

PART I - SCHEDULE OF ITEMS

SECTION B - SERVICES AND PRICES

Whistle Pig Beetle Salvage Timber Sale

Conejos Peak District

Rio Grande National Forest

Conejos County

B- 1 - SCHEDULE OF ITEMS

ITEM NO.	DESCRIPTION	PAY UNIT	EST. QTY.	UNIT PRICE	TOTAL PRICE
----------	-------------	----------	-----------	------------	-------------

15101	Mobilization	Lump Sum		\$__420_	\$__420_
-------	--------------	----------	--	----------	----------

20426	Grade dips, _compaction method d, finishing method A_	Each	2	\$__320_	\$__640_
-------	-------------------------------------------------------	------	---	----------	----------

Total: \$__1,060_

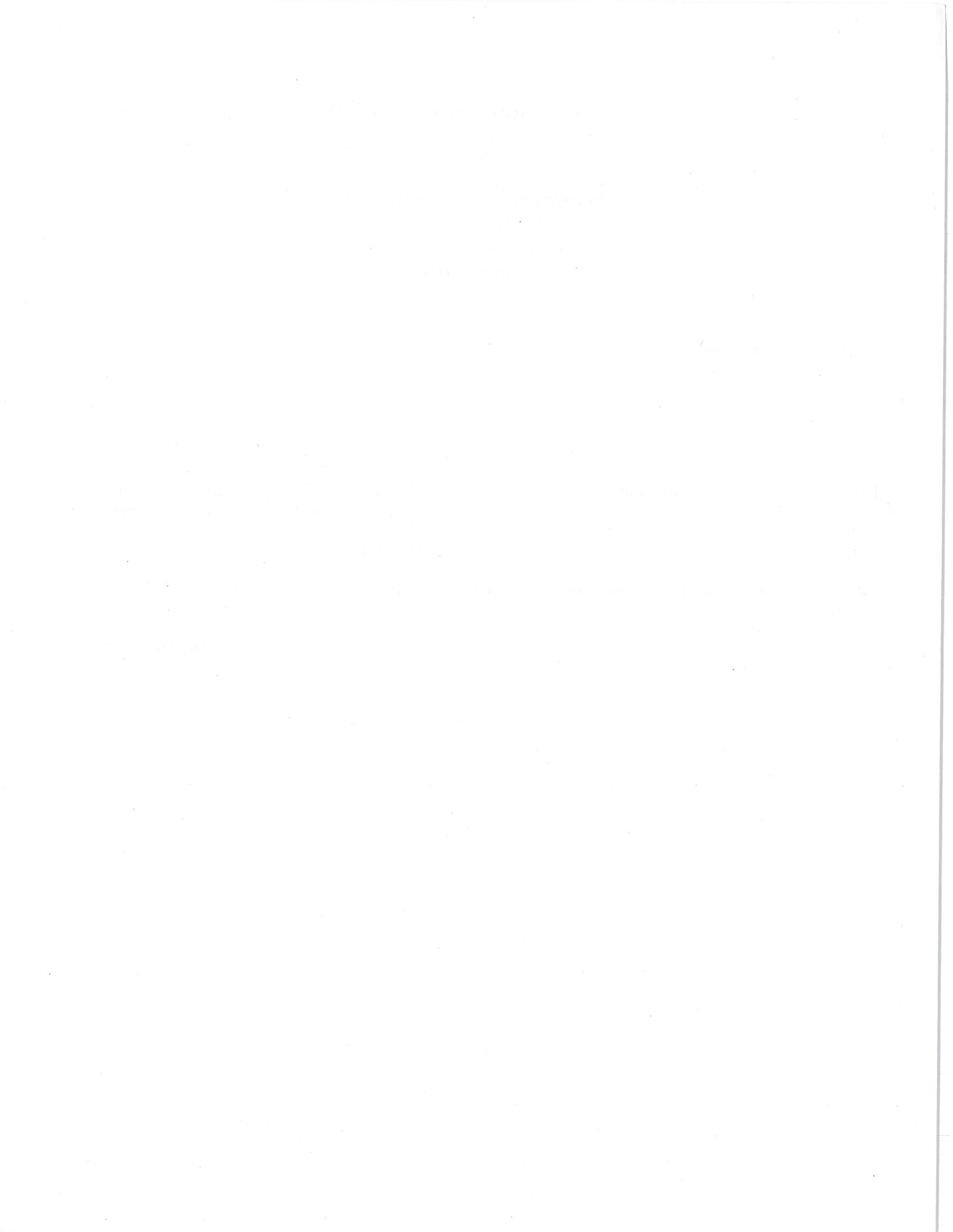


Table of Contents

Table of Contents.....	1
Preface.....	3
101 - Terms, Format, and Definitions.....	4
101.01 Meaning of Terms.....	4
101.01 Meaning of Terms.....	4
101.03 Abbreviations.....	4
101.04 Definitions.....	4
101.04 Definitions.....	7
102 - Bid, Award, and Execution of Contract	8
102 Bid, Award, and Execution of Contract.....	8
103 - Scope of Work.....	9
Deletions	9
104 - Control of Work.....	10
Deletions	10
104.03.....	10
104.06 Use of Roads by Contractor.....	10
104.07 Other Contracts.....	10
105 - Control of Material	11
105.02 Material Sources.....	11
105.02(a) Government-provided sources.....	11
105.05 Use of Material Found in the Work.....	11
106 - Acceptance of Work.....	12
106.01 Conformity with Contract Requirements.....	12
106.07 Delete	14
107 - Legal Relations and Responsibility to the Public.....	15
107.05 Responsibility for Damage Claims.....	15
107.06 Contractor's Responsibility for Work.....	15
107.08 Sanitation, Health, and Safety.....	15
107.09 Legal Relationship of the Parties.....	15

107.10 Environmental Protection.....	15
108 - Prosecution and Progress.....	17
108 Delete.....	17
109 - Measurement and Payment.....	18
109 Deletions.....	18
109.02 Measurement Terms and Definitions.....	18
153 - Contractor Quality Control.....	19
153.04 Records.....	19
155 - Schedules for Construction Contracts.....	20
155 Delete.....	20
201 - Clearing and Grubbing.....	21
201.02 Material:.....	21
201.06 Disposal.....	21
204 - Excavation and Embankment.....	22
204.09 Preparing Foundation for Embankment Construction.....	22
204.11 Compaction.....	22
204.13 Sloping, Shaping, and Finishing.....	23
Table 204-2 Construction tolerances.....	23
718 - Traffic Signing and Marking Material.....	25
718.05 Aluminum Panels.....	25

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_01_22_2009

101.01 Meaning of Terms

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

101.01_nat_us_01_22_2009

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	<u>National Institute of Standards and Technology</u>
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_03_29_2007

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.

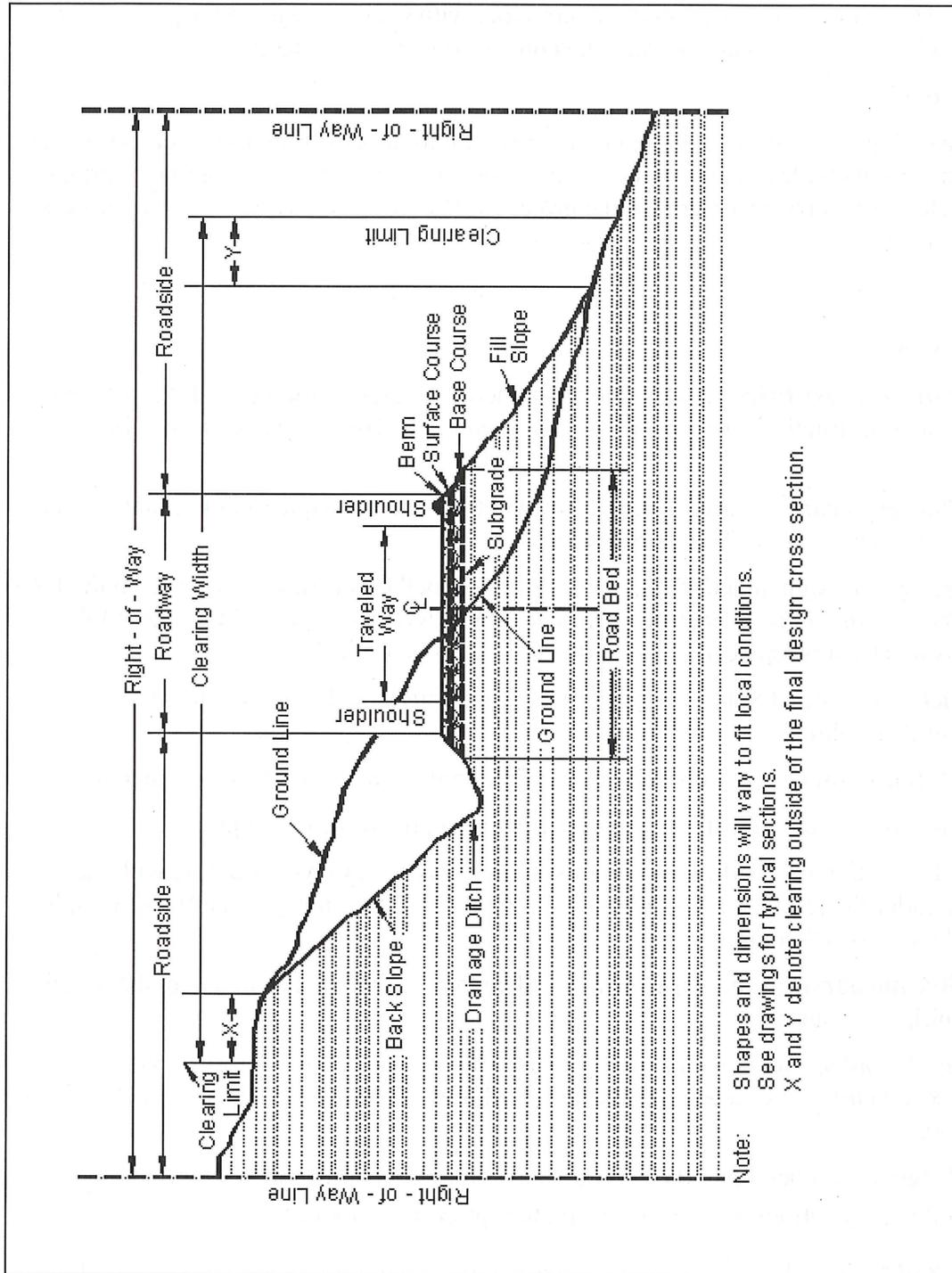
Road Order--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

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 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.

104.03_nat_us_01_22_2009

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.

104.07_nat_us_02_17_2005

Add Subsection.

104.07 Other Contracts.

The Forest Service is administering and is intending to award contracts for the reconstruction of Forest system roads adjacent to, and shared by, this project, and for log-haul on these roads. Schedule activities to assure no delays or interference to the operations of the Forest Service contracts.

105 - Control of Material

105.02_nat_us_01_18_2007

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_07_31_2007

106.01 Conformity with Contract Requirements.

Delete Subsection 106.01 and substitute the following:

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.

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.

153 - Contractor Quality Control

153.04_nat_us_10_24_2007

153.04 Records.

Delete all but the first sentence

155 - Schedules for Construction Contracts

155.00_nat_us_05_11_2004

155 Delete.

Delete Section 155 in its entirety.

201 - Clearing and Grubbing

201.00_nat_us_08_05_2009

201.02 Material:

Delete Tree wound dressing material reference.

201.03 General.

Delete the last sentence.

201.04 Clearing.

Delete the last sentence of (d).

201.06_nat_us_02_18_2005

201.06 Disposal.

Delete the first sentence of this subsection and substitute the following:

Dispose of merchantable timber designated for removal according to the provisions of the timber sale contract.

204 - Excavation and Embankment

204.06_nat_us_03_02_2005

204.06 Roadway Excavation

(a) General.

Add the following:

Retrieve material deposited outside of the clearing limits as directed by the CO. Place unsuitable material in designated areas.

204.09_nat_us_03_02_2005

204.09 Preparing Foundation for Embankment Construction.

Delete subsection (a) and replace it with the following:

(a) **Embankment less than 4 feet high over natural ground.** When designated, remove topsoil and break up the ground surface to a minimum depth of 6 inches by plowing or scarifying.

Compact the ground surface according to Subsection 204.11.

204.11_nat_us_04_11_2005

204.11 Compaction.

Delete the first paragraph and replace it with the following:

For compaction according to method (a), (b), or (c), use AASHTO T 27 to determine the amount of material retained on a Number. 4 sieve. For compaction methods (d) or (e) no sieve test is required.

Add the following compaction methods:

(d) **Layer Placement Method (Hauling and Spreading Equipment).** Place material by end dumping 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.

204.13 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 ^(a)												
	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 ^(b))	±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.

718 - Traffic Signing and Marking Material

718.05_nat_us_08_05_2009

718.05 Aluminum Panels

Delete the third paragraph and replace with the following:

Clean, degrease and properly prepare the panels according to methods recommended by the sheeting manufacturer. Conversion coatings will conform to ASTM B-921 or ASTM B-449.

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO
DIVISION OF THE PHYSICAL SCIENCES

DEPARTMENT OF CHEMISTRY
5708 SOUTH CAMPUS DRIVE
CHICAGO, ILLINOIS 60637

RIO GRANDE NATIONAL FOREST

U.S. Department of Agriculture,
Forest Service
Rocky Mountain Region

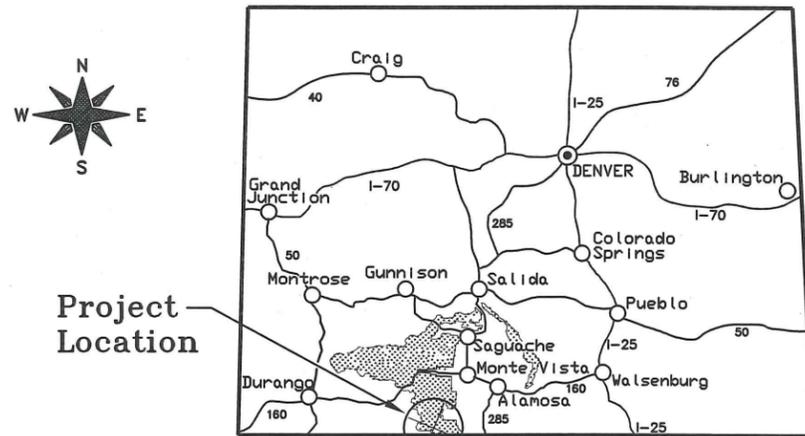
WHISTLE PIG BEETLE SALVAGE TIMBER SALE ROAD RECONSTRUCTION

CONEJOS PEAK RANGER DISTRICT

Conejos County, Colorado

INDEX TO SHEETS

Title Sheet	1
Location Map	2
Vicinity Map	3
Illustration of Terms	4
General Notes	5
Road Log	6
Clearing	7
Grade Dip	8-9



LEGEND

RIO GRANDE NATIONAL FOREST

COLORADO STATE LOCATION MAP
NOT TO SCALE

Designed by:

G.B. Frink Engineering Technician 09/10/15
Signature Title Date

The design and review of this project has been accomplished by qualified personnel and the design is consistent with current policy and direction.

May Sull Forest Engineer 9/15/15
Signature Title Date

The design objectives have been accomplished, the project will serve intended uses, all appropriate NEPA requirements have been met, and the design is consistent with approved resource planning documents and is in the program of work.

Signature District Ranger Title Date

Approved by: *Touyabrak Aring* *fs* Forest Supervisor 9/21/15
Signature Title Date

U.S. DEPARTMENT OF AGRICULTURE

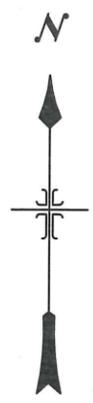
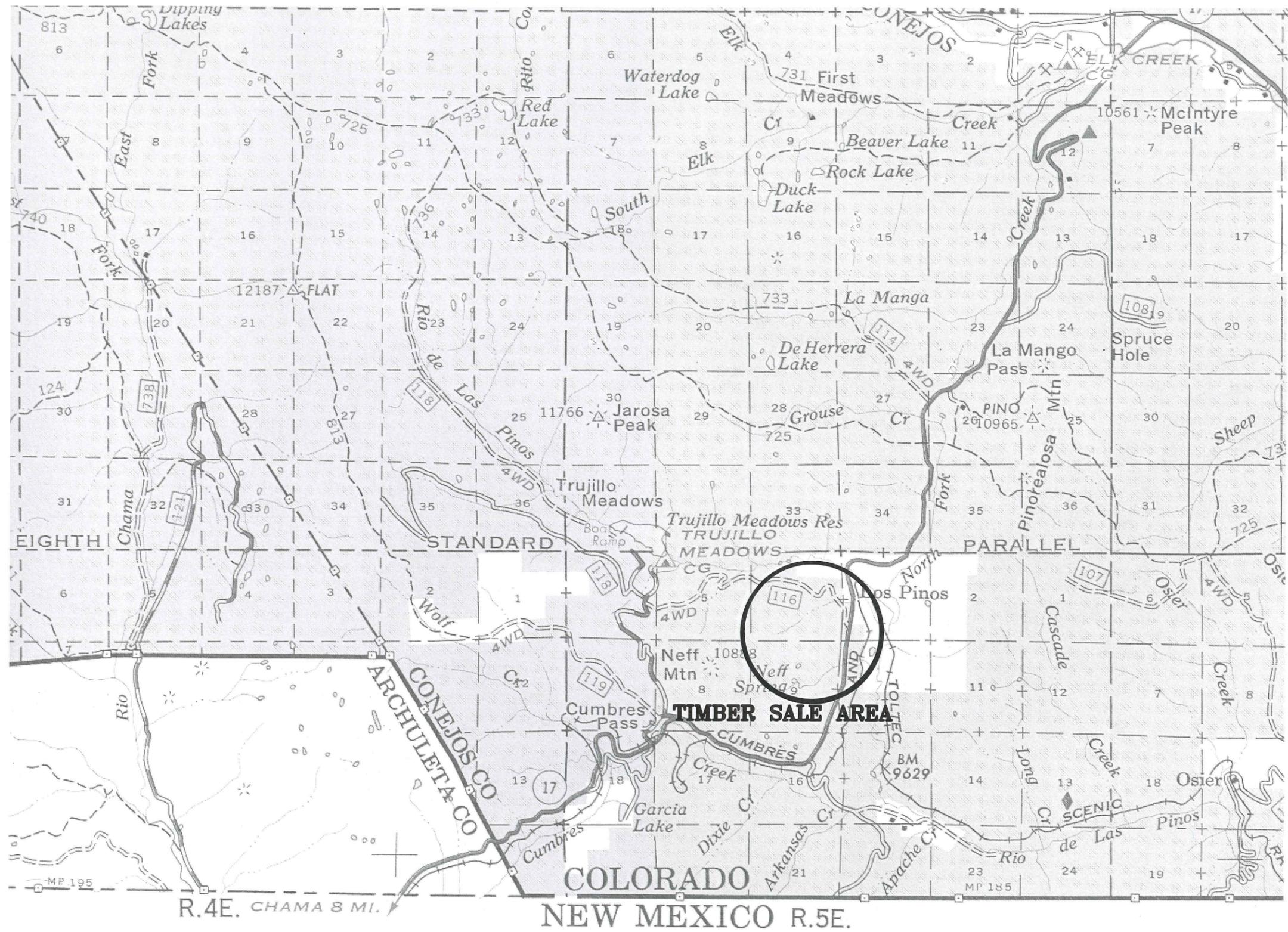


FOREST SERVICE
ROCKY MOUNTAIN REGION

Drawn G.B. Frink
Design G.B. Frink
Checked _____
Reviewed _____

Forest
RIO GRANDE NATIONAL FOREST
Project Name
**Whistle Pig Beetle Salvage TS
Road Reconstruction**

Sheet Title TITLE SHEET	
Scale NONE	Sheet 1 of 9



U.S. DEPARTMENT OF AGRICULTURE

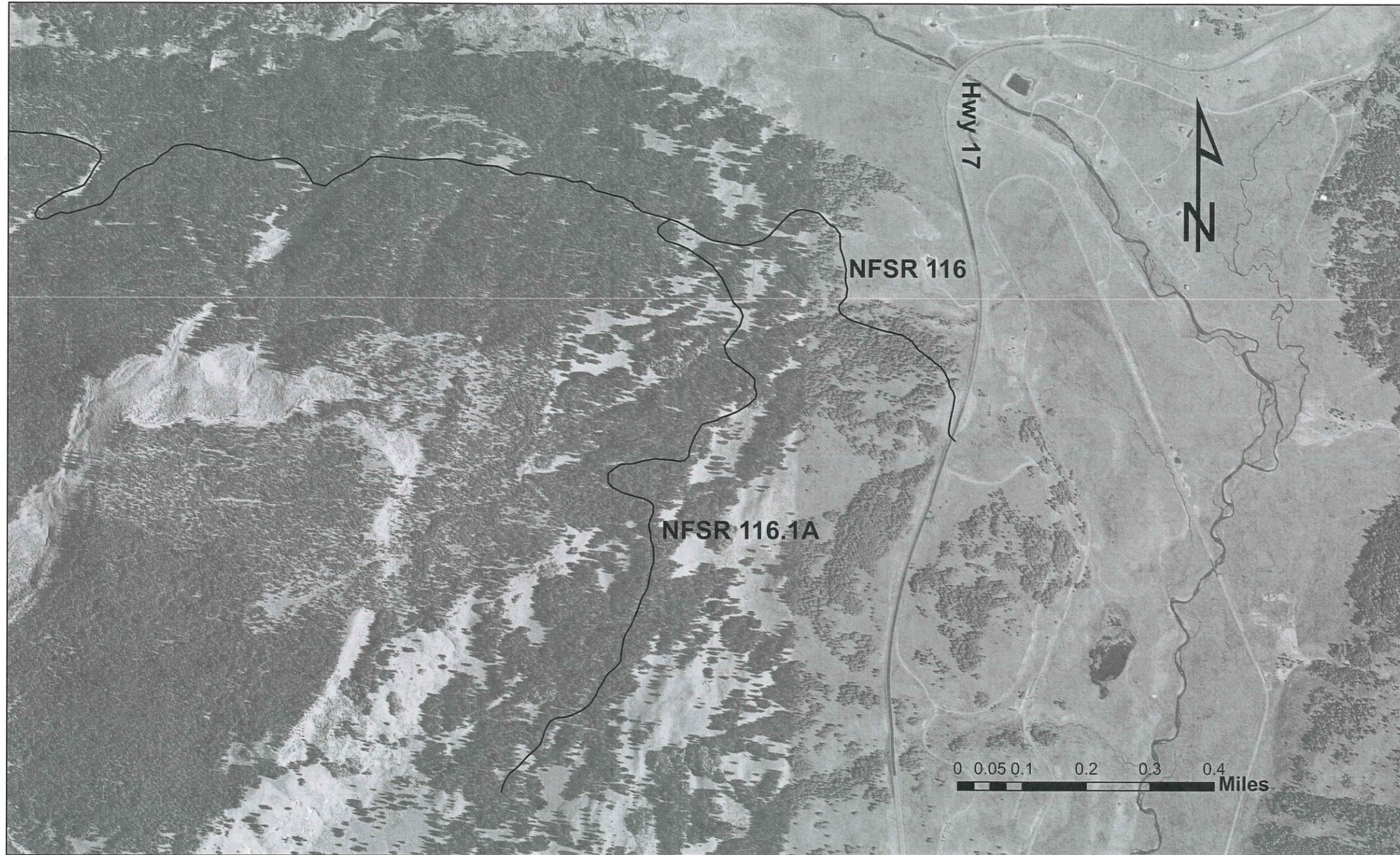
 FOREST SERVICE
 ROCKY MOUNTAIN REGION



Drawn G.B.Frink
 Design G.B.Frink
 Checked _____
 Reviewed _____

Forest
RIO GRANDE NATIONAL FOREST
 Project Name
**Whistle Pig Beetle Salvage TS
 Road Reconstruction**

Sheet Title	
LOCATION MAP	
Scale	Sheet
NONE	2
	of 9



U.S. DEPARTMENT OF AGRICULTURE

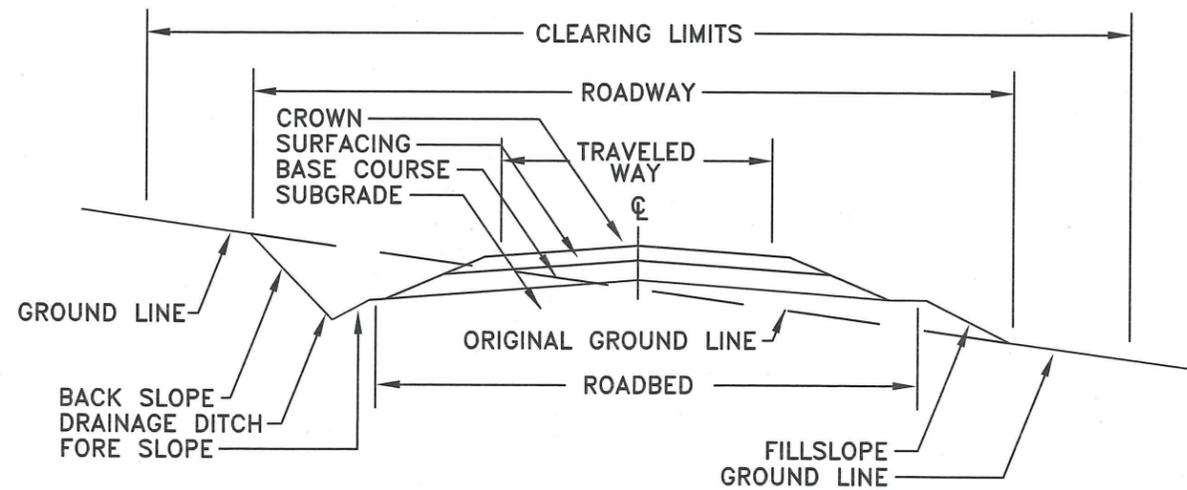


FOREST SERVICE
ROCKY MOUNTAIN REGION

Drawn G.B.Frink
Design G.B.Frink
Checked _____
Reviewed _____

Forest
RIO GRANDE NATIONAL FOREST
Project Name
**Whistle Pig Beetle Salvage TS
Road Reconstruction**

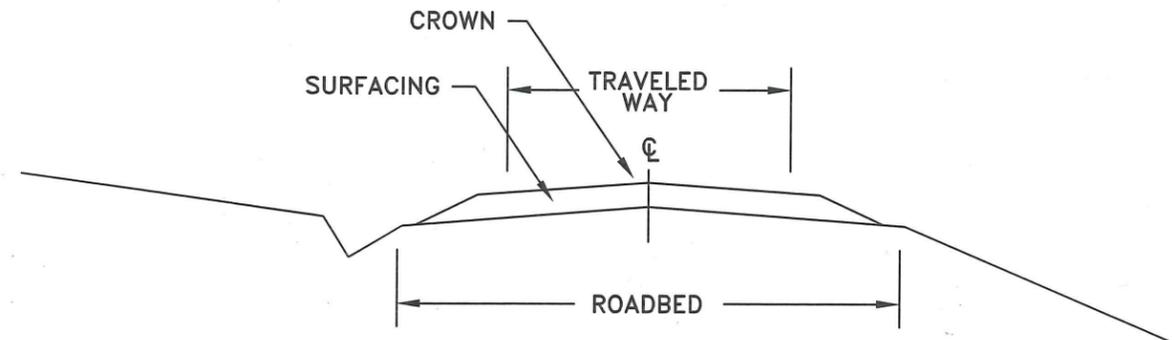
Sheet Title	
VICINITY MAP	
Scale	Sheet
NONE	3
	of 9



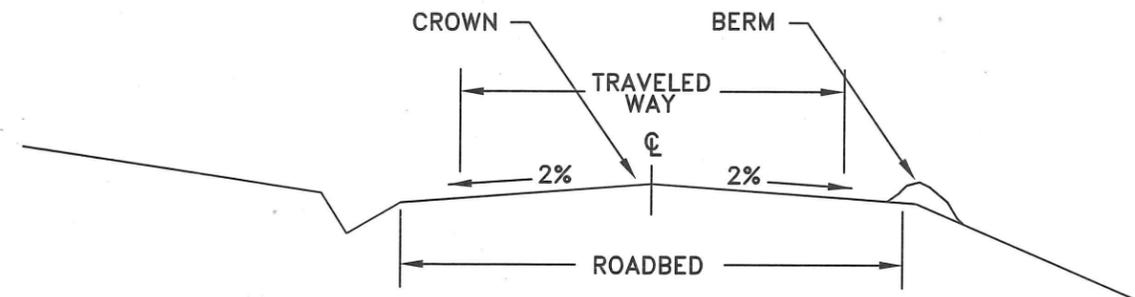
ROAD STRUCTURE DETAILS
NOT TO SCALE

NOTES:

1. THIS IS A CONCEPTUAL DRAWING FOR A CROWNED ROADWAY WITH DITCH.
2. TEMPLATE SHAPE AND DIMENSIONS WILL VARY WITH LOCAL CONDITIONS.



AGGREGATE SURFACING SECTION
NOT TO SCALE



NATIVE MATERIAL SECTION
NOT TO SCALE

U.S. DEPARTMENT OF AGRICULTURE



FOREST SERVICE
ROCKY MOUNTAIN REGION

Drawn G.B.Frink
Design G.B.Frink
Checked _____
Reviewed _____

Forest
RIO GRANDE NATIONAL FOREST
Project Name
**Whistle Pig Beetle Salvage TS
Road Reconstruction**

Sheet Title ILLUSTRATION OF TERMS	
Scale NONE	Sheet 4 of 9

NOTES:

1. STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS, HEREINAFTER REFERRED TO AS FP-03 (U.S. CUSTOMARY UNITS), AND FOREST SERVICE SUPPLEMENTAL SPECIFICATIONS (FSSS) WILL BE USED.
2. EXISTING DITCHES SHALL BE CLEANED TO ALLOW FREE DRAINAGE.
3. CLEARING REQUIRED FOR INSTALLATION OR MAINTENANCE OF OUTLET DITCHES AND DRAINAGE STRUCTURES IS INCIDENTAL TO THAT WORK REQUIREMENT.

U.S. DEPARTMENT OF AGRICULTURE

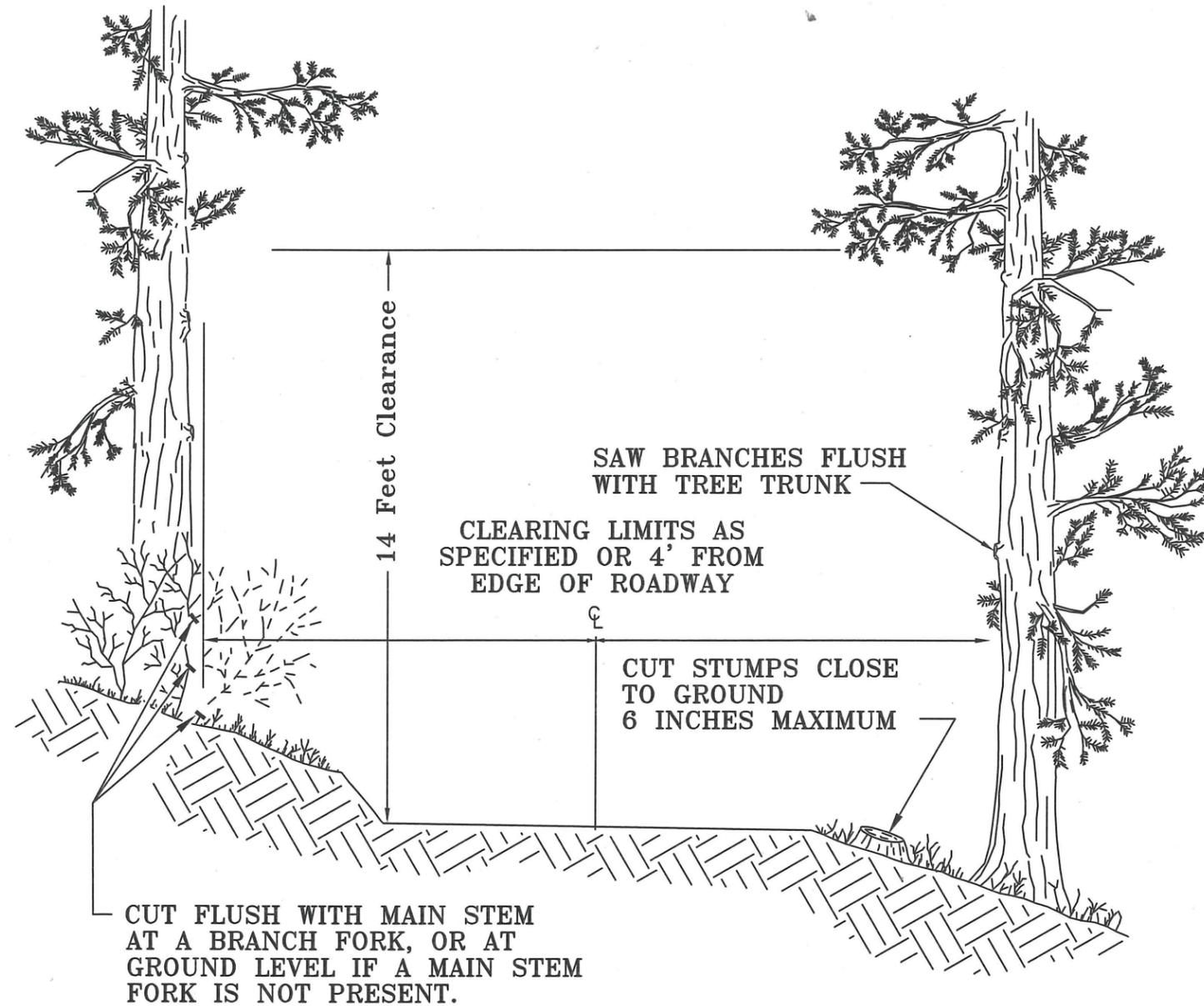


FOREST SERVICE
ROCKY MOUNTAIN REGION

Drawn _____ G.B.Frink _____
Design _____ G.B.Frink _____
Checked _____
Reviewed _____

Forest
RIO GRANDE NATIONAL FOREST
Project Name
Whistle Pig Beetle Salvage TS
Road Reconstruction

Sheet Title GENERAL NOTES	
Scale NONE	Sheet 5 of 9



U.S. DEPARTMENT OF AGRICULTURE



FOREST SERVICE
ROCKY MOUNTAIN REGION

Drawn G.B.Frink
Design G.B.Frink
Checked _____
Reviewed _____

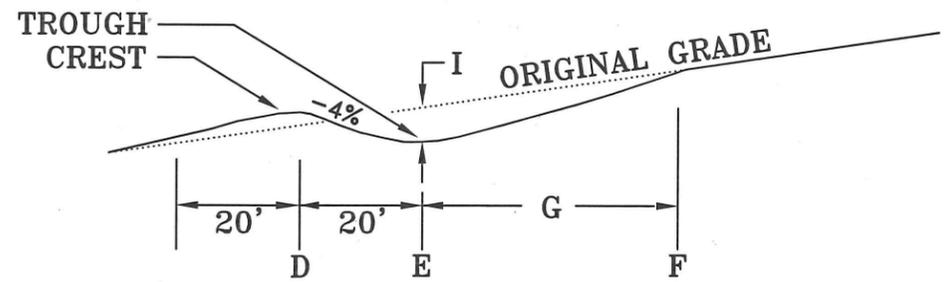
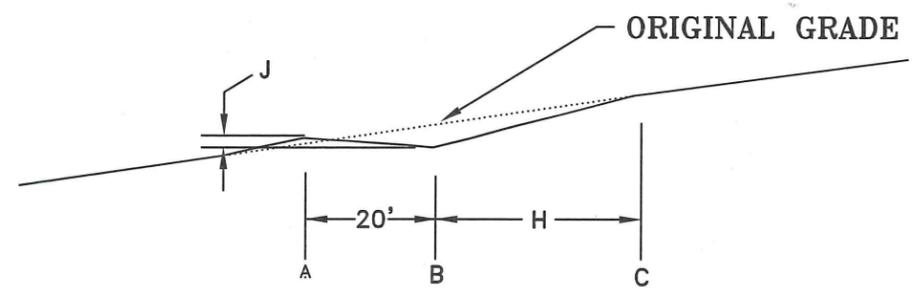
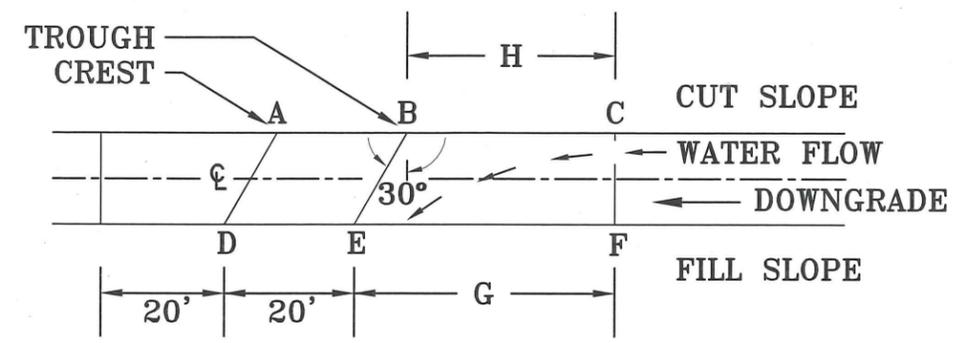
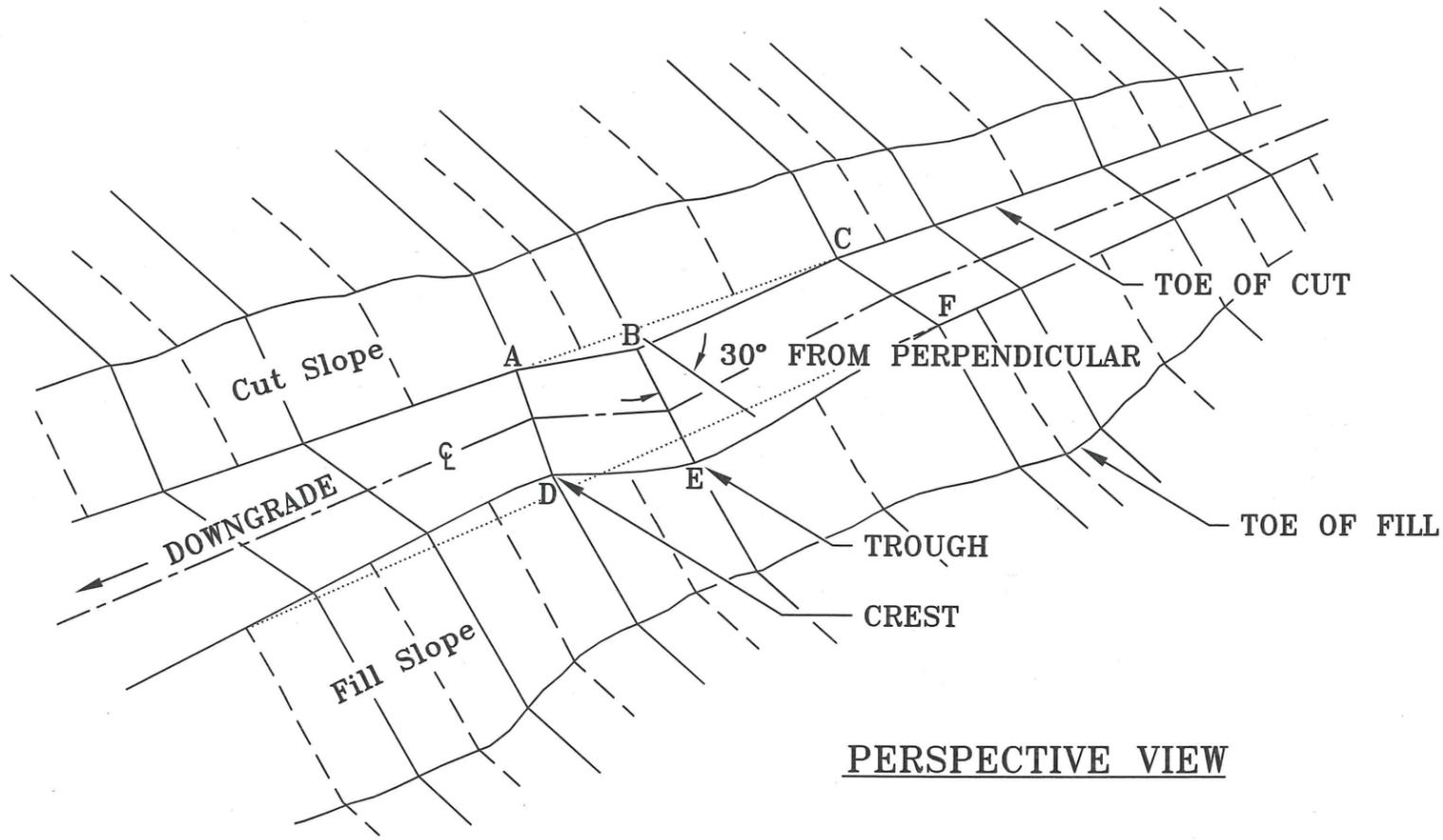
Forest
RIO GRANDE NATIONAL FOREST
Project Name
**Whistle Pig Beetle Salvage TS
Road Reconstruction**

Sheet Title

Clearing

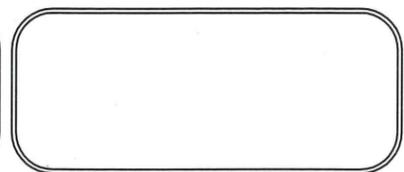
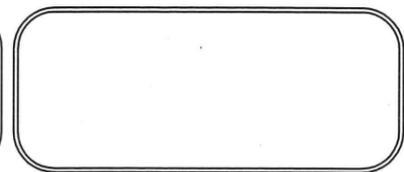
Scale
NONE

Sheet **7**
of **9**



DRAWINGS NOT TO SCALE

U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
 ROCKY MOUNTAIN REGION



Drawn G.B.Frink
 Design G.B.Frink
 Checked _____
 Reviewed _____

Forest
 RIO GRANDE NATIONAL FOREST
 Project Name
 Whistle Pig Beetle Salvage TS
 Road Reconstruction

Sheet Title
 GRADE DIP 1
 Scale NONE
 Sheet 8
 of 9

ROAD GRADE %	12 FEET ROAD WIDTH				14 FEET ROAD WIDTH				16 FEET ROAD WIDTH			
	LENGTH/FT		DEPTH/FT		LENGTH/FT		DEPTH/FT		LENGTH/FT		DEPTH/FT	
	G	H	I	J	G	H	I	J	G	H	I	J
<6	51	45	.8	.3	52	45	.9	.3	53	45	.95	.3
6	56	50	.8	.3	57	50	.9	.3	58	50	1	.3
7	60	54	.85	.3	61	54	.95	.3	62	54	1.05	.3
8	65	59	.85	.3	66	59	1	.3	67	59	1.1	.3
9	69	63	.85	.3	70	63	1	.3	71	63	1.1	.3
10	74	68	.9	.3	75	68	1.05	.3	76	68	1.15	.3

NOTES:

1. PLANS ARE FOR AN OUTSLOPED, INSLOPED, OR CROWNED TEMPLATE, WITH OR WITHOUT A DITCH.
2. GRADE DIPS FUNCTION BY THE PROGRESSIVE INCREASE OF ROAD SURFACE OUTSLOPE FROM LINE "C-F" INTO THE TROUGH, LINE "B-E". THE SURFACE ROLLS THROUGH THE TROUGH AND CREST TRANSITIONS IN A UNIFORM MANNER. GRADE DIP OUTLETS SHALL BE CONSTRUCTED TO DRAIN TO DAYLIGHT.
3. EXCESS EXCAVATION MATERIAL SHALL BE SCATTERED EVENLY OVER THE ROAD EMBANKMENT SO THAT IT WILL NOT CAUSE EROSION AND SEDIMENTATION PROBLEMS IN THE GRADE DIP, OUTLET DITCHING, OR STREAMS.
4. WHEN GRADE DIPS ARE CONSTRUCTED IN DITCH SECTIONS, THE DITCH SHALL DRAIN ACROSS THE GRADE DIP. RESUME DITCH CONSTRUCTION 25 FEET DOWN GRADE FROM THE CREST OF THE GRADE DIP.
5. OUTLET DRAIN DITCHES SHALL HAVE CUT SLOPES EQUAL TO OR FLATTER THAN 1.5:1. EXCAVATION FROM OUTLET DITCHING SHALL BE SCATTERED ALONG THE SIDES OF THE DITCH. ALL NECESSARY CLEARING AND OUTLET DITCHING SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION OF THE GRADE DIP AND NO SEPARATE PAYMENT WILL BE MADE.
6. FINAL LOCATIONS FOR GRADE DIPS WILL BE STAKED BY THE FOREST SERVICE PRIOR TO CONSTRUCTION.

U.S. DEPARTMENT OF AGRICULTURE



FOREST SERVICE
ROCKY MOUNTAIN REGION

Drawn G.B.Frink
Design G.B.Frink
Checked _____
Reviewed _____

Forest
RIO GRANDE NATIONAL FOREST
Project Name
Whistle Pig Beetle Salvage TS
Road Reconstruction

Sheet Title
GRADE DIP 2

Scale
NONE

Sheet 9
of 9