

APPENDIX A

SERVICE WORK TECHNICAL SPECIFICATIONS

Mandatory WORK ITEMS: The contractor is required to submit pricing where applicable for all mandatory service work items. Not all mandatory work items are currently flagged or signed. After award, the boundary can be established in orange and black striped flagging.

Mandatory Item 1:

Road Number	Miles	Road Maintenance (Prehaul, During Haul, and Post Haul)
46N22	8.11	Surface Blading and Dust Abatement: See Road Maintenance Requirements (Timber Sale contract Section 18)
46N30	2.00	
Total	10.11	

Mandatory Item 2:

Unit Number	Acres	Commercial Timber Harvest (Conifers >9.9 inches DBH (specify treatments in Proposal))
18T	70	<u>Cutting and utilization of designated timber (Green paint bands): See Timber Sale Agreement Sections 15 and 16.</u>
22T	198	
57T	89	
21T*	25	* Unit 21T is not marked with green paint. It will be a designation by prescription. See Technical Specification Item 1.
Total	382	

Mandatory Item 3:

Unit Number	Acres	Mechanically Thin Conifers 3.0 inches to 9.9 inches DBH in Commercially Harvested Ground-based Units and treat fuels (specify treatments in Proposal)
18T	70	<u>Mechanically thin conifers in commercially harvested units: see Technical Specifications below</u>
22T	198	
57T	89	
Total	357	

Technical Specifications for Service Items

1.) Thin conifer in unit 21T according to the following prescription

Unit 21T- Specifications for greater than 10” DBH trees

A mosaic of stand conditions is desired. Retain approximately 15% of the stand as it currently exists (“skips”). Desirable conditions to retain are: areas with concentrations of greater than 24” DBH trees; areas near draws and wet seeps. Thin approximately 15% of the stand to a fairly open condition with spacing often 36 Feet and greater (“gaps”). Current stand conditions that would be good candidates for “gaps” are: groups of poorly growing small diameter conifers, areas with severe mistletoe infections, individual PP and SP with good form and growth; around hardwoods on south and west sides. These skips and gaps should be ¼ to 1 ½ acres in size. The remaining 70% of the stand will receive a more uniform thin from below. Thin greater than 10” dbh stems to 30 foot spacing. Thinning emphasis will be to remove suppressed and intermediate type trees and those trees of poorest vigor and form. Crop tree characteristics and species are more important in tree selection than spacing. Crop trees should: be disease and damage free; have constant or increasing height growth; have live crown ratios (LCR’s) > 40%; have good form, color, needle complement and retention. Where they exist, retain 2-5 snags (min. 18” dbh and 20’ tall) and 7 pieces of CWD (min. 20” small end and 20’ long) per acre.

Species Preference	Unit Number
SP, DF, IC, PP	21T

Units 21T - Specifications for less than 10” DBH trees

When no large conifers are present, thin conifers 3-9.9 inch DBH to an average 24 x 24 foot spacing (75 trees per acre), but may vary ±25% to select the more desirable tree. Remove all small diameter trees when within 30 feet of large diameter conifers. Leave trees should be disease and damage free, have constant or increasing height growth, have live crown ratios greater than 40%, have good form and color as well as healthy needles and needle retention. Species preference for retention varies by stand:

Species Preference	Unit Number
SP, DF, IC, PP	136-21

2.) Mechanically thin conifers in commercially harvested ground based units

Thin 3-9.9 inch DBH conifers to an average 22 x 22 foot spacing (90 trees per acre), but may vary ±25% to select the more desirable tree. Leave trees should be disease and damage free, have constant or increasing height growth, have live crown ratios greater than 40%, have good form and color as well as healthy needles and needle retention. Species preference for retention varies by stand:

Species Preference	Unit Number
SP, DF, IC, PP	57T, 22T, 18T

3.) Piling Specifications-Hand Piles

Slash generated from thinning operations may be piled. Hand Piles shall be no less than five (5) feet and no more than eight (8) feet high, with a diameter not less than five (5) feet and no more than eight (8) feet. Piles shall be as compact as possible and constructed at an adequate distance from residual trees to assure that residual trees will not be damaged when piles are burned. At least 50% of material in the lower 1/3 of the piles shall be composed of small diameter material. Covering will be placed to cover the bottom 2/3 of the pile and must be approved by the State prior to use. Piles will be at least 80% covered with durable, waterproof, covering. The top 1/3 of slash in the pile shall be placed over the covering sheet, being sure to anchor all four corners and the middle of the covering sheet securely.

4.) Piling Specifications-Machine Piles

Slash generated from logging operations shall be piled. Landing pile specifications are the same as those pertaining to logging operations and described in the Timber Sale Contract Section 16, "Machine Piling Specifications".

5.) Decking Specifications

Work consists of limbing all tops of all trees at designated landings. Limbing of tops will occur down to a top diameter of 2 inches. Tops will be decked separate from limbs. Limbs will be placed in one pile, the top will be decked separate from limb pile. Place tops parallel to each other with decks not exceeding 16 feet in height. Work item will be accomplished at the designated landing(s) within or adjacent to the harvest units.

6.) Felling, Bucking, Yarding

Use of a mechanical harvester is expected to be the cutting method in ground-based units. Hand-cutting may be done, and is expected in cable units. Tractor skidding is anticipated. Whole-tree yarding and endlining is required. Specifications regarding mechanical harvesting, skidding, whole-tree yarding, and endlining are the same as required in Appendix B.

7.) Damage and Yarding of Conifers and Hardwoods

Conifers or hardwoods damaged or requiring removal as a result of operations shall be yarded to a landing.

8.) Protection of Residual Trees, Sensitive Areas

Work shall be performed in a manner that will not damage the residual leave trees. Non- Treatment Areas may be delineated on the contract area map or on the ground by the State. These areas could be wildlife habitat, archeological sites, stream course protection and/or areas of excessive rock or steep ground. Generally, if these areas are one acre or greater in size, individually or combined, they are not included in the contract acres. Should unworkable areas be encountered that have not been delineated, the Timber Sale Officer shall be notified.

9.) Fire Precautions

Activities will be subject to limitations when actual or predicted weather conditions indicate a hazardous fire condition that warrants curtailment of contract operations as specified in Specified Fire Precautions (Timber Sale Contract Section 16, ae.).

Quality Assurance Plan

Inspection: inspections are for the purpose of satisfying contract requirements that the services are acceptable and do not relieve the Contractor of the responsibility for maintaining quality control. The Contractor shall conduct inspections on all units in accordance with the Contractor's Quality Control Plan included in the Contractor's technical proposal which is made

part of this contract.

The contractor is responsible for performing or having performed all inspections and tests necessary to substantiate that the supplies or services furnished under this contract conform to contract requirements, including any applicable technical requirements for specified Manufacturer's parts.

Acceptable Quality Levels

- At least 95% of all trees greater than 3 inches DBH designated for cutting, are cut and removed to the landing or piled (Specification varies by Item).
- At least 90% of shrubs and hardwoods designated for treatment are cut below the lowest live limb.
- No more than 5% (cumulative) of the residual leave trees are damaged by the contractors' operation.
- At least 95% of the cut stumps are within the specified stump height in Timber Sale Contract, Section 15.
- At least 90% of piles are constructed to specifications.
- All slash generated at the landing is piled and at least 95% of the machine piles meet specifications as required for sawtimber in Timber Sale Contract, Section 16.

Acceptance

Work will be accepted when it is determined by the visual inspection or plot data that the Contractor's work conforms to the Acceptable Quality Level (AQL) for the task and critical sub-tasks. Missed areas within the work unit will not be considered a part of the work being inspected and must be re-worked regardless of the results of the inspection of the work completed in the unit. Work units that do not comply with the Acceptable Quality Level for the task and critical subtask are un-acceptable and shall be reworked.

Measurements for Payment

Acreage was measured on a horizontal plane using a Global Positioning System. Unless otherwise indicated by this contract, the contractor may request re-measurement of any quantities. The request must be made in writing and must be within 10 calendar days of completing work on the unit in question. If re-measurement indicates a variance of five percent or less from the stated quantity, the STATE may deduct payment to the Contractor equal to cost of this re-measurement. If re-measurement indicates a variance of more than five percent from the stated quantity, payment will be based on the re-measured quantity, and the Contractor will not be liable for the costs of re-measurement. All re-measurement will be done by the STATE. The STATE may re-measure quantities of completed stewardship work activities at its discretion. The STATE will bear all costs for discretionary re-measurement. Re-measured quantities will be the basis for awarding payment. Re-measurement of acreage will be done using a Global Positioning System.

Definitions

Additional Timber - Any sawlog size tree (10.0 DBH and greater) that is designated and agreed to by the Contracting Officer after contract award.

Biomass - Any tree or piece of tree from 3.0 DBH to 9.9 DBH that is agreed to by the Contracting Officer after contract award.

DBH (Diameter breast height) - The diameter of the trunk measured at a point 4-1/2 feet above the ground level on the uphill side of the tree.

Goods for Services – When the value of commercial timber products that are being treated under the contract is retained and reinvested on-site in exchange for doing equal value of service work.

Incentives- In a Performance Based Service Contract, the recognition of good performance.

ITM – Individual Tree Mark. A designation signifying the only trees to be cut are marked with green paint by the State across the trunk and below stump height.

Landing - Area used to stage and load forest products just prior to removal from the unit.

Leave Tree – All trees and snags which are not to be cut or damaged under this contract.

Limbing – Cutting off the limbs from the boles of the trees or brush.

Landing Pile – A compacted stack of gathered slash and vegetative debris; that is free of soil concentrations, constructed on cleared land in a location and of such a size that will not subject leave trees, improvements or other resources to damage when burned. Piles shall be compact and constructed maximizing height instead of width, to promote complete and efficient combustion.

Mastication – an operation generally performed by a tracked vehicle about 10 feet wide with low ground pressure that uses a rotating head or drum with teeth to treat unwanted trees, hardwoods, shrubs, and slash. The material is not chipped, but is shredded into small enough pieces to come in contact with the ground to aid in more rapid decomposition.

Normal Operating Season – That period during a typical year wherein an operator can reasonably expect to be able to operate. Not with standing restrictions on timing of work in section 19 of the Timber Sale Contract, the normal operating season for this contract is May 1 through October 31.

Removal – Transportation of cut whole trees, boles, biomass, sub-biomass and slash on designated haul roads from landings within the contract area to disposal site or completely off of the National Forest.

Sawtimber – A portion of a tree bole meeting minimum piece utilization specifications for included timber.

Slash – Any contractor generated woody material greater than one (1) inch in diameter and longer than three (3) feet.

Snag – Any dead standing tree greater than fifteen (15) inches DBH and twenty (20) feet in height.

Stump Height – The maximum permissible height measured above forest floor or cutting obstacles on the uphill side to highest point on the stump.

Ton – The unit of measure, representing 2,000 pounds, at which sawlogs and biomass are sold in the embedded timber sale contract.

Unit or Stand – Areas where contract work will be completed that are delineated on the Sale Area Map.

Utilization – The use of products as goods for services and removal of vegetation or portions thereof from National Forest Land as a product. Forms of utilization products include saw logs, chips, firewood, posts, etc.