

**FOREST SERVICE**  
**SUPPLEMENTAL SPECIFICATIONS**

**FOR**

**HELWICK TIMBERSALE**

**U.S.D.A Forest Service, Region 1  
Kootenai National Forest  
Cabinet Ranger District  
Sanders County, Montana**



# HELWICK TIMBERSALE

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## **PREFACE**

Delete all but the first paragraph and add the following:

The Forest Service, US Department of Agriculture has adopted FP-03 for construction of National Forest System Roads.

## 101 - TERMS, FORMAT, AND DEFINITIONS

### 101.01 Meaning of Terms

Delete all references to the TAR (Transportation Acquisition Regulations) in the specifications.

### 101.03 Abbreviations.

Add the following to (a) Acronyms:

AFPA	American Forest and Paper Association
MSHA	Mine Safety and Health Administration
NIST	National Institute of Standards and Technology
NESC	National Electrical Safety Code
WCLIB	West Coast Lumber Inspection Bureau

Add the following to (b) SI symbols:

mp	Milepost
ppm	Part Per Million

### 101.04 Definitions.

Delete the following definitions and substitute the following:

**Bid Schedule**--The Schedule of Items.

**Bridge**--No definition.

**Contractor**--The individual or legal entity contracting with the Government for performance of prescribed work. In a timber sale contract, the contractor is the “purchaser”.

**Culvert**--No definition.

**Right-of-Way**--A general term denoting (1) the privilege to pass over land in some particular line (including easement, lease, permit, or license to occupy, use, or traverse public or private lands), or (2) Real property necessary for the project, including roadway, buffer areas, access, and drainage areas.

Add the following:

**Adjustment in Contract Price**--“Equitable adjustment,” as used in the Federal Acquisition Regulations, or “construction cost adjustment,” as used in the Timber Sale Contract, as applicable.

**Change**--“Change” means “change order” as used in the Federal Acquisition Regulations, or “design change” as used in the Timber Sale Contract.

**Design Quantity**--“Design quantity” is a Forest Service method of measurement from the FS-96 *Forest Service Specifications for the Construction of Roads and Bridges*. Under these FP specifications this term is replaced by the term “Contract Quantities”.

**Forest Service**--The United States of America, acting through the Forest Service, U.S. Department of Agriculture.

**Neat Line**--A line defining the proposed or specified limits of an excavation or structure.

**Pioneer Road**--Temporary construction access built along the route of the project.

**Purchaser**--The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through agents, employees, or subcontractors.

**Protected Streamcourse**--A drainage shown on the plans or timber sale area map that requires designated mitigation measures.

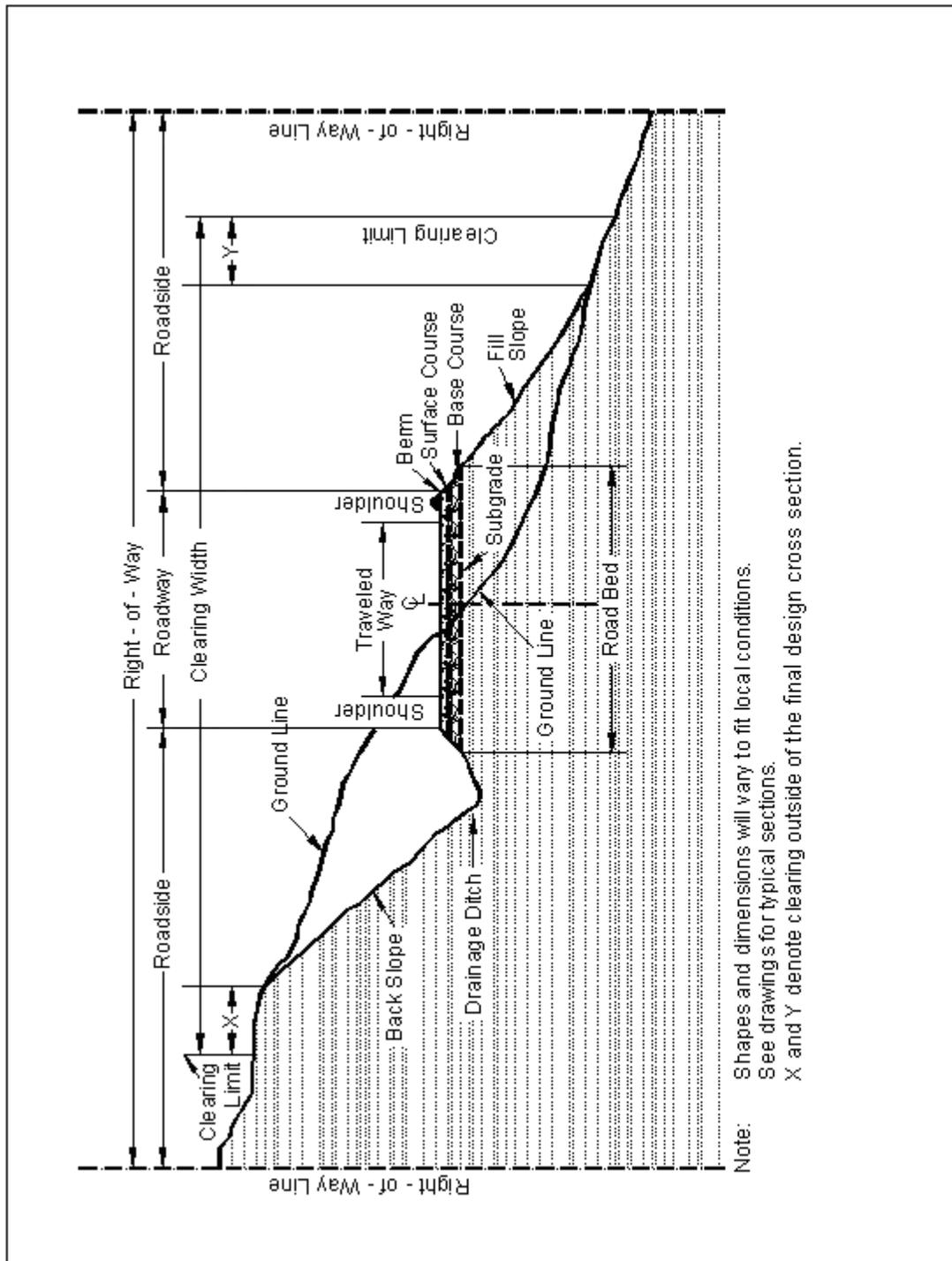
**Road Order**--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

**Schedule of Items**--A schedule in the contract that contains a listing and description of construction items, quantities, units of measure, unit price, and amount.

**Utilization Standards**--The minimum size and percent soundness of trees described in the specifications to determine merchantable timber.

Add Figure 101-1—Illustration of road structure terms:

Figure 101-1—Illustration of road structure terms.



## **102 - BID, AWARD, AND EXECUTION OF CONTRACT**

### **102 Bid, Award, and Execution of Contract**

Delete Section 102 in its entirety.

## 103 - SCOPE OF WORK

### **Deletions**

Delete all but subsection 103.01 Intent of Contract.

### Add the following:

The project consists of constructing and reconstructing haul routes associated within the timber sale area to meet Best Practice Management objectives.

The project is located on the Cabinet Ranger District of the Kootenai National Forest, approximately 8 miles west of Thompson Falls in Sanders County, Montana. Refer to the location map on the title sheet of the plans.

In-stream work must be completed between July 15<sup>th</sup> and September 1<sup>st</sup>, or when channel is dry, unless otherwise approved by the Contracting Officer (CO).

## 104 - CONTROL OF WORK

### **Deletions**

Delete sections 104.01, 104.02, and 104.04.

Add the following subsection:

### **104.06 Use of Roads by Contractor**

The Contractor is authorized to use roads under the jurisdiction of the Forest Service for all activities necessary to complete this contract, subject to the limitations and authorizations designated in the Road Order(s) or described in the contract, when such use will not damage the roads or national forest resources, and when traffic can be accommodated safely.

## 105 - CONTROL OF MATERIAL

### 105.02 Material Sources.

Add the following before the first paragraph.

Sources have been designated for this project as follows:

Riprap Rock – Government Furnished – Class III riprap can be found at numerous locations within the project sale area.

Materials Stockpile Site – Government Furnished – The Contractor will be allowed to stockpile material, including riprap, and culvert components at the site adjacent to the existing roadway. Materials must be stockpiled in such a manner as to allow for safe passage of the general public along the road and to avoid damage to any trees at the culvert site. Provide the CO 72 hours advance notification prior to stockpiling any materials at the construction sites.

Add the following to section (b) Contractor-located sources:

Prior to any pit development or use of materials, the Contractor shall provide to the CO a State certification that the pit site is free of noxious weed as listed on the "All States Noxious Weeds List".

Delete 105.05 (a) and (b) and the last sentence of the second paragraph and substitute the following:

Materials produced or processed from Government lands in excess of the quantities required for performance of this contract are the property of the Government. The Government is not obligated to make reimbursement for the cost of producing these materials.

## 106 - ACCEPTANCE OF WORK

### 106.07 Delete

Delete subsection 106.07.

## **107 - LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC**

### **107.05 Responsibility for Damage Claims.**

Delete the entire subsection.

### **107.06 Contractor's Responsibility for Work.**

Delete the following from the first paragraph.  
“except as provided in Subsection 106.07”.

### **107.09 Legal Relationship of the Parties.**

Delete the entire subsection.

### **107.10 Environmental Protection.**

Add the following:

Design and locate equipment repair shops, stationary refueling sites, or other facilities to minimize the potential and impacts of hazardous material spills on Government land.

Before beginning any work, submit a Hazardous Spill Plan. List actions to be taken in the event of a spill. Incorporate preventive measures to be taken, such as the location of mobile refueling facilities, storage and handling of hazardous materials, and similar information. Immediately notify the CO of all hazardous material spills. Provide a written narrative report form no later than 24 hours after the initial report and include the following:

- Description of the item spilled (including identity, quantity, manifest number, and other identifying information).
- Whether amount spilled is EPA or state reportable, and if so whether it was reported, and to whom.
- Exact time and location of spill including a description of the area involved.
- Containment procedures.
- Summary of any communications the Contractor had with news media, Federal, state and local regulatory agencies and officials, or Forest Service officials.
- Description of clean-up procedures employed or to be employed at the site including final disposition and disposal location of spill residue.

When available provide copies of all spill related clean up and closure documentation and correspondence from regulatory agencies.

The Contractor is solely responsible for all spills or leaks that occur during the performance of this contract. Clean up spills or leaks to the satisfaction of the CO and in a manner that complies with Federal, state, and local laws and regulations.

## 108 - PROSECUTION AND PROGRESS

### **108 Delete**

Delete Section 108 in its entirety.

## 109 - MEASUREMENT AND PAYMENT

### 109 Deletions

Delete the following entire subsections:

**109.06 Pricing of Adjustments.**

**109.07 Eliminated Work.**

**109.08 Progress Payments.**

**109.09 Final Payment.**

### 109.02 Measurement Terms and Definitions.

**(b) Contract quantity.**

Add the following:

Contract quantities will be adjusted only when there are errors in the original design of 15% or more.

Change the following:

“(b) Cubic yard” to “(c) Cubic yard”.

Add the following definitions:

**(p) Thousand Board Feet (Mbf).** 1,000 board feet based on nominal widths, thickness, and extreme usable length of each piece of lumber or timber actually incorporated in the job.

For glued laminated timber, 1,000 board feet based on actual width, thickness, and length of each piece actually incorporated in the job.

### 109.10 Methods of Measurement.

One of the following methods of measurement for determining final payment is DESIGNATED IN THE SCHEDULE OF ITEMS for each PAY ITEM.

**(a) Design Quantity (DQ)**” These quantities denote the final number of units to be paid for under the terms of the contract. They are based upon the original design data available prior to advertising the project. Original design data include the preliminary survey information, design assumptions, calculations, drawings, and the presentation in the contract. Changes in the number of units DESIGNATED IN THE SCHEDULE OF ITEMS may be authorized under any of the following conditions:

- (1) Changes in the work authorized by the CO.
- (2) A determination by the CO that errors exist in the original design that cause a PAY ITEM quantity to change by 15 percent or more.

(3) A written request submitted to the CO showing evidence of errors in the original design that cause the quantity of a PAY ITEM to change by 15 percent or more. The evidence must be verifiable and consist of calculations, drawings, or other data that show how the designed quantity is in error.

**(b) Actual Quantities (AQ).** These quantities are determined from measurements of completed work.

**(c) Lump Sum Quantities (LSQ).** These quantities denote one complete unit of work as required by or described in the contract, including necessary materials, equipment, and labor to complete the job.

## **151 - MOBILIZATION**

### **151.01 Description**

Add the following requirements:

Noxious Weed Control Requirements:

All construction equipment to be used at the job site shall be cleaned and certified free of noxious weeds and their seeds prior to entrance on to forest lands, whether they are owned, leased or borrowed by the Contractor or any subcontractors. "Construction equipment" does not include personal vehicles or support equipment that remains on the main travel route.

Cleaning shall occur off forest land.

Construction equipment shall be visually inspected by the C.O.R. and each one certified in writing to be reasonably clean and weed free. Inspections will take place at a forest administrative site with the Contractor providing at least 24 hours notice. The location of the administrative site is to be agreed upon in advance between the C.O.R. and the Contractor or Subcontractor. Equipment is expected to proceed directly to the job site following the inspection and to not leave the designated weed management district wherein the job site exists.

Certification shall remain valid for each identified piece of equipment for the duration of the specified project and only as long as the equipment remains at the job site or within the designated weed management district. Equipment leaving the designated weed management district will need to be recertified as weed free before being allowed to return to the job site.

### **151.03 Payment.**

Add the following:

All costs associated with equipment cleaning is in the unit price for mobilization.

## 152 – CONSTRUCTION SURVEY AND STAKING

### Description

#### 152.01(a) Personnel.

##### Add the following:

Conduct all construction staking under the direction of a licensed professional engineer or licensed land surveyor who is closely associated and familiar with construction staking.

#### 152.01(c) Material.

##### Add the following:

Use required stake dimensions and materials. Pre-paint the top 2 inches of all stakes and lath, or mark them with plastic flagging. Use designated colors for paint or flagging.

Mark all stakes with a stake pencil that leaves a legible imprint, or with waterproof ink.

Use moisture-resistant paper for survey notes. Keep notes in books with covers that will protect the contents and retain the pages in numerical sequence.

### Construction Requirements

#### 152.02 General.

Delete the first two sentences. Add

the following:

When indicated on the plans, a preliminary survey line has been established on the ground. The project location line is established by offsets from this preliminary line.

Delete second sentence in second paragraph and replace with the following:

Reestablish missing reference, control lines, or stakes as necessary to control subsequent construction staking operations

#### c) Slope Stakes & References:

Replace section with the following:

Slope stakes and references. When required, locate slope stakes on designated portions of the road. Locate the slope stake catch points and use them to establish clearing limits and slope stake references.

Mark slope stakes with the station, the amount of cut or fill, the horizontal distance to centerline, and the slope ratios.

Place slope reference stakes at least 10 feet outside the clearing limit and mark with the offset distance to the slope stake. Place sight stakes when required.

Prior to clearing and grubbing operations, move the slope stake outside the clearing limit to the slope reference stake. After clearing and grubbing and before excavation, reset the slope stakes in their original position.

Use the designated method to establish the slope stake catchpoint.

- **Method I**—Computed Method. Use the template information shown in the plans or other Government-provided data to calculate the actual location of the catchpoint. The slope stake “catchpoint distance” provided may be used as a trial location to initiate slope staking. Recatch slope stakes on any section that does not match the staking report within the tolerances established in Table 152-2.
- **Method II**—Catchpoint Measurement Method. Determine the location of slope stake catchpoints by measuring the catchpoint distances shown in the plans or other Government-provided data.

**(d) Clearing and grubbing limits.**

Add the following:

Establish clearing limits on each side of the location line by measuring the required horizontal or slope distances shown in the stake notes. Mark the clearing limits with flagging or tags on trees to be left standing, or on lath. Make markings intervisible, and no more than 90 feet apart.

After establishing clearing limits, move the location line stake outside the clearing limits for station identification purposes, and mark it with horizontal distance to location line

**(g) Culverts.**

Replace subsection with the following:

Set culvert reference stakes at all culvert locations. Set a culvert reference stake on the centerline of the culvert 10 feet from each end or beyond the clearing limit, whichever is greater. Record the following on culvert reference stakes:

- (1) Diameter, actual field measured length, and type of culvert.
- (2) The vertical and horizontal distance from the reference stake to the invert at the ends of the culvert.
- (3) Station of actual point where culvert intersects centerline.

When required, stake headwall for culverts by setting a hub with a guard stake on each side of the culvert on line with the face of the headwall. Perform this work after clearing is completed.

Replace Table 152-1 with the following two tables:

**Table 152-1 Tolerances for reestablishing P-line, traverse, and elevations.**

Precision Class	Minimum Position Closure	Angular Accuracy (±)	L-Line Tangent Control Points <sup>a</sup> (±)	Vertical Closure <sup>b</sup> (±)
A (Bridges)	1/10,000	2 sets, direct/reverse 10 second rejection limit	N/A	0.02 ft or 0.02ft/1000ft <sup>c</sup>
B	1/5,000	2 sets, direct/reverse 20 second rejection limit	0.1 ft	0.02 ft or 0.02ft/1000ft <sup>c</sup>
C	1/1,000	1 set, direct/reverse 1 minute rejection limit	0.2 ft	0.5ft/1000ft <sup>c</sup>
D	1/300	Foresight and backsight; 15 minute rejection limit <sup>c</sup>	0.4 ft	1.0ft/1000ft <sup>c</sup>
E	1/100	Foresight and backsight; 30 minute rejection limit <sup>c</sup>	0.8 ft	1.0ft/1000ft <sup>c</sup>

a. Accuracy of offset measurement.

b. Determine vertical closures at intervals not to exceed 2000 ft as measured along centerline.

c. Use greater value.

**Table 152-2 Cross section and slope stake tolerances.**

Item	Tolerances				
	A	B	C	D	E
Allowable deviation of cross-section line projection from a true perpendicular to tangents, a true bisector of angle points, or a true radius of curves	(±)2°	(±)3°	(±)3°	(±)5°	(±)5°
Take cross-sections topography measurements so that variations in ground from a straight line connecting the cross-section points will not exceed	0.5 ft	1.0 ft	2.0 ft	2.0 ft	3.0 ft
Horizontal and vertical accuracy for cross-sections, in feet or percentage of horizontal distance measured from traverse line, whichever is greater.	0.1 ft or 0.4%	0.15 ft or 0.6%	0.2 ft or 1.0%	0.2 ft or 1.0%	0.3 ft or 1.0%
Horizontal and vertical accuracy for slope stake, slope stake references, and clearing limits. In feet or percentage of horizontal distance measured from centerline or reference stake, whichever is greater.					
Slope reference stakes and slope stakes.	0.1 ft or 0.4%	0.15 ft or 0.6%	0.2 ft or 1.0%	0.2 ft or 1.0%	0.3 ft or 1.0%
Clearing limits	1.0 ft	1.0 ft	1.0 ft	1.5 ft	2.5 ft

## 153 - CONTRACTOR QUALITY CONTROL

Add the following.

### 153.07. Project Submittals

At a minimum the contractor shall provide project submittals as shown on the below Submittal Log. Submittal requirements are listed in the Standard Specifications, Supplemental Specifications, and Plans.

<b>Submittal Log</b>					
<b>Log No.</b>	<b>Incidental to Pay Item(s)</b>	<b>Description of Submittal</b>	<b>Type of Submittal</b>	<b>Requirement found in Specification No. /Drawings</b>	<b>Additional Specification References</b>
<b>1</b>	151	Weed Free Material Source Certification	Material Certification	FSSS 105.02(b)	
<b>2</b>	151	Hazardous Spill Plan	Plan	FSSS 107.10	
<b>3</b>	151	Contractor Quality Control Plan	Plan	153.02	552.09
<b>4</b>	156	Traffic Control Plan	Plan	FSSS 156.03	
<b>5</b>	157	Stream Diversion Plan (Per Site)	Plan	Drawings	
<b>6</b>	157	Soil Erosion and Pollution Control Plan	Plan	FSSS 157.03	
<b>8</b>	602	Culvert Certification	Shop Drawings	602.08	106, Drawings
<b>9</b>	622	Equipment Rental	Equipment Approval	FSSS 622.02	
<b>10</b>	625	Seed Mix & Mulch	Material Certification	625.10	106, FSSS 625, 713

## **155 - SCHEDULES FOR CONSTRUCTION CONTRACTS**

### **155 Delete**

Delete Section 155 in its entirety.

## **156 - PUBLIC TRAFFIC**

### **156.03 Accommodating Traffic During Work.**

Delete the first paragraph and replace with the following:

Accommodate traffic according to the requirements set forth below, MUTCD, and Section 635. Submit a traffic control plan for acceptance at least 30 days before intended use.

Add the following project specific requirements:

The Contractor will be allowed to close roads to through traffic. Contact the C.O. for details. The Contractor shall notify local newspapers 2 weeks in advance of the closure indicating anticipated closure dates. All other haul routes may be closed without any notification. The Contractor will be allowed to close Road No. 152 for a period of no more than 4 hours with at least 1 hour of being open per closure.

It is the responsibility of the Contractor to schedule delivery of materials, equipment and all necessary supplies to the sites, to ensure that the crossing can be substantially completed within the specified contract time. The Contractor shall give the CO at least two weeks advanced written notice prior to any road closure. The Contractor shall be responsible for providing, installing, maintaining, and removal of warning signs and type 3 barricades required for the road closure period in accordance with MUTCD as submitted and approved in the traffic control plan.

Delete the following from the last sentence of the last paragraph:

according to Subsection 106.07(b).

### **156.08 Traffic and Safety Supervisor.**

Delete this subsection in its entirety.

## 157 - SOIL EROSION CONTROL

### 157.02 Materials.

Add the following:

Provide bales, wattles, logs and rolls from a certified noxious weed free source.

### 157.03 General.

Add the following:

Delete the first two paragraphs and replace with the following:

Submit an Erosion Control Plan detailing permanent and temporary control measures to minimize erosion and sedimentation during and after construction in accordance with the plans and storm water permits. Do not modify the type, size, or location of any control or practice without approval. Submit the erosion control plan proposal at least 7 days before operations begin to the CO for approval.

Reflect in the Erosion Control Plan special concerns and measures necessary to protect resources and government improvements. Include:

- (a) The construction activities and sequence of implementation relating to specific erosion control measures.
- (b) The location and type of permanent controls to be implemented during construction.
- (c) The location and type of temporary controls to be implemented during construction.
- (d) For work in stream channels with running water a detailed dewatering plan.
- (e) For work in stream channels without flowing water describe level of ground and vegetative disturbance and measures to reduce potential sediment delivery.
- (f) Description of the monitoring plan.

Add the following to the third paragraph:

Upon completion of construction at the site, remove all temporary erosion control devices, dewatering materials and equipment from Government property.

### 157.08 Water Crossings.

Add the following:

At any channel crossing where there is running water, dewater by rerouting water flow around the site before and during excavation and embankment operations.

## 201 - CLEARING AND GRUBBING

### 201.03 General.

Delete the last sentence:

### 201.04 Clearing.

Add the following:

Utilization standards for merchantable timber are listed below. Fall and buck merchantable material into lengths not to exceed 40 feet. Pieces (logs) meet utilization standards when such pieces would have met Utilization Standards if bucking lengths were varied to include such material.

#### Minimum Utilization Standards

Length	Diameter Breast High (d.b.h.)	Diameter (Inside Bark) at Small End	33 1/3 % Net Scale in % of Gross Scale
8 feet	7.0 inches	4.6 inches	

Delete subsection (d) and add the following:

- (d) Limb all logs. Remove brush and soil from log decks. Deck logs so that logs are piled parallel to one another, can be removed by standard log loading equipment, will not damage standing trees, will not interfere with drainage, and will not roll. Keep logs in log decks free of brush and soil.
- (e) Within the construction limits shown on the plans, trim tree branches that extend over the road surface and shoulders to attain a clear height of 20 feet. Trim tree limbs as near flush with the trunk as practicable.
- (f) Clear only the minimum amount of vegetation required to complete the project.

### 201.06 Disposal.

Delete this subsection and substitute the following:

Dispose of clearing and grubbing debris according to the following methods:

- Method A: Bury. Bury stumps at a waste site designated by the CO. Do not bury debris inside the roadway prism limits, beneath drainage ditches, or in any areas subject of free-flowing water.
- Method B: Slash Filter Windrow. Construction slash shall be left in a windrow at a location designated by the CO. Slash windrows shall consist of small, dense vegetative material and be free of stumps and merchantable timber. Slash windrows shall not interfere with culvert drainage. Slash windrows shall be between 2 feet and 3 feet high, and shall not extend above the

road surface elevation. Refer to FSSS 203.05 Method E for additional information.

Method C: Scattering. Construction slash in excess of that needed to build slash filter windrows (Disposal Method B) may be scattered outside the clearing limits without damaging trees.

Method D: Decking Unmerchantable timber. Logs not meeting utilization standards but which could be used for firewood shall be decked in areas designated by the CO. Materials shall be cut into lengths not to exceed 40 feet and all limbs shall removed. Decks shall be stable and free of brush and soil.

Method E: Decking Merchantable timber. All merchantable timber within the clearing limits on Forest Service land is Government property. Deck all merchantable timber at approved locations according to 201.06.

## 203 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS

### 203.05 Disposing of Material.

Modify this subsection as follows:

**(a) Remove from project.** Add the following:

All materials designated for removal become property of the Contractor and are to be disposed of by removing off of Forest Service Lands in accordance with all local, state, and federal requirements.

**(b) Burn.** Delete this section.

**(c) Bury.** Delete this section.

Add the following:

**(e) Placing Slash on Embankment Slopes.** Place suitable construction slash on completed embankment slopes in slash filter windrow(s) according to 201.06 Method B and as shown on the plans, or as directed by the CO to reduce soil erosion.

## 204 - EXCAVATION AND EMBANKMENT

### 204.05 Conserved Topsoil

Delete the entire paragraph.

### 204.11 Compaction.

Delete the subsection and replace it with the following:

**Roller Compaction.** Adjust the moisture content to a level suitable for compaction. Operate Rollers over the full width of each layer until visible displacement ceases, but no fewer than six passes. Use rollers that meet the following requirements:

- (1) Steel wheeled rollers, other than vibratory, capable of exerting a force of not less than 250 pounds per inch of width of the compression roll or rolls.
- (2) Vibratory steel wheeled rollers equipped with amplitude and frequency controls with a minimum weight of 6 tons, specifically designed to compact the material on which it is used.
- (3) Pneumatic-tired rollers with smooth tread tires of equal size that will provide a uniform compacting pressure for the full width of the roller and capable of exerting a ground pressure of at least 80 psi.
- (4) Sheepsfoot, tamping, or grid rollers capable of exerting a force of 250 lbs/inch of width of the roller drum.

Add the following compaction methods:

**(d) Layer Placement Method (Hauling and Spreading Equipment).** Place material to the minimum depth needed for operation of spreading equipment. Level and smooth each embankment layer before placing the next layers. Operate hauling and spreading equipment uniformly over the full width of each layer. Construct a solid embankment with adequate compaction by working smaller rock and fines in with the larger rocks to fill the voids, and by operating hauling and spreading equipment uniformly over the full width of each layer as the embankment is constructed.

**(e) Layer Placement (Roller Compaction) Method.** Place material by end dumping to the minimum depth needed for operation of spreading equipment. Adjust the moisture content of the material to obtain a mass that will not visibly deflect under the load of the hauling and spreading equipment. Operate compaction equipment over the full width of each layer until visible deformation of the layer ceases or, in when a sheepsfoot roller is used, the roller “walks out” of the layer. Make at least three complete passes.

### 204.12 Ditches.

Delete the entire subsection and replace it with the following:

**204.12 Drainage Excavation.** Construct side ditches, minor channel changes, inlet and outlet ditches, furrow ditches, ditches along the road but beyond roadway limits, drain dips and other minor earth drainage structures as shown on the plans. Utilize excavated material in accordance with Subsection 204.06.

Stake drain dips in a manner that ensures they will be constructed in accordance with the details shown on the plans. Bring the road to grade and have locations approved prior to staking drain dips.

**204.13 Sloping, Shaping, and Finishing.**

Delete section (d) and add the following:

(d) Finishing. For surfaced roads, remove all material larger than 6 inches from the top 6 inches of the roadbed. For all roads, finish the roadbed to be smooth and uniform, and shaped to conform to the typical sections. Remove unsuitable material from the roadbed and replace it with suitable material. Finish roadbeds to the tolerance class shown in table 204-2.

Ensure that the subgrade for both surfaced and unsurfaced roads is visibly moist during shaping and dressing. Scarify to 6 inches below the bottom of low sections, holes, cracks, or depressions and bring back to grade with suitable material. Maintain proper ditch drainage.

For unsurfaced roads, use one of the following methods to finish the roadbed:

- (1) Method A. Remove all material larger than 6 inches from the top 6 inches of the roadbed and replace with suitable material.
- (2) Method B. Use a vibratory grid roller or approved equal with a minimum weight of 10 tons. Roll at least 5 full-width passes or until visible displacement ceases.
- (3) Method C. For roads designated as Construction Tolerance Class K, L, or M, finish the roadbed by spreading the excavation. Eliminate rock berms.

Add Table 204-2—Construction Tolerances:

**Table 204-2 Construction tolerances.**

	Tolerance Class <sup>(a)</sup>												
	A	B	C	D	E	F	G	H	I	J	K	L	M
Roadbed width (ft)	+0.5	+0.5	+1.0	+1.0	+1.0	+1.0	+1.5	+1.0	+2.0	+2.0	+2.0	+2.0	+2.0
Subgrade elevation (ft)	±0.1	±0.2	±0.2	±0.5	+0.5	±1.0	±1.0	±1.5	±2.0	±3.0	±2.0	±3.0	(c)
Centerline alignment (ft)	±0.2	±0.2	±0.5	±0.5	±1.0	±1.0	±1.5	±1.5	±2.0	±3.0	±3.0	±5.0	(c)
Slopes, excavation, and embankment (% slope <sup>(b)</sup> )	±3	±5	±5	±5	±5	±5	±10	±10	±10	±10	±20	±20	±20

- a. Maximum allowable deviation from construction stakes and drawings.
- b. Maximum allowable deviation from staked slope measured from slope stakes or hinge points.

c. Unless otherwise shown the centerline alignment and subgrade elevation, as built, have no horizontal curves with a radius of less than 80 feet, and no vertical curves with a curve length of less than 80 feet when the algebraic difference in the grade change is less than 10 percent, or a curve length of less than 100 feet when the algebraic difference of the grade change is greater than or equal to 10 percent. The centerline grade is not to exceed 20 percent in 100 feet of length.

#### **204.14 Disposal of Unsuitable or Excess Material.**

Delete the text of the first paragraph and substitute the following:

Unsuitable or excess material shall be disposed of along the adjacent fill slopes as directed.

#### **204.15 Acceptance**

##### **Table 204-1 Sampling and Testing Requirements.**

Add the following note to the table:

(2) When compaction methods (d) or (e) are used AASHTO M 145, T 99, T 180, and T 310 are not required for earth embankment test methods.

## 251 - RIPRAP

### **251.01 Description.**

Delete the first sentence and add the following:

This work consists of furnishing, hauling, and placing riprap for bank protection, slope protection, drainage structures, erosion control, and cross-vane structures.

### **251.03 General.**

Change reference from Section 209 to Section 208.

### **251.07 Acceptance.**

Delete reference to Table 251-1.

Delete the fourth sentence and add the following:

Structure excavation and backfill will be evaluated under section 208.

Delete Table 251-1.

### **251.09 Payment.**

Add the following:

The cost of excavation, embankment, and haul required for placement of riprap is incidental to the riprap pay item.

## **602 - CULVERTS AND DRAINS**

### **602.03 General.**

Delete the last paragraph and add the following:

Excavation and backfill will be evaluated under Section 209 for culverts less than six feet in diameter or concrete box culverts with a clear opening less than four feet.

Excavation and backfill will be evaluated under Section 208 for culverts larger than six feet in diameter or concrete box culverts with a clear opening greater than four feet.

Excavation and backfill for large diameter box culverts will be paid under a separate 208 bid item.

### **602.05 Acceptance.**

Delete the last paragraph and add the following:

Excavation and backfill will be evaluated under Section 209 for culverts less than six feet in diameter or concrete box culverts with a clear opening less than four feet.

Excavation and backfill will be evaluated under Section 208 for culverts larger than six feet in diameter or concrete box culverts with a clear opening greater than four feet.

Excavation and backfill for large diameter box culverts will be paid under a separate 208 bid item.

## 622 - RENTAL EQUIPMENT

### 622.02 Rental Equipment.

Delete the first two sentences of the first paragraph and add the following:

Hydraulic Excavator. Provide a track mounted hydraulic excavator, at least 90 HP, less than 15 years old, and reasonably free of leaks and other mechanical deficiencies. Bucket must be equipped with a hydraulic "thumb". Provide a competent operator.

Large Dump Truck. Provide a large dump truck with a minimum capacity of 12 cubic yards, less than 15 years old, and reasonably free of mechanical deficiencies. Provide a competent truck driver.

Grader. Provide a grader capable of blading the width of the roads, less than 15 years old, and reasonably free of mechanical deficiencies. Provide a competent operator.

## 625 - TURF ESTABLISHMENT

### 625.04 Preparing Seedbed.

Delete entire subsection.

### 625.05 Watering

Delete entire subsection.

### 625.07 Seeding.

(a) **Dry method.** Delete the third sentence.

Add the following after subsection (a).

**Seed Mix.** Furnish and apply the following kinds and amounts pure live seed:

Lolo Seed Mix A (9/08)

<u>Kind of Seed</u>	<u>Live Seed (Lbs/Acre)</u>
1. Annual Ryegrass	6.0
2. Mountain Bome	4.0
3. Sheep Fescue	4.0
4. Thickspike Wheatgrass	4.0
5. Pubescent Wheatgrass	5.0
6. Slender Wheatgrass	5.0
Total .....	28 Pounds/Acre

### Seed Certification

Certified, blue-tagged seed shall be used where a name variety or cultivar is specified. Blue tags that are removed to mix or spread the seed will be saved and provided to the Forest.

All seed purchased will be certified free of seeds from weeds listed on the current "All States Noxious Weeds List."

Pounds of seed to be furnished per acre shall be obtained by dividing the pounds of pure live seed required per acre by the product of the percent purity and percent germination.

Example:  $\frac{5 \text{ lbs. pure live seed/acre}}{(0.90 \times 0.85)} = 6.55 \text{ lbs. commercial seed/acre}$   
where: purity = 90%; germination = 85%.

**625.08 Mulching.**

Delete the entire subsection and replace with the following:

**Mulching:**

Mulch material shall be weed free straw and shall be applied at a uniform rate to adequately cover the seed. The weed free straw shall be from a grain crop such as barley straw, wheat straw or oat straw.

Mulch will be applied in a one-step operation with the seed at the rate of 1 Ton per Acre.

## 705 - ROCK

### **705.02 Riprap Rock.**

Delete this subsection and add the following.

A Government source shall be provided for riprap.