

APPENDIX F: Timber Removal and Road Specifications

Contents

AT1 – Location and Area 2

AT2 – Quantity Estimate and Utilization Standards..... 2

AT3 – Timber Designations 2

AT4a – Scaled Rates..... 3

AT4b – Tree Measurement Rates 3

AT5 – High Stumps 3

AT7 – Specified Roads 4

AT8 – Scaling Instructions and Specifications 5

BT2.0 –TIMBER SPECIFICATIONS 5

BT3.0—RATES OF PAYMENT 7

BT4.0—PAYMENTS 8

BT8.0—OTHER CONDITIONS 8

ROAD MAINTENCE T-SPECIFICATIONS 10

SPECIFICATION T-801 SLIDE AND SLUMP REPAIR 12

SPECIFICATION T-802 DITCH CLEANING 13

SPECIFICATION T-803 SURFACE BLADING..... 13

SPECIFICATION T-804 SURFACING REPAIR..... 14

SPECIFICATION T-805 DRAINAGE STRUCTURES..... 16

SPECIFICATION T-806 DUST ABATEMENT 16

SPECIFICATION T-807 ROADWAY VEGETATION..... 18

SPECIFICATION T-808 MISCELLANEOUS STRUCTURES 18

SPECIFICATION T-809 WATERBARS 19

SPECIFICATION T-810 BARRIERS 19

SPECIFICATION T-811 SURFACE TREATMENT 20

AT1 – Location and Area,

This Stewardship Project Area of:	941 Acres	more or less located in:	T3S R26E Sec 14, 15, 22, 23, 26, 27, 34 and 35 T4S R26E Sec 2, 3 and 11
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AT2 – Quantity Estimate and Utilization Standards,

Species	Product	Estimated Quantity	Unit of Measure	Minimum Specifications				
				Merchantable Tree		Piece Required to be Removed		
				Diameter Breast High (d.b.h.) (inches)	Number of Minimum Pieces per Tree	Length (feet)	Diameter Inside Bark at Small End (inches)	Net Merch. Factor ^{1/}
Red Fir	Sawtimber	690	CCF	10	1	10	6	12
White Fir	Sawtimber	8	CCF	10	1	10	6	12
Lodgepole Pine	Non-Sawtimber	1713	CCF	10	1	10	6	16
Timber Subject to Agreement								
Combined Softwood	Sawtimber	250	CCF	10	1	10	6	12
Combined Softwood	Non-Sawtimber	250	CCF	10	1	10	6	16

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

AT3 – Timber Designations, acres are approximate:

	<u>Number</u>	<u>Acres</u>
Clearcutting Units (BT2.31)	_____	_____
Specified Road Clearing (BT2.32)	_____	_____
Overstory Removal Units (BT2.33)	_____	_____
Understory Removal Units (BT2.34)	_____	_____
Individual Trees (BT2.35)	11	250
Incompletely Measured Payment Units (BT2.36)	_____	_____
Prescription by Description	23	691

AT4a – Scaled Rates

Payment Unit	Acres	Species	Product	Quantity	Unit of Measure	Rates per Unit of Measure	
						Bid Minimum \$	Bid \$

AT4b – Tree Measurement Rates

Payment Unit	Acres	Species	Product	Quantity	Unit of Measure	Rates per Unit of Measure	
						Bid Minimum \$	Bid \$
FH-1	31	Red Fir	Sawtimber	226	CCF	0.01	
		White Fir	Sawtimber	0	CCF	0.01	
		Lodgepole Pine	Non-Sawtimber	229	CCF	0.01	
FH-2	22	Red Fir	Sawtimber	134	CCF	0.01	
		White Fir	Sawtimber	0	CCF	0.01	
		Lodgepole Pine	Non-Sawtimber	116	CCF	0.01	
FH-3	10	Red Fir	Sawtimber	63	CCF	0.01	
		White Fir	Sawtimber	0	CCF	0.01	
		Lodgepole Pine	Non-Sawtimber	10	CCF	0.01	
FH-4	28	Red Fir	Sawtimber	176	CCF	0.01	
		White Fir	Sawtimber	0	CCF	0.01	
		Lodgepole Pine	Non-Sawtimber	28	CCF	0.01	
FH-5	17	Red Fir	Sawtimber	23	CCF	0.01	
		White Fir	Sawtimber	2	CCF	0.01	
		Lodgepole Pine	Non-Sawtimber	119	CCF	0.01	
FH-6	8	Red Fir	Sawtimber	16	CCF	0.01	
		White Fir	Sawtimber	2	CCF	0.01	
		Lodgepole Pine	Non-Sawtimber	44	CCF	0.01	
FH-7	32	Red Fir	Sawtimber	12	CCF	0.01	
		White Fir	Sawtimber	1	CCF	0.01	
		Lodgepole Pine	Non-Sawtimber	246	CCF	0.01	
FH-8	14	Red Fir	Sawtimber	9	CCF	0.01	
		White Fir	Sawtimber	1	CCF	0.01	
		Lodgepole Pine	Non-Sawtimber	118	CCF	0.01	
FH-9	40	Red Fir	Sawtimber	6	CCF	0.01	
		White Fir	Sawtimber	0	CCF	0.01	
		Lodgepole Pine	Non-Sawtimber	271	CCF	0.01	
FH-10	39	Red Fir	Sawtimber	1	CCF	0.01	
		White Fir	Sawtimber	0	CCF	0.01	
		Lodgepole Pine	Non-Sawtimber	502	CCF	0.01	
FH-11	9	Red Fir	Sawtimber	24	CCF	0.01	
		White Fir	Sawtimber	2	CCF	0.01	
		Lodgepole Pine	Non-Sawtimber	30	CCF	0.01	

AT5 – High Stumps,

Payment Unit	Species	Product	Maximum Stump Height (inches)
FH	Combined Softwood	Sawtimber	8
FH	Combined Softwood	Non-Sawtimber	8
MR	Combined Softwood	Non-Sawtimber	4

AT7 – Specified Roads,

Name and Date of Governing Road Specifications: NA

Project		Design Class	Approx. Length (mi./km.)	Sheet Numbers and Approval Date	Performance Responsibility		
Road No.	Name				Survey	Design	Const. Staking ^{1/}

^{1/} Indicate timing, i.e., before clearing (BC) or after clearing (AC).

AT7a – Road Maintenance Requirements Summary,

Road Maintenance T-Specifications for Timber Sale Contracts (Appendix Specification T-800 Definitions)

Pre-Haul Requirements

Road	From	To	Miles	Use Limit.	Applicable T-800 Specifications										
					T-801	T-802	T-803	T-804	T-805	T-806	T-807	T-808	T-809	T-810	T-811
03S11			6.0	A											
03S11B			0.5	A/S											
03S11C			0.3	A/S											
03S11D			0.1	A/S											
03S11E			0.2	A/S											
03S11F			0.6	A/S											
03S11G			0.6	A/S											
03S11I			0.2	A/S											
03S11J			0.3	A/S											
03S11K			0.2	A/S											
03S55			0.6	A/S											
03S55B			0.2	A/S											

Refer to AT7b and T-specifications below.

During Haul Requirements

Road	From	To	Miles	Use Limit.	Applicable T-800 Specifications										
					T-801	T-802	T-803	T-804	T-805	T-806	T-807	T-808	T-809	T-810	T-811
03S11			6.0	A		X			X						
03S11B			0.5	A/S		X			X						
03S11C			0.3	A/S		X			X						
03S11D			0.1	A/S		X			X						
03S11E			0.2	A/S		X			X						
03S11F			0.6	A/S		X			X						
03S11G			0.6	A/S		X			X						
03S11I			0.2	A/S		X			X						
03S11J			0.3	A/S		X			X						
03S11K			0.2	A/S		X			X						
03S55			0.6	A/S		X			X						
03S55B			0.2	A/S		X			X						

Refer to AT7b and T-specifications below.

Post- Haul Requirements

Road	From	To	Miles	Use Limit.	Applicable T-800 Specifications										
					T-801	T-802	T-803	T-804	T-805	T-806	T-807	T-808	T-809	T-810	T-811
03S11			6.0	A		X			X						

03S11B		0.5	A/S		X	X		X						
03S11C		0.3	A/S		X	X		X						
03S11D		0.1	A/S		X	X		X						
03S11E		0.2	A/S		X	X		X						
03S11F		0.6	A/S		X	X		X						
03S11G		0.6	A/S		X	X		X						
03S11I		0.2	A/S		X	X		X						
03S11J		0.3	A/S		X	X		X						
03S11K		0.2	A/S		X	X		X						
03S55		0.6	A/S		X	X		X						
03S55B		0.2	A/S		X	X		X						

Refer to AT7b and T-specifications below.

AT7b – Use of Roads by Partner, Use of existing roads identifies on stewardship Project Area Map by the following codes is prohibited or subject to restrictive limitations, unless agreed to otherwise:

Code	Use Limitations
X	Hauling prohibited
R	Hauling restricted
U	Unsuitable for hauling prior to completion of agreed reconstruction
P	Use prohibited
A	Public use restriction
W	Regulation waiver
S	Skidding allowed

Roads coded A will be signed by the Forest Service to inform the public of use restrictions.

AT8 – Scaling Instructions and Specifications,

<p><u>Name and Date of Governing Instructions:</u></p>	<p>FSH 2409.11a, National Forest Cubic Log Scaling Handbook, as amended and supplemented. Governing instructions for products contained in E.2.</p>
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AT4 – Timber Payment Rates, applicable to BT3.1

BT2.0 –TIMBER SPECIFICATIONS

BT2.1 Included Timber. “Included Timber” consists of:

BT2.11 Standard Timber. Live and dead trees and portions thereof that meet Utilization Standards under BT2.2 and are designated for cutting under BT2.3.

BT2.12 Substandard Timber. Live and dead trees that:

- (a) Do not meet Utilization Standards and
- (b) Are located in Clearcutting Units or construction clearings or are otherwise designated for cutting.

BT2.13 Damaged Timber.

BT2.131 Damaged by Partner. Undesignated live trees meeting Utilization Standards:

(a) Within 200 feet slope distance from centerline of roads constructed hereunder that are damaged by Partner's construction to the extent that considerable deterioration or mortality is imminent and are designated by Forest Service for felling before the nearest road segment is Substantially Completed or

(b) That are damaged by Partner in logging or stewardship project operations and are subsequently Marked before Partner has completed work in the immediate area.

By agreement, such trees may be left without charge if their removal would cause undue damage or be grossly uneconomic.

BT2.132 Negligent or Willful Damage. Undesignated timber meeting Utilization Standards and unnecessarily damaged or negligently or willfully cut by Partner, if included by Contracting Officer.

BT2.134 Minor Damage by Natural Causes. Undesignated trees within Contract Area and meeting Utilization Standards, in amounts that become insect infested, windthrown, suffer serious damage, or die, as designated by agreement.

BT2.14 Unintentionally Cut Timber. Trees within or immediately adjacent to Contract Area or to road construction or other authorized clearing outside Contract Area, not designated for cutting under BT2.3 but that are cut through mistake by Partner, when included by Contracting Officer.

BT2.15 Construction Timber. Trees to be used for construction under this contract.

BT2.16 Other Material. Species or products not listed in the contract, upon written approval of Forest Service.

BT2.2 Utilization and Removal of Included Timber. "Utilization Standards" for trees and minimum pieces are stated in AT2. To meet minimum tree specifications, trees must equal or exceed tree diameters listed in AT2 and contain at least one minimum piece. Except for timber required or authorized to be left, Partner shall fell and buck such trees and shall remove from Contract Area all pieces that:

(a) Meet minimum piece standards in AT2 or

(b) Do not meet such standards but would have qualified as part of minimum pieces if bucking lengths were varied to include such material.

BT2.3 Timber Designations. Timber designated for cutting shall be confined to Contract Area, except as otherwise provided in BT2.131, BT2.14, BT2.15, and BT2.32. Contract Area Map indicates Payment Units, if any, where Marking under BT2.35 is to be done after contract advertisement, except for construction clearing under BT2.23, designation changes under BT2.37, and damaged timber. The boundaries of Clearcutting Units, Overstory Removal Units, and Understory Removal Units were plainly Marked on ground before contract advertisement and are shown on Contract Area Map. Boundary trees shall not be cut. Such units where Measuring is to be completed after date of contract advertisement are also shown. The number of units and approximate acreage of timber designations are stated in AT4.

BT2.31 Clearcutting Units. All trees that meet Utilization Standards within "Clearcutting Units" are designated for cutting.

BT2.32 Construction Clearing. All timber is designated for cutting that is within the clearing limits of roads constructed hereunder or is in other authorized clearings. All dead or unstable live trees are designated for cutting that are sufficiently tall to reach Partner's landings, work areas, or the roadbed of Specified and Temporary Roads when Marked in advance of work in the immediate area. Pieces meeting Utilization Standards from such dead or unstable live trees shall be removed unless there is agreement that to do so could damage the road.

BT2.321 Specified Road Clearings. Timber within the clearing limits of Specified Roads is within separate Payment Units, as shown on Contract Area Map, and the quantities in AT4. These Payment Units are

subject to revision, as specified in BT2.37. The quantities of dead or unstable trees designated outside the clearing limits are not included in AT4.

BT2.322 Other Authorized Clearings. Timber within authorized clearings for Temporary Roads, landings, or other construction clearings is designated for cutting. Quantities of such timber are not included in AT4.

BT2.33 Overstory Removal Units. All trees within “Overstory Removal Units” are designated for cutting when they meet Utilization Standards and equal or exceed the diameter limits shown on Contract Area Map.

BT2.34 Understory Removal Units. All trees within “Understory Removal Units” are designated for cutting when they meet Utilization Standards and are smaller than the diameter limits shown on Contract Area Map.

BT2.35 Individual Trees. All trees to be cut, other than in the units described in BT2.31, BT2.32, BT2.33, and BT2.34, are Marked or designated by description. Trees are “Marked” when individually designated by Forest Service with paint marks above and below stump height. Contract Area Map indicates areas plainly identified on the ground where leave trees are Marked to be left uncut.

BT2.37 Designation Changes. Within Contract Area, minor adjustments may be made in boundaries of cutting units or in the timber individually Marked for cutting when acceptable to Partner and Forest Service.

BT2.4 Quantity Estimate. The estimated quantities of timber by species designated for cutting under BT2.3 and expected to be cut under Utilization Standards are listed in AT4. Estimated quantity in AT4 does not include the following:

- (a) Damaged timber under BT2.13.
- (b) Unintentionally cut timber under BT2.14.
- (c) Construction timber under BT2.15 cut outside of Payment Units and removed from construction use for utilization by Partner.
- (d) Timber within clearing limits of Temporary Roads or other authorized clearings and that is not designated under BT2.31, BT2.33, BT2.34, or BT2.35; or
- (e) Dead or unstable live trees that are sufficiently tall to reach Partner’s landings, work areas, or the roadbed of Specified Roads under BT2.32.

Estimated quantities for such timber not included in AT4 shall be determined as stated herein.

If Contract Area Map shows Payment Units where Marking or Measuring is to be completed after date of contract advertisement, the objective of Forest Service shall be to designate for cutting in such Payment Units sufficient timber so that Contract Area shall yield the approximate estimated quantities by species or species groups stated in AT4. However, the estimated quantities stated in AT4 are not to be construed as guarantees or limitations of the timber quantities to be designated for cutting under the terms of this contract.

BT3.0—RATES OF PAYMENT

BT3.1 Current Contract Rates. Included Timber that is Released for Cutting shall be paid for at Current Contract Rates determined under this Section. “Current Contract Rates” shall be Flat Rates. Flat Rates shall be those listed in AT4. In the event contract time is adjusted, Current Contract Rates shall be continued in the same manner as immediately prior to the adjustment period.

BT3.4 Other Payment Rates.

BT3.41 Material and Quantities Not in AT4. Incidental amounts of products or portions of trees of species that do not meet Utilization Standards may be removed without charge. Such material may be purposely removed in more than incidental amounts without charge upon written approval of Contracting Officer, and subject to agreement on deposits if needed for road maintenance and use. Other species or products not listed may be cut and removed upon written approval of Contracting Officer and subject to agreement on rates of payment. Timber for which the quantity is not included in the estimate, shall be paid for at Current Contract Rates and Required Deposits.

BT3.42 Timber Cut Through Mistake. Undesignated timber meeting Utilization Standards, cut by Partner through mistake and included by Contracting Officer under BT2.14, shall be removed and paid for at Current Contract Rates and Required Deposits, unless such material is not listed in AT4. In such event, Contracting Officer, in accord with standard Forest Service methods, shall establish rates to be paid.

BT3.44 Undesignated Timber Damaged Without Negligence. Undesignated timber meeting Utilization Standards, damaged without negligence by Partner and designated by Forest Service under BT2.131, shall be cut, removed, and paid for at Current Contract Rates and Required Deposits.

BT3.45 Undesignated Timber Unnecessarily Damaged or Negligently or Willfully Cut. Undesignated timber meeting Utilization Standards and unnecessarily damaged or negligently or willfully cut by Partner, if included by Forest Service under BT2.132, shall be cut, removed, and paid for at Current Contract Rates and Required Deposits that are in addition to liquidated damages under BT3.46. If such timber is of a species or size not listed in AT2 or is of a quality different from designated timber, Contracting Officer shall establish payment rates in accord with standard Forest Service methods.

BT3.46 Liquidated Damages. Unnecessary damage to or negligent or willful cutting of undesignated timber, as described in BT3.45, on portions of Contract Area cut over under this contract is likely to cause substantial silvicultural or other damage to the National Forest. It will be difficult, if not impossible, to determine the amount of such damage. Therefore, Partner shall pay as fixed, agreed, and liquidated damages an amount equivalent to the amount payable at Current Contract Rates. If designated by Contracting Officer, Partner shall remove such damaged or cut timber and pay for it at Current Contract Rates.

BT4.0—PAYMENTS

BT4.1 Amount Payable for Timber. Except as provided in BT3.1, Current Contract Rates and Required Deposits in effect when a Payment Unit is Released for Cutting shall be applied to the timber quantities to determine the amount Partner shall pay. A “Payment Unit” is a portion of Contract Area established for payment purposes.

BT4.2 Advanced Deposits. The partner agrees to make advanced deposits in advance of cutting. These deposits may be in the form of cash, acceptable payment bond, earned stewardship credit or any combination thereof. Advanced deposits will be in such amounts as to maintain an unobligated balance sufficient enough to cover the value of timber to be cut. Forest Service and partner will agree on a systematic approach to provide sufficient advanced deposits.

BT8.0—OTHER CONDITIONS

BT8.1 Title and Liability.

BT8.11 Title Passage. All right, title, and interest in and to any Included Timber shall remain in Forest Service until it has been Measured, removed from Contract Area or other authorized cutting area, and paid for, at which time title shall vest with the partner. Timber cut under the terms of clause Product Payment Guarantee, shall be considered to have been paid for. Title to any Included Timber that has been Measured

and paid for, but not removed from Contract Area or other authorized cutting area by partner on or prior to contract termination, shall remain in Forest Service.

BT8.12 Liability for Loss. If Included Timber is destroyed or damaged by an unexpected event that significantly changes the nature of Included Timber, such as fire, wind, flood, insects, disease, or similar cause, the party holding title shall bear the timber value loss resulting from such destruction or damage; except that such losses caused by insect or disease after felling of timber shall be borne by Partner, unless Partner is prevented from removing such timber for reasons by the Forest Service. Deterioration or loss of value of salvage timber is not an unexpected event.

In the event Included Timber to which Forest Service holds title is destroyed, Partner will not be obligated to remove and pay for such timber. In the event Included Timber to which Forest Service holds title is damaged, Contracting Officer shall make an appraisal to determine for each species the difference between the appraised unit value of Included Timber immediately prior to the value loss and the appraised unit value of timber after the loss. Current Contract Rates in effect at the time of the value loss shall be adjusted by differences to become the redetermined rates.

There shall be no obligation for Forest Service to supply, or for the Partner to accept and pay for, other timber in lieu of that destroyed or damaged. This Subsection shall not be construed to relieve either party of liability for negligence.

Limited Liability for Operations Fires.

Maximum Amount of Partner’s Obligation per Operation’s Fire. Entry should be determined as follows and rounded up to the nearest \$100. The minimum amount will be \$1,000.00. If State statute or law defines limited liability, use that determination (e.g. Oregon), otherwise calculate the amount using the following formula:

$$[(1) \times (2) + (3) \times (4)] \times (5) = \text{Maximum Amount of Cooperator’s Obligation per Operations Fire. Round up to the next } \$100.$$

- (1) Equals the number of workers normally required to operate the size of proposed project.

_____ Workers

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

\$ _____/Hr. x 12 hours = \$ _____

- (3) Equals the number of pieces of equipment normally required to operate the size of proposed project that can effectively cut and clear fire lines.

_____ Pieces of equipment

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

\$ _____/Hr. x 12 hours = \$ _____/12hr.

- (5) Equals the number of days normally required to control and mop up such fires to a point where control lines can reasonably be expected to hold under foreseeable conditions. Minimum is one day and maximum is 10.

_____ days

Cooperator’s Obligation per Operations Fire,

Maximum

Amount: \$ _____

BT8.5 Sale of Other Materials. Forest Service reserves the right to sell from Contract Area during the period of this contract any materials or products not subject to its terms, but shall not permit removal, possession, or use thereof that will materially interfere with Partner’s Operations. The partner shall not be obligated to do any work made necessary by the action of others.

ROAD MAINTENCE T-SPECIFICATIONS

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 the Purchaser determines 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 B/BT6.31.

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 raveling.

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 Sale Area 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 shown on Sale Area Map, 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.

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 shown on Sale Area Map.

1.1 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. The oversized Material shall be disposed of by sidecasting, unless shown otherwise on Sale Area Map. 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, Forest Service Borrow areas shown on Sale Area Map, 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. Prior to skin patching, potholes shall be patched and the surface shall be cleaned of loose and deleterious material. Apply a tack coat with a slow-setting emulsified asphalt at the rate of 0.1 gallons per square yard. 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 shown on Sale Area Map.

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 drop inlets.

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 shown on Sale Area Map.

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 Traveled Way 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 (B/BT5.3, B/BT6.31, and C/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 Forest Service Specifications for Construction of Roads and Bridges or attached Special Project Specifications.

Emulsified Asphalt 702

Blotter Material 703.12

Magnesium or Calcium Chloride Brine 723.01

Calcium Chloride Flake 723.02

Lignin Sulfonate 723.03

2.4 Testing of Materials. Certification and sampling of bituminous Materials lignin sulfonate, and magnesium chloride shall be in accordance with subsections 105.04 or 723.04 of Forest Service Specifications for Construction of Roads and Bridges.

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 (B/BT5.3, B/BT6.31, and C/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 (B/BT5.3, B/BT6.31, and C/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.

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 shown on Sale Area Map and as required by C/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.

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.

SPECIFICATION T-810 BARRIERS

DESCRIPTION

1.1 This work shall consist of furnishing, installing, or removing barriers. Gates are not included.

MATERIALS

2.1 Materials for barriers shall meet the requirements as shown on attached drawings.

REQUIREMENTS

3.1 Barriers shall be installed in accordance with the attached drawings.

The location of barriers to be removed or installed is shown on Sale Area Map. Installation or removal may occur as often as road use is terminated and resumed.

SPECIFICATION T-811 SURFACE TREATMENT

DESCRIPTION

1.1 This work shall consist of applying a chip seal, sand seal, or fog seal to the Traveled Way.

Chip seals may consist of single or double applications of bituminous Material and cover aggregate.

MATERIALS

2.1 The roads requiring surface treatments, the type of seal coat to be applied, the rate of application, and type and grade of bituminous Material, and the rate of application and grading of cover aggregate will be shown on Surface Treatment Plan (B/BT5.3, B/BT6.31, and C/CT5.31#).

2.2 Emulsions used for fog seals shall be diluted with an equal amount of water and shall be applied at the diluted application rate shown on Surface Treatment Plan (B/BT5.3, B/BT6.31, and C/CT5.31#).

2.3 Seal coat Materials shall meet the requirements of the following subsections of Forest Service Specifications for Construction of Roads and Bridges or attached Special Project Specifications:

Bituminous Materials

Asphalt Cement	702.01
Liquid Asphalts	702.02
Emulsified Asphalt	702.03
Application Temperatures	702.04
Cover Aggregate	703.11
Blotter Material	703.12
Water for Diluting	725.01

2.4 The cover aggregate shall be surface damp at the time of application when using emulsified asphalt and dry when using an asphalt cement or liquid asphalt. Excess water on the aggregate surface will not be permitted.

REQUIREMENTS

3.1 Traffic. Traffic shall be maintained in accordance with B/BT6.33.

3.2 Weather Limitations. Fog seal and chip seal shall not be applied when the weather is foggy or rainy.

Seal coats requiring cover aggregate shall not be applied when the temperature of the surface being treated is below 70 degrees Fahrenheit in the shade.

Fog seal coats shall not be applied when the surface temperature is below 40 degrees Fahrenheit in the shade.

3.3 Equipment. The following equipment or its equivalent shall be used:

A distributor truck equipped to spread the Material uniformly at the designated rate, within the temperature range specified and within 0.04 gallons per square yard of the rate specified. The distributor shall be equipped with a thermometer and a hand hose with spray nozzle.

A rotary power broom and/or blower.

When cover aggregates are applied: A pneumatic tire roller, 8-ton minimum weight with all tires equally inflated to a pressure of at least 90 pounds per square inch. Rollers shall be equipped with devices for applying water to the tires.

Self-propelled aggregate spreader supported by at least four wheels equipped with pneumatic tires on two axles, situated so that at no time will the tires contact the uncovered bituminous Materials. The aggregate spreader shall be equipped with positive controls so that the required amount of Materials will be deposited uniformly over the full width.

Trucks with spreading attachments shall not be used.

3.4 Preparation of Surface. Immediately before applying the bituminous Material, the surface to be sealed shall be cleaned of all foreign and loose Material.

3.5 Application of Bituminous Material. Bituminous Material shall be applied in a uniform, continuous spread. The distributor shall be moving forward at proper application speed at the time the spray bar is opened. Skipped areas or deficiencies shall be corrected prior to the application of cover aggregate.

The spread of bituminous Material shall not be more than 6 inches wider than the width to be covered by the cover aggregate. Operations shall not proceed if the bituminous Materials are allowed to cool, set up, dry, or otherwise impair retention of cover aggregate.

Fog seal shall be allowed to penetrate and dry before traffic is permitted on the sealed portion.

The surfaces of structures and trees adjacent to the area being treated shall be protected to prevent their being spattered or marred.

3.6 Application of Cover Aggregate and Blotter. Immediately following the application of the bituminous Material, cover aggregate shall be spread at the specified rate. Joints between adjacent applications of cover aggregate shall be approximately in the center of two-lane roads.

The aggregate spreader shall not be operated at speeds which cause the aggregate to roll over after striking the bituminous Material. The cut-off of aggregate shall be complete, and any excess aggregate shall be removed from the surface prior to resuming operations. Immediately after the cover aggregate has been spread, any piles, ridges, and uneven distribution shall be corrected.

Cover aggregate may be applied by hand in areas inaccessible to spreading equipment.

Rolling shall begin immediately after spreading the cover aggregate and shall consist of a minimum of two complete coverages.

The second treatment of a double chip seal shall not be applied until at least 24 hours after completion of a first treatment, when an emulsion or asphalt cement is used. If a medium cure liquid asphalt is used, 48 hours shall be allowed between applications. Prior to the second treatment, any loose cover aggregate remaining on the surface after the first treatment shall be removed in such a manner that the cover aggregate set in the bituminous material will not be displaced.

After rolling, traffic shall be controlled to a maximum speed of 15 miles per hour for a period of 4 hours.

The day following the final application of cover aggregate, any concentrations of loose cover aggregate shall be redistributed without disturbing the embedded aggregate. Four days after the final application of cover aggregate, all excess cover aggregate shall be removed. During this period, any bituminous Material that comes to the surface shall be covered with additional cover aggregate or approved blotter Material.

3.7 Blotter Material for fog seals shall be spread in sufficient quantity to prevent tire pickup.