

Sale Name: Willow Salvage

CT2.11# - TIMBER SUBJECT TO AGREEMENT (01/2003)

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

| Species | Product |
|-----------------------|------------|
| Dead Engelmann Spruce | Misc-Conv. |

that shall be Included Timber upon written agreement.

CT2.301# - CUTTING UNIT BOUNDARIES (05/2003)

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

See Cutting Unit Boundary Designation Table

CT2.11# - TIMBER SUBJECT TO AGREEMENT. (1/03) In addition, there is within Sale Area an unestimated quantity of:

| Species | Product |
|------------------|--------------------------------|
| Engelmann spruce | Products Other than Logs (POL) |
| true fir | Products Other than Logs (POL) |

that shall be Included Timber upon written agreement.

RO-CT2.301# - CUTTING UNIT BOUNDARIES. (5/03) The boundaries of cutting units are designated as shown in the following table. The trees used for boundary designation are not to be cut.

Cutting Unit Boundary Designation Table

| <u>Cutting Unit</u> | <u>Paint Color</u> | <u>Designation</u> |
|---------------------|--------------------|--|
| All | Orange | Vertical stripes of orange tracer paint on three sides of each painted boundary tree, extending from below stump height to a height of five feet or more. The middle stripe of paint faces into the area to be cut. |

Sale Name: Willow Salvage

CT2.355# - INDIVIDUAL TREES (CUT TREE MARKING) (05/2003)

Notwithstanding BT2.35, individual trees are designated for cutting only if marked above and below stump height as show in the table below:

See Cut Tree Marking Table

RO-CT2.355# - INDIVIDUAL TREES (CUT TREE MARKING). (9/01)

Cut Tree Marking Table

| <u>Cutting Unit</u> | <u>Paint Color</u> |
|---------------------|---|
| All | BLUE paint marks at DBH, or about 4 to 6 feet up the bole of the tree, and BLUE butt marks (usually on root wad) |

Sale Name: Willow Salvage

CT5.12# - USE OF ROADS BY PURCHASER (01/2003)

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

| Code | Use Limitations |
|------|------------------------|
| X | Hauling prohibited |
| R | Hauling restricted |
| 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. Purchaser's use of roads coded R, A, or W shall be in accordance with the following restrictions:

See Restricted Road List Table.

CT5.12# – USE OF ROADS BY PURCHASER. (1/03) Purchaser's use of existing roads identified on Sale Area Map by the following codes is prohibited or subject to restrictive limitations, unless agreed otherwise:

| <u>Code</u> | <u>Use Limitations</u> |
|-------------|------------------------|
| X | Hauling prohibited |
| R | Hauling restricted |
| P | Use prohibited |
| A | Public use restriction |
| W | Regulation waiver |

Roads coded A will be signed by Forest Service to inform the public of use restrictions. Purchaser'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 | | |
| NFSR 867 | Alpine Plateau Rd | 0.0 | End | R | Use of road is only allowed between May 1 and December 15 except when excessive damage to FS roads will result from hauling activities and on weekends and federal holidays between July 1 and September 10. |

Sale Name: Willow Salvage

CT5.31# - ROAD MAINTENANCE REQUIREMENTS (01/2003)

Purchaser shall maintain roads in accordance with the following Contract Road Maintenance Requirements Summary:

See Contract Road Maintenance Requirements Summary Table.

CT5.31# – ROAD MAINTENANCE REQUIREMENTS. (1/03) Purchaser shall maintain roads in accordance with the following Contract Road Maintenance Requirements Summary:

Contract Road Maintenance Requirements Summary

| Road | Termini | | Miles | Applicable Prehaul Road Maintenance Specifications | | | | | | | | |
|--------|---------|------|-------|--|-------|-------|-------|-------|-------|-------|-------|--|
| | From | To | | T-800 | T-801 | T-802 | T-803 | T-804 | T-805 | T-807 | T-808 | |
| 867.3B | 0 | 0.81 | 0.81 | P | P | P | P | P | P | P | P | |
| 867.3G | 0 | 0.26 | 0.26 | P | P | P | P | P | P | P | P | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

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

| Road | Termini | | Miles | Applicable During Haul Road Maintenance Specifications | | | | | | | | |
|--------|---------|------|-------|--|-------|-------|-------|-------|-------|-------|-------|-------|
| | From | To | | T-800 | T-801 | T-802 | T-803 | T-804 | T-805 | T-806 | T-807 | T-808 |
| 867 | 0 | 6.3 | 6.3 | P | P | P | P | P | P | | P | P |
| 867.3B | 0 | 0.81 | .81 | P | P | P | P | P | P | | P | P |
| 867.3G | 0 | 0.26 | .26 | P | P | P | P | P | P | | P | P |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

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

| Road | Termini | | Miles | Applicable Post Haul Road Maintenance Specifications | | | | | | | | |
|--------|---------|------|--------|--|-------|-------|-------|-------|-------|-------|-------|--|
| | From | To | | T-800 | T-801 | T-802 | T-803 | T-804 | T-805 | T-807 | T-808 | |
| 867 | 0 | 6.3 | 867 | P | P | P | P | P | P | P | P | |
| 867.3B | 0 | 0.81 | 867.3B | P | P | P | P | P | P | P | P | |
| 867.3G | 0 | 0.26 | 867.3G | P | P | P | P | P | P | P | P | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

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

Road Maintenance T-Specifications

for

Timber Sale Contracts

To be used with Timber Sale Contract Form 2400-3T, CT5.31#

| No. | Specification Title |
|------------|----------------------------|
| T-800 | Definitions |
| T-801 | Slide and Slump Repair |
| T-802 | Ditch Cleaning |
| T-803 | Surface Blading |
| T-804 | Surfacing Repair |
| T-805 | Drainage Structures |
| T-806 | Dust Abatement |
| T-807 | Roadway Vegetation |
| T-808 | Miscellaneous Structures |

SPECIFICATION T-800 DEFINITIONS

Wherever the following terms or pronouns are used in Specifications T-801 through T-811, the intent and meaning shall be interpreted as follows:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

800-1.13 - Prehaul Maintenance. Road maintenance work which must be accomplished to maintain the roads to a satisfactory condition commensurate with the Purchaser's use, provided Purchaser's Operations do not damage improvements under B6.22 or National Forest resources and hauling can be done safely. This work will be shown in the Annual Road Maintenance Plan as provided in C5.31#.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SPECIFICATION T-801 SLIDE AND SLUMP REPAIR

DESCRIPTION

1.1 Slide removal is the removal from Roadway and disposal of any Material, such as soil, rock, and vegetation that cannot be routinely handled by a motorgrader during Ditch Cleaning, T-802, and Surface Blading, T-803 Operations.

Slump repair is the filling of depressions or washouts in Roadway which cannot be routinely filled by a motor grader during Surface Blading, T-803 Operations.

Slide removal and Slump repair includes excavation, loading, hauling, placing, and compacting of waste or replacement Material and the development of disposal or borrow areas.

REQUIREMENTS

3.1 Slide Material, including soil, rock and vegetative matter which encroaches into the Roadway, shall be removed. The slope which generated the Slide Material shall be reshaped during the removal of the Slide Material with the excavation and loading equipment. Slide Material deposited on the fillslope and below the Traveled Way will not be removed unless needed for slope stability or to protect adjacent resources.

Surface and Base Courses shall not be excavated during Slide removal operations.

Slide Material which cannot be used for other beneficial purposes shall be disposed of at disposal sites shown on Sale Area Map. Material placed in disposal sites will not require compaction unless compaction is shown on Road Maintenance Plan.

3.2 When filling Slumps or washouts, Material shall be moved from agreed locations or borrow sites, placed in layers, and compacted by operating the hauling and spreading equipment uniformly over the full width of each layer.

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

Damaged aggregate base, aggregate surfacing, and bituminous pavement shall be repaired under Specification T-804 Surfacing Repair.

The repaired areas of the Slump shall conform to the cross-section which existed prior to the Slump and shall blend with the adjacent undisturbed Traveled Way.

3.3 The maximum volume of Purchaser responsibility for Slide and Slump repair is shown on Road Maintenance Plan. Greater volumes of Slide and Slump repair not qualifying as Catastrophic Damage are Forest Service responsibility.

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SPECIFICATION T-802 DITCH CLEANING

DESCRIPTION

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

REQUIREMENTS

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

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

Material removed from ditches that is not by Agreement blended into existing roads or placed in Berms shall be loaded and hauled to the disposal site designated by the Forest Service.

3.3 Roadway backslope or Berm shall not be undercut.

SPECIFICATION T-803 SURFACE BLADING

DESCRIPTION

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

REQUIREMENTS

3.1 Surface blading shall be performed before, during, and after Purchaser's use as often as necessary to facilitate traffic and proper drainage.

3.2 The surface blading shall preserve the existing cross-section. Surface irregularities shall be eliminated and the surface left in a free-draining state and to a smoothness needed to facilitate traffic. Surface Material which has been displaced to the Shoulders or Turnouts shall be returned to the Traveled Way. The blading operation shall be conducted to prevent the loss of surface Material and to provide for a thorough mixing of the Material being worked.

3.3 Water, taken from Water Sources designated on Sale Area Map, shall be applied during blading if sufficient moisture is not present to cut, mix, or compact the surface Material.

3.4 On native surfaced roads, Material generated from backslope Sloughing, and ditch cleaning may be blended with the surface Material being worked. On aggregate surfaced roads this Material shall not be blended with Surface or Base Course Material unless agreed otherwise.

3.5 Roadway backslopes or Berms shall not be undercut, nor shall new Berms be established unless agreed otherwise.

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

3.6 Drainage Dips and Lead-off Ditches shall be cleaned and maintained to reasonably blend with existing line, grade, and cross-section.

3.7 Intersecting roads shall be bladed for a distance of 50 feet to assure proper blending of the two riding surfaces.

3.8 Rocks or other Material remaining on the Traveled Way after the final pass that are larger than 4 inches in diameter or are larger than the maximum size of imported surfacing shall be removed from the Traveled Way. Unless otherwise designated by the Forest Service, the oversized Material shall be disposed of by sidecasting. Sidecasting into streams, lakes, or water courses will not be permitted.

3.9 Material resulting from work under this specification shall not remain on or in structures, such as Culverts, overside drains, cattleguards, ditches, Drainage Dips, and the like.

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

SPECIFICATION T-804 SURFACING REPAIR

DESCRIPTION

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

MATERIALS

2.1 Material used in the repair of soft areas on aggregate or native surfaced roads may be acquired from approved commercial sources, designated Forest Service Borrow areas, or Borrow sources agreed to. The quality and quantity of the imported Material used in the repair will be limited to that needed to provide a stable Traveled Way for hauling and to minimize damage to the road and adjacent resources. The quantity of imported surface repair Material used in the appraisal estimate will be shown on Road Maintenance Plan. However, the magnitude of the work may vary depending on Purchaser's hauling schedule and ground conditions.

2.2 Material used in the repair of bituminous pavements may be acquired from local commercial sources. If a mixing table is required, the location shall be approved by the Forest Service. The bituminous mixture to be used by the Purchaser shall be approved by the Forest Service. The Purchaser's share of the quantity of bituminous mixture used in the appraisal estimate will be shown on Road Maintenance Plan. However, Purchaser's share of the work may vary depending on Purchaser's hauling schedule, ground conditions, other traffic, etc.

REQUIREMENTS

3.1 Work under this specification shall be performed in a timely manner to reduce further deterioration of the Traveled Way.

3.2 Soft spots on aggregate or native surfaces shall be repaired by placing the imported Surface Course on top of the soft spot. Layers of imported Material shall be placed until a firm surface is produced.

3.3 Bituminous Pavement Repairs. The areas to receive bituminous pavement repairs will be marked on the road surface by the Forest Service just prior to Purchaser performing the work.

3.4 Potholes (deep patch). Surface Course and Base Course Materials shall be excavated to a depth necessary to reach firm, suitable Material. The minimum depth of excavation shall be 2 inches and the maximum depth of excavation shall be to the top of the Subgrade.

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

Prepared potholes shall be patched or barricaded immediately.

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

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

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

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

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

3.6 Asphalt Berm. Damaged segments of Berm shall be removed and the exposed ends beveled at approximately 45 degrees from vertical. The Berm foundation shall be cleaned and patched as necessary. The foundation and joining surfaces shall be coated with a slow-setting emulsified asphalt. Asphalt mix shall be placed and compacted to conform with the shape and alignment of the undamaged segment.

3.7 Disposal. All Materials removed from potholes, patches, and Berms shall be disposed of at disposal sites designated by the Forest Service.

SPECIFICATION T-805 DRAINAGE STRUCTURES

DESCRIPTION

1.1 This work consists of maintaining Drainage Structures and related items such as inlet and outlet channels, existing riprap, trash racks, and dropinlets.

MATERIALS

2.1 All Materials used in the maintenance of Drainage Structures shall conform by type and specification to the Material in the structure being maintained.

REQUIREMENTS

3.1 Drainage Structures and related items shall be cleared of all foreign Material which has been deposited above the bottom of the structure and all vegetative growth which interferes with the flow pattern. Material removed that cannot be incorporated into maintenance work shall be hauled to a disposal site designated by the Forest Service.

3.2 If outlet or inlet riprap was installed by Purchaser as a construction item or existed prior to Purchaser's haul, it shall be maintained in good condition including the replacement of riprap if necessary to previous line, grade, and cross-section.

3.3 Perform maintenance to insure the proper functioning of the head walls, aprons, inlet assemblies, overside drains, riprap, trash racks, and other facilities related to the Drainage Structure.

SPECIFICATION T-806 DUST ABATEMENT

DESCRIPTION

1.1 This work shall consist of preparing road surface and furnishing and applying Materials to abate dust.

MATERIALS

2.1 The roads requiring dust abatement, type of dust abatement material to be used, the rates of application, and frequency of applications will be shown on Dust Abatement Plan (CT5.31#). The Dust Abatement Plan may be changed by written agreement.

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

2.3 Dust abatement Materials shall meet the requirements of the following subsections of FP-03 Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects.

| | |
|-------------------------------------|--------|
| Emulsified Asphalt | 702.03 |
| Blotter Material | 703.13 |
| Magnesium or Calcium Chloride Brine | 725.02 |
| Calcium Chloride Flake | 725.02 |
| Lignin Sulfonate | 725.20 |

2.4 Testing of Materials. Certification and sampling of bituminous Materials lignin sulfonate, and magnesium chloride shall be in accordance with subsections 106.04 and 702.09 or 106.03 and 306.06 of FP-03 Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects.

REQUIREMENTS

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

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

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

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

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

Prior to applying DO-6BA, DO-6PA, or DO-8, the top 2 inches of Traveled Way shall contain not less than 80 percent nor more than 120 percent of optimum moisture as determined by AASHTO T-99, Method C. Prior to applying other bituminous Material, Traveled Way shall have a moisture content between 1 and 3 percent. If surface dusting prevents the bituminous Material from penetrating, a light application of water shall be applied just prior to applying the bituminous Material.

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

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

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

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

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

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

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

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

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

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

3.7 Weather Limitations. Dust abatement Materials shall not be applied when it is raining.

Bituminous Material shall be applied when the surface temperature of Traveled Way is 50 degrees Fahrenheit or higher.

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

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

SPECIFICATION T-807 ROADWAY VEGETATION

DESCRIPTION

1.1 This work includes removal of brush and trees from within the Roadway limits.

REQUIREMENTS

3.1 Vegetative matter within the Roadway which impedes vehicular travel or interferes with road maintenance operations, such as surface blading and ditch and culvert cleaning shall be removed. Downed timber meeting utilization standards shall be cut in appropriate lengths and decked along the Roadside in locations where the Traveled Way or sight distances will not be impaired.

3.2 Vegetative matter removed from the Roadway shall be treated by the specified method and as required by CT6.7#.

SPECIFICATION T-808 MISCELLANEOUS STRUCTURES

DESCRIPTION

1.1 Maintenance of miscellaneous structures includes cattleguards, gates, and other similar structures that have been previously installed to insure safe and efficient operation of the road.

MATERIALS

2.1 Any Materials needed in the maintenance of miscellaneous structures shall be similar in type and quality to the Material in the structure being maintained.

REQUIREMENTS

3.1 Cattleguards. Loose rails shall be welded or bolted back in place.

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.

3.2 Gates. Gates shall be kept in good repair and made to swing easily. Hinges or latches shall be repaired if not operating properly.

Brush and debris shall be removed from within the swinging radius.

CT5.36# - SNOW REMOVAL (04/2003)

Snow removal shall be done in a manner to preserve and protect the roads to insure safe and efficient transportation and to prevent unacceptable erosion damage to roads, streams, and adjacent lands.

A. Description. Snow removal work by Purchaser shall include:

1. Removal of snow from entire road surface width including turnouts.
2. Removal of snow slides, minor earth slides, fallen timber and boulders that obstruct normal road surface width including turnouts.
3. Maintain drainage so that the drainage system will function efficiently.

B. Performance. All items of snow removal shall be done currently as necessary to insure safe, efficient transportation. Work shall be done in accordance with the following minimum standards of performance.

1. Removal of material. All debris, except snow and ice, that is removed from the road surface and ditches shall be deposited away from stream channels at agreed locations.
2. During snow removal operations, banks shall not be undercut nor shall gravel or other selected surfacing material be bladed off the roadway surface.
3. Ditches and culverts shall be kept functional during and following roadway use.
4. Snow berms shall not be left on the road surface. Berms left on the shoulder of road shall be removed and/or drainage holes shall be opened and maintained. Drainage holes shall be spaced as required to obtain satisfactory surface drainage without discharge on erodible fills.
5. Dozers and skidders shall not be used to plow snow on system roads without written approval of Forest Service. Upon approval, dozers and skidders must be equipped with shoes or runners to keep the plow blade a minimum of 4 inches above the road surface unless specifically removed from the requirements in writing.
6. Snow must not be removed to the road surface. A minimum 4 inch depth must be left to protect the roadway.
7. Purchaser's damage from, or as a result of, snow removal shall be restored in a timely manner.

Sale Name: Willow Salvage

CT6.601# - EROSION CONTROL SEEDING (04/2003)

Following completion of skidding and yarding operations in an area, Purchaser shall seed and fertilize all exposed areas of raw soil which has been designated by the Forest Service on skid trails, landings, firebreaks, slides, slumps and Temporary Roads.

Soil on areas to be seeded shall be left in a roughened condition favorable to the retention and germination of the seed.

Seed and fertilizer shall be spread evenly at the rate of 45 pounds of seed and N/A pounds of fertilizer per acre.

When fertilizer and seed are applied in separate operations, the second operation shall be carried out within 72 hours of the first.

Seeding shall be done during the period September 1 to October 31 and under the above specified conditions unless otherwise approved.

The kinds and amounts of seed to be sown in terms of pure live seed (PLS) shall be:

See Seed Application Table

Certified, blue-tagged seed shall be used where a name variety or cultivar is specified. Blue tags which are removed to mix the seed shall be provided to the Forest Service.

All seed purchased will be certified to be free of the noxious weed seeds from weeds listed on the current "All States Noxious Weeds List." Test results from a certified seed analyst and seed analysis labels attached to the bags will be provided to the Forest Service.

The following kinds and amounts of standard commercial fertilizer shall be used with guaranteed analysis of contents clearly marked on containers:

See Fertilizer Application Table

RO-CT6.601# - EROSION CONTROL SEEDING. (11/98)

Seed Application Table

| <u>Species of Seed</u> | <u>PLS Pounds Per Acre</u> |
|---------------------------------|----------------------------|
| Barley (Hordeum Vulgare) | 45 (Forty-Five) |

Fertilizer Application Table

| <u>Type of Fertilizer</u> | <u>Pounds Per Acre</u> |
|---------------------------|------------------------|
| N/A | N/A |

Sale Name: Willow Salvage

CT6.7# - SLASH TREATMENT (04/2003)

Slash is defined as logs, tops, limbs, and other woody material, exclusive of stumps, which is created by the logging operation and remaining on the ground after logging. In areas where Purchaser-created slash is intermingled and inseparable from pre-existing slash, slash disposal requirements shall apply to the pre-existing slash as well as the Purchaser-created slash. Such areas are designated in the Purchaser Slash Responsibility Table herein.

Unless otherwise agreed in writing, Purchaser shall perform the following work described below and/or as shown on the Sale Area Map and/or Slash Disposal Map.

Forest Service and Purchaser shall jointly develop a schedule for completion of slash treatment on the various portions of the sale area.

See Purchaser's Slash Responsibility Table

RO-CT6.7# - SLASH TREATMENT. (4/03) Slash is defined as logs, tops, limbs, and other woody material, exclusive of stumps, which is created by the logging operation and remaining on the ground after logging. In areas where Purchaser-created slash is intermingled and inseparable from pre-existing slash, slash disposal requirements shall apply to the pre-existing slash as well as the Purchaser-created slash. Such areas are designated in the Purchaser Slash Responsibility Table herein.

Slash created in the construction of Specified Roads shall not be considered as logging slash in this Section.

Unless otherwise agreed in writing, Purchaser shall perform the following work described below and/or as shown on the Sale Area Map and/or Slash Disposal Map.

Forest Service and Purchaser shall jointly develop a schedule for completion of slash treatment on the various portions of the sale area.

Purchaser's Slash Responsibility Table

| <u>Cutting Units</u> | <u>Type of Slash Disposal</u> |
|----------------------|------------------------------------|
| All | Landing Cleanup |
| All | Scatter |
| All | Fell Damaged Residual |
| All | Yarding Unutilized Material |

Landing Cleanup

A landing is considered a place where any logs or products are gathered for loading. Logs not meeting utilization standards accumulated at landings shall be (decked) or (returned to the cutting unit) as agreed to in writing by the Forest Service.

Piles shall be reasonably compact and free of soil to facilitate burning. Piles will not be less than **6 (Six)** feet in height. Piles shall be of a size and location which will not impair road use or result in damage to residual timber. Piles shall be located at least **20 (Twenty)** feet from residual timber. Piles shall not be more than **N/A** feet long.

Logging slash shall be scattered 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. Other logging slash shall be scattered to reduce slash concentrations with slash being generally left within **24 (Twenty-Four)** inches of the ground and not in piles.

Fell Damaged Residual

Purchaser shall fell all species over **2 (Two)** inches in diameter and not meeting minimum diameter specifications for included Timber that are damaged beyond recovery by the Purchaser's Operations. Damaged beyond recovery is defined as (1) has the top broken out, (2) leans more than 10 degrees, (3) has less than one half of its original limbs or (4) has its bark removed from at least half the circumference of the bole. Such trees shall be severed at the stump and then treated with other logging slash. Stump height shall not exceed **12 (Twelve)** inches from the ground surface as measured on the uphill side.

Yarding Unutilized Material

Purchaser shall yard to landings or other locations agreed to in writing and deck all unutilized spruce material **8 (eight)** inches or larger in large end diameter outside bark and **8 (eight)** feet or more in length. This material shall be decked so that it can be burned by Forest Service within one year of the timber being cut.

Sale Name: Willow Salvage

CT6.8# - MEASURING (09/2003)

The estimated quantity of timber on Page 1 has been determined by standard procedures described in FSH 2409.12, Timber Cruising Handbook.

The following table describes the type of cruising method used to determine quantities:

See Cruising Method Table

Estimated quantities of timber subsequently included under BT2.13, BT2.14, BT2.31, BT2.32, BT2.33, BT2.34, BT2.35 or BT2.37 not previously measured will be determined using standard cruise methods as described in FSH 2409.12, Timber Cruising Handbook, or, if attached, using the Additional Volume Calculation Table based on information generated from the timber sale cruise.

RO-CT6.8# - MEASURING. (9/03) The estimated quantity of timber in AT2 has been determined by standard procedures described in FSH 2409.12, Timber Cruising Handbook.

The following table describes the type of cruising method used to determine quantities:

| Payment Unit/Cutting Unit | Cruising Method |
|---------------------------|-----------------|
| All | Sample Tree |

Volume for additional included timber, as allowed for under the provisions of this contract shall be derived using the local volume table provided below.

Note: Volumes in this table are taken from a local volume table generated from the Willow Salvage Sale using cruise data specific to this sale. Regression models were run using the U.S. Forest Service "Local Volume Table Program", version 2008-12-19.

Local Volume Table- Willow Salvage Timber Sale (net CF/tree by contract species and DBH class)

| DBH | ES & TF |
|-----|----------------------------|
| | older dead and recent dead |
| 7 | 5.85 |
| 8 | 6.22 |
| 9 | 7.14 |
| 10 | 8.62 |
| 11 | 10.65 |
| 12 | 13.23 |
| 13 | 16.36 |
| 14 | 20.05 |
| 15 | 24.29 |
| 16 | 29.09 |
| 17 | 34.44 |
| 18 | 40.34 |
| 19 | 46.79 |
| 20 | 53.79 |
| 21 | 61.35 |
| 22 | 69.46 |

* ES = Engleman Spruce Sawtimber; TF = Sub-Alpine Fir (True Fir) Sawtimber

Note: Measure all trees that fall into a diameter range where a value is not provided.

Sale Name: Willow Salvage

CT6.81# - ACCOUNTABILITY (04/2003)

The following requirements are applicable to Product Removal Permits:

1. Forest Service will issue to Purchaser or designated representative(s) serially numbered Product Removal Permit books for use only on this sale. Product Removal Permit books, whether used or unused, shall be accountable property of Forest Service and shall be returned to issuing Forest Service Office in accordance with instructions contained in each book. Each book which is not returned to the Forest Service will be considered a lost book and liquidated damages of \$100 will be assessed.
2. Purchaser shall require all permits be completed in accordance with the instructions contained on the inside cover of each book.
3. Each load will have the last three digits of the load receipt number painted on both ends of three logs with BLACK paint. All loads that consist of a truck and pup(s) must have the last three digits of the load receipt painted on both ends of three logs on all subunits of the combination.

Purchaser shall require vehicles hauling Included Products to stop at agreed upon locations for purposes of monitoring accountability. The parties shall agree upon the haul route prior to operations.

CT8.65# (Option 1) - USE OF TIMBER (01/2004)

(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 Purchaser or any person as defined in the Act (16 USC 620e).

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

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

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

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

(d) Unless otherwise agreed in writing, unprocessed 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, Purchaser 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 Purchaser or affiliates.

(f) Prior to delivering unprocessed Included Timber to another party, Purchaser 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 Purchaser and another party, Purchaser shall furnish to Forest Service a copy of each such agreement. Purchaser shall retain, for 3 years from Termination Date, the records of all sales, exchanges, or dispositions of all 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 Purchaser relating to the termination.

BT6.33 WARNING SIGN PLACEMENT

Location of signs is as follows and/or as shown on Sale Area Map or other attached drawings.

| Sign # | Location |
|---------------|--|
| FW 11-9-30 | Intersection of NFSR 867 and State Highway 50 (as shown on the sale area vicinity map) |
| FW 11-9-30 | NFSR 867 0.25 miles north of the water improvement pipe (as shown on the sale area vicinity map) |
| FW 11-9-30 | At the cattle guard / Corall on the FS Boundary on NFSR 867 (as shown on the sale area vicinity map) |

WARNING SIGN SPECIFICATIONS FOR LOGGING AND ROAD CONSTRUCTION AND MAINTENANCE OPERATIONS

The following is a guide for meeting the intent of BT6.33 SAFETY. This is not a complete list of signs that may be needed. All signs are to be manufactured and installed as specified in MUTCD. In event of conflict, MUTCD standards shall take precedence over the following:

- Size: Standard 30", minimum 24", or as shown.
- Shape: As Shown.
- Background: Shall be fully reflective.
Temporary signs shall have an orange background.
Permanently installed signs shall have a yellow background.
- Lettering: Minimum 4" letters, standard alphabet, black, Series "C". Border: 1/2 inch, black.
- Mounting: Signs shall be mounted so as to be clearly visible to road user. Signs shall not be mounted on trees or other sign posts.

Sign Numbers: Sign numbers are from MUTCD. An "F" before the number indicates a Forest Service sign. An "R" or "L" after the number indicates right or left.

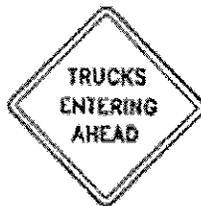
LOGGING OPERATION SIGNS



FG20-3-48"
FG20-3-XX*



FW20-1-30"
FW20-1-XX



W-5-24"
W-5-30"
W-5-XX



FW11-9-24"
FW-9-30"
FW11-9-XX



FW-1-24"
FW-1-30"
FW-1-XX



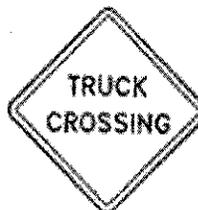
FG20-3a-48"
FG20-3a-XX



FW11-7-24"
FW11-7-XX



FW11-9a-24"
FW-9a-XX



W6-5-24"
W6-6-XX



FW11-3-24"
FW11-3-XX

* XX = size of the sign in inches

ROAD CONSTRUCTION AND MAINTENANCE SIGNS



FG20-1-48"



W21-1a
Always Orange



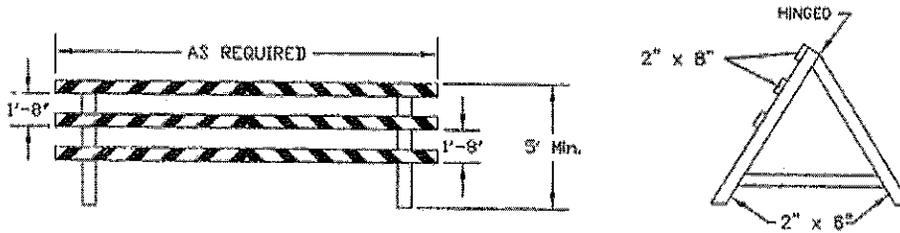
W21-3-30"
Always Orange



FG20-2-48"

TYPICAL TYPE 3 MOVEABLE BARRICADE

Color: Orange & White. (See MUTCD for length and stripe size.)



SIGN INSTALLATION ILLUSTRATION

