 inches of the ground as shown on Contract Area Map. Logging Slash shall be scattered into openings away from and without unnecessary damage to residual trees. All scattered logs shall be limbed, placed away from trees and positioned so they will not roll. When Scattering is specified, another method may be used by agreement.
Stack	"Stacking" small material	Logging Slash **10** inches or smaller in large end d.o.b. and **8** feet or more in length shall be stacked for disposal by Forest Service by piling pieces parallel to each other.
View	"Visible Slash Treatment"	Designated on Contract Area Map with boundaries posted on the ground are TBD with distance limitations for visible slash treatment. Within such units and the area of visible Logging Slash adjacent thereto, Logging Slash shall be treated by Contractor. Primary treatment shall be by Removing, Burying, Chipping, Piling, Machine Piling, or a combination of these means unless a method is specified or prohibited on Contract Area Map. Logging Slash not readily treated by the selected or specified method shall be removed to designated areas or treated as agreed.
YUMD	"Yarding Unutilized Material-Decking"	All unutilized material developed by Contractor's Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized material shall be Yarded to landings and Decked. Where this is impractical, or other reasons, other locations shall be agreed upon.

Unit	Large End d.o.b. (in)	Length (feet)
NA		

YUME "Yarding Unutilized Material-Exterior Boundary"

All unutilized material developed by Contractor's Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized material shall be yarded to locations a minimum of 50 feet slope distance within the exterior boundaries of such units and positioned so the yarded material will not roll.

Unit	Large End d.o.b. (in)	Length (feet)
NA		

YUML "Yarding Unutilized Material-Landing"

All unutilized material developed by Contractor's Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized shall be yarded to locations within 100 feet slope distance of landing. Where this is impractical, or other reasons, other locations shall be agreed upon.

Unit	Large End d.o.b. (in)	Length (feet)
NA		

YUMR "Yarding Unutilized Material-Removal"

All unutilized material developed by Contractor's Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized shall be removed to locations shown on Contract Area Map and designated on the ground, or other agreed locations, and Decked.

Unit	Large End d.o.b. (in)	Length (feet)
NA		

Cover "Covering Piles"

All piles shall be covered with a durable waterproof covering as approved by Forest Service. The material shall be at least six feet in width. Piles shall not be less than fifty percent covered, with the covering extending not less than half way down all sides. Pieces of burnable material shall be placed on top of the durable waterproof covering to keep the covering from blowing off the pile.

Fell	"Damaged Small Trees"	Unless treated under other provisions, all trees smaller than the minimum d.b.h. in AT2, over 5 feet in height, and damaged beyond recovery by Contractor's Operations shall be felled. Such trees shall be limbed to a stem diameter outside bark of approximately 3 inches, at which point the top shall be cut from the remainder of the stem, and shall be bucked into lengths not exceeding 20 feet.
Fire-L	"Firelines"	Shown on Contract Area Map and to be flagged on ground after logging by Forest Service are firelines to be constructed by Contractor unless otherwise agreed in writing. Contractor shall construct not more than TBD chains of fireline by hand and not more than TBD chains of fireline by tractor. Firelines constructed by hand shall be cleared of all vegetative debris larger than one inch in d.o.b. and three feet long. The width of firelines shall be at least **2** feet, except across the top of cutting units where the width shall be at least **1.5** feet. At least **1.5** feet shall be scraped to mineral soil. In areas where there is potential for burning material to roll, the fireline shall be constructed in a trenched manner on the downhill side. Tractor lines shall be cleared of all vegetative debris, larger than one inch in diameter and three feet long, to a width of at least **NA** feet, with at least **NA** feet to mineral soil. No slash, brush, or other vegetative debris shall be buried in or under berms created in the construction of firelines. All limbs overhanging into the fireline, shall be removed to a minimum height of 8 feet. Firelines shall be completed on each unit in accordance with BT6.311 unless otherwise agreed in writing. In subdivisions TBD and shown on Contractor Area Map, Logging Slash shall be scattered within TBD feet slope distance of the inside edge of firelines.
Fuel-B	"Fuelbreaks"	Shown on Contract Area Map, with boundaries designated on the ground, are

"Fuelbreaks" of varying width. Within such Fuelbreaks all Logging slash and Construction slash shall be treated by Contractor. Primary treatment shall be by Removing, Burying, Chipping, Piling, Machine Piling, or a combination of these methods unless a method is specified or prohibited on Contract Area Map. Slash larger than treatment size requirements of selected or specified methods shall be scattered outside Fuelbreak, or treated as agreed.

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 NA inches. Machine Piling is not required on areas where use of tractors would cause undue damage to residual timber or where slopes exceed <> 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 <> 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.

	SLASH TREATMENT	
Subdivision or Unit No	***Specified Method***	***Prohibited Method***
All	Scat 18"	All Others

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***	***Maximum Height o Decks***
Landings	**ALL**	***MACH, COVER, DECK***	***5***

Disposal Sites	**NA**		

TREATMENT ALONG PERMANENT ROADS Permanent roads that require roadside slash treatment are listed in the attached table and shown on Contract Area Map. All Logging and Construction Slash within Required Disposal Strips shall be treated by Contractor. "Required Disposal Strips" are those areas adjacent to permanent roads where slash treatment is required for resource objectives. The width of Required Disposal Strips is shown in the attached table and is measured in slope distance from Roadbed edges of permanent roads. By agreement, in Clearcutting Units and regeneration units slash from Required Disposal Strips may be treated with other Logging Slash. By agreement the location of Required Disposal Strips may be adjusted from side to side without materially changing the total work required.

Slash treatment in Required Disposal Strips shall be accomplished without affecting the proper functioning of channels leading to and from drainage structures.

Logging Slash larger than treatment size requirements of the specified method shall either be Scattered outside Required Disposal Strip, within Required Disposal Strip or Decked at agreed locations as shown in the attached table.

			SLASH TREATMENT	
Road No.	***Subdivision and/ or Unit No. or Road Juncitons (From To)***	***Width of Required Disposal Strip***	***Specified Method***	***Slash Larger Than Treatment Size Requirements of Specified Method***
N/A				

TREATMENT ALONG TEMPORARY ROADS. Outside of Clearcutting Units or regeneration units, all trees felled or pushed over and trees damaged beyond recovery by Temporary Road construction shall be felled, limbed to a stem d.o.b. of approximately 3 inches, at which point the top shall be cut from the remainder of the stem, and stem shall be bucked into lengths not exceeding <> feet. Such slash shall be Scattered free of soil to reduce concentrations unless treatment is required by another specified method.

ADDITIONAL SLASH TREATMENT REQUIREMENTS. Within areas shown on Contract Area Map, Contractor shall perform work according to the specifications in the attached Table, unless otherwise agreed in writing.

Subdivision, Payment Units, Roads and or Road Segments	Additional Slash Treatment Requirements
All Mechanized Cutting Units	Yard all stem material to a top d.o.b. of 1 inch, from timber designated for cutting, with the following exception: broken portions of logs and tops less than 4 feet in length need not be yarded. Broken ends of merchantable logs shall not be bucked off in the units. Slash and Substandard Material accumulated at the landings shall be Decked or Machined Piled, in accordance with specifications above. Material accumulated at landings shall be considered as Timber Subject to Agreement under CT2.11##, described as Substandard Material and may be removed and paid for at Contractor's option.

C6.817# (Option 2) - Load Count Services. (7/2022) Stumpage payments shall be based on

1/ ___NA_____ **2/**___NA_____ per load of sawtimber products, and
1/ ____**21**_____ **2/**__Tons____ per load of_non-saw_ timber products

that leaves the Contract Area unless otherwise agreed to in writing. Volume for each payment period shall be calculated by multiplying the number of loads delivered to load count locations by the specified volume and unit of measure listed above.

Special Load Count Product Removal Permits will be issued for load count product loads. Product Removal Permits shall be completed by an assigned individual on the landing following the instructions on the inside cover of the product removal book. The truck driver shall sign for the load. For van loads the Product Removal Permit will be stapled to a piece of wood or similar material attached to the lower front of the van on the driver’s side. For log truck loads, the Product Removal Permit will be stapled to the driver’s side bunk log of the trailer portion of the load. If a loaded truck is staged on the Contract Area or any other approved location, the driver, prior to moving the load, shall record the removal date, and sign on the outside of the attached ticket as instructed on the inside cover of the Product Removal Permit Book, section II.A.5 . Truck drivers are responsible for insuring the Product Removal Permit is attached to the load prior to removal from the loading area and until the load is accounted for at the final delivery point.

All load count locations are to be final delivery points unless otherwise agreed to in writing. When other than the final delivery point is agreed to, the agreement shall require a designated individual to remove the scaler's portion of the product removal permit and return it to the agreed upon Forest Service location. The load portion of the Product Removal

Permit shall remain attached to the load until it reaches the final delivery point.

When hauling to the final delivery point for load count services is requested, Contractor shall sign an Alternate Scaling Agreement prior to hauling. This agreement shall clearly state the procedure for removal and return of the Product Removal Permits to Forest Service.

Contractor shall make all necessary arrangements to implement load count services and make deposits to cover all costs associated with load count services including but not limited to the following:

Designated individual removing Product Removal Permits

Mailing scaler's portion of the Product Removal Permit to Forest Service on a
daily basis

Forest Service may agree to processing load count data.

When other than final delivery point for load count services is requested, the individual responsible for performing load count services shall be approved in advance by Forest Service and is responsible for the following:

Removing Product Removal Permit and mailing on a daily basis to:

Location: San Bernardino National Forest - Supervisor's Office
Address: 602 S. Tippecanoe Ave, San Bernardino, CA 92408

The location where Product Removal Permits are to be removed shall be open to inspection by Forest Service at all times while hauling is in progress. When locations other than final product destination are requested, hours and days of operation shall be agreed to in writing and hauling will take place only when designated individual is physically present. Locations other than final destination points shall be as close to the Contract Area as practicable.

All holdover locations off the Contract Area, where vans may be stored for some period of time (over 24 hours), shall have an approved Holdover Yard Agreement in place prior to use. If staging areas on the Contract Area are to be used they must be approved in advance. Tickets will remain attached to loads until delivery to final destination.

Chip vans used to move products from the Contract Area must display on the van the first letter of the van owner's last name and the last 3 numbers from the van license plate, i.e. P123, unless another unique identification system is agreed to. The characters are to be a minimum of 6 inches in height and located high enough on the van to be visible at all times. The characters are to be located on both the driver and passenger side at the front of the van. This same van identification shall be written in the Product Removal Permit book on the woods permit that remains in the book.

Lost load receipts will be paid for at the contract rate plus deposits at the agreed to volume and UOM per product load as stated above.

CT6.83 - ACCOUNTABILITY. (2/2005) Forest Service and Contractor shall agree upon the haul route(s) prior to use. All products removed from Contract Area shall be transported over the designated route of haul.

Contractor shall:

(a) Require truck drivers to sign form R5-2400-242, product removal permit, assure permit is attached to the load prior to removal from the Contract Area and while in transit to load destination.

(b) Assign a competent individual at the landing to record the following information for each load on the product removal permit provided by Forest Service:

1. Date and time load is punched out with a paper punch or equivalent
2. Truck ID or license number
3. Load destination

Used books of product removal permits (stub portion) shall be returned to the Forest Service at least weekly, unless otherwise agreed.

(c) Require truck drivers to stop for transportation inspections, if requested by Forest Service, when products are in transit from Contract Area to Contractor's processing facility(s).

(d) Inform truck drivers of the designated route(s) of haul, the agreed upon location(s) for transportation inspections, the method of alerting drivers of an impending stop, and the fact that loads may be inspected at other locations where it is safe and possible to do so.

(e) Require truck drivers to assure the product removal permit is secured to each load of product (including chip vans, dump trucks or other container used for removing material) on the front lower corner of the drivers side of the load. Staple product removal permits to a log or attached piece of wood or other suitable material. Product removal permit shall remain attached to log until manufactured into products or if chips, until load has been unloaded. After logs are processed or load of chips unloaded the product removal permit shall be either destroyed or otherwise rendered unusable, unless otherwise agreed.

CT8.66# – USE OF TIMBER (Option 1). (9/04) (a) This contract is subject to the Forest Resources Conservation and Shortage Relief Act of 1990, as amended (16 USC 620, *et seq*.).

(b) Except for **NONE** determined pursuant to public hearing to be surplus, unprocessed Included Timber shall not be exported from the United States nor used in direct or indirect substitution for unprocessed timber exported from private lands by Contractor or any person as defined in the Act (16 USC 620e).

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

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

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

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

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

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

(f) Prior to delivering unprocessed Included Timber to another party, Contractor shall require each buyer, exchangee, or recipient to execute an acceptable agreement that will:

(i) Identify the Federal origin of the timber.

(ii) Specify domestic processing for the timber involved.

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

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

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

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

(h) Upon request, all records dealing with origin and disposition of Included Timber shall be made available to Contracting Officer.

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

F.11 - Roads. Error! Reference source not found. is/are 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."

F.11-a– Specified Roads.
Name and Date of Governing Road Specifications:

Project				Sheet Numbers and Approval Date	Performance Responsibility		
Road No.	Name	Design Class	Approx. Length *(mi./km.)*		Survey	Design	Const. Staking
N/A							

F.11-b - Road Maintenance Requirements. Error! Reference source not found. shall maintain roads in accordance with the following Road Maintenance Requirements

Road Maintenance Requirements Summary

Road	Termini		Miles	Applicable Prehaul Road Maintenance Specifications										
	From	To		T-801	T-802	T-803	T-805	T-807	T-811	T-812	T-813			
2N09	0	3.94	3.94			P	P	P	P		P			
3N09	0	3.49	3.49				P		P	P	P			
3N16	0	0.96	0.96			P	P	P	P		P			
3N09A	0	0.5	0.5	P	P		P			P				

P = Partner Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

F.11-c - Use of Roads By the Partner. Error! Reference source not found.'s use of existing roads identified on Stewardship Project 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 the Forest Service to inform the public of use restrictions. **Error! Reference source not found.**'s use of roads coded R, A, or W shall be in accordance with the following restrictions:

Restricted Road List

Road Number	Road Name	Termini		Map Legend	Description of Restrictions
		From	To		
2N09	Polique Canyon	0.0	3.94	R	No hauling after 5PM on Friday and before 8AM on Monday.
3N09	Van Dusen	0.0	3.49	R	No hauling after 5PM on Friday and before 8AM on Monday.

Road Number	Road Name	Termini		Map Legend	Description of Restrictions
		From	To		
3N16		0.0	0.96	R	No hauling after 5PM on Friday and before 8AM on Monday.
3N09A		0.0	0.5	X	Hauling Prohibited

F.12– 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.

F.13– Scaling Services.

Species	Product	Unit of Measure	Site and Geographic Location	Method	Standard Estimated Cost per Unit $
All	Non-saw Timber	Ton	Subject to Agreement	Partner	Un-estimated

F.14 - Advance Deposits. Error! Reference source not found. agree(s) to make advanced deposits in advance of cutting. These deposits may be in the form of cash, acceptable payment bond, earned stewardship credit or any combination thereof. Advanced deposits will be in such amounts as to maintain an unobligated balance sufficient enough to cover the value of timber to be cut. Forest Service and **Error! Reference source not found.** will agree on a systematic approach to provide sufficient advanced deposits.

If the credit balance in the IRSA is less than the amount due for timber, the Forest Service will suspend all or any part of **Error! Reference source not found.**'s operations until payment or acceptable payment guarantee is received.

F.15- 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 Stewardship Project Area or other authorized cutting area, and paid for, at which time title shall then vest with **Error! Reference source not found.**. 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 Stewardship Project Area or other authorized cutting area by the **Error! Reference source not found.** 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 Stewardship Stewardship Project Area or other authorized cutting area, at which time title shall then vest with **Error! Reference source not found.**. 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 Stewardship Project Area or other authorized cutting area by **Error! Reference source not found.** on or prior to the termination date, shall remain with the Forest Service.

F.16– 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 Stewardship Project Area, but before scaling, shall be borne by **Error! Reference source not found.** at current SPA 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, **Error! Reference source not found.** 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 SPA 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 **Error! Reference source not found.** 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 **Error! Reference source not found.**'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) x (2) + (3) x (4)] x (5) = 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 proposed project.

4 Workers

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

$21.08 /Hr. x 12 hours = $ 252.96

(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.

4 Pieces of equipment

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

$**280** /Hr. x 12 hours = $**3,360** /12hr.

(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.

5 days

Cooperator's Obligation per Operations Fire,
Maximum Amount: **72,300** $ _____

F.17 – Use of Timber

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

(b) Except for **NONE** determined pursuant to public hearing to be surplus, unprocessed Included Timber shall not be exported from the United States nor used in direct or indirect substitution for unprocessed timber exported from private lands by Partner or any person as defined in the Act (16 USC 620e).

(c) Timber in the following form will be considered unprocessed:
(i) Trees or portions of trees or other roundwood not processed to standards and specifications suitable for end product use;
(ii) Lumber, construction timbers, or cants intended for remanufacturing not meeting standards defined in the Act (16 USC 620e); and
(iii) Aspen or other pulpwood bolts exceeding 100 inches in length.

(d) Unless otherwise agreed in writing, unprocessed Included Timber shall be delivered to a domestic pro-cessing facility and shall not be mixed with logs intended for export.

(e) Prior to award, during the life of this SPA and for a period of 3 years from Termination Date, Partner shall furnish to Forest Service, upon request, records showing the volume and geographic origin of unprocessed tim-ber from private lands exported or sold for export by Partner or affiliates.

(f) Prior to delivering unprocessed Included Timber to another party, Partner shall require each buyer, ex-changee, or recipient to execute an acceptable agreement that will:

(i) Identify the Federal origin of the timber;

(ii) Specify domestic processing for the timber involved;

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

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

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

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

(h) Upon request, all records dealing with origin and disposition of Included Timber shall be made available to Contracting Officer.

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

F.17 – Debarment and Suspension Certification

Pursuant to 2 CFR 180 and 2 CFR 417, Partner shall certify and obtain certifications from its Subcontractors regarding debarment, suspension, ineligibility, and voluntary exclusion, including additional Subcontractors obtained after execution of this SPA. “Subcontractors” are participants in lower tier covered transactions.

Partner may rely upon a certification of a prospective Subcontractor that it is not proposed for debarment under 48 CFR 9.4, debarred, suspended, ineligible, or voluntarily excluded from participating in covered transactions or contracts, unless Partner knows that the certification is erroneous.

Partner shall keep the certifications of its Subcontractors on file until contract Termination Date and any extensions thereof, and will provide a copy at the written request of Contracting Officer. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this Subsection. The knowledge and information of Partner is not re-quired to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

If Partner knowingly enters into a contract transaction with a person who is proposed for debarment under 48 CFR 9.4, suspended, debarred, ineligible, or voluntarily excluded from

participation in covered transactions or contracts, in addition to other remedies available to the Government, Forest Service may pursue available remedies, including suspension and/or debarment.

Contracting Officer shall provide a copy of Forms AD-1047 Certification Regarding Debarment, Suspen-sion and Other Responsibility Matters – Primary Covered Transactions and AD-1048 Certification Regard-ing Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions to the Partner.

Partner shall complete form AD-1047 and provide to the Contracting Officer upon request.

Partner shall require each subcontractor to complete form AD-1048 and provide to the Contracting Officer upon request.

Appendix F Road Maintenance Specifications for Use With Timber Sales

U.S. Department of Agriculture, Forest Service

Last Updated: June 3, 2024

For Use with FS-2400-6/6(T) Contracts

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Contents

Road Maintenance Specifications for Use With Timber Sales 1

U.S. Department of Agriculture, Forest Service 1

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Change Log

Spec #	Title	Revision date	Description of change
T-801	Vegetation Removal–Roadway	6/3/24	Full Rewrite
T-802	Vegetation Removal–Roadside	6/3/24	Full Rewrite
T-803	Pavement Cleaning	6/3/24	Full Rewrite
T-804	Bridge Deck and Curb Cleaning	6/3/24	Full Rewrite
T-805	Road Grading	6/3/24	Full Rewrite
T-806	Slide Removal and Slump Repair	6/3/24	Full Rewrite
T-807	Surface Repair (Bituminous)	6/3/24	Full Rewrite
T-808	Surface Repair (Aggregate & Native)	6/3/24	Full Rewrite
T-809	Dust Abatement	6/3/24	Full Rewrite
T-810	Ditch Maintenance	6/3/24	Full Rewrite
T-811	Drainage Structures	6/3/24	Full Rewrite
T-812	Miscellaneous Structures	6/3/24	Full Rewrite
T-813	Waterbar	6/3/24	Full Rewrite
T-814	Closure Devices	6/3/24	Full Rewrite

Table or figures	Title	Revision date	Description of change
Figure 1	Road structure terms	6/3/24	e.g., edit existing drawing
Table 1	T–804 Bridge identification	6/3/24	e.g., full rewrite
Table 2	T–805 Compaction requirement	6/3/24	e.g., full rewrite
Table 3	T–807 Material type	6/3/24	e.g., full rewrite
Table 4	T–808 Specified material sources	6/3/24	e.g., full rewrite
Table 5	T–809 Dust abatement application rate	6/3/24	e.g., full rewrite
Figure 2	T–813 A waterbar (typical)	6/3/24	e.g., edit existing drawing
Table 6	T–814 Closure devices and locations	6/3/24	e.g., full rewrite
Figure 3	T–814 An earthen barrier	6/3/24	e.g., edit existing drawing

Preface

The U.S. Department of Agriculture (USDA), Forest Service developed these maintenance specifications (T-specs) for use with Provisions C5.31# and CT5.31# of timber sale contract forms FS-2400-6 and FS-2400-6T respectively.

Definitions

Wherever the road maintenance specifications use the following terms (figure 1), the user shall interpret the intent and meaning as follows:

Base course. Material used to reinforce subgrade or, as shown on drawings, placed on subgrade to distribute wheel loads. Base course usually consists of aggregate (treated or untreated). It serves as the immediate support for the surface course and may be built directly on subgrade if no subbase is called for. The requirements for building on subgrade are more stringent than for building with a subbase.

Berm. A curb or dike constructed to prevent uncontrolled roadway runoff water from discharging onto fillslope.

Bituminous. Of or containing bitumen.

Borrow. Material taken from designated borrow sites.

Crown, inslope, and outslope. The cross slope of the roadway, which aids in drainage and traffic maneuverability.

Culvert. A conduit or passageway under a road or trail.

Drainage dip. A dip in the roadway that intercepts and diverts surface water runoff. A drainage dip does not block the movement of traffic.

Drainage structure. A manufactured structure that controls the runoff of water from the roadway, including (but not limited to) overside drains, aprons, flumes, down drains, downpipes, and culverts.

Lead-off ditch. A ditch used to transmit water from a drainage structure or drainage dip outlet to the natural drainage area.

Maintenance activity. Items of work leading to the upkeep of a road within the right of way and necessary to sustain the road's anticipated traffic.

Maintenance specifications. Specifications that detail conditions and requirements peculiar to the individual project in addition to requirements identified in the national specifications.

Roadbed. The portion of a road between the intersection of subgrade and side slopes, excluding that portion of the ditch below subgrade. Roadbed consists of suitable native soil. It supports the base course and surface course.

Roadside. A term denoting the area adjoining the outer edge of the roadway.

Roadway. A term denoting the area consisting of the traveled way and shoulders.

Shoulder. That portion of roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and lateral support of base and surface course, if any.

Slide. A concentrated deposit of soil, rock, and other debris from the cut slope, often extending onto the roadway, whether caused by mass land movement or accumulated raveling.

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.

Subbase. Consists of either compacted granular material (treated or untreated) or a compacted layer of treated soil. It may help protect the base course and surface course from intrusion of fine-grained roadbed soils, damage from frost, and accumulation of water in or below the pavement structure. The pavement structure consists of the subbase, base course, and surface coarse.

Subgrade. Top surface of roadbed upon which subbase, base course, or surface course is constructed. For roads without subbase, base course, or surface course, that portion of roadbed prepared as the finished roadway. **Subgrade** consists of suitable native soil (treated or untreated). It serves as the top of the roadbed where the subbase or base course is constructed.

Surface course. The material placed on the base course or subgrade to enhance traction, distribute concentrated wheel loads and resist abrasion and the effects of climate. Surface course may be referred to as surfacing. **Surface course** consists of an aggregate mixture that may include a binder (plastic fines or

bituminous material). It must carry the traffic load, provide a smooth riding surface, and resist skidding and traffic wear while keeping water from penetrating into pavement structure.

Traveled way. That portion of roadway, excluding shoulders, used for the movement of traffic.

Turnouts. Short sections of traveled way constructed with additional width to allow for safe passing of traffic.

Waterbar. A constructed feature in the roadbed that intercepts surface runoff and diverts the water off the roadway. A waterbar is not designed to be traversable by traffic.

Water source. A place designated in individual projects for acquiring water for road maintenance purposes.

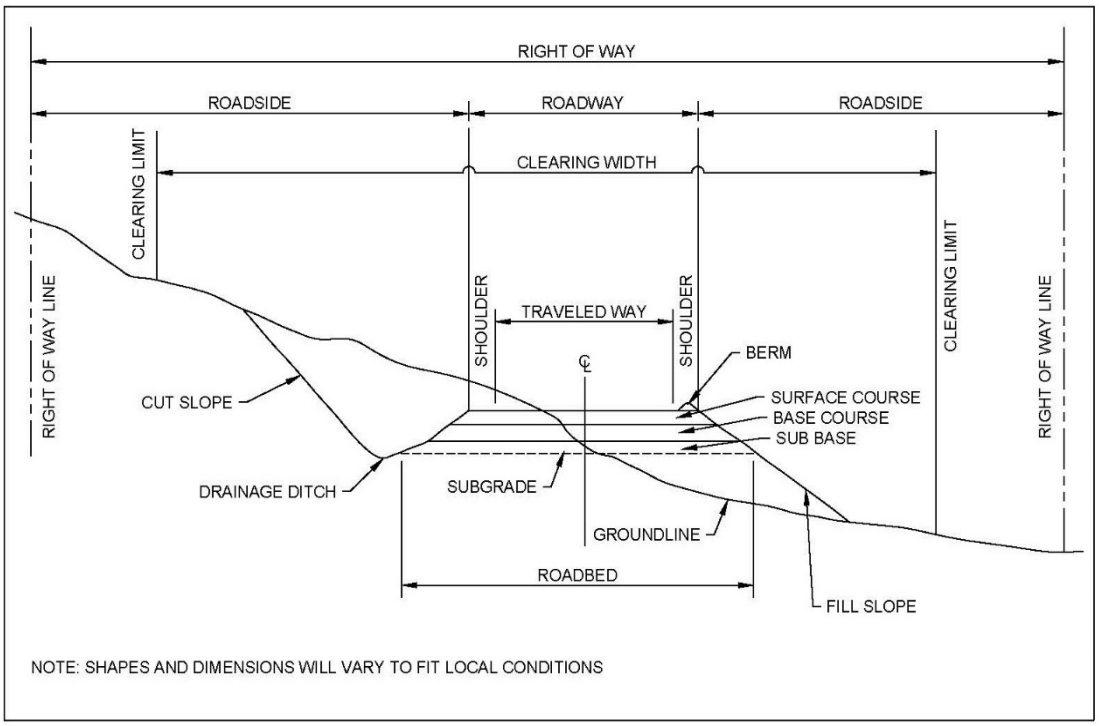


Figure 1—Road structure terms.

Sources:

- National Engineering Roads Drawing Library
  https://fsweb.sdtdc.wo.fs.fed.us/programs/eng/natlib/drawings/
- Road structures terms
  https://fsweb.sdtdc.wo.fs.fed.us/programs/eng/natlib/drawings/pdf/G1/C-GROUP_1_G1-1_TYPICAL_SECTION_WITH_DITCH.pdf

T–801 Vegetation Removal—Roadway

801.01 Description

Work consists of removing fallen trees and snags that encroach within 5 feet of the roadway.

801.02 Maintenance Requirements

A. Deck portions of trees that meet utilization standards in A/AT2 along the roadside at locations that do not impair the traveled way or sight distance (agreed to in writing).

B. Limb sub-merchantable material and cut it into lengths for handling. Scatter the material outside ditches and drainages, off the roadway and turnouts, or at staked locations.

C. Do not leave woody debris and slash on the roadway or concentrations that may plug ditches, culverts, or drainage channels.

D. Place residual root wads in an upright position out of the clearing limits.

T–802 Vegetation Removal—Roadside

802.01 Description

Work consists of cutting and disposing of vegetation that reduces the operational capability of the road, including compromised visibility of signing, gates, or approach railings on bridges. Work also includes removing vegetation for the purpose of restoring site distance to an acceptable level.

802.02 Maintenance Requirements

A. Remove vegetative matter that reduces sight distance, impedes vehicular travel, or interferes with road maintenance operations (such as surface blading, ditch and culvert cleaning, and bridge deck and curb cleaning) to a maximum height of 6 inches and a minimum of 5 feet outside of the roadway.

B. No need to remove low shrubs and brush which do not restrict sight distance and do not impede road maintenance if the road surface can be adequately maintained without doing so. This is not applicable to bridge sites.

C. For bridge sites, remove roadway vegetation within a minimum of 20 feet from abutments as measured along the center line of the road. Cut vegetation to provide a vertical clearance of 14 feet from the road and bridge surface elevation by trimming any encumbering tree limbs.

D. Do not leave woody debris and slash on the roadway or concentrations which may plug ditches, culverts, or drainage channels.

T–803 Pavement Cleaning

803.01 Description

Work consists of removing loose material from paved traveled ways, paved shoulders, and paved turnouts.

803.02 Maintenance Requirements

A. Clean the surface to the extents of the existing pavement without obstructing surface drainage.

B. Move materials away from the road centerline on double-lane roads.

C. When paved road structure includes aggregate lateral support, pavement cleaning shall leave (as much as practicable) the aggregate in its original form and assure support material is not adversely affected.

803.03 Equipment

A. Equipment shall have the capability of removing all loose material from paved surfaces without damage to the surface. Surface damage includes but is not limited to:

   a. Divots in the paved surface

   b. Peeling of surface material

   c. Cracking or breaking pavement edges

B. Use of hydraulic flushing equipment will not be permitted within a horizontal distance of _____ from a live stream, unless approved by the Forest Service.

T–804 Bridge Deck and Curb Cleaning

804.01 Description

Work consists of cleaning bridge decks and curbs.

804.02 Maintenance Requirements

A. Maintain bridges and associated components as identified on the sale area map or as indicated in table 1.

B. Bridge deck and curbs.

   a. Remove debris and sediment from the bridge deck, running planks, and the top and roadside face of the curbs. Ensure that all scuppers and drainage openings on the bridge are clear and operating as intended.

   b. Do not allow debris and sediment to enter the stream or stream channel.

   c. Haul sediment and other debris to a disposal area designated by the Forest Service in accordance with Section T–806 Slump Removal and Slump Repair.

C. Vegetation removal.

   a. Remove and dispose of vegetation at the bridge in accordance with T–802 Vegetation Removal.

Table 1—Bridge identification

Bridge name	Road number	Milepost
e.g., Smokey Bear Bridge	3100000	0.1

T–805 Road Grading

805.01 Description

Work consists of keeping a native or aggregate roadbed in a condition that facilitates traffic and provides proper drainage. It includes maintaining the crown, inslope, outslope or drainage dips of the traveled way; maintaining turnouts and shoulders; repairing berms; and blending approach road intersections.

805.02 Maintenance

A. Road grading shall be performed as often as necessary, per C/CT 5.31, to facilitate safe use and proper drainage.

B. Road grading 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. On aggregate-surfaced roads, thoroughly loosen surfacing material to no less than a 2-inch depth or the depth of defects. Scarification to facilitate cutting to the full depth of potholes or corrugations may be elected but will be considered incidental to blading. Do not scarify to a depth that will cause contamination of the surfacing. Surface material that has been displaced to the shoulders or turnouts shall be returned to the traveled way. A grading pattern shall be established to retain surface material on the roadbed and to provide for a thorough mixing of the materials within the completed surface width.

C. Unless otherwise shown in table 2, compaction of the traveled ways will be accomplished using compaction method A and will commence immediately following blading.

    a. Compaction method A: adjust the moisture content of the material to a content suitable for compaction. Fill the interstices around rock with earth or other fine material, as practical. Operate hauling and spreading equipment uniformly over the full width of each layer until there is no visible evidence of further consolidation.

    b. Compaction method B: operate a 7- to 10-ton pneumatic, steel, or equivalent vibratory roller to cover the full width three times. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material, as practical.

D. Smooth blading may be used as an interim measure on aggregate-surfaced roads to remove loose surfacing material from the wheel paths. Store removed materials in a recoverable windrow until blade processing (as described above) is feasible. Watering is not required for smooth blading. Accomplish smooth blading without distorting the existing cross-slope or crown of the traveled way.

E. Move and store loose surfacing materials on the high side of super-elevated curves and sections with uniform inslope or outslope. In crowned sections, store the material on either or both sides, as elected. Windrow and place stored materials to provide not less than 12 feet of smooth traveled way on one-lane segments, or 20 feet of smooth traveled way on two-lane segments or segments with turnouts. Place holes through windrows for drainage every 500 feet or less to provide drainage.

F. Water, taken from water sources designated on the sale area map, shall be applied during blading if sufficient moisture is not present to cut, mix, or compact the surface material.

G. On native-surfaced roads, material generated under other maintenance specifications 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 otherwise agreed.

H. Roadway cut slopes or berms shall not be undercut, nor shall new berms be established unless otherwise agreed.

I. Berms shall be repaired by placing material, as needed to restore the berm, to reasonably blend with existing line, grade, and cross-section.

J. Drainage dips shall be cleaned and maintained to reasonably blend with existing line, grade, and cross-section. Lead-off ditches shall be maintained in accordance with T-810 Ditch Maintenance.

K. Intersecting road junctions that are not closed or restricted from vehicular use shall be bladed to assure proper blending of the two riding surfaces.

L. 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. Unless otherwise designated by the Forest Service, the oversized material shall be removed and placed outside

the roadway; do not obstruct drainage ways or structures. Placement into streams, lakes, or water courses will not be permitted.

M. Material resulting from work under this specification shall not remain on or in structures, such as culverts, overside drains, cattleguards, ditches, and drainage dips.

N. Material resulting from work under this specification, plus any accumulated debris, shall be removed from bridge decks and the deck drains opened.

Table 2—Compaction requirement

Road number	Beginning milepost	Ending milepost
e.g., 3100000	0.0	2.1

Note: Roads listed in this table require compaction method B, as specified in 806.02-C.

T–806 Slide Removal and Slump Repair

806.01 Description

Work includes excavating, loading, hauling, placing, and compacting waste or replacement material. Work under T–806 is work that cannot be handled by a motor grader during T–805 Road Grading or T–810 Ditch Maintenance.

806.02 Maintenance Requirements

A. Slide material, including soil, rock, and vegetative matter that encroaches into the roadway shall be removed. The slope which contributed the slide material shall be reshaped as practicable to reduce future sliding, as agreed to with the Forest Service. Slide material on the fill slope and below the roadway will not be removed unless needed for slope stability or to protect adjacent resources.

   a. Surface and base courses shall not be excavated during T–806 Slide Removal operations.

   b. Slide material which cannot be used for other beneficial purposes shall be placed at disposal sites shown on the sale area map or designated by the Forest Service. Compact material shall be placed in disposal sites only if required by the Forest Service.

B. Material for slump repair is from agreed upon borrow sites, placed in layers no more than 12-inches thick, and compacted in accordance with T–805 method A or other methods approved by the Forest Service.

   a. Existing aggregate surfacing shall be salvaged when practical and replaced after depressions have been filled.

   b. Damaged aggregate base, aggregate surfacing, and bituminous pavement shall be repaired under T–807 Surface Repair (Bituminous) and T–808 Surfacing Repairs.

   c. Following slide removal, the roadway shall be shaped to reasonably conform to its original cross-section.

T–807 Surface Repair (Bituminous)

807.01 Description

Work consists of bituminous surface repair and includes repairing potholes or small, failed areas within the roadway. Includes preparing the area, furnishing, hauling, and placing all materials, and other work necessary for repairing the bituminous surface within the traveled way.

807.02 Maintenance Requirements

A. Unless otherwise specified, the purchaser is responsible for furnishing all needed material to complete the work (table 3). Bituminous product mix type shall be hot mix, unless otherwise specified.

B. The Forest Service will mark the areas to receive bituminous surface repairs on the road surface before the purchaser performs the work.

C. Soft spots and potholes require the excavation of surface and base course material necessary to reach firm, suitable material. The minimum depth of excavation shall be 2 inches and the maximum depth 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. Shape shall be generally circular or square, dry, and cleared of all loose material.

D. The prepared hole should be patched immediately or barricaded in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) until patched.

E. The faces of the hole shall be prepared by thoroughly applying emulsified asphalt tack coat.

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

G. The completed, compacted patch in the pothole shall be flush, with an allowable tolerance up to ½ inch above the level of the adjacent pavement.

H. Skin patches required for surface sealing shall uniformly distribute the bituminous mixture with feathered edges in even layers.

I. Damaged segments of asphalt berm shall be removed and the exposed ends beveled at 45 degrees from vertical. The berm foundation shall be cleaned and patched as necessary. The foundation and adjoining surfaces shall be prepared by thoroughly applying emulsified asphalt tack coat. Asphalt mix shall be placed and compacted to conform to the shape and alignment of the undamaged segment.

J. Unsuitable material shall be disposed of only at locations designated by the Forest Service or as shown on the sale area map.

Table 3—Material types

Road number	Material type*
e.g., 310000	Hot mix
e.g., All roads	Cold mix

*Identify material type: asphalt (hot mix or cold mix), other bituminous materials.

T–808 Surface Repair (Aggregate/Native)

808.01 Description

Work consists of repairing potholes, minor washouts, and soft areas on aggregate- or native-surfaced roads. Includes preparing the area; removing unsuitable material; furnishing, hauling, and placing all materials; and other work necessary to make the repair and blend into the adjacent surface section to provide a uniform cross section.

808.02 Maintenance Requirements

Table 4 identifies material sources.

Prepare the area as approved by the Forest Service. Soft spots on native- or aggregate-surfaced roads shall be repaired by placing the imported material on top of the soft spot in layers until a firm surface is produced, as evident by no surface deflection under normal operating loads. Repair material shall be uniformly distributed in layers not to exceed 6 inches compacted depth. Ensure adequate moisture. Material placement shall not cause surface irregularities and shall preserve the existing cross section.

Unsuitable material shall be disposed of at locations designated by the Forest Service or shown on the sale area map.

Material provided shall be certified weed-free.

Table 4—Specified material sources

Road number	Material type*	Source**	Gradation
e.g., 310000	Aggregate	Commercial	
e.g., All roads	Aggregate	Gov Vance Crk Quarry	

* Identify material type: aggregate, pit run, etc.

** Identify source of material: Government-furnished or commercial source

T–809 Dust Abatement

809.01 Description

Work consists of preparing the traveled way and furnishing and applying materials to abate dust.

809.02 Material

A. A dust abatement plan must be agreed on before hauling on roads that require dust abatement, as shown in C/CT5.31#. The plan must include the type of dust abatement material to use, the rates of application, and the frequency of applications. Table 5 shows special requirements for dust abatement that the dust abatement plan should include.

B. The sale area map designates the locations of approved water sources. The Forest Service may approve alternate water sources.

C. Dust abatement materials shall meet the following requirements:

   a. Magnesium chloride liquid—ASTM D 1298, Type S, 28 percent min. by mass, specific gravity 1.29 to 1.33

   b. Calcium chloride liquid—AASHTO M 144, Type L, 35 percent min. by mass

   c. Calcium chloride flake—AASHTO M 144, Type S Grades 1, 2, or 3, Class A

   d. Lignosulfonate liquid—Dry solids 50 percent, specific gravity 1.20 min. (ASTM D1475), pH (ASTM E70 3.0 to 8.0)

D. Certification of magnesium or calcium chloride brine, calcium chloride flake, and lignosulfonate liquid shall be in accordance with the concentrations listed above.

809.03 Maintenance Requirements

A. 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.

B. The traveled way shall be prepared and finished in accordance with the manufacturer's requirements or recommendations.

C. Dust abatement materials other than water shall be applied within tolerances specified by the manufacturer.

D. Dust abatement materials shall not be applied when it is raining. Lignosulfonate and magnesium chloride shall be applied when the atmospheric temperature is 40 °F or above.

E. The designated water sources may require some work before use. Such work may include cleaning ponded areas, installing temporary weirs or sandbags, pump installation, or other items appropriate to the purchaser's operations. Water source preparation requires contracting officer approval before use.

Table 5—Dust abatement application rate

Road number	Material type*	Application rate (pounds/tons/gallons) per __**
e.g., 310000	Water	1000 gallons per mile
e.g., All roads	Water	1000 gallons per mile

* Identify material type; water, magnesium chloride, lignosulfonate, etc.

** Identify application rate; gallons per mile, pounds per mile, etc.

T–810 Ditch Maintenance

810.01 Description

Work consists of routine maintenance to provide unobstructed drainage for various types of ditches.

810.02 Maintenance Requirements

A. Maintain existing ditches by removing rock, soil, wood, and other materials to provide unobstructed flow.

B. Do not undercut backslopes during ditch maintenance operations.

C. Remove suitable material up to 4 inches in greatest dimension from the ditches and blend it into the existing native road surface and shoulder or place it in a designated berm.

D. Do not blend material from ditch cleaning operations into aggregate surfaced roads. Do not blade material across bituminous surfaced roads, unless approved in writing by the Forest Service.

E. Dispose of excess material which cannot be used for other beneficial purposes at disposal sites shown on the sale area map or at sites designated by the Forest Service. Material placed in disposal sites does not require compaction, unless required by the Forest Service.

F. Remove limbs and wood chunks that exceed 12 inches in length or 3 inches in diameter from ditches and place outside the roadway.

G. Clean paved surfaces of all materials resulting from ditch maintenance work.

H. Shape lead-off ditches to drain away from the traveled way.

T–811 Drainage Structures

811.01 Description

Work consists of maintaining drainage structures such as culverts, armored crossings, surface water deflectors, inlet and outlet channels, related ditches, existing riprap, trash racks, and drop inlets. This includes overside drains and cattleguards that function as drainage structures.

811.02 Maintenance Requirements

A. Drainage structures and related items shall be cleared of all foreign material that has been deposited above the bottom of the structure and all vegetative growth that interferes with the flow pattern.

B. Culvert inlets and outlets shall be cleaned a minimum of 3 feet, as measured along the invert, unless otherwise directed by the Forest Service.

   a. Recondition culvert inlets and outlets by field methods such as jacking out or cutting away damaged metal that obstructs water flow. Treat cut metal edges with a zinc-rich coating, according to AASHTO M 36 and ASTM A849.

   b. Clean catch basins by removing the material within the basin floor to conform to the original grade from the invert and shape the basin to reasonably match the original catch basin cutslope.

   c. Clean the inlet channel transition from the drainage ditch to the catch basin and outlet ditches a minimum of 10 feet, or a sufficient distance to allow free drainage of water.

C. Ditches shall be cleaned to conform to previous line, grade, and cross section for positive drainage.

D. Drainage dip maintenance consists of cleaning existing dips on native- and aggregate-surfaced roads. Drainage dips shall be shaped to a depth and width to provide positive drainage and to reasonably conform to the original lines, grades, and cross sections, unless otherwise agreed upon. Lead-off ditches shall be cleaned a minimum of 10 feet from the drainage dip.

E. Riprap shall be maintained in good condition, including the replacement of riprap, if necessary, to previous line, grade, and cross section.

F. Headwalls, aprons, inlet assemblies, overside drains, riprap, geotextiles, trash racks, and other facilities related to the drainage structure shall be maintained to ensure proper function.

G. Material removed, if suitable, may be blended into existing native road surfaces or shoulders. On aggregate surface roads, care must be taken to ensure the material is not mixed into the existing aggregate. Haul unsuitable material to a disposal area designated by the Forest Service in accordance with Section T–806, or as otherwise agreed. Side casting into streams, lakes, or watercourses is not permitted.

T–812 Miscellaneous Structures

812.01 Description

Work consists of maintaining miscellaneous structures—including cattleguards, gates, and other similar, previously installed structures—to ensure safe and efficient operation of the road.

812.03 Maintenance Requirements

A. Cattleguards.

   a. Loose rail or wing elements shall be straightened and welded or bolted back in place.

   b. Excess material carried into the cattleguard shall be removed when drainage is blocked or when it reaches 6 inches from the bottom of the cattleguard frame. Drainage into and from the cattleguard shall be kept open according to T–811 Drainage Structures.

B. Gates.

   a. Gates shall be kept in good repair and made to swing easily. Hinges or latches shall be repaired if not operating properly and hinges shall be oiled. Vegetation and debris shall be removed from within the swinging radius according to T–802 Vegetation Removal—Roadside.

   b. Loose wire gate ends and internal stays shall be maintained in good condition. Gate wire shall be maintained as necessary to ensure proper operation of the gate both as a vehicular passageway and as a barrier to cattle movement.

C. Other miscellaneous structures shall be maintained as needed to ensure safe and efficient operation of the road.

T–813 Waterbar

813.01 Description

Work consists of restoring waterbars in the roadbed.

813.02 Maintenance Requirements

A. Waterbars shall be restored in accordance with figure 2.

B. All material excavated shall be used in the restoration of the waterbar. Berm material shall be compacted by operating heavy equipment over the entire length and width of the berm.

C. Waterbars may need to be restored between seasons of use and then removed when haul is resumed. Waterbar restoration may also be required when use of a road is complete.

D. Waterbar restorations shall be as agreed upon in the purchaser's plan of operations (B/BT6.311) or as directed by the Forest Service.

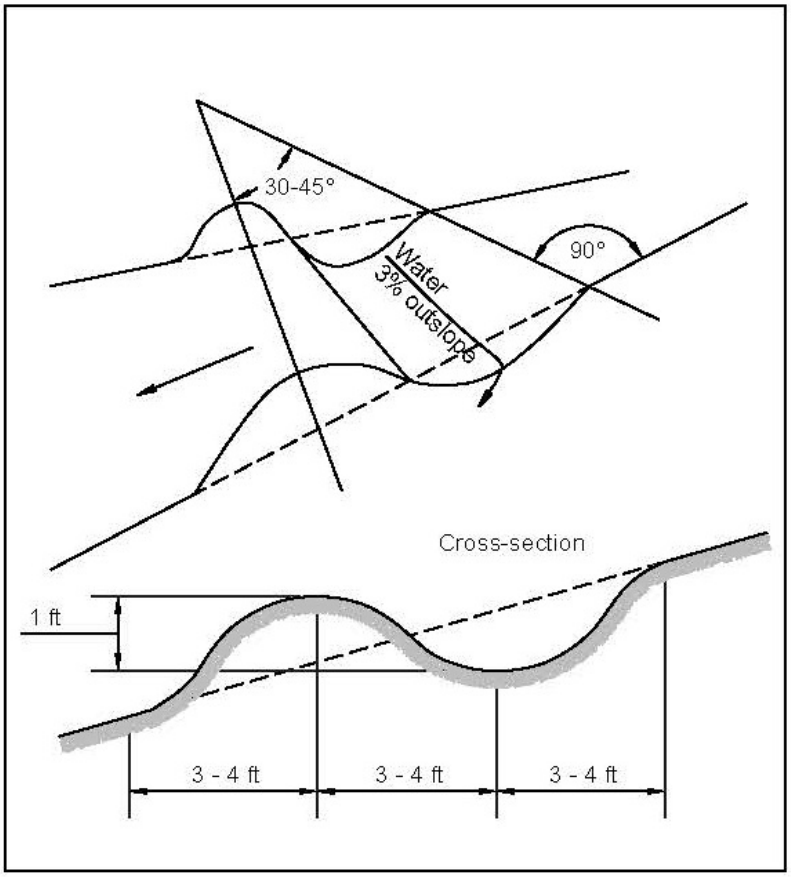


Figure 2—A waterbar (typical).

Source:

- The National Engineering Roads Drawing Library

  https://fsweb.sdtdc.wo.fs.fed.us/programs/eng/natlib/drawings/

- Water Bar—Driveable-G3-3

  https://fsweb.sdtdc.wo.fs.fed.us/programs/eng/natlib/drawings/pdf/G3/C-GROUP_3_G3-3_WATER_BAR-DRIVEABLE.pdf

- Note: The drawing here has a minor modification from the original.

T–814 Closure Devices

814.01 Description

Work consists of furnishing, installing, or removing barriers to facilitate road closures. Gates are not included.

814.02 Maintenance Requirements

A. Barriers shall be removed or installed in accordance with table 6, or as otherwise provided by the Forest Service.

B. Earthen barriers shall be installed such that excavation areas drain, ditch lines do not impede flow, and as indicated in figure 3.

C. Other barrier types shall be installed as directed by the Forest Service.

D. The sale area map or stakes on the ground show the location of barriers to be removed or installed. Table 6 also identifies this information. Installation or removal may occur as often as road use is terminated or resumed.

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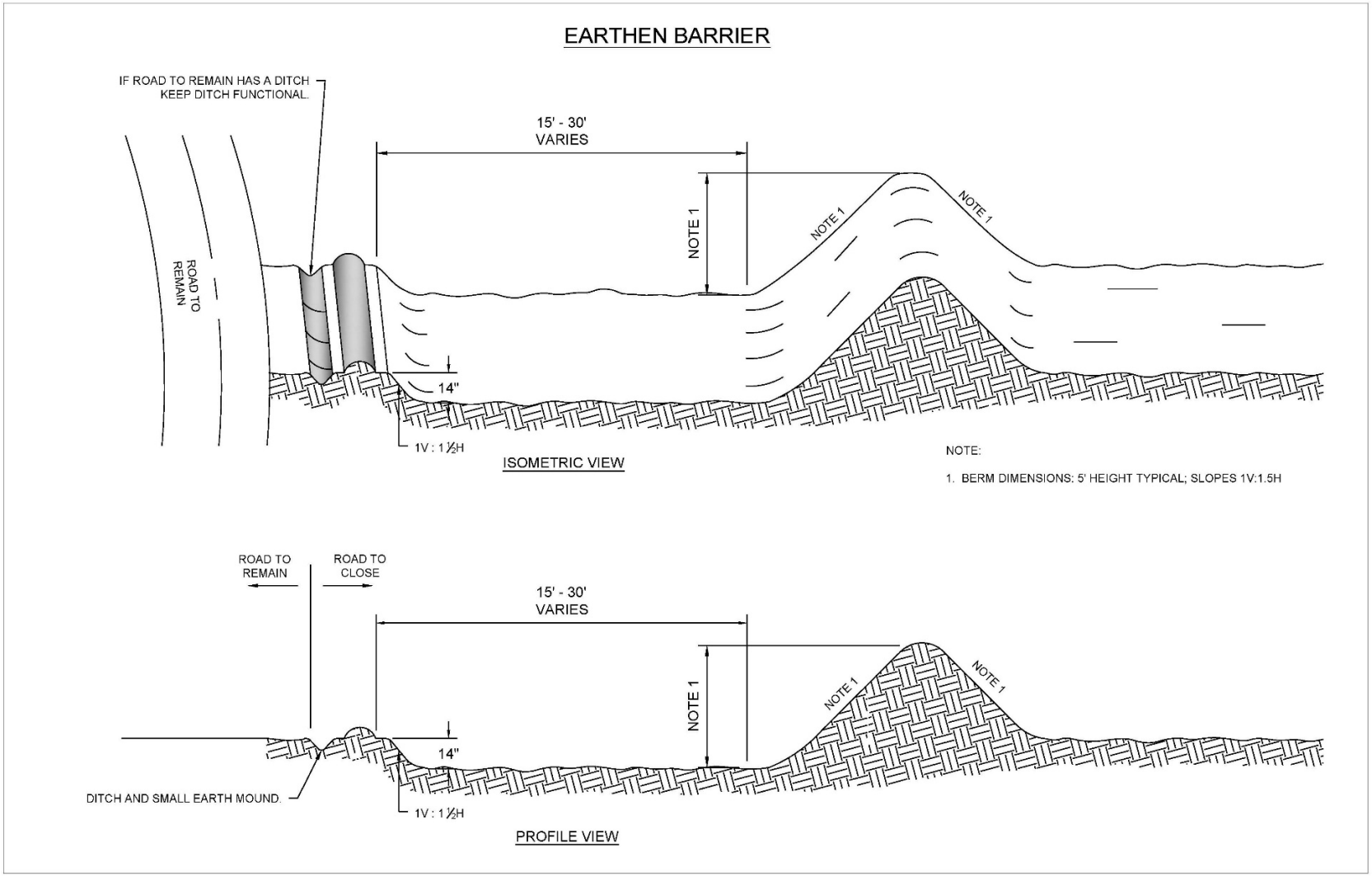


Figure 3—An earthen barrier.

Source:

- The National Engineering Roads Drawing Library

  https://fsweb.sdtdc.wo.fs.fed.us/programs/eng/natlib/drawings/

- Earthen Barrier-G3-4

  https://fsweb.sdtdc.wo.fs.fed.us/programs/eng/natlib/drawings/pdf/G3/C-GROUP_3_G3-4_EARTHEN_BARRIER.pdf

- Note: Note: The drawing here has a minor modification from the original.

Table 6—Closure devices and locations

Road number	Location(s)	Closure device*	Furnished by**	Work ***/
e.g., 310	MP 0.01	Log barrier	Gov	Remove
e.g., 709	MP 3.24	Double earth barrier at entrance; type A	Gov/onsite material	Install

*Type of closure device; e.g., earthen barrier, log barrier, rock barrier
** Material source: e.g., furnished by Government, commercial source
*** Install or remove

Appendix G: Flagging Code

Flagging Code Guidelines for the San Bernardino National Forest	
Color	**Use**
Pink and Black Stripe	Areas to avoid (Control Areas), used for all resources (biology, archaeology, equipment exclusion, etc…)
Red	Sale/Project Boundary/Private Land Boundaries Only
Dark Blue	Unit Boundary/ Subdivision Boundary/Rx Burn
Pink	Fuels Project Work
Double Yellow	Temporary road location
Double Yellow with Orange	Temporary road not requiring re-shaping
Yellow	Temp skid trail location
Orange Polka-dot	Landing locations
Orange Stripe on Black	Water bar starting point location, erosion control location
Yellow and Black Stripe	Hazards (trees, rocks, utilities, etc…)
Dark Blue	Reforestation and Timber Stand Improvement Boundaries
White	General Use – Pioneering, Exams, Surveys, etc.
Orange Stripe on White	Limited Operating Period (LOP)
Blue White Stripe	Riparian Conservation Areas (RCAs)

Appendix H: Invasive Species Handout
Non-Native Invasive Plants to Watch For
San Bernardino National Forest

Tamarisk or Salt Cedar (*Tamarix spp*)

Tamarisk is an invasive species of lower elevations that was cultivated as a windbreak. Its deep roots pull so much water that it can increase the salt content of the soil, rendering the soil inhospitable to native plant species and lowering water tables along streams.





Spanish Broom (*Spartium junceum*)

This species grows in clumps and when not in flower, it looks like a clump of naked stems. It is considered a potential fire hazard because the mature plants form dense woody undergrowth. Mature Spanish broom is extremely difficult to remove because of its huge seed production and extensive root system. It is often spread by vehicles and equipment along roads and trails.





****Internal Use Only - Not for Distribution to the Public****

Russian Thistle /Tumbleweed (*Salsola tragus*)

Russian thistle is a bush summer annual that grows in deserts, along roadsides and in open disturbed areas up to 8000 ft or more. It is very prickly and at maturity the adult plant detaches to become "tumbleweed." It has been reported that wildfires can be rapidly spread when ignited balls of burning Russian thistle blow across the landscape.







Castor bean (*Ricinus communis*)

Castor bean is an herbaceous plant, semi-woody large shrub, or small tree. The leaves generally have 7-11 pointed lobes radiating from a central point with slightly serrated edges and prominent central veins. The fruit is spiny. It grows quickly in mild climates and has escaped cultivation to become a noxious weed in southern and central California. Castor bean contains ricin, a toxic chemical. Handling foliage and seeds can cause severe dermatitis. The seeds can be fatal if eaten.





****Internal Use Only - Not for Distribution to the Public****

Giant Reed (*Arundo donax*)

Giant reed grows in many-stemmed cane-like clumps that spread from horizontal roots that get very large. It is often over 10 feet high and has plume-like flowers that boom March to September. It grows in moist places, seeps & ditch banks usually at elevations below 1500 ft. Giant reed displaces native plants and associated wildlife species with the massive stands it forms which monopolize soil moisture and shades adjacent vegetation.







Pampas grass (*Cortaderia selloana*)

Pampas grass is a perennial grass that can be 6 to 13 ft. tall with long bluish green leaves that are folded at the midrib (along the long axis), tips are bristly and curled. It has a plume-like flower head and stiff stem. The clumped stems form a tussock mound. It can invade bluffs, shrublands, marshes, riparian areas and disturbed sites. Widely planted as an ornamental, it escapes and invades natural areas. Each flower head can produces up to 100,000 seeds that can develop without fertilization and are scattered by the wind. It colonizes bare ground and prevents the establishment or re-growth of native plants.





****Internal Use Only - Not for Distribution to the Public****

<u>Yellow Star-thistle (*Centaurea solstitialis*)</u>

Yellow Star thistle grows as a deep-tap-rooted winter annual, or rarely as a short-lived perennial found up to an elevation of 7500 ft. It produces one to many solitary, spiny, yellow flower-heads in late spring, summer, and fall Stem leaves of mature plants extend downward, giving the stems a winged appearance. It invaded the western US through contaminated feed and seed, and continues to spread across disturbed areas. It aggressively displaces native species and is injurious to horses and other wildlife.







DON'T CONFUSE WITH TOCALOTE!

Yellow star-thistle can be difficult to distinguish from the much more common plant called Tocalote (*Centaurea melitensis*). The spines that radiate from the base of the flower head on Tocalote are shorter and not as rigid.



▲
Yellow star-thistle
Spines 10-25mm
(up to 1 inch)

▲
Tocalote
Spines 5-10 mm
(¼ to ½ inch)

Try to make sure before you report!

This species is not yet known to be present in most of the SBNF. This species has occurred in small isolated patches on the Forest but has been carefully eradicated whenever encountered. Therefore, it is critical to ecosystem health to limit its spread into currently unoccupied areas.

****Internal Use Only - Not for Distribution to the Public****

Tree of Heaven (*Ailanthus altissima*)

A native of China, Tree of heaven becomes a medium size tree. The large compound leaves have 3-25 leaflets along a central axis. Each leaflet has 2-4 rounded "ear-like" teeth near the base. The fruits are flat winged "samaras" with a small dark seed in the center. Culitvated as street tree, it spreads by seeds and creeping roots that produce many suckers. The plant produces an allelopathic chemical that can inhibit the growth of nearby vegetation.







Fennel (*Foeniculum vulgare*)

Fennel is native to southern Europe and the Mediterranean where it has been used for centuries as a spice and for medicinal purposes. All parts of the plant have a strong fennel smell. The flowers are yellow and small (1/4 inch across), and are clustered in large, rounded, umbrella-like groups (compound umbels), roughly 4 inches across, seen from April through July. Fennel can reproduce quickly and drastically alter the composition and structure of many plant communities, including grasslands, coastal scrub, riparian, and wetland communities.







Fennel seeds

****Internal Use Only - Not for Distribution to the Public****

Bull Thistle (*Cirsium vulgare*)

Bull thistle is native to Eurasia. It can be found in disturbed areas, fields, and pastures, but also in washes and riparian areas. In pastures and rangelands, bull thistle can displace forage species.







Poison Hemlock (*Conium maculatum*)

Poison hemlock is native to Europe and Africa. Poison hemlock grows in riparian zones, wetlands, and generally moist areas. Poison hemlock is **highly toxic** to humans and livestock when ingested.







****Internal Use Only - Not for Distribution to the Public****

Stinknet (*Oncosiphon pilulifer*)
Stinknet is a strongly-scented annual herb with round yellow flowers and finely dissected leaves found in the south coast and desert ranges of Southern California. It is native to South Africa. It favors dunes and scrub and chaparral habitat. It spreads via seeds which travel through human activities and machinery.







Saharan Mustard (*Brassica tournefortii*)
Saharan mustard or African mustard) is a winter annual found in deserts, desert dunes, and coastal scrub, in southwestern region of California. It readily invades newly burned areas, and is known to increase fire frequency and fuel load. Increased fire frequency can cause scrub habitats to convert to grasslands because the native shrubs are not adapted to recurrent fires.







****Internal Use Only - Not for Distribution to the Public****

Tree tobacco (*Nicotiana glauca*)

Tree tobacco is a tree/shrub which stands 10-20 feet tall and is short-lived. Tree tobacco was introduced to California about 100 years ago and is found growing up to 5,000 feet in disturbed soils, vacant lots, along roadsides, streamsides, and other riparian areas.





Fountain Grass (*Pennisetum setaceum*)

Fountain grass is a coarse tufted perennial. It primarily grows along the southern California coast. It is is well adapted to fire, and plants can recover to pre-burn density, even increase in density, following a burn. It is cultivated as an ornamental.





****Internal Use Only - Not for Distribution to the Public****

Big Periwinkle (*Vinca major*)

Big periwinkle is a spreading perennial vine or ground cover with dark green stems that contain milky latex. In California it is rapidly spreading in several areas. Big periwinkle has escaped from garden plantings, and lowers species diversity and disrupts native plant communities. Riparian zones are particularly sensitive. Fragments of periwinkle vines can break, wash downstream, and start new invasions.





Fuller's Teasel (*Dipsacus sativus*)

Fullerss teasel is a biennial found in California's Coastal and Peninsular Ranges. It favors disturbed sites, including grasslands, roadsides, ditches and riparian sites. Teasel plants may grow to form dense stands that are impenetrable by humans and animals. Teasel seeds can survive in the soil for 6 years or more, and once a dense population is established, it can persist for decades.





****Internal Use Only - Not for Distribution to the Public****

Perennial Sweet Pea (*Lathyrus latifolius*)

Perennial sweet pea is an herbaceous perennial vine that has a long history in horticulture as an ornamental. It has naturalized throughout the United States. In California, this species can create monocultures in natural areas. It reproduces by seed but persists and spreads mostly by rhizomes (underground), making it difficult to control once established. Its leaves are alternate and pinnately divided and have winged petioles. Tendrils on leaves are branched and its stems are winged. Individual plants typically grow to 3-6′. Perennial sweet pea is toxic to livestock.







Onionweed (*Asphodelus fistulosus*)

Onionweed is an annual/perennial herb found in dry, sandy and rocky places, as well as pastures, roadsides and waste places. Livestock avoid eating it, allowing it to create dense stands that crowd out more desirable forage species in pastures. It is primarily found along coastal regions of southern California.







****Internal Use Only - Not for Distribution to the Public****

Perennial pepperweed (*Lepidium latifolium*)

Pepperweed has invaded thousands of acres of natural habitat, especially riparian zones, throughout California. It is also an agricultural weed, infesting thousands of acres of rangeland, grass pasture, hay and row crops. Once introduced from seed or root fragments, it can rapidly become a monoculture that leads to a decrease in nesting sites for birds and habitat for native rodents, reptiles, and mammals. Pepperweed brings salts from deep in the soil up through the roots depositing them on the soil surface. The increased soil salinity inhibits growth of existing native plants or prevents them from re-establishing in an infested area. Left uncontrolled, perennial pepperweed will completely transform native habitats to more saline areas dominated by salt-tolerant non-native species.





Invasive Species…why does it matter?

Invasive plants are species that aggressively compete with and displace native plant communities and have impacted ecosystems in every state in the United States. The result can be loss and destruction of forage and habitat for wildlife, loss of grazing land, diminished land values, lost forest productivity, reduced groundwater levels, soil degradation, increased risk of devastating wildfires, and diminished recreational enjoyment. Although some were introduced in the United States for erosion control, as windbreaks, or ornamental purposes, many now invade thousands of acres per year. Today, entire ecosystems are experiencing the detrimental impact of invasive and noxious weeds. Invasive species are identified as one of the main threats to National Forest System Lands.

What Can I Do to Help?

- Get GPS coordinates and take photos if possible.
- Fill out reporting form and submit forms to the district botanist.
- Don't try to pull the weeds. In many cases pulling can make matters worse if all roots are not removed. Also, there are native species that look similar to some of these.
- Wash all equipment and vehicles after working in infested areas.

Contact Information:

Forest Service Botanist:
Lance Woolley (office = 909.382.2858)
lance.woolley@usda.gov

San Jacinto Ranger Station; P.O. Box 518 54270 Pine Crest Avenue; Idyllwild, CA 92549

****Internal Use Only - Not for Distribution to the Public****

Appendix I: Determining Basal Area with a Prism

Glass Wedge Prism – Glass wedge prisms come with various basal area factor (BAF) calibrations and may be used to determine "in" or "out" trees in a variable plot cruise. Common factors include 10, 20, 25, 30, and 40 BAFs. Prisms are useful when only tree counts are necessary. However, proper use of the prism is important.



The prism must be held directly over the plot center. To correct for slope the prism must be rotated on axis to the same slope angle to the sighting point on the tree.

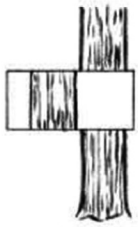
Using a Prism to Measure Basal Area

1. Hold prism (not your eye) over the selected point at a comfortable distance from the eye, with the long side horizontal. Hold prism with right hand by lower part of the thicker edge.

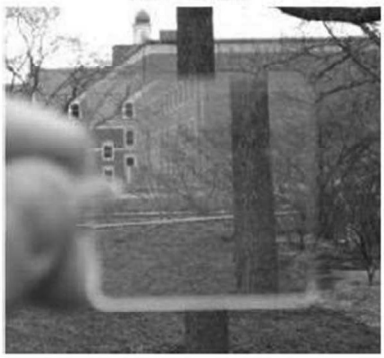
2. With one eye closed, point with the upper part of the prism so as to divide the tree in question at breast height. Refraction of light through the prism will cause the portion of the tree below breast height to appear separated. Count as 1 all of the trees whose figures are superimposed, as 1/2, or measure for accuracy those which touch only at the edge. If they do not touch each other they are not counted.

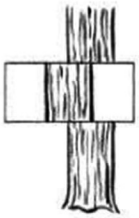
3. Turn in a circle, checking each visible tree, making sure not to count the same tree twice.

4. The number of trees counted, multiplied by basal area conversion factor of prism gives us the basal area per stand acre. BA/Acre = (Total number of trees counted X BAF of prism)/(Number of samples)



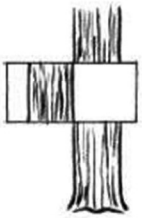
Out – do not count





In - count





Borderline

