

**EXHIBIT B: SPECIFICATIONS**  
**TIMBER STAND IMPROVEMENT**  
**COEUR D'ALENE RESERVATION**

1.0 General Specifications

1.1 Purpose

These specifications describe the standards for timber stand improvement (tree pruning, thinning, shrub control and slash treatment) on the Coeur d'Alene Reservation. Precommercial thinning and shrub control requires cutting down undesirable trees and shrubs to release crop trees from competition, as specified in Section 2.1 herein, within treatment blocks shown on Exhibit A to the Contract. Pruning requires removal of lower branches from crop trees, as specified in Section 2.2 herein. Slash treatment requires lopping limbs and cut stems into shorter sections and scattering to reduce slash depth or piling to break up fuel continuity.

1.2 Contractor Responsibilities

1.2.1 Personal Protective Equipment

Safety equipment: hard hat, goggles, face shield or safety glasses, hearing protection and saw chaps.

Safety equipment must be worn while operating power equipment on the contract area. The Contractor is responsible for ensuring that safety equipment is available and properly used.

1.2.2 Crew Size and Supervision

Minimum crew size shall be two. There is no maximum crew size. For each crew of eight (8) or more, at least one supervisor at the work site shall monitor performance for safety and quality according to the Technical Specifications in Section 2.0.

1.2.3 Existing Facilities

All existing facilities such as, but not limited to, fences, roads, erosion control dips, water bars, if damaged by the Contractor, will be repaired or replaced by the Contractor, at the Contractor's expense, to their condition prior to the approval date of the Contract.

1.2.4 Fires

During closed fire season, May 20 to October 10, employees must carry a personal fire extinguisher while operating a power tool (e.g. chain saw, power brush cutter). The Contractor will keep a shovel and a water container, with a minimum of five (5) gallons of water, near the work site for fire suppression in case his crew accidentally starts a fire or finds a fire near the work site. The Contractor will notify the Tribe, local, state or federal agencies as soon as possible if any fire should occur. The workers will not smoke within any thinning block during closed fire season. Smoking is permitted only in slash-free areas at least eight (8) feet in diameter (e.g. a road).

### 1.3 Tribal Obligations

The Tribe will provide training and perform all inspections necessary to ensure the satisfactory completion of this contract. Inspections will be performed periodically and in a timely manner to assure that any problems are promptly brought to the attention of the Contractor.

Following Notice of Completion, the Contract Representative will inspect the work site on the Next Available Workday. Availability is subject to prior scheduling of Forestry personnel, but inspections will have priority over other activities except fire control or prescribed burning.

## 2.0 Technical Specifications

### 2.1 Thinning

Crop Trees: Crop trees shall be selected to favor larger, undamaged and healthy trees of the preferred species. Preferred species include western white pine (WP), western larch (WL), western redcedar (RC), ponderosa pine (PP) and lodgepole pine (LP). Douglas-fir, grand fir and western hemlock are acceptable leave trees in the absence of preferred species. Aspen, birch and cottonwood will not be cut, or thinned where they occur in groups.

Spacing: Acceptable spacing between crop trees shall be 10 to 14 feet, with an average of 12 feet. The variation in spacing is to allow selection of the best crop tree based on species preference, tree condition and size. Contractor shall cut excess conifers (except white pine) and tall shrubs rooted within 4 feet of preferred species crop trees (WP, WL, RC, PP & LP) crop trees. Seedlings or brush less than 3 feet tall does not need to be cut. Any white pine having a lethal canker or dead trees shall not be considered in the spacing.

Exceptions: Thinning is not required in groups with no preferred species crop trees, due to shade tolerance and a history of root disease in the treatment blocks. This shall apply to hardwoods, brush or conifers other than the preferred species. Trees of preferred species shall not be cut within 4 feet of such groups.

Maximum Diameter: Trees larger than 6 inches DBH shall not be cut, unless they have top damage affecting more than 30% of total height, have no merchantable sawlog volume or have dwarf mistletoe infections.

Acceptable Tools: Hand tools such as axes, pruning shears and handsaws, and power tools such as chain saws and power brush cutters shall be allowed for thinning. All power tools operated on the worksite must have approved spark arresters. Mastication equipment may be used on suitable slopes when soil moisture is low enough to prevent rutting.

Cut trees shall be completely severed from the stump with no holding wood or bark left attached to the stump. Cut trees shall not be left leaning against or be suspended by an uncut tree. Seedlings less than 3 feet tall, excess white pine and dead trees do not need to be cut.

Stumps shall be as flat as practical, and the stump's surface shall slope no more than 20% from level.

Stump height shall be no higher than 6 inches, measured from ground level on the uphill side, or 3 inches measured from large rocks or logs adjacent to the stump. Trees forked below DBH may exceed the 6 inch maximum stump height if the resultant stump diameter would exceed 6 inches. Each fork may be cut separately.

Live limbs: Trees shall be cut below the lowest live limb or, where prevented by natural obstacles, live limbs shall be severed from the stump. A limb must be at least three (3) inches in length to be considered a live limb.

Improvements: Cut trees shall be felled away from property boundaries, open roads, utility lines, established trails, fence lines, established land corners, and streams.

## 2.2 Pruning

Prune Trees: All white pine (WP) that are at least 4 feet tall and free of lethal cankers shall be pruned. Crop trees of other preferred species (WL, RC, PP and LP) that are at least 6 feet tall shall also be pruned. Live white pine shall be examined for lethal blister rust cankers (on or within 4 inches of the bole). Contractor shall trim one whorl near eye level from any lethally infected white pine, leaving longer branch stubs (6" to 12" long) to show that they were not missed. Pruning is not required on hardwoods, Douglas-fir, grand fir or western hemlock.

Acceptable tools: Contractor may use hand saws, loppers or pruning shears for pruning. The use of axes, hatchets, machetes or clubs for pruning shall not be allowed on live branches. Chainsaws may be allowed for pruning branches on the lower 6 feet of the bole only if sufficient care is taken to avoid damage to bark or branch collars. The Contract Representative shall suspend the use of chainsaws for pruning if more than 5% of pruned trees have unsatisfactory damage.

Pruning height: For each prune tree, pruning height shall be ½ of total height or the maximum pruning height, whichever is less. Maximum pruning height is 10 feet (downhill side) for WP and 6 feet (uphill side) for other species. Trees within roadside fuel breaks within TSI units have already been pruned to 6 feet, but WP shall be pruned to their correct pruning height if they are taller than 12 feet in total height.

Branch Removal: Contractor shall remove all live branches below pruning height, and check at ground level on WP for live branches covered by fallen needles or twigs.

Bole Needles: All live needles growing directly from the bole of white pine below pruning height shall be removed by hand (not required on other species).

Branch Collar: Branches shall be pruned to leave a flat cut surface within ¼ inch of the branch collar.

Damage: Pruning shall be conducted to avoid damage such as bark peeling or other wounds.

**Wounds caused by the Contractor that are larger than 2 square inches per wound shall be tallied as unsatisfactory damage.**

## 2.3 Slash Treatment

Slash from pruning and thinning shall be scattered at least 3 feet from crop trees. Slash larger than 2 inches in diameter shall be lopped and/or bucked to lengths less than 4 feet long and scattered so that slash depth does not exceed 2 feet. Slash may be piled in some areas at the Contractor's option, and the pile height can exceed the maximum slash depth. Roads shall be kept free of slash, and any slash falling into those roads must be piled outside the travel lane. Most roads adjacent to or through the TSI units have a fuel break that shall also be cleared of any thinning or pruning slash.

### 3.0 Inspection and Acceptance

The Tribe will furnish an inspector(s) to the site periodically as work progresses, to ensure adequate compliance to contract provisions. The Contractor is encouraged to observe the inspection and may request inspection summaries.

Upon Notice of Completion, the Tribe will conduct the final inspection of the block within one week of the Notice of Completion, generally on the Next Available Workday. Payment will be based on this inspection. Availability of inspectors is subject to prior scheduling of Forestry personnel. Inspection will be made on fixed diameter sample plots.

#### 3.1 Notification

The Contractor shall notify the Tribe within one workday of the completion of a block. The Notice of Completion can be verbal or in writing.

#### 3.2 Block Inspection Procedure

##### 3.2.1 Sample plot inspections

Compliance with Section 2.0 herein shall be determined by inspection with sample plots. Sample plot inspections will consist of a series of fixed area circular plots distributed over the entire block sufficient to yield at least a one percent sample. Plot centers will be marked and the number of trees per plot will be recorded by species for the following categories:

- A. Satisfactory prune trees according to Section 2.2.
- B. Unsatisfactory prune trees (see definitions).
- C. Satisfactory leave trees according to Section 2.1.
- D. Unsatisfactory leave trees (see definitions).
- E. Unsatisfactorily cut trees (see definitions).

Reasons for unsatisfactory rating will be noted.

Slash treatment shall be graded on each plot as satisfactory if slash is pulled back 3 feet from leave trees and lopping and scattering has achieved average slash depth does not exceed 2 feet or piled to break fuel continuity.

Upon inspection of all plots for a block, the percent quality shall be calculated as follows:

$$\text{QUALITY} = [A / (A+B) + (C-E) / (C+D) + G/H] / 3$$

Where: A = Total number of satisfactory prune trees left on all plots.

B = Total number of unsatisfactory prune trees on all plots.

C = Total number of satisfactory leave trees on all plots.

D = Total number of unsatisfactory leave trees on all plots

E = Total number of unsatisfactorily cut trees on all plots.

G = Total number of plots with satisfactory slash treatment.

H = Total number of plots.

$$\% \text{ QUALITY} = \text{QUALITY} \times 100$$

### 3.2.2 Rework of Blocks

If slash treatment is unsatisfactory on more than 10% of plots, the Contractor must rework the block to bring the treatment up to specification standards.

If % quality for a block is less than 90% and can be corrected by additional pruning or thinning, the Contractor may rework the block to bring it to an acceptable level.

If the Contractor does not rework an unacceptable block, payment will be based on the results of sample plot inspection according to Section 3.2.1 and Section 3.4 herein.

The contract period shall not be extended to accommodate rework. Any rework must take place before the termination date set forth in Section 2.2 of the Contract.

### 3.2.3 Re-inspection

A re-inspection will be conducted on all blocks reworked within one week of notification of rework, generally on the Next Available Workday. Inspections after rework will be made in the same manner as the first inspection, but will use different plot centers. Only one re-inspection will take place, with payment according to Section 3.4 herein, based on the % quality from the re-inspection.

## 3.3 Acreage

### 3.3.1 Acreage Measurements

The acreages shown in Section 3.1 of the Contract are calculated from Global Positioning System (GPS) input to the Tribe's Geographic Information System (GIS), rounded to the nearest tenth (0.1) acre. Unless physical deletions or additions are made on the ground, the acreage for the units as shown in Section 3.1 of the Contract is final, subject only to the remeasurement provision below.

### 3.3.2 Remeasurement

The Tribe reserves the right to correct erroneous acreage figures shown in Section 3.1 of the Contract, or to account for physical deletions or additions to the actual treatment unit area made by the Contract Representative.

The Contractor may request, in writing, remeasurement of any treatment unit under this contract if he/she believes the acreage stated in Section 3.1 of the Contract is incorrect.

Remeasurement will be made on the ground within the established boundaries.

Remeasurement will be based on standard horizontal measurements, using GPS and GIS.

If remeasurement determines a variance of five (5) percent or less, at a precision of one tenth (0.1) acre, the actual cost to the Tribe of conducting the remeasurement will be deducted from payment due the Contractor, and no adjustment will be made in the acreage.

If remeasurement determines a variance of greater than five (5) percent adjusted to the nearest tenth (0.1) acre, payment will be based on the remeasured acreage. The cost of conducting the remeasurement in this instance will be borne by the Tribe.

## 3.4 Payment Adjustments

### 3.4.1 Adjustment from Inspection Plots

Based on % Quality from inspections specified in Section 3.2, the payment rates shall be:

<u>% Quality</u>	<u>Payment Rate</u>
90% or greater	100% of block bid price
80% to 89%	(% Quality) X block bid price
Less than 80%	No payment unless reworked to at least 80% quality

### 3.4.2 Acreage Adjustments

If acreage adjustments are made according to Section 3.3.2, the adjusted acreage and bid rate per acre shall be used to recalculate the bid price, subject to any adjustments specified in Section 3.4.1.

## 4.0 Definitions

The following standard terms are hereby defined for use in the Contract and Exhibit B.

"Average Spacing" means the average of the distance between crop trees necessary to provide the desired number of crop trees per acre.

"Blister Rust Canker" is a lesion on the bark of white pine trees indicated by a swelling and dying branch or diamond shaped dead bark on the bole centered on a dead branch. Cankers usually have other symptoms, including resin flow from bole cankers, a margin of orange colored bark or chewing by rodents around the margins or seasonal fruiting bodies.

"Block" is an identifiable portion of a treatment unit where work may be accepted for partial payment.

"Bole" is the main tree stem.

"Branch Collar" is the basal enlargement of a branch and the desired edge of the pruning cut.

"Contract Representative" is the Tribal Forestry employee assigned to supervise contract compliance.

"Crop Tree" is any tree of a preferred species selected for its potential to survive and grow to merchantable size.

"Crew" includes any persons under the supervision or direction of the Contractor, either as employees or subcontractors, who are performing services under this contract.

"Cut Tree" means any tree cut in conformance with Section 2.1. Dead trees and excess white pine shall not be cut, and will be ignored in spacing/thinning decisions.

"Damage" means any defect or deformity of a tree resulting from agents such as disease, wind, snow, animals, insects, and/or equipment, and evidenced by such conditions as dead or broken tops, crooks, deep scars and/or missing bark.

"DBH" (Diameter at Breast Height) means the diameter of the bole measured at a point 4-1/2 feet above the ground level on the uphill side of the tree.

"Excess Tree" means any tree of sufficient height that is spaced too close to crop trees as specified in Section 2.1.

“Lethal Canker” means a blister rust canker on the bole of a white pine, or on a branch with visible signs of infection within four (4) inches of the bole. Any branch canker with no visible signs of infection within 4 inches of the bole shall be considered “prunable”.

"Next Available Workday" means the workday following the day of notification when the Contract Representative or his representative is available to inspect the worksite. The Contract Representative may not be available if other activities are scheduled prior to notification. Weekends and Tribal holidays are not considered workdays.

“Notice of Completion” means the Contractor’s verbal or written statement to the Contract Representative that contract services have been completed on a block to schedule an inspection to approve services.

“Prune Tree” is any crop tree taller than 6 feet, unless disqualified by specifications in Section 2.2.

“Pruning Height” is the portion of the stem to be cleared of branches and needles, measured from ground level on the downhill side of the tree.

"Satisfactory Leave Tree" means any tree not cut that meets crop tree specifications in Section 2.1 or excess white pine or dead trees.

“Satisfactory Prune Tree” means any tree pruned that meets pruning specifications in Section 2.2.

“Slash” means woody plant residues created during the Contractor’s activities, including branches and stems of conifers and brush cut while thinning and pruning.

"Spacing" means the horizontal distance, measured at ground level, from the stem of one crop tree to the stem of the nearest neighboring crop tree.

“Treatment Unit” means a distinct area to be treated under the contract, as shown on Exhibit A.

"Unsatisfactorily Cut Tree" means any cut tree not severed from the stump, a hang-up tree, live limbs left attached to the stump or poor species selection.

"Unsatisfactory Leave Tree" means any uncut tree that should have been cut according to Section 2.1.

“Unsatisfactory Prune Tree” means any tree pruned to the wrong pruning height, with any live limbs below pruning height, with branch stubs longer than ¼ inch from the branch collar, with any pruning wound in excess of 2 inch<sup>2</sup> or any Prune Tree that was not pruned.