

Sale Name: Queen Spruce Salvage

C2.301# - CUTTING UNIT BOUNDARIES (09/2001)

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

C2.301# - CUTTING UNIT BOUNDARIES. (04/04)

Cutting Unit Boundary Designation Table

Cutting Unit	Paint Color	Designation
1-3	Orange	Boundary trees are marked with one vertical stripe and two dots. A vertical stripe at least three inches wide and five feet long is placed on one side of the boundary trees facing into the harvest unit. One dot is placed on both sides of boundary trees parallel to the boundary. A stump mark painted on the downhill side of boundary trees.

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C2.357# - INDIVIDUAL TREES (CUT TREE MARKING) (04/2004)

Notwithstanding B2.35, in units shown as ITM on the Sale Area Map, individual trees are designated for cutting only if marked above and below stump height as shown in the table below:

See Cut Tree Marking Table

C2.357# - INDIVIDUAL TREES (CUT TREE MARKING). (09/01)

Cut Tree Marking Table

Cutting Unit	Paint Color
1-3	Blue

Sale Name: Queen Spruce Salvage

C4.31# - BLANKET BOND (09/2001)

If Purchaser furnishes an acceptable bond or deposits securities, in accordance with B4.3, to guarantee payment for timber from this and other timber sales within the same Contracting Zone, the amount of such bond or deposited securities shall be allocated to such sales by Forest Service. When there is to be no timber cutting hereunder for 30 calendar days or more and payment of current charges has been made, the allocation to this sale shall be reallocated to other sales at Purchaser's request, and Purchaser shall not start cutting hereunder until this sale receives an allocation which will, in combination with transferred-in Purchaser Credit, meet the obligation for payment guarantee.

A Contracting Zone as stated in this provision contains the following National Forests:

Contracting Zone	National Forests
SZ	GrandMesa/Uncompahgre/Gunnison National Forest
SZ	Rio Grande National Forest
SZ	Pike-San Isabel National Forest
SZ	San Juan National Forest

C5.12# - USE OF ROADS BY PURCHASER (06/1999)

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
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. Purchaser's use of roads coded R, A, or W shall be in accordance with the following restrictions:

See Restricted Road List Table.

C5.12# - USE OF ROADS BY PURCHASER (06/99)

Restricted Road List

Road Number	Road Name	From	To	Map Legend	Description of Restrictions
Temporary Road		Temporary Road	HWY 65	R	No timber hauling or road maintenance on all national and federal holidays unless agreed upon by the Forest Service.

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C5.31# - ROAD MAINTENANCE REQUIREMENTS (07/2001)

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

See Contract Road Maintenance Requirements Summary Table.

C5.31# – ROAD MAINTENANCE REQUIREMENTS. (7/01)

Contract Road Maintenance Requirements Summary

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-802	T-803	T-804	T-805	T-808	T-809			
Temp. Road	South end of sale area	Hwy 65	1	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 2400-6, C5.31#

<u>No.</u>	<u>Specification Title</u>
T-800	Definitions
T-802	Ditch Cleaning
T-803	Surface Blading
T-804	Surface Repair
T-805	Drainage Structures
T-808	Miscellaneous Structures
T-809	Waterbars

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-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.

T-803-1

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 $\frac{1}{4}$ inch to $\frac{1}{2}$ 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-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.

SPECIFICATION T-809 WATERBARS

DESCRIPTION

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

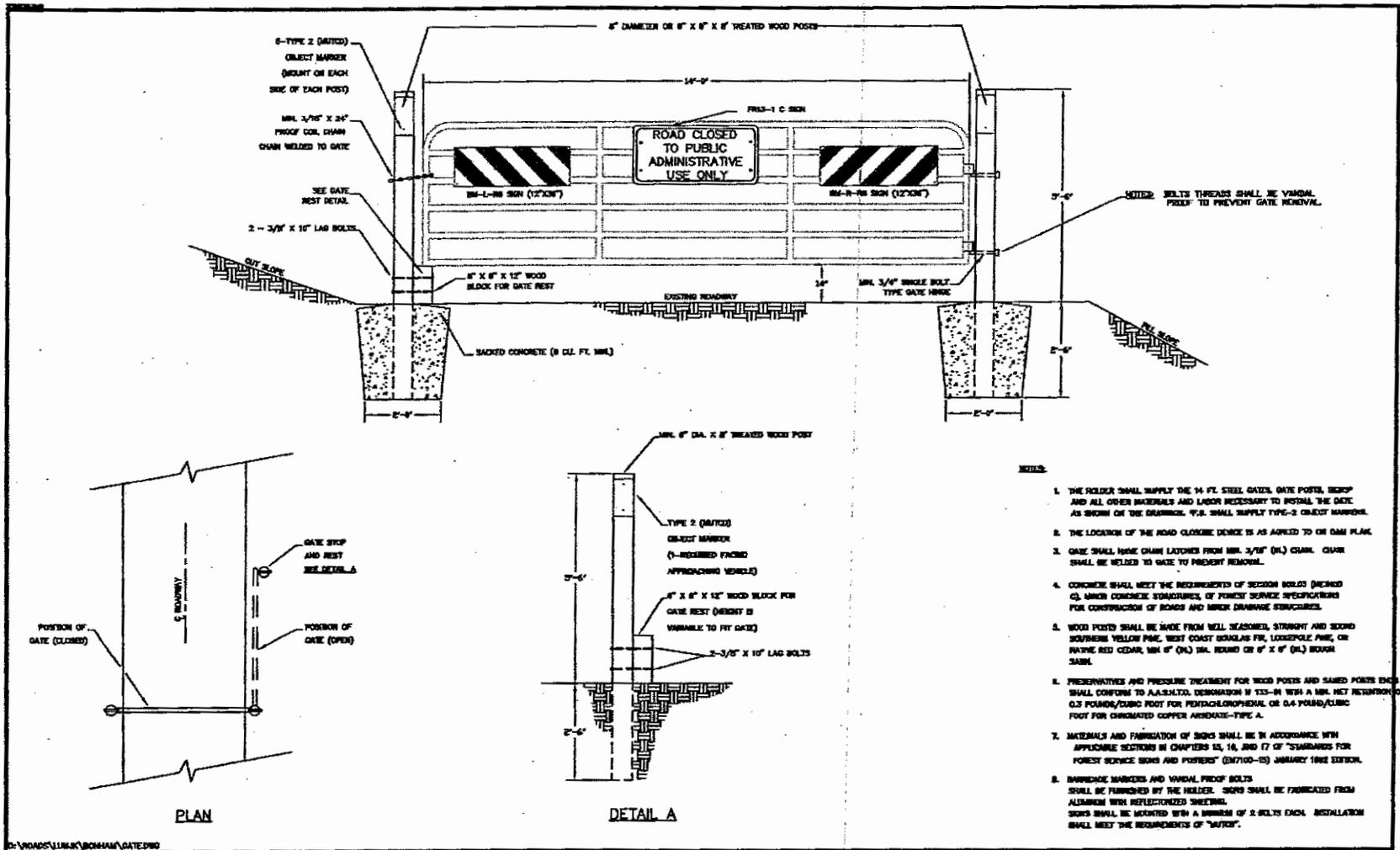
REQUIREMENTS

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

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

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

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



U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
 R-2
 ROCKY MOUNTAIN REGION

Drawn: JLD/ats/2011aw
 Design: _____
 Checked: _____
 Reviewed: _____

Forest: GRAND MESA
 Project Name: _____
 County Line #2

Sheet Title: App. C1-ROAD CLOSURE Gate
 Scale: _____
 Sheet: _____
 of: _____

Sale Name: Queen Spruce Salvage

C5.34# - OBLITERATION OF TEMPORARY ROADS, SKID TRAILS AND LANDINGS (03/2002)

Unless otherwise agreed in writing, temporary roads, skid trails and landings associated with the cutting unit(s) listed in the following table shall be obliterated using the method described below:

See Obliteration Table

C5.34# - OBLITERATION OF TEMPORARY ROADS, SKID TRAILS AND LANDINGS (7/01).

Cutting Unit(s)	Type of Facility	Closure Method
1-3	Skid Trails and landings	At intersections of the temporary road, skid trails shall be blocked and closed up to 100 feet by scattering rocks, slash, stumps or cull logs to prevent motorized vehicle access.

C5.36# - SNOW REMOVAL (09/2001)

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 (four) 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 (four) 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: Queen Spruce Salvage

C5.41# - CLOSURE TO USE BY OTHERS (04/2004)

A. Closure of Roads During Period of Contract. Unless otherwise agreed in writing between Purchaser and Forest Service, Purchaser shall within 15 days of receipt of notice from Forest Service, install gates listed below and close gates on roads designated "To Be Closed" on Sale Area Map and listed below to effectively block access behind such gates to vehicle traffic except that constituting official use. Installation of gates shall follow closure details attached hereto and made a part hereof.

Official vehicle traffic shall constitute that use by Purchaser and his employees when engaged in timber sale activities. It shall also include administrative traffic by Forest Service, and other landowners for the administration of their lands. Purchaser will close gates as directed by Forest Service at the completion of daily activities or close gates after passage of each vehicle. Forest Service will monitor and administer closure activities.

See Gate Location(s) Table

B. Closure of Roads at End of Purchaser's Use. Unless otherwise agreed in writing between Purchaser and Forest Service, upon completion of use, Purchaser shall effectively close to public use the following roads designated "To Be Closed" on Sale Area Map and listed below. As an element of final road maintenance and environmental or resource protection, the designated closure shall be accomplished by using the methods required for each road as described below:

Installation of barricades, which may include earth berms, logs, timber, rock, metal railing, etc., in accordance with details attached hereto and made a part hereof, including the proper barricade and closure signing.

Scarify, seed, and fertilize these travel ways full width as described in C6.601#. Recontour or reshape cut or fill slopes in accordance with details attached hereto and made a part hereof; seed, scarify, and fertilize as described under C6.601#; pull existing drainage structures; haul designated culverts to approved stockpile site, or other work needed to obliterate or put road to bed as described in attached road logs or details.

Construct cross ditches by cutting a dip at least six (6) inches deep in the road surface and mounding the excavated material along the downgrade edge of the dip. Dips shall be cut at a sufficient angle so that they will drain to the outside of the road. They shall cross the entire width of the roadbed and be constructed at the following spacing:

See Table

See Close and Lock Existing Gate(s) Table

During the life of this contract, Purchaser is authorized to install temporary barricades on the roads designated "To Be Closed." Gates with adequate and protected locks may be considered a temporary barricade. Temporary barricades shall be installed so that they may be readily opened by Purchaser or Forest Service for access to Sale Area in case of fire or other emergency. Official vehicle traffic shall also include administrative traffic by Forest Service and other landowners for the administration of their lands. Purchaser shall provide and post approved signs as authorized by Forest Service.

C. Purchaser's Operations in areas otherwise closed to motorized vehicles. During the period January 1 to December 31 when Purchaser's Operations are in areas otherwise closed to motorized vehicles, Purchaser shall not be permitted to hunt, transport hunters, discharge firearms, or transport big game animals with vehicles within the closed areas.

C5.41# - CLOSURE TO USE BY OTHERS. (4/04)

Gate Location(s)				
Road Number	Location	Gate Furnished By	Gate Installed By	In Place
NA				

Cross Ditch

Percent Grade	Maximum Spacing
NA	

Closure Location(s)				
Road Number	Location	Closure Method	Furnished By	In Place
Temporary Road	Intersection of temp. rd and Hwy 65	Type 2 Road Closure Gate as shown on page 2 of the B6.33 Attachment	Purchaser	No

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C6.24# - SITE SPECIFIC PROTECTION MEASURES (04/2004)

Special protection measures needed to protect known areas identified on Sale Area Map or on the ground include:

Cultural Resource Protection Measures: n/a

Wildlife and Botanical Protection Measures: meadows

Heavy equipment shall not enter or pass through protected meadows. Landings and "YUM" piles shall not be located within protected meadows.

Heavy equipment is allowed to pass through protected meadows only when covered with 2 (two) feet of packed snow.

Cave Resource Protection Measures: n/a

C6.333# - SAFETY (RECREATION AREAS) (09/2001)

A. When road construction, timber cutting, or yarding is in progress within or adjacent to recreation areas, safety zones as shown on Sale Area Map shall be established and designated on the ground by Forest Service. Purchaser shall, unless relieved in writing by Forest Service, provide such flagmen, post signs, erect and maintain barricades, guards, construction signs, warning signs, and detour signs as necessary to warn and protect the public at all times from injury or damage as a result of Purchaser's operations. In addition, Purchaser shall provide a watchman for the area whose sole duty shall be to warn and advise the public of any hazards present in the areas as a result of this sale.

All flagging of traffic, all furnishing, placing and maintaining of barricades, danger signs, detour signs, warning signs, and lighting devices shall conform to the requirements in Part 2C of the 2009 issue of the "Manual on Uniform Traffic Control Devices for Streets and Highways," U.S. Department of Commerce, Federal Highway Administration.

B. During periods of general recreation activity within Sale Area or vicinity, Forest Service may restrict road construction, timber cutting, yarding, and other logging operations to days other than Saturdays, Sundays, and holidays as listed in C6.312#.

In the event that Forest Service determines that the safety of recreation activity is endangered by Purchaser's operations, all or part of Purchaser's operations may be temporarily suspended, or in lieu thereof, where agreement can be reached, precautions in addition to those set forth herein may be designated.

C6.411# - FELLING AND BUCKING (SPECIAL OBJECTIVES) (11/1998)

Unless otherwise agreed in writing, silvicultural prescriptions and land management objectives shall be conducted and accomplished by the following requirements, methods and procedures:

See Felling and Bucking Table

C6.411# - FELLING AND BUCKING (SPECIAL OBJECTIVES). (11/98)

Cutting Unit	Special Objectives
All	To restrict residual tree damage, harvest trees shall be felled, insofar as reproduction, topography and lean will permit, to angle into tractor roads and/or skid trails.
All	Dense stands with minimal volume marked for removal may require hand felling and winching to prevent resource damage to the residual stand.
All	Long butting of spruce shall be done at landings.
All	Whenever feasible, trees shall not be felled into or across Streamcourses
All	Felling equipment is permitted off of designated skid trails only in harvest groups, at landings, and as necessary to reach included material.

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C6.42# - SKIDDING AND YARDING (SPECIAL OBJECTIVES) (11/1998)

Unless otherwise agreed in writing, silvicultural prescriptions and land management objectives shall be conducted and accomplished by the following requirements, methods and procedures

See Skidding and Yarding Table

C6.42# - SKIDDING AND YARDING (SPECIAL OBJECTIVES). (11/98)

Cutting Unit	Special Objectives
All	Windfall down material across skid trails shall be bucked prior to being pushed by tractors.
All	Insofar as topography and ground conditions permit, products shall be pulled endwise from the bed where they are felled.
All	Heavy equipment other than felling equipment shall operate only within harvest groups or on designated skid trails and landings.
All	Skid trails shall be spaced at least 75 feet apart, and be located at least 50 feet from unit boundaries, except where converging at landings.
All	Skid trails that access groups shall not pass through the center of the group. Main skid trails shall be located so that they pass in between groups. Spur skid trails shall "herring bone" off of the main skid trail to an individual group. Only one spur skid trail shall access an individual group.
All	Dense stands with minimal volume marked for removal may require hand felling and winching to prevent resource damage to the residual stand.
All	No skid trails will be permitted parallel to perennial or intermittent streams within 100 feet of the stream.
All	At least one end of the log will be suspended during skidding within 100 feet of perennial and intermittent streamcourses.

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C6.6# - EROSION PREVENTION AND CONTROL (11/1998)

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

B. Skidding with tractors within 100 (one hundred) feet of live streams shall not be permitted except in places designated in advance by Forest Service, and in no event shall skid roads be located in live or intermittent streamcourses. Skid trails shall be located high enough out of draws, swales, and valley bottoms to permit diversion of runoff water to natural undisturbed forest ground cover.

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

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

E. Unless otherwise agreed in writing, Purchaser shall keep erosion control work current with his operations under the sale and in any case not later than 15 days after completion of skidding on each payment unit or cutting unit.

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C6.601# - EROSION CONTROL SEEDING (11/1998)

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, Temporary Roads and traveled ways of Specified Roads n/a following closure specified in C5.41#.

Soil on areas to be seeded shall be left in a roughened condition favorable to the retention and germination of the seed. Scarification of traveled ways on Specified Roads listed above shall be to a minimum depth of n/a inches and a maximum depth of n/a inches.

Seed and fertilizer shall be spread evenly at the rate of 19 (nineteen) 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 following completion of activity in area to July 1 or December 1, whichever comes first 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

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

C6.601# - EROSION CONTROL SEEDING. (11/98)

Seed Application Table

<u>Species of Seed</u>	<u>PLS Pounds Per Acre</u>
Slender wheatgrass	3
Mountain brome	5
Canby bluegrass	3
Blue wildrye	5
Thickspike wheatgrass	3

Fertilizer Application Table

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

Sale Name: Queen Spruce Salvage

C6.602# - PROTECTION OF DISTURBED AREAS FROM ESTABLISHMENT OF NOXIOUS WEEDS (11/1998)

In addition to the requirements of C6.601#; Purchaser shall seed and fertilize areas where mineral soil is exposed as designated by the Forest Service.

Unless otherwise agreed to in writing, seeding shall be done in the early spring or fall during weather and moisture conditions favorable for quick germination and growth of the plants. Seeding shall be completed in a timely manner following the last disturbance activity by the purchaser in the disturbed area.

The Certified seed analysis reports from each container shall be provided by Purchaser to the Forest Service prior to application of the seed. Seed and fertilizer shall be spread evenly at the rate of 19 (nineteen) 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 operation.

When an adequate seedbed does not exist; Purchaser shall scarify to get a 2 inch loose soil seedbed, prior to seeding.

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

See Seed Application Table

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

C6.602# - PROTECTION OF DISTURBED AREAS FROM ESTABLISHMENT OF NOXIOUS WEEDS. (11/98)

Seed Application Table

<u>Species of Seed</u>	<u>PLS Pounds Per Acre</u>
Slender wheatgrass	3
Mountain brome	5
Canby bluegrass	3
Blue wildrye	5
Thickspike wheatgrass	3

Fertilizer Application Table

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

Sale Name: Queen Spruce Salvage

C6.62# - SITE SPECIFIC WETLANDS PROTECTION MEASURES (07/2001)

Measures needed to protect wetlands identified on the Sale Area Map or on the ground include:

No heavy equipment within 50 feet of wetlands shown on the sale area map.

Heavy equipment is allowed between 50-100 feet of wetlands only when: the soil is dry, frozen or covered with 1 foot of packed snow; or covered with continuous slash mat greater than 6 inches in depth. Under these conditions and with the limits in C6.411# and C6.42#, a maximum of five passes with heavy equipment are permitted in any one place. Entry into this zone must be perpendicular to the edge of the wetland.

At least one end of the log must be suspended during skidding within 100 feet of wetlands. If a drag channel is produced that may concentrate runoff, water control measures (waterbars) will be required.

C6.7# - 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.

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.

See Purchaser's Slash Responsibility Table

C6.7# - SLASH TREATMENT. (4/03)

Purchaser's Slash Responsibility Table

<u>Cutting Unit(s)</u>	<u>Type of Slash Disposal</u>
All	Landing Cleanup
All	Scatter
All	Fell Damaged Residual
1 & 2	Treat Cull Spruce
3	Treat Cull Spruce
All	Leave Tops
All	Treat Group Selection Openings

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 piled. All other slash accumulated at landings shall be treated with a combination of piling, return to the cutting unit, and lop and scatter. Slash treatment shall ensure that no more than 70% (seventy percent) of the landing is covered with slash, with scattered slash no more than 24 (twenty-four) inches above the ground.

Piles shall be reasonably compact and free of soil to facilitate burning. Piles shall include at least 25 percent of material 2 inches in diameter and under within the piles to facilitate burning. Piles shall not be less than 6 (six) feet in height. Piles shall be of a size and location which will not result in damage to residual timber including snags. Piles shall be located at least 20 (twenty) feet from the drip line of residual timber, at least 80 (eighty) feet from lakes, reservoirs, and at least 100 (one hundred) feet from perennial streams. Piles shall not be more than 25 (twenty-five) feet long. Piles shall not be located within a group selection area.

Scatter

Logging slash shall be scattered away from and without unnecessary damage to residual trees and snags. All scattered logs shall be limbed and placed away from residual trees and snags. 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 large piles or windrows.

Fell Damaged Residual

Purchaser shall fell trees of 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 more than 20% of 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.

Treat Cull Spruce (Units 1 & 2)

Within units 1 and 2, all unutilized spruce material, 7 (seven) inches or larger in large end diameter, 8 (eight) feet or more in length, and with 50% (fifty percent) or more tight bark, shall be yarded to landings. Unutilized spruce material shall be bucked into lengths not longer than 8 (eight) feet. Piles shall conform with the requirements in "Landing Cleanup" above.

Unutilized spruce material 7 (seven) inches or larger in large end diameter, with 50% (fifty percent) or more tight bark, and less than 8 (eight) feet in length, shall be either (1) piled at landings; (2) bucked to 18 (eighteen) inches or shorter lengths, or (3) have the bark peeled on two sides.

Treat Cull Spruce (Unit 3)

Within unit 3, all unutilized spruce material, 7 (seven) inches or larger in large end diameter, 8 (eight) feet or more in length, and with 50% (fifty percent) or more tight bark, shall be yarded to landings or other locations not within group selection areas as agreed to in writing. Unutilized spruce material shall be bucked into lengths not longer than 8 (eight) feet. Piles shall conform with the requirements in "Landing Cleanup" above.

Unutilized spruce material 7 (seven) inches or larger in large end diameter, with 50% (fifty percent) or more tight bark, and less than 8 (eight) feet in length, shall be either (1) piled at landings or in other locations not within group selection areas as agreed to in writing; (2) bucked to 18 (eighteen) inches or shorter lengths, or (3) have the bark peeled on two sides.

Leave Tops

Included Timber shall have tops cut from the stems prior to skidding. These tops shall be left in the cutting unit where the timber is felled. If the Purchaser uses harvesting methods that do not result in tops being cut at the point of felling, the Purchaser will be required to return tops to the cutting unit through bunching and/or yarding operations. Scattering shall be done in a manner that results in a relatively uniform distribution of slash throughout the unit. Tops shall be lopped and scattered within 24 (twenty-four) inches of the ground.

Treat Group Selection Openings

Residual slash greater than 4 inches at the midpoint of a piece is desired over 50% to 60% of the ground surface and well distributed. No more than 25% of group openings shall be covered with a continuous mat of fine material slash where germination and seeding would be compromised.

Areas of advanced regeneration, saplings, and poles shall be protected, shall not be scarified, and will not be considered part of the workable ground surface. Any excess slash within group selection openings may be put in skid trails, either scattered in accordance with the "scatter" paragraph above, or in small piles. Any piles in skid trails shall not exceed 5 (five) feet in height or width. Additional excess slash within group selection openings may be scattered in the untreated part of the cutting unit in accordance with the "scatter" paragraph above.

C6.72# - TEMPORARY ROAD CONSTRUCTION SLASH DISPOSAL (01/2000)

Slash treatment methods of Temporary Road slash shall be agreed to in writing prior to construction. Temporary Road slash shall be treated in accordance with the following:

- A. All timber within the road clearing limits which contains a product meeting the minimum piece specifications stated in A2 shall be felled (not pushed over) and bucked in advance of road construction. All timber shall be felled within the clearing limits whenever it is feasible to do so.
- B. Timber within the clearing limits not meeting minimum piece specifications in A2 and other debris from the clearing and grubbing operations more than 5 (five) inches in diameter and 7 (seven) feet in length shall either be (a) utilized and removed from Sale Area, (b) burned within the right-of-way, (c) removed to designated locations shown on Sale Area Map for burying or later burning, (d) buried, (e) processed through a chipping machine, (f) scattered in such a manner as to avoid concentrations of slash and without damaging other trees or resource values, (g) windrowed (h) decked, or (i) a combination thereof.
- C. All material to be treated or disposed of shall be bucked into lengths not to exceed 8 (eight) feet before being piled or buried.
- D. If debris is to be burned, burning shall be complete and shall be done at such times and in a manner approved in writing by Forest Service. Residual construction slash from burning shall be buried, scattered or removed to agreed locations.
- E. Debris to be buried shall be placed in prepared holes, benches, or trenches at agreed locations and covered with not less than 2 (two) feet of native soil or rock. Slash and debris may be buried in the roadway providing hauling can be supported and providing there is little probability or hazard of slope failure.
- F. If debris is to be chipped, the chips shall be spread over the surface of the ground in such a manner that their loose depth does not exceed 6 (six) inches. Chips may be mixed with soil within roadway.
- G. Slash and debris may be scattered in those situations where the volume of slash or residual slash is relatively light and the adjacent stands of timber are sufficiently open to accommodate the scattering without damage.
- H. When slash is to be windrowed, the windrow area shall be cleared. Windrows shall be placed parallel to and along the embankment toe. Windrows shall not be placed against trees.
- I. If material is decked, logs not meeting Utilization Standards that are 7 (seven) inches or more in diameter shall be bucked into lengths not to exceed 7 (seven) feet and piled at agreed locations.

C6.73# - TIMING OF SLASH DISPOSAL (11/1998)

Unless otherwise agreed to in writing, on units Cutting units 1-3, for spruce slash over 7 (seven) inches in diameter with more than 50% tight bark, slash created by August 15 shall be treated, as specified in C6.7#, by October 15 of that year. Treatment of slash created after August 15, but not treated that fall, shall start the following spring as soon as ground conditions will permit, unless agreed otherwise. Treatment shall continue at sustained productions and shall be completed by October 15 of that year. Forest Service shall designate the priorities of slash disposal within Sale Area and may suspend operations because of weather or ground conditions.

Sale Name: Queen Spruce Salvage

C6.83# - PRODUCT ACCOUNTABILITY (10/2003)

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 Ranger District in accordance with the instructions contained on the cover of each book. Each Product Removal Permit which is not returned will be considered a lost load and charged for as described in B6.85 or B6.851, as appropriate.

2. Purchaser shall require all permits be filled out in ink, and otherwise completed, by an individual named in writing, showing the date loaded, sale brand, sale name, and destination where products will be unloaded. On the Load Permit, the month, day, and time the truck is loaded shall be punched out. Each permit will then be attached to the load in accordance with instructions on the inside cover of the Product Removal Permit book. Products will not be hauled from the Sale Area without the Load Permit attached to the load.

3. Before products are hauled, the truck driver must sign the Woods Permit in ink using legal signature.

4. 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.

Sale Name: Queen Spruce Salvage

C8.66# (Option 1) - USE OF TIMBER (04/2004)

(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 Section, 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 Section, Forest Service will not be liable for any Claim submitted by Purchaser relating to the termination.

B6.33 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	On Hwy 65 approximately .2 miles east and west of entrance to temporary (as shown on the sale area map)
W6-6-24	On the SP Snow Trail approximately .1 mile either side of the intersection of the temporary road.

**WARNING SIGN SPECIFICATIONS FOR LOGGING AND ROAD CONSTRUCTION AND
MAINTENANCE OPERATIONS**

The following is a guide for meeting the intent of B6.33 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: ½ 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"
FW11-9-30"
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



W6-6-24"
W6-6-XX



FW11-3-24"
FW11-3-XX

* XX = size of the sign in inches

ROAD CONSTRUCTION AND MAINTENANCE SIGNS



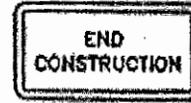
FG20-1-48"



W21-1a
Always Orange



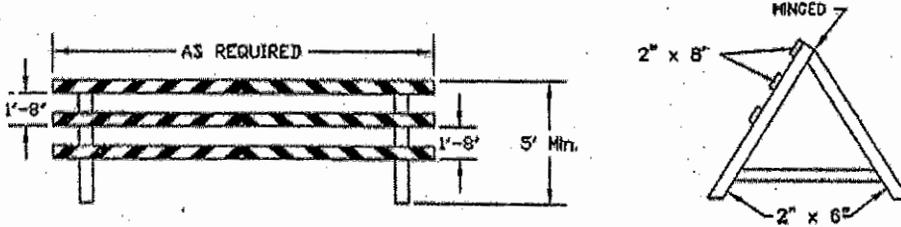
W21-3-30"
Always Orange



FG20-2-48"

TYPICAL TYPE 3 MOVEABLE BARRICADE

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



SIGN INSTALLATION ILLUSTRATION

