CHATTAHOOCHEE–OCONEE NATIONAL FOREST

OCONEE R. D.

Jasper
F. S. 1060

Traffic Service Level D

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D.W. Byrd — 4/19/2011
FOREST ENGINEER – ROADS — DATE

4/18/2011
ER STAFF OFFICER — DATE

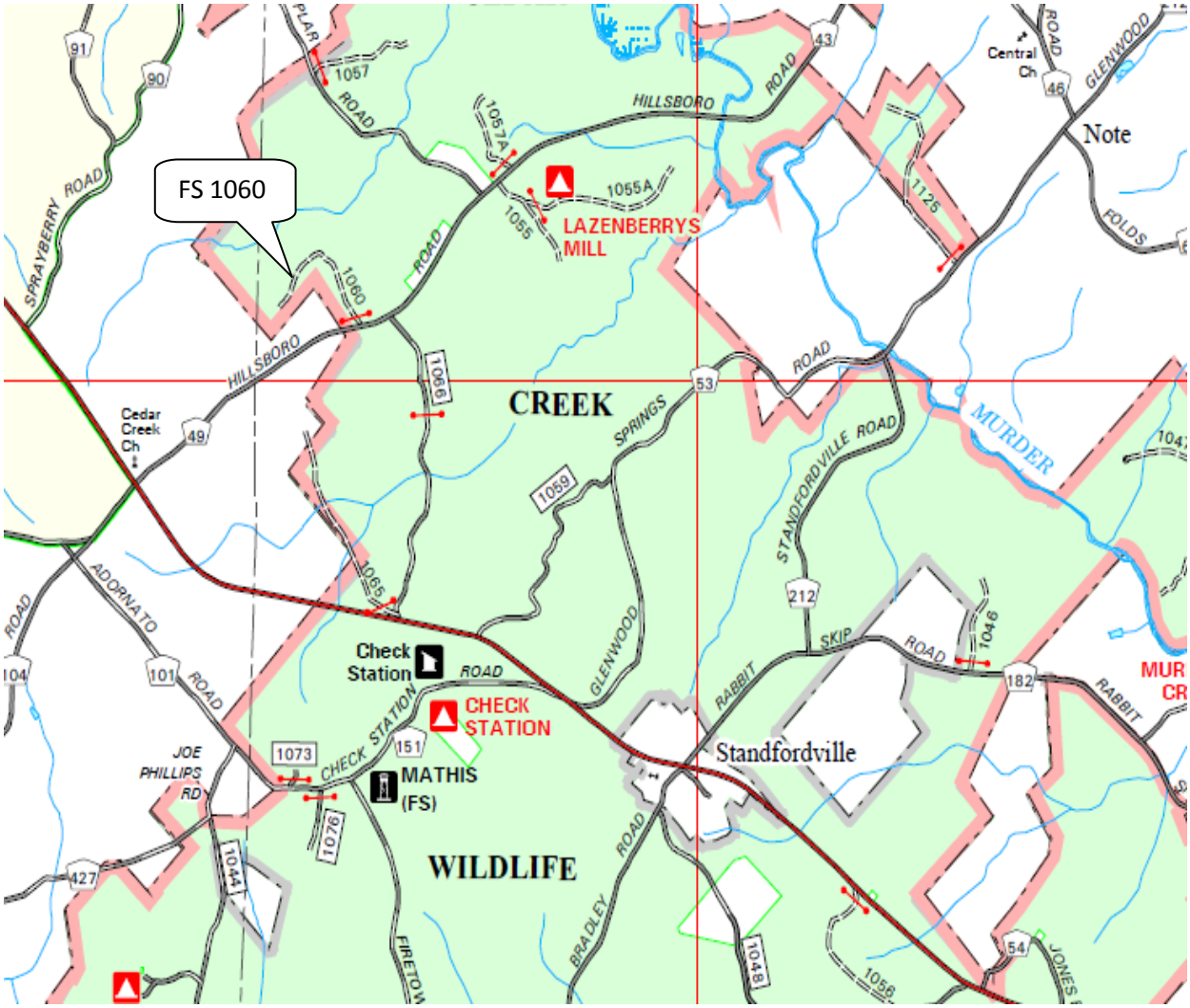
31 MARCH 2011
DISTRICT RANGER (ACTING) — DATE

4·20·11
FOREST SUPERVISOR — DATE

Oconee National Forest

Vicinity Map

Forest Service Road 1060



PART I – SUMMARY OF QUANTITIES

SECTION B – SERVICES AND PRICE

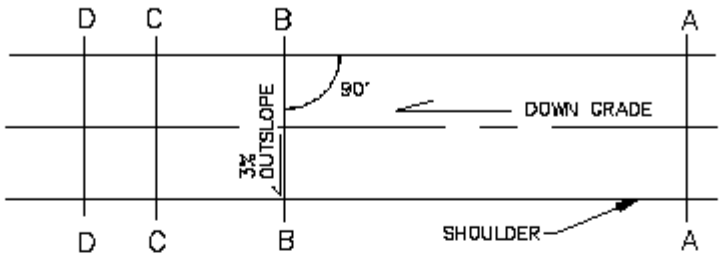
(Reconstruction F.S. 1060)

Oconee
Chatt-Oconee
Putnam

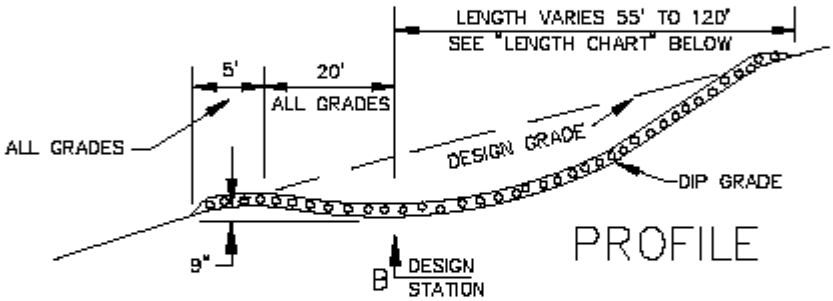
B- 1 - SCHEDULE OF ITEMS

ITEM NO.	DESCRIPTION	PAY UNIT	EST. QTY.	UNIT PRICE	TOTAL PRICE
30318	Road reconditioning, roadbed, compaction method _d	Mile	.60		
30802	Roadway aggregate, compaction method __GA #4 compaction_a__	Ton	280		

TOTAL



PLAN



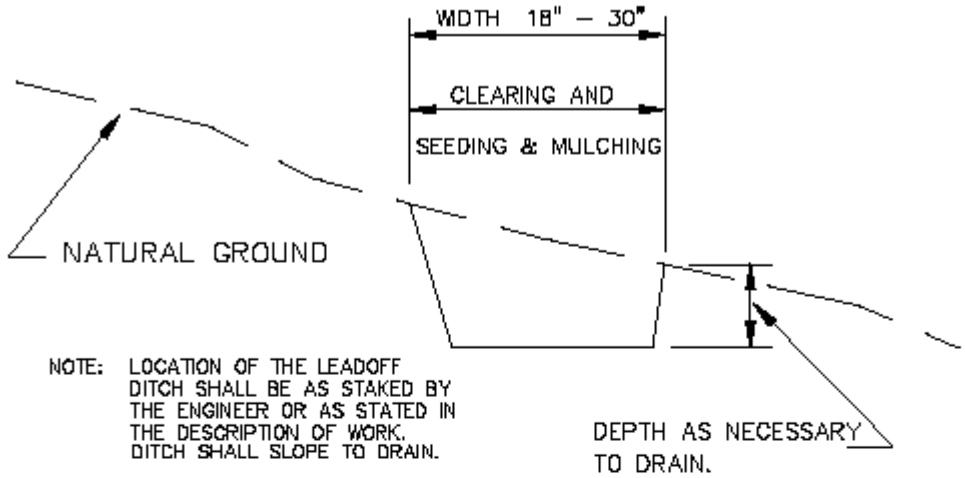
PROFILE

LEGEND	LENGTH CHART	
A = BEGIN THE DIP	DESIGN GRADE	LENGTH
B = LOWEST POINT IN DIP, --=DESIGN STA.=-	10%	120'
C = CREST	9%	80'
D = END OF DIP	8% OR LESS	55'

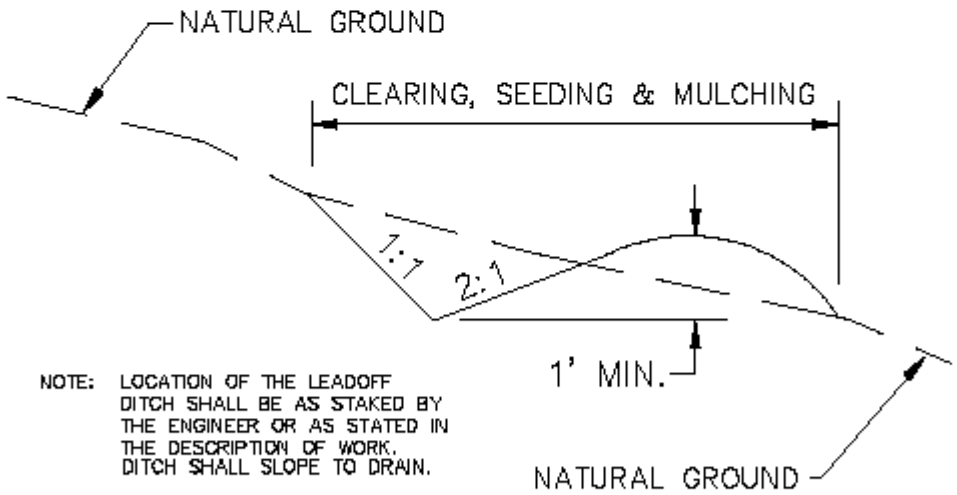
NOTES: OUTLET OF DIPS SHALL DRAIN FREELY.

NOT TO SCALE

PROJECT: OCMULGEE RIVER ROAD PART A
LOCATION: OCONEE
FOREST: CHATTAHOOCHEE-OCONEE NFS



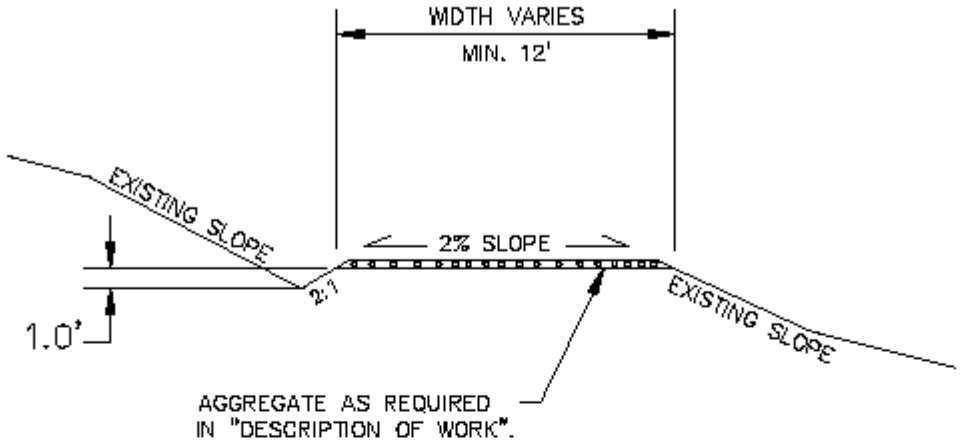
NOTE: LOCATION OF THE LEADOFF DITCH SHALL BE AS STAKED BY THE ENGINEER OR AS STATED IN THE DESCRIPTION OF WORK. DITCH SHALL SLOPE TO DRAIN.

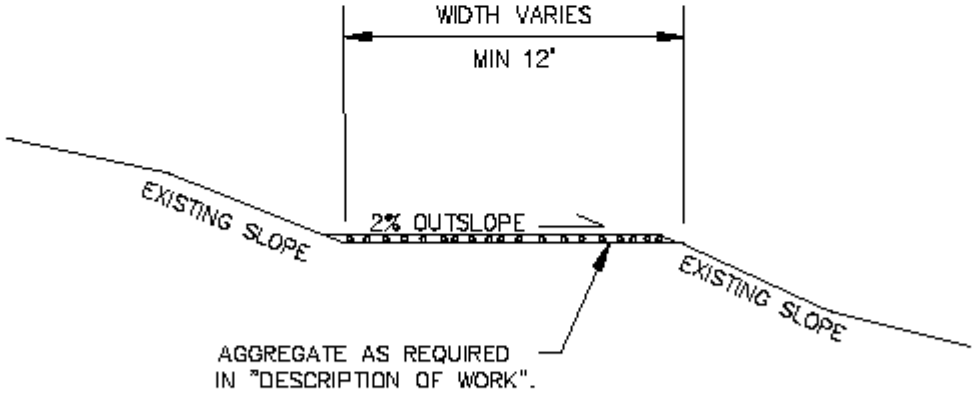


NOTE: LOCATION OF THE LEADOFF DITCH SHALL BE AS STAKED BY THE ENGINEER OR AS STATED IN THE DESCRIPTION OF WORK. DITCH SHALL SLOPE TO DRAIN.

NOT TO SCALE

PROJECT: OCMULGEE RIVER ROAD PART A
LOCATION: OCONEE NF
FOREST: CHATTAHOOCHEE-OCONEE NFS





NOT TO SCALE

PROJECT: OCMULGEE RIVER ROAD PART A
LOCATION: OCONEE NF
FOREST: CHATTAHOOCHEE-OCONEE NFS

Forest Service
Specified Road Reconstruction

F.S. Road 1060

00+00	Begin project in accordance with typical sections and
	FS Specifications. Begin at intersection with County Road.
	Begin 3” #4 stone
0+10	Existing CSP Clean inlet and outlet
0+75	Existing gate “DO NOT DISTURB”
1+00	Stop 3” #4 stone
4+60	Construct Dip and lead off ditch
5+75	Construct Dip and lead off ditch
10+10	Construct Dip and lead off ditch
12+75	Construct Dip and lead off ditch
13+00	Start 3” #4 stone
15+00	Construct Dip and lead off ditch
17+25	Construct Dip and lead off ditch
18+80	Construct Dip and lead off ditch
20+40	Construct Dip and lead off ditch
21+25	Existing 60” CSP “DO NOT DISTURB”
	Clean inlet and outlet
22+50	Construct Dip and lead off ditch
23+50	Construct Dip and lead off ditch

24+30	Construct Dip and lead off ditch
25+75	Construct Dip and lead off ditch
27+15	Construct Dip and lead off ditch
28+70	Construct Dip and lead off ditch
30+00	Stop stone
31+75	EOP

GENERAL NOTES

1. The basic road width for the reconstruction of this road is 12 feet.
2. All disturbed soils shall be seeded and mulched. Mulch will not be required where aggregate is placed.
3. Dips will receive 15 tons of gravel after grade approval.

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Preface

Preface_wo_03_15_2004_m

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

101.00_nat_us_07_25_2005

101.01_nat_us_02_17_2005

101.01 Meaning of Terms.

Add the following:

Delete all references in FP-03 to Transportation Acquisition Regulations (TAR).

101.01_nat_us_02_22_2005

101.01 Meaning of Terms

Delete all references to the FAR (Federal Acquisition Regulations) in the specifications.

101.03_nat_us_06_16_2006

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_nat_us_06_16_2006

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.

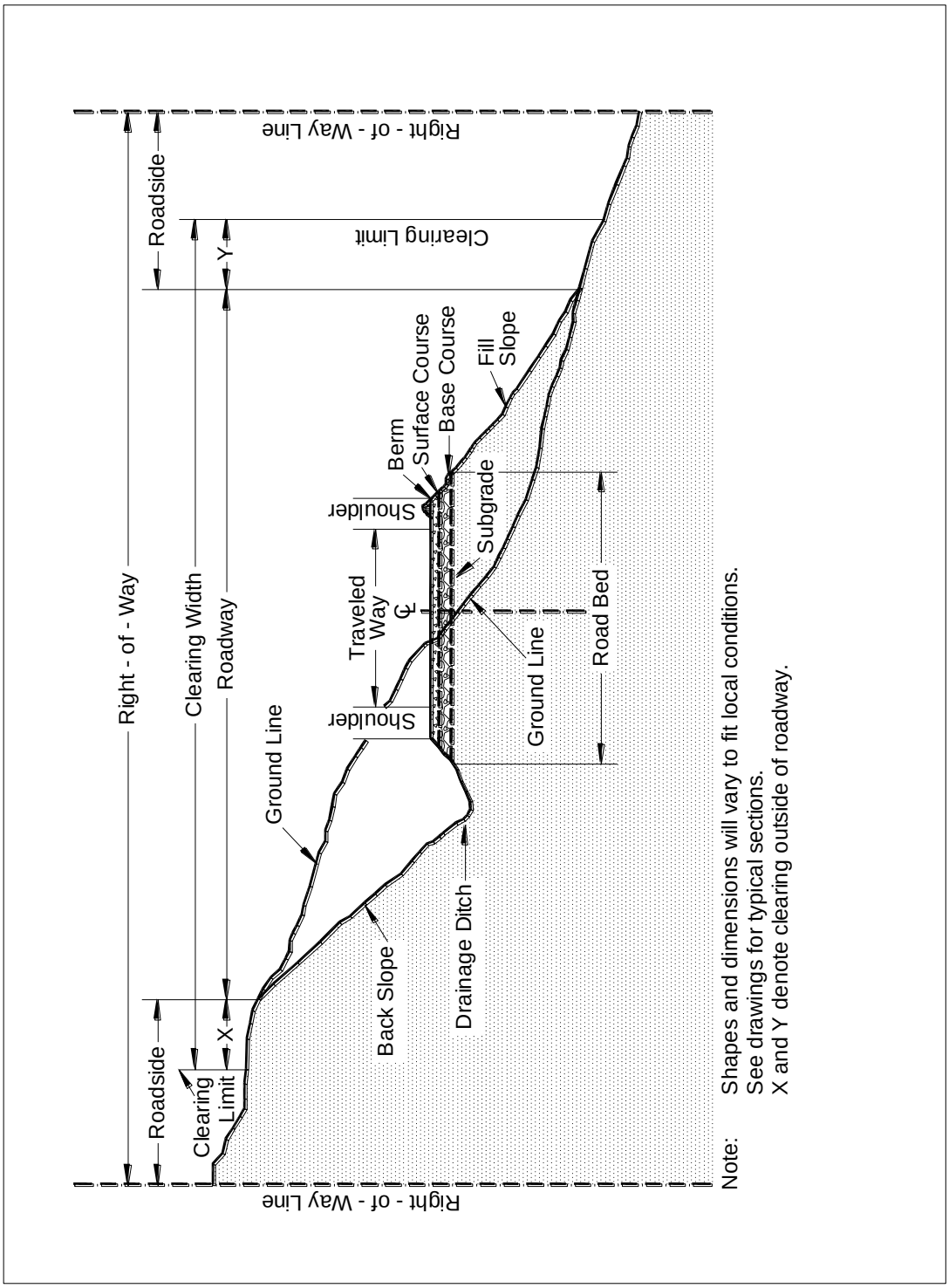
Road Order--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

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.



101.04_nat_us_03_11_2005

101.04 Definitions.

Delete the following definitions:

Contract Modification

Day

Notice to Proceed

Solicitation

102 - Bid, Award, and Execution of Contract

102.00_nat_us_02_16_2005

102 Bid, Award, and Execution of Contract

Delete Section 102 in its entirety.

103 - Scope of Work

103.00_nat_us_02_16_2005

Deletions

Delete all but subsection 103.01 Intent of Contract.

104 - Control of Work

104.00_nat_us_06_16_2006

Deletions

Delete Sections 104.01, 104.02, and 104.04.

104.00_01_us_10_10_2006

104.03 Specifications and Drawings.

Add the following:

(c) As-Built-Plans. Furnish one set of as built plans. The Government will provide one set of contract plans to be used exclusively for recording the as-built details of the project. Use red pencil or red ink to record the information on the as-built plans.

Note all additions or revisions to the location, character, and dimensions of the prescribed work shown on the contract plans. Line out all details shown that are not applicable to the completed work. Check off details shown that were incorporated into the completed work without change.

Retain the plans at the project site and, as work progresses, continually update them to reflect the as-built details. Upon request, make the plans available to the CO to review for compliance with these specifications.

Show the following types of changes on the as-built plans:

(1) Typical section(s)

(a) Revisions to the alignment
(b) Revisions to width or ditch
(c) Revisions to embankment or back slopes
(d) Changes in the construction limits

(2) Plan and profile

(a) Revisions to the alignment
(b) Changes in the construction limits
(c) Revisions in location, type, and grade of road approaches
(d) Location of monuments and permanent references
(e) Revisions to grades, elevations, and stationing of intersection PIs
(f) Location and type of utilities
(g) Equations

(3) Bridge

(a) Stationing of bridge ends
(b) Revisions to footing and seal elevations
(c) Pile length, size, type, location and tip elevation
(d) Any changes in plan dimensions
(e) Changes in reinforcing

(4) Miscellaneous

(a) Revisions to parking areas or turnouts
(b) Culvert diameter, length, type and stationing
(c) Location, length, stationing and type of retaining walls
(d) Location, length, stationing and end treatment of guardrail
(e) Final location, type and length of curbs, sidewalks, etc.
(f) Location, length, and type of fencing
(g) Location, elevation and type of aerial or underground utilities

Furnish the as-built working plans to the CO before the final inspection. Correct all details found during the final inspection that are not shown on the as-built plans and return to the CO within 5 days.

<u>Add the following subsection:</u>

104.06 Use of Roads by Contractor

Commensurate with use, maintain all unpaved roads under the jurisdiction of the Forest Service as required within. All costs for such maintenance work shall be incidental to other items in the contract.

(a) Surface blading

(1) Shape the existing roadbed, including turnouts, to remove ruts and conform reasonably to the previous cross section. Blade the existing surface aggregate so as to conserve material and prevent segregation of sizes, return surface aggregate to roadway during maintenance operations. Repeat surface blading as often as required.
(2) Remove earth slides, fallen timber or boulders obstructing road surface.
(3) Do not undercut roadside cut slopes.
(4) Remove berms from road surface and shoulders, unless designated to remain.
(5) At intersections, grade the roadbeds of side roads for a reasonable distance to assure a proper blend of adjacent driving surfaces.
(6) Clean and shape drainage dips and lead-off ditches and shaped to conform reasonably to their previous line, grade and cross section.

(b) Ditch cleaning

(1) Remove and dispose of all sloughed material from roadside ditches to provide an unblocked waterway conforming reasonably to previous line, grade and cross section
(2) Clean culverts, inlet basins and leadoff ditches as required ensuring proper function.
(3) Suitable material removed from the ditch or culverts may be blended into the existing native road surface, shoulder or designed berm during the cleaning operations.
(4) Dispose of slough material not blended into surface material or designed berms, away from stream channels.

(c) Snow removal

(1) Remove snow if authorized in the Road Orders.
(2) Remove snow in a manner that will preserve and protect the roads, ensure safe and efficient transport of materials, equipment, and personnel and prevent excessive erosion damage to roads, streams and adjacent lands.
(3) Remove snow from entire road surface width including turnouts. Leave a minimum two inch layer of snow to protect road surface. Do not undercut banks. Do not blade gravel or other surface material off the road surface. Do not use tracked machines for snow removal unless approved by CO.
(4) Remove snow, ice or debris from culverts and ditches so drainage system can function properly. Keep ditches and culverts functional during and after roadway use.
(5) Do not allow snow berms to remain on the road surface. Remove berms on shoulder or allow for suitable openings to allow for surface drainage without damage to fill. Deposit all debris removed from the road surface and ditches, away from stream channels.

(d) Dust control

Apply dust control to road surface in accordance with Section 158 or 306 as applicable and when required by the CO.

Add the following subsection:

104.07 Other Contracts.

(add project specific information, example below, delete this sentence from final packet)

The Federal Highway Administration is administering and is intending to award a contract for the reconstruction of 3 1/2 miles of Salmon la Sac Road approximately 5 miles north of this project. Schedule activities to ensure no delays or interference to the operations of the Federal Highway Administration contract.

104.03_nat_us_03_03_2005

104.03 Specifications and Drawings.

Delete 104.03.

104.06_nat_us_02_17_2005

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_nat_us_06_16_2006

105.02 Material Sources.

105.02(a) Government-provided sources.

Add the following:

Comply with the requirements of 30 CFR 56, subparts B and H. Use all suitable material for aggregate regardless of size unless otherwise designated. When required, re-establish vegetation in disturbed areas according to section 625.

105.05_nat_us_05_12_2004

105.05 Use of Material Found in the Work.

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

106.01_nat_us_03_29_2005

106.01 Conformity with Contract Requirements.

Delete Subsection 106.01 and substitute the following:

Follow the requirements of FAR Clause 52.246-12 Inspection of Construction.

References to standard test methods of AASHTO, ASTM, GSA, and other recognized standard authorities refer to the methods in effect on the date of solicitation for bids.

Perform all work to the lines, grades, cross-sections, dimensions, and processes or material requirements shown on the plans or specified in the contract.

Incorporate manufactured materials into the work according to the manufacturer's recommendations or to these specifications, whichever is more strict.

Plan dimensions and contract specification values are the values to be strived for and complied with as the design values from which any deviations are allowed. Perform work and provide material that is uniform in character and reasonably close to the prescribed value or within the specified tolerance range. The purpose of a tolerance range is to accommodate occasional minor variations from the median zone that are unavoidable for practical reasons.

When standard manufactured items are specified (such as fence, wire, plates, rolled shapes, pipe conduits, etc., that are identified by gauge, unit mass, section dimensions, etc.), the identification will be considered to be nominal masses or dimensions. Unless specific contract tolerances are noted, established manufacturing tolerances will be accepted.

The Government may inspect, sample, or test all work at any time before final acceptance of the project. When the Government tests work, copies of test reports are furnished to the Contractor upon request. Government tests may or may not be performed at the work site. If Contractor testing and inspection is verified by the Government, the Contractor's results may be used by the Government to evaluate work for acceptance. Do not rely on the availability of Government test results for process control.

Acceptable work conforming to the contract will be paid for at the contract unit bid price. Four methods of determining conformity and accepting work are described in Subsections 106.02 to 106.05 inclusive. The primary method of acceptance is specified in each Section of work. However, work may be rejected at any time it is found by any of the methods not to comply with the contract.

Remove and replace work that does not conform to the contract, or to prevailing industry standards where no specific contract requirements are noted, at no cost to the Government.

(a) Disputing Government test results. **If the accuracy of Government test results is disputed, promptly inform the CO. If the dispute is unresolved after reasonable steps are taken to resolve the dispute, further evaluation may be obtained by written request. Include a narrative describing the dispute and a proposed resolution protocol that addresses the following:**

(1) Sampling method;

(2) Number of samples;
(3) Sample transport;
(4) Test procedures;
(5) Testing laboratories;
(6) Reporting;
(7) Estimated time and costs; and
(8) Validation process.

If the evaluation requires additional sampling or testing be performed, mutually agree with the Government on witnessing procedures and on sampling and testing by a third party laboratory. Use a third party laboratory accredited by the AASHTO accreditation program. Provide proof of the laboratory's accreditation for the test procedures to be used. Do not use the same laboratory that produced the disputed Government test results or that produced the test results used as a basis for the dispute.

The CO will review the proposed resolution protocol and may modify it before final approval and execution.

The Government will use the approved resolution protocol test results to determine the validity of the disputed testing. If the Government test results are validated, the Contractor will be responsible for all costs associated with developing and performing the resolution protocol. If the Government test results are not validated, the Government will be responsible for all costs associated with developing and performing the resolution protocol. If the validity of the Government test results cannot be determined, the Contractor and Government will equally share all costs associated with developing and carrying out the resolution protocol.

(b) Alternatives to removing and replacing non-conforming work. As an alternative to removal and replacement, the Contractor may submit a written request to:

(1) Have the work accepted at a reduced price; or

(2) Be given permission to perform corrective measures to bring the work into conformity.

The request must contain supporting rationale and documentation. Include references or data justifying the proposal based on an evaluation of test results, effect on service life, value of material or work, quality, aesthetics, and other tangible engineering basis. The CO will determine disposition of the nonconforming work.

106.07_nat_us_05_11_2004

106.07 Delete

Delete subsection 106.07.

107 - Legal Relations and Responsibility to the Public

107.05_nat_us_05_11_2004

107.05 Responsibility for Damage Claims.

Delete the entire subsection.

107.06_nat_us_06_16_2006

107.06 Contractor's Responsibility for Work.

Delete the following from the first paragraph.

"except as provided in Subsection 106.07".

107.08_nat_us_03_29_2005

107.08 Sanitation, Health, and Safety

Delete the entire subsection.

107.09_nat_us_06_16_2006

107.09 Legal Relationship of the Parties.

Delete the entire subsection.

107.10_nat_us_06_16_2006

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.

107.10_05_us_07_27_2005

107.02 Protection and Restoration of Property and Landscape

Add the following:

Meet the requirements chapters 10, 11, and 12.2 in their entirety of "Water Quality Management for National Forest System Lands in California Best Management Practices" dated September 2000

108 - Prosecution and Progress

108.00_nat_us_02_16_2005

108 Delete.

Delete Section 108 in its entirety.

109 - Measurement and Payment

109.00_nat_us_02_17_2005

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_nat_us_06_16_2006

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 definition:

(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.

151 - Mobilization

151.03_nat_us_08_05_2005

151.03 Payment

Delete the entire subsection and add the following:

151.03 Payment

Mobilization is considered an indirect cost of this contract and will not be compensated as a separate work item.

152 - Construction Survey and Staking

152.00_nat_us_08_05_2005

Description

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.

Do not use aerosol spray paints.

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

152.03 Survey and Staking Requirements.

(b) Roadway cross-sections.

Replace the first two sentences with the following:

Take roadway cross-sections normal to centerline. When the centerline curve radius is less than or equal to 200 feet, take cross-sections at a maximum centerline spacing of 25 feet. When the centerline curve radius is greater that 200 feet take cross-sections at a maximum centerline spacing of 80 feet.

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

(e) Centerline reestablishment.

Replace with the following:

Reestablish centerline from instrument control points. The maximum spacing between centerline points is 25 feet when the centerline curve radius is less than or equal to 200 feet. When the centerline curve radius is greater than 200 feet, the maximum distance between centerline points is 80 feet.

(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.

152.03 (l) Miscellaneous Survey and Staking.

Add the following:

(11) Cattleguards

(12) Drain Dips

(13) Erosion Control Measures

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[a] (±)	Vertical Closure[b] (±)
A (Bridges)	1/10,000	2 sets, direct/reverse 10 second rejection limit	N/A	0.02 ft or 0.02ft/1000ft[c]
B	1/5,000	2 sets, direct/reverse 20 second rejection limit	0.1 ft	0.02 ft or 0.02ft/1000ft[c]
C	1/1,000	1 set, direct/reverse 1 minute rejection limit	0.2 ft	0.5ft/1000ft[c]
D	1/300	Foresight and backsight; 15 minute rejection limit[c]	0.4 ft	1.0ft/1000ft[c]
E	1/100	Foresight and backsight; 30 minute rejection limit[c]	0.8 ft	1.0ft/1000ft[c]

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

155 - Schedules for Construction Contracts

155.00_nat_us_05_11_2004

155 Delete.

Delete Section 155 in its entirety.

156 - Public Traffic

156.00_nat_us_04_06_2005

Delete Section 156 in its entirety and replace with the following:

Description

156.01 This work consists of controlling and protecting public traffic adjacent to and with the project.

Material

156.02 Conform to the MUTCD and the following Sections and Subsections:

Construction sign panels	633
Retroreflective sheeting	718.01
Temporary concrete barrier	618
Temporary plastic fence	710.11
Temporary traffic control devices	718.22

156.03 General. Unless otherwise provided for in Table 156-1, keep existing roads open to all traffic during road improvement work, and maintain them in a condition that will adequately accommodate traffic. Delays may not exceed ___ minutes at any one time followed by an open period of no less than ___ minutes.

Perform no work that interferes or conflicts with traffic or existing access to the roadway surface until a traffic control plan has been approved. Post construction signs and traffic control devices in conformance with MUTCD. All required signs will be in place and approved prior to beginning work on project.

If the Contractor agrees in writing to allow public traffic to use a new road being constructed prior to completion, it will be considered an existing road for traffic control purposes.

156.04 Temporary Traffic Control. Install and maintain temporary traffic control devices adjacent to and within the project as required by the approved traffic control plan and the MUTCD. Install and maintain traffic control devices as follows:

- **(a)** Furnish and install traffic control devices before the start of construction operations.
- **(b)** All detours outside of clearing limits will be approved in writing by the Contracting Officer as part of the traffic control plan.
- **(c)** Install only those traffic control devices needed for each stage or phase.
- **(d)** Relocate temporary traffic control devices as necessary.
- **(e)** Remove devices that no longer apply to the existing conditions.
- **(f)** Immediately replace any device that is lost, stolen, destroyed, or inoperative.
- **(g)** Keep temporary traffic control devices clean.
- **(h)** Remove all temporary traffic control devices upon contract completion or when approved.
- **(i)** When required, use flaggers certified by the American Traffic Safety Services Association, the National Safety Council, the International Municipal Signal Association, a state agency, or other acceptable organization. Perform the work described under MUTCD Part 6. Use type III, VII, VIII, or IX retroreflective sheeting on flagger paddles. Do not use flags. Flaggers must wear high visibility safety apparel as required by MUTCD 6E.02.

156.05 Temporary Closures. Road segments may be closed as shown in Table 156-1. The maximum consecutive days of closure shall be followed by a minimum number of consecutive days open to traffic as shown. Maintain traffic control devices during closure period(s). Appropriate barricades and signs will be erected and maintained as shown in the traffic control plan or as otherwise designated.

Prior to closing roads during construction, give written notice to the Contracting Officer at least 10 days in advance.

Table 156-1

Temporary Road Closures

Road Number	From Terminus	To Terminus	Maximum Consecutive Days of Closure	Minimum Consecutive Days Open

156.06 Acceptance. Public traffic work will be evaluated under Subsection 106.02.

Measurement and Payment

156.07 Do not measure Public Traffic for payment. Compensation is made as an indirect payment.

157 - Soil Erosion Control

157.03_nat_us_02_24_2005

157.03 General

Delete the entire subsection and replace with the following:

Prior to the start of construction, submit a written plan that provides permanent and temporary erosion control measures to minimize erosion and sedimentation during and after construction. Do not begin work until the necessary controls for that particular phase of work have been implemented. Do not modify the type, size, or location of any control. An alternate erosion control plan with all necessary permits may be submitted 30 days before intended use.

Incorporate all permanent erosion control features into the project at the earliest practicable time, as outlined in the approved plan.

When erosion control measures are not functioning as intended, immediately take corrective action.

249 - Composite Road Construction

249.00_0114_us_08_08_2006

Description

249.01 Work. Perform clearing and grubbing, excavation and embankment, and erosion control.

During clearing and grubbing, treat merchantable timber and construction slash, including all trees designated for removal.

Excavation and embankment includes borrow excavation; drainage excavation; placing all excavated material; and shaping the roadway, including approaches, turnarounds, ditches and drainages dips.

Perform erosion control by furnishing and placing seed, fertilizer, mulch and tackifier. Construct the roadway in conformance with the dimensions “shown on the plans” or as staked on the ground.

Construction

249.02 Clearing and Disposal. Protect construction stakes and construction control markers. Remove or treat all trees, snags, downed timber, brush, and stumps within the clearing limits according to the following specifications:

(a) Merchantable Timber. Deck or remove timber meeting Utilization Standards as "shown on the plans".

(b) Unmerchantable Timber. Treat unmerchantable timber as "shown on the plans".

(c) Large Construction Slash. Treat construction slash larger than 3 inches in diameter or longer than 3 feet by one or more of the following methods, as "shown on the plans".

Method A. Incorporate construction slash into the embankment.

Method B. Windrow construction slash inside the clearing limits. When slash is windrowed, place it approximately parallel to the roadway outside the toe of the fill slope.

Method C. Scatter construction slash outside the roadway without damaging trees. Limb all logs. Place logs and stumps away from trees, positioned so they will remain in place and are not on top of one another.

Method D. Construct piles that are free of soil, with smaller slash well mixed with larger slash. Buck unmerchantable logs into lengths less than 30 feet prior to placement in piles.

Method E. Transport construction slash to a location "shown on the plans" or designated by the C.O.

Method F. Bury construction slash within the roadway limits. Construct mats in layers and cover the mats with at least 18 inches of rock and soil.

Method G. Construct piles of construction slash in the areas "shown on the plans" or staked on the ground. Construct piles so burning does not damage standing trees. Burn the piles until all the material remaining in the pile is charred or ash.

Method H. Bury the construction slash outside the roadway at the locations "shown on the plans" or staked on the ground. Construct mats in layers, and cover the mats with at least 18 inches of rock and soil. Slope the final surface to drain.

Method J. Construct a debris mat of construction slash under the road subgrade. Use tree limbs, tops, cull logs, split stumps, wood chunks, and other debris to form a mat. Place stumps upside down and blended into the mat as "shown on the plans".

(d) Small Construction Slash. Construction slash less than 3 inches in diameter and less than 3 feet in length may be incorporated into embankments so long as the material is distributed so that it does not result in concentrations or matting.

Immediately remove slash deposited in stream courses.

Fell all dead trees outside the clearing limits that lean toward the road and are sufficiently tall to reach the roadbed. Fell hazard or unstable live trees designated on the ground outside the clearing limits before felling timber in the immediate clearing vicinity.

Leave stump heights less than 12 inches or one-third of the stump diameter, whichever is greater, measured on the side adjacent to the highest ground. Leave felled trees outside the clearing limits in place, and treat them no further unless otherwise "shown on the plans".

249.03 Pioneering. Do not undercut the final back slope during pioneering operations. Deposit material inside the roadway limits. Do not restrict drainage.

249.04 Grubbing. Grub within the limits as “shown on the plans”. Stumps outside the grubbing limits may remain if cut no higher than 12 inches or one-third the stump diameter, which ever is greater, above the original ground, measured on the uphill side, unless otherwise “shown on the plans”. Grub stumps that will protrude through the subgrade or have less than 6 inches of cover.

249.05 Excavation and Embankment. Construct the roadway to conform to the typical sections “shown on the plans”. Protect backslopes from being undercut. Embankment may be placed by side casting and end dumping.

Locate and use borrow material, remove and treat unsuitable or excess material, as “shown on the plans”.

Place rocks that are too large to be incorporated into the embankment outside the traveled way on the downhill side such that they will not roll, obstruct drainage, or hinder roadbed use and maintenance.

Leave slopes that are to be seeded in a roughened condition.

Shape and finish the roadbed to the condition ordinarily accomplished by a crawler tractor with dozer blade to provide drainage of surface water, unless otherwise “shown on the plans”. Do not permit individual rocks to protrude more than 4 inches above the subgrade of the roadbed.

Width tolerance for the roadbed is (+) 30 inches unless otherwise “shown on the plans”.

249.06 Erosion Control. Perform erosion control measures, including seeding, as “shown on the plans”. Use methods and rates of application, and types of seed, fertilizer, mulch, and tackifier, as specified in Section 625 and as “shown on the plans”. Apply materials uniformly to the areas to be treated.

Measurement

249.07 Method. Measure the Section 249 items listed in the Bid Schedule according to Subsection 109.02.

Payment

249.08 Basis. The accepted quantities will be paid at the contract price per unit of measurement for Section 249 pay items listed in the Bid Schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

301 - Untreated Aggregate Courses

301.00_nat_us_03_03_2005

301 Title Change.

Change the title to: **Section 301 Aggregate Courses**

301.01_nat_us_03_03_2005

301.01 Work.

Add the following:

Work includes producing aggregate by pit-run, grid rolling, screening, or crushing methods, or placing Government-furnished aggregate. Work may include additive mineral filler, or binder.

301.02_nat_us_05_16_2005

301.02 Material.

Add the following:

Bentonite	725.30
Calcium Chloride Flake	725.02
Lignon Sulfonate	725.20
Magnesium Chloride Brine or Calcium Chloride Liquid	725.02

301.03_nat_us_09_14_2005

301.03 General.

Add the following:

Written approval of the roadbed is required before placing aggregate.

For pit run or grid-rolled material, furnish material smaller than the maximum size. No gradation other than maximum size will be required for pit-run or grid-rolled material. For grid rolling, use all suitable material that can be reduced to maximum size. After

processing on the road, remove all oversize material from the road and dispose of it as directed by the CO.

Provide additives or binder, if required, at the proportions specified.

Develop and use Government furnished sources according to Section 105.

If the aggregate is produced and stockpiled before placement, handle and stockpiled according to Section 320. Establish stockpile sites at locations approved. Clear and grub stockpile sites according to Section 201.

303 - Road Reconditioning

303.01_nat_us_03_02_2005

303.01 Work.

Delete and add the following:

This work consists of reconditioning ditches, shoulders, roadbeds, cattleguards, asphalt surfaces, and aggregate surfaces.

625 - Turf Establishment

625.01_0803_us_07_12_2006

625.05 Fertilizing

(a) Dry method or (b) Hydraulic method
Add the following:
Fertilizer shall be uniformly applied at the rate of 800 lbs. per acre and shall have a chemical analysis of 10% Nitrogen, 10% Phosphorus, and 10% Potassium.
625.07 Seeding
Add the following
The Clover shall be inoculated.
The Tall Turf Fescue shall be certified by the supplier to be Endophyte Free.
Seed shall be applied at the rates for both of the Methods for the seeding periods as follows:

DATES	SPECIES of SEED	LBS of SEED/ACRE
March 1 To August 15	Dixie Crimmson Clover (Reseeding)	15
	Common Bermuda (Hulled)	15
	Brown Top Millet	25
	White Dutch Clover	15
August 16 to November 1	Dixie Crimmson Clover (Reseeding)	20
	Common Bermuda (Hulled)	15
	Brown Top Millet	25
	White Dutch Clover	15
November 2 to February 28	Dixie Crimmson Clover (Reseeding)	20
	Common Bermuda (Unhulled)	10
	Annual Rye	50

625.08 Mulching,
Delete the last two sentences in the first paragraph

650 - Road Closure Devices

650.00_nat_us_09_06_2005

Description

650.01 Work. Furnish and install, or install only, road closure devices using fabricated gates and accessories, combination post and rail barriers, concrete barriers, earth mound barriers, and other devices.

Materials

650.02 Requirements. Furnish materials to be used in fabricating gates and barriers. Ensure that all hardware is galvanized in accordance with AASHTO M 232 and meets the requirements of ASTM A 307. Furnish plain or cut washers that are American Standard Washers.

Furnish timber posts, rails, and lumber that meet the requirements of AASHTO M 168. Provide timber of the species and type, and rate of preservative treatment.

Furnish concrete that meets the requirements of Subsection 601.03, method B or C.

Construct earth mound barriers from excavated material adjacent to the barrier location, or from other designated locations.

Construction

650.03 Performance. Place road closure devices at designated locations. Construct all devices to the required dimensions. In assembling gates, perform required welding in accordance with the best modern practice and the applicable requirements of AWS D1.1.

After assembly, clean non-galvanized steel pipe gates and paint them with one coat of zinc-rich primer and two coats of exterior enamel of the required type and color.

Set all posts vertically and embed them to the required depth. Place concrete for embedment against undisturbed earth within an excavation sized to achieve the embedment dimensions. Compact the backfill in 6 inch layers to finished grade.

Furnish and install all signs and/or reflective warning markers accessory to the road closure device.

650.04 Acceptance. Construction of road closure devices will be evaluated under Subsections 106.02 and 106.04.

Measurement

650.05 Measure the items listed in the bid schedule according to Subsection 109.02.

Payment

650.06 The accepted quantities, measured as provided in Subsection 109.02 and above, will be paid at the contract price per unit of measurement for the Section 650 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

713 - Roadside Improvement Material

713.05_nat_us_03_02_2005

713.05 Mulch.

Add the following:

Assure that mulch used on the project is certified noxious weed free by the appropriate authority in the jurisdiction of use

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