

DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
REGION 9  
ALLEGHENY NATIONAL FOREST

SRSP Tinker Town Stewardship  
Project No. 004

FR 247      Tinker Town    0.5 Miles    Road Surfacing – Maintenance – Service Level I

Bradford Ranger District  
McKean County  
Pennsylvania

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The location and design elements of these facilities have been correlated with the plans, policies and constraints of the approved Greater Stickney Environment Assessments.

Plans are to be used with "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects" FP-03 with Special Project Specifications thereto included in this contract.

Prepared By:

John E. Matting

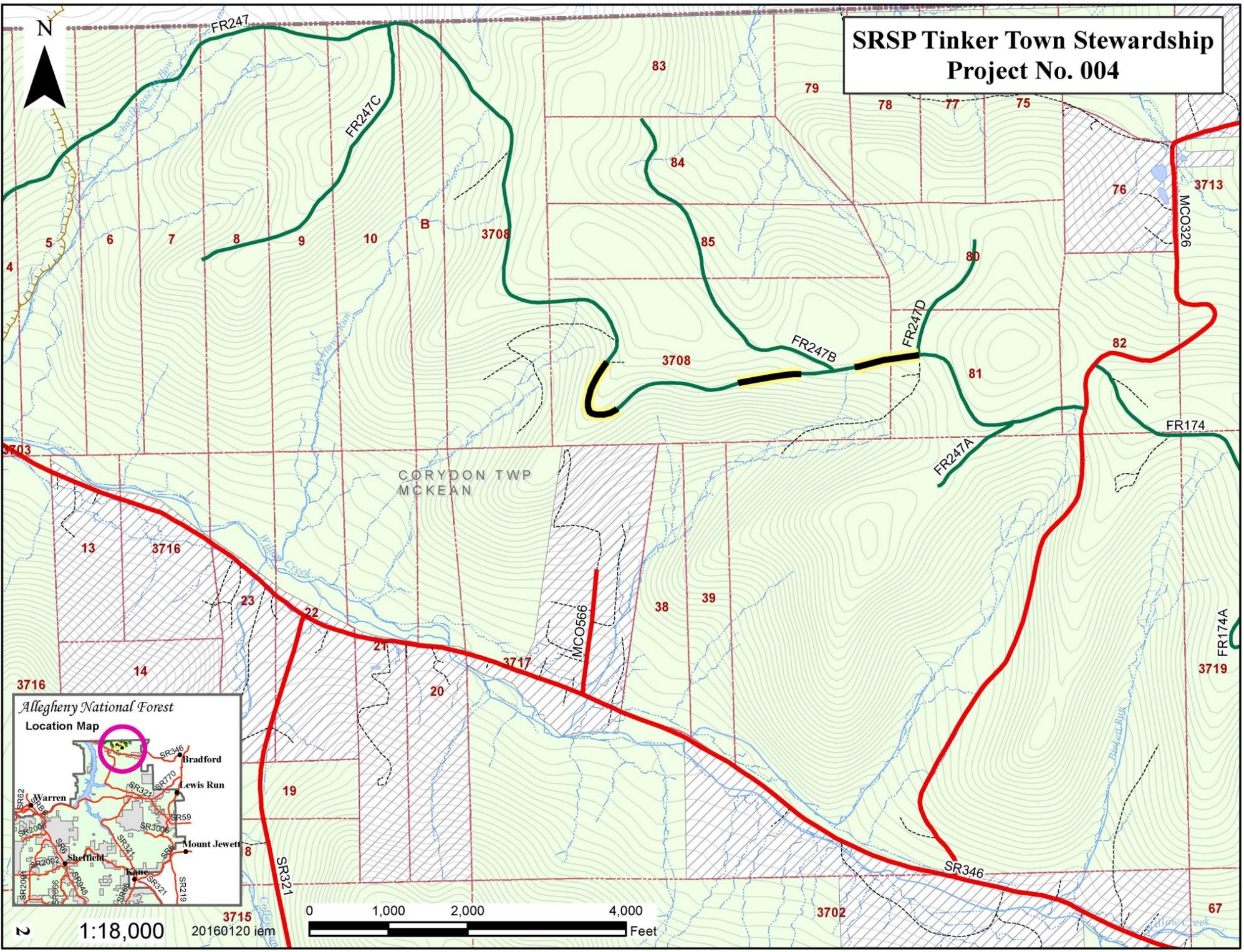
Approved By:

Randy      1/22/16  
District Ranger      Date

Donald      1-22-16  
Forest Engineer      Date

[Signature]      Jan 22, 2016  
Forest Supervisor      Date

# SRSP Tinker Town Stewardship Project No. 004



2 1:18,000 20160120 lem 0 1,000 2,000 4,000 Feet

## Road Summary

### SPECIFIED ROADS

a. Description of Work:

**Reconstruction: FR 247 – Road Surfacing**

Commercial Road Surfacing

b. Construction Costs:

| <u>Road No.</u>                            | <u>Miles</u> | <u>Engineer's Estimate</u> |
|--|--------------|----------------------------|
| FR 247 (Road Surfacing)<br>Project No. 004 | 0.5          | \$ _____                   |

c. Completion dates: 10/30/2016

## Schedule of Items

### FR 247 (Road Surfacing) Service Work - Project No. 004

| Pay Item     | Description  | Pay Unit | Estimated Quantity | Engineer's Estimate Unit Price | Engineer's Extended Total |
|--------------|--|----------|--------------------|--------------------------------|---------------------------|
| 30109        | Aggregate surface, grading <b>PA 2A</b> , compaction method <b>B</b> | Ton      | 667                |                                | \$                        |
| <b>TOTAL</b> |  |          |                    |                                | <b>\$</b>                 |

## General Notes

- **Prior to any earth disturbing activities, contractor shall call the Pennsylvania One Call System (800-242-1776) and all Oil & Gas Operators in the work area to determine locations of any underground utility lines.**
- All road work will be completed prior to timber haul, unless otherwise approved.
- Contractor is responsible for maintenance of all Forest Service roads over which pit run or commercial stone material is hauled. Roads shall be bladed or shaped to restore travel way to the condition found prior to haul.
- Culvert cleaning and repair will be considered incidental to road reconditioning.
- Contractor shall furnish, erect and maintain the minimum barricades and warning signs identified in the Special Project Specifications until final inspection and acceptance, unless otherwise directed by the Engineer. Signs shall conform to the Manual on Uniform Traffic Control Devices (MUTCD). **Contractor shall install “ROAD CONSTRUCTION AHEAD” signs on all roads in this project area and at ATV trail crossings. Contractor’s sign plan must be approved by Forest Service prior to work. Signs will be covered on weekends, holidays and any days when contractor is not working.**
- Roads shall be completed in such a manner that water shall not pond on roadbed or in ditch lines.
- All removed corrugated metal pipe culverts shall be hauled off Federal lands and become the property of the contractor, unless otherwise indicated for salvage. Steel pipe casings shall be returned to the Sheffield Work Center unless otherwise directed by the Engineer.
- Contouring, topsoil re-spreading, seeding and mulching of disturbed areas as determined by the Forest Service is required.
- DSA limestone shall be shipped at optimum moisture content not exceeding 15%. Limestone loads that fail field test parameters will be rejected.
- When replacing culverts in live streams, contractor shall install silt fence and straw bales at approaches to live stream crossings to eliminate sediment in the stream course. When culverts are located on High Quality and Exceptional Value streams, contractor shall install compost filter socks. Any sediment collected will be removed and ground will be stabilized with seed and mulch. Dewatering pumps will be used to redirect water out of the stream course at the time of stream crossing installation. Silt fence and straw bales will be removed only after vegetation is clearly re-established as determined by the Engineer.
- Roadway sod encountered during road reconditioning operations will be spread and leveled outside the road template avoiding piles. Natural terrain depressions and openings are the preferred waste locations. Seeding and mulching may be required to supplement natural revegetation.
- Vegetation cut down during roadside brushing will be pulled beyond the clearing limits and the toe of any roadway template construction. Mixing of soil and cut vegetation shall be avoided. All material will be scattered and lopped within 3’ of the ground.
- Aggregate stockpiled for culvert replacement will be located on the existing road surface to assure maximum utilization of the material and eliminate disturbance of existing vegetated areas.
- **Contractor shall install silt fence and straw bales at live stream crossings to eliminate sediment in the stream course. Any sediment collected will be removed and stabilized with seed and mulch. This will be considered incidental to Pay Item 602.**

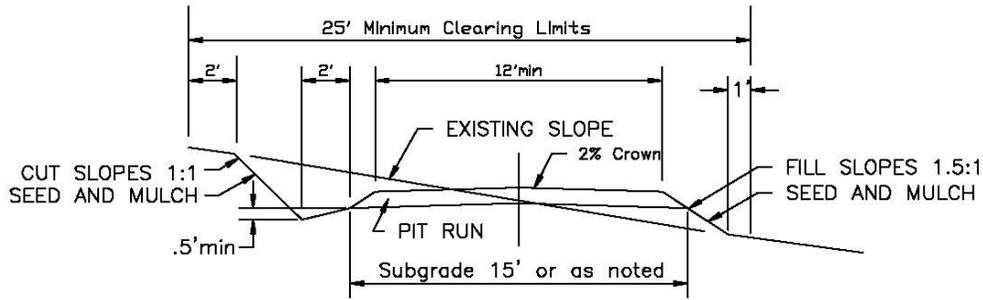
## Road Log - Work Descriptions

**FR 247 Tinkertown Run (Project No. 004)**

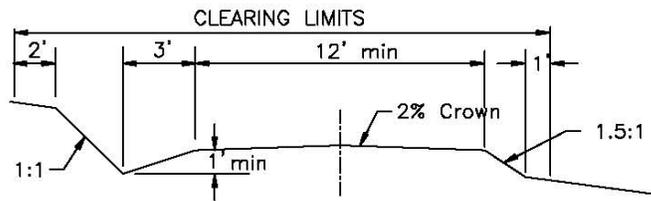
**Level of Service I (Old Level C)**

| Milepost                 | Station              | Road Log/Work Description   |
|--------------------------|----------------------|---|
| 0.000                    | 0+00                 | Intersection with Township Road 326 (FR 151)<br><b>Coordinates: Latitude 41° 59' 1.42" N (41.98373)</b><br><b>Longitude 78° 51' 0.03" W (-78.85001)</b> |
| 0.013                    | 0+70                 | Parking area (3 vehicles)/turnaround left   |
| 0.024                    | 1+25                 | Forest Service gate   |
| 0.033                    | 1+75                 | Old logging road left   |
| 0.063                    | <b>3+35</b>          | <b>CAUTION: Electric line overhead, low clearance</b>   |
| 0.114                    | 6+00                 | Road widening left  |
| 0.185                    | 9+75                 | FR 247A left  |
| 0.251                    | 13+25                | Turnout left  |
| 0.492                    | 26+00                | FR 247D right, old road corridor left   |
| <b>0.502 -<br/>0.663</b> | <b>26+50 - 35+00</b> | <b>Apply 4" compacted PA 2A as road surfacing (230 tons)</b>  |
| 0.703                    | 37+10                | FR 247B right   |
| 0.734                    | 38+75                | Turnout left  |
| <b>0.795 -<br/>0.928</b> | <b>42+00 - 49+00</b> | <b>Apply 4" compacted PA 2A as road surfacing (207 tons)</b>  |
| <b>1.288 -<br/>1.439</b> | <b>68+00 - 76+00</b> | <b>Apply 4" compacted PA 2A as road surfacing (230 tons)</b>  |
| 1.325                    | 69+95                | Turnaround left   |
| <b>1.439</b>             | <b>76+00</b>         | <b>End of road surfacing, road continues</b>  |

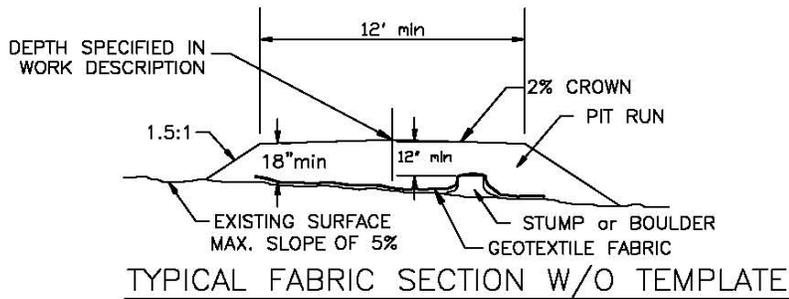
## Roadbed Details & Drawings



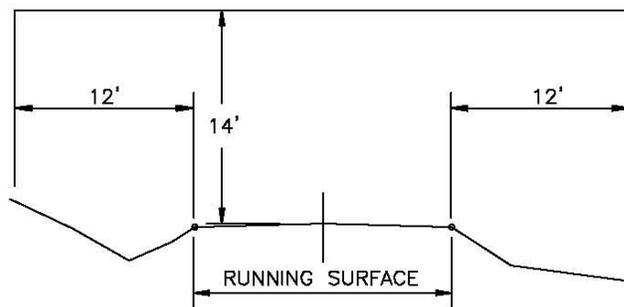
TYPICAL CONSTRUCTION SECTION



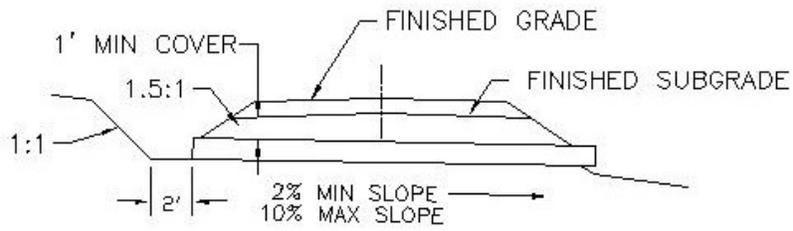
TYPICAL RECONDITION SECTION



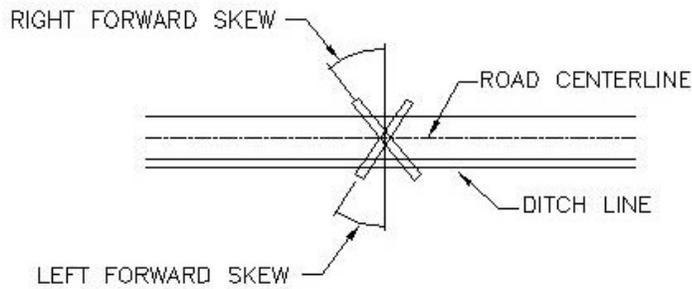
TYPICAL FABRIC SECTION W/O TEMPLATE



ROADSIDE BRUSHING DETAIL

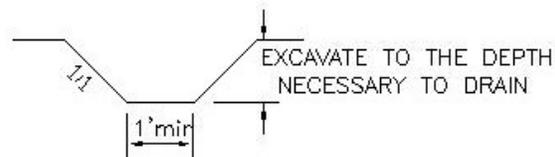


CULVERT SECTION

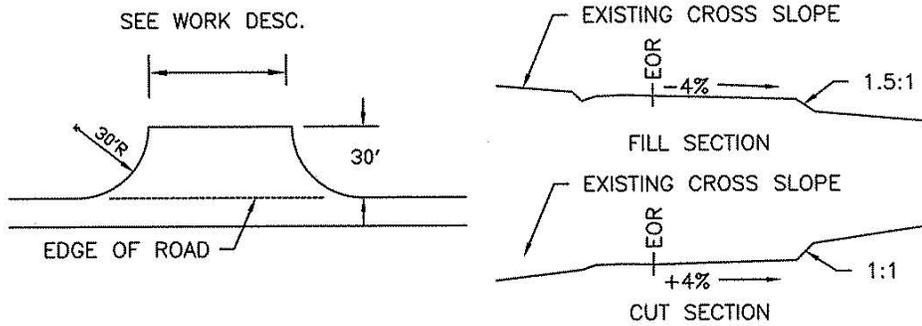


SKEW DETAIL

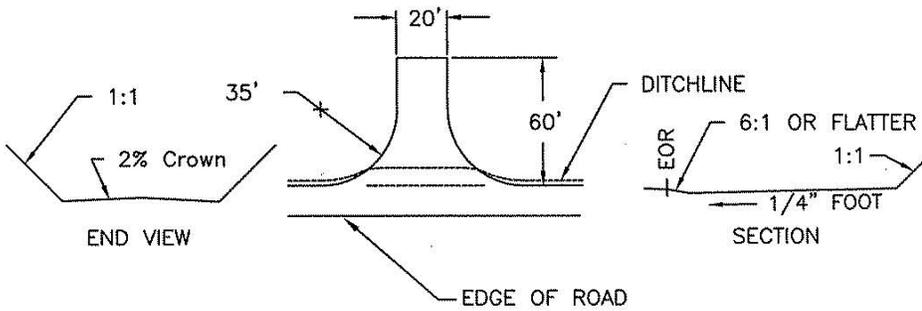
NOTE: Field locate ditch to minimize new clearing



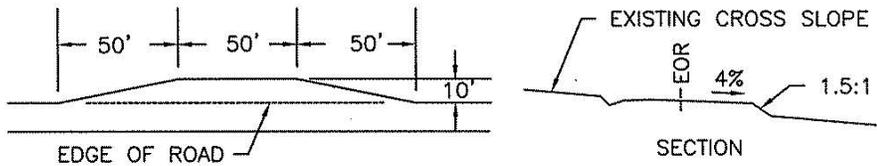
OUTLET/LEAD OFF DITCH SECTION



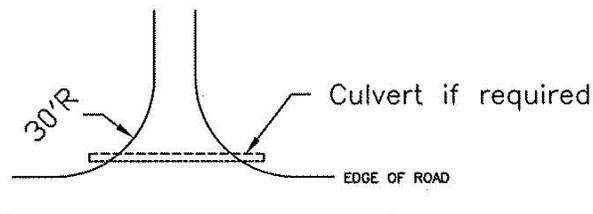
PARKING LOT DETAIL



TURNAROUND DETAIL



TURNOUT DETAIL



INTERSECTION DETAIL

## Specifications for Specified Roads

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## Specifications Description

The following specifications will be used for this contract:

Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects – FP-03 U.S. Customary Units. FP-03 is available on the internet at the following site:

<http://flh.fhwa.dot.gov/resources/pse/specs/>

Supplemental Specifications – The specifications identified in this contract were prepared by the Forest Service and are a supplement to or change the FHWA specifications.

Special Project Specifications – Are specifications prepared on the Allegheny National Forest and pertain to Pennsylvania Department of Transportation nomenclature. These are designated SPS.

## 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.

101.03\_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  | <a href="#">National Institute of Standards and Technology</a> |
| 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.

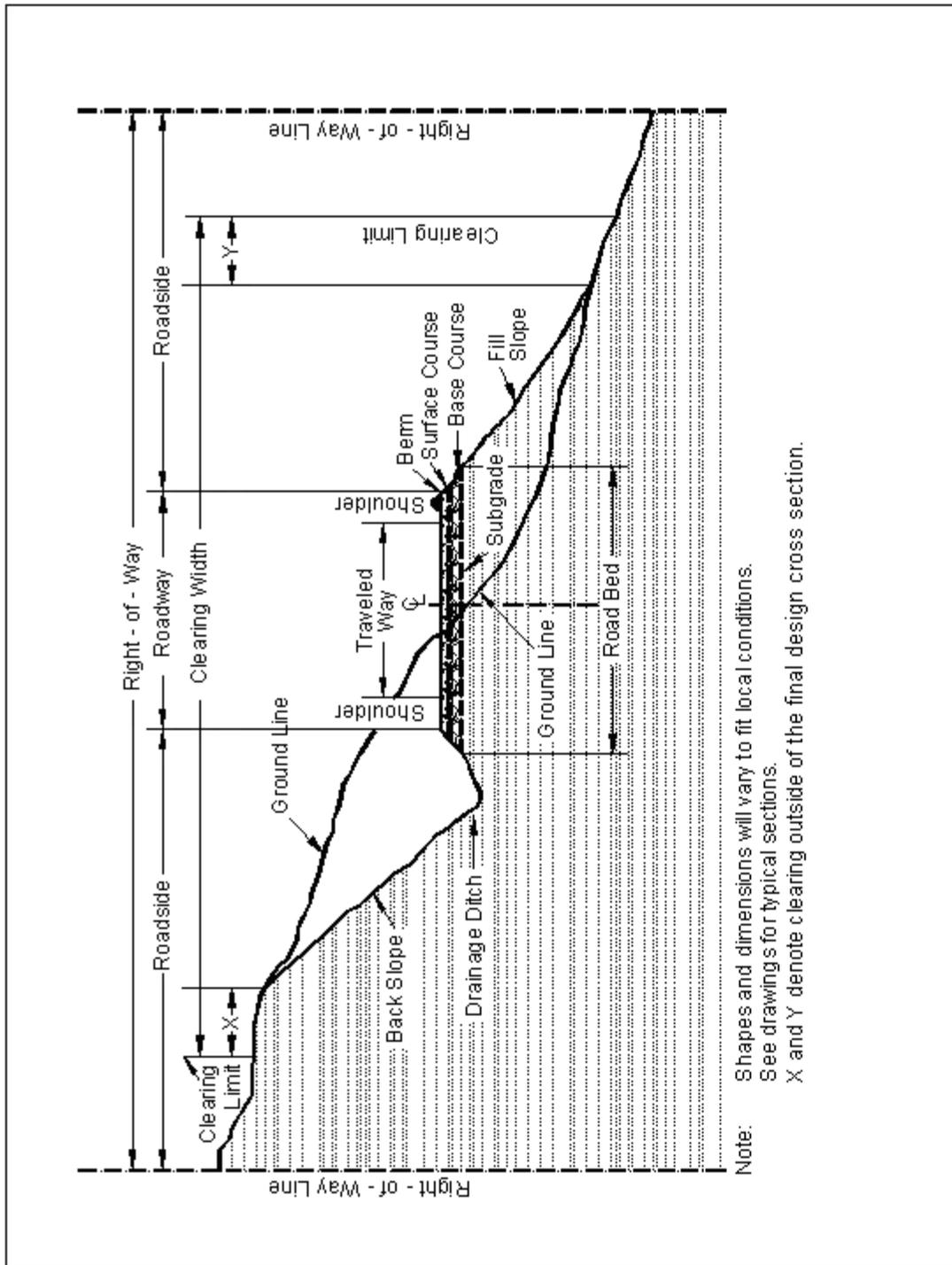
**Road Order**--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

**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.



## 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.

104.06\_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\_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

106.07\_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”.

107.09\_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

153.02\_nat\_us\_02\_17\_2005

### **153.02 Contractor Quality Control Plan.**

Add the following:

Submit written proposals for approval of alternate AASHTO or State approved test methods. Alternate methods may be allowed based on documented equivalence to the specified method.

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.

## 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.

301.04\_nat\_us\_03\_03\_2005

### 301.04 Mixing and Spreading.

Delete the first sentence of the first paragraph and add the following:

Ensure that aggregate and any required additives, water, mineral filler, and binder are mixed by the specified method except, if crushed aggregate products are being produced and mineral filler, binder, or additives are required, uniformly blend following crushing. Control additive proportions to 0.5 percent dry weight.

**(a) Stationary Plant Method.** Mix the aggregate with other required materials in an approved mixer. Add water during the mixing operation in the amount necessary to provide the moisture content for compacting to the specified density. After mixing, transport the aggregate to the jobsite while it contains the proper moisture content, and place it on the roadbed or base course using an aggregate spreader.

**(b) Travel Plant Method.** After placing the aggregate for each layer with an aggregate spreader or windrow-sizing device, uniformly mix it with other required materials using a traveling mixing plant. During mixing, add water to provide the necessary moisture content for compacting.

**(c) Road Mix Method.** After placing the aggregate for each layer, mix it with other required materials at the required moisture content until the mixture is uniform throughout. Mix aggregate, water, and all other materials until a uniform distribution is obtained.

Spread the aggregate in a uniform layer, with no segregation of size, and to a loose depth that will provide the required compacted thickness.

When placing aggregate over geotextile, place aggregate in a single lift to the full depth specified.

Route and distribute hauling and leveling equipment over the width and length of each layer.

301.05\_nat\_us\_05\_17\_2005

### 301.05 Compacting

Delete and replace with the following:

Compact each layer full width. Roll from the sides to the center, parallel to the centerline of the road. Along curbs, headers, walls, and all places not accessible to the roller, compact the material with approved tampers or compactors.

Compact the aggregate using one of the following methods as specified:

**Compaction A.** Operating spreading and hauling equipment over the full width of the travelway.

**Compaction B.** Operate rollers and compact as specified in Subsection 204.11(a)(1).

**Compaction C.** Moisten or dry the aggregate to a uniform moisture content between 5 and 7 percent based on total dry weight of the mixture. Operate rollers and compact as specified in Subsection 204.11(a)(1).

**Compaction D.** Compact to a density of at least 95 percent of the maximum density, as determined by AASHTO T 99, method C or D.

**Compaction E.** Compact to a density of at least 96 percent of the maximum density, as determined by the Modified Marshall Hammer Compaction Method (available upon

request from USDA Forest Service, Regional Materials Engineering Center, P.O. Box 7669, Missoula, MT 59807).

**Compaction F.** Compact to a density of at least 95 per-cent of the maximum density, as determined by AASHTO T 180, method C or D.

**Compaction G.** Compact to a density of at least 100 percent of the maximum density as determined by the Modified Marshall Hammer Compaction Method (available upon request from USDA Forest Service, Regional Materials Engineering Center, P.O. Box 7669, Missoula, MT 59807).

For all compaction methods, blade the surface of each layer during the compaction operations to remove irregularities and produce a smooth, even surface. When a density requirement is specified, determine the in place density and moisture content according to AASHTO T 310 or other approved test procedures.

301.06\_nat\_us\_03\_03\_2005

### **301.06 Surface Tolerance.**

Add the following:

Thickness and Width requirements:

The maximum variation from the compacted specified thickness is ½ inch. The compacted thickness is not consistently above or below the specified thickness and the average thickness of 4 random measurements for any ½ mile of road segment is within + ¼ inch of the specified thickness.

The maximum variation from the specified width will not exceed +12 inches at any point. The compacted width is not consistently above the specified width and the average of any four random measurements along any ½ mile of road segment is within +4 inches of the specified width.

301.09\_nat\_us\_07\_07\_2005

### **301.09 Measurement.**

Replace the second paragraph with the following:

Measure aggregate by cubic yard compacted in place when payment is by contract quantities.

301.10\_nat\_us\_03\_03\_2005

### **301.10 Payment**

Delete the following:

adjusted according to Subsection 106.05

## SPS 703 - Aggregate

Add the following: **703.20 Driving Surface Aggregate.** All Driving Surface Aggregate (DSA) is to be derived from natural limestone formations. Stone is defined as rock that has been crushed; rock is defined as consolidated mineral material. For use in this program, both are restricted to that which has been mined or quarried from existing bedrock formations.

All components of the aggregate mix are to be derived from crushed parent rock material that meets program specifications for abrasion resistance, pH and freedom from contaminants. Ninety-eight percent (98%) of the fines passing the #200 sieve must be parent rock material. No clay or silt soil may be added. The amount of particles passing the #200 sieve shall be determined using the washing procedures specified in PTM No. 100.

Size: The required amount and allowed ranges, determined by weight, for various size particles are:

| PASSING SIEVE | LOWER% | HIGH% |
|---------------|--------|-------|
| 1 ½ inch      | 100%   |       |
| ¾ inch        | 65%    | 90%   |
| #4            | 30%    | 65%   |
| #16           | 15%    | 30%   |
| #200          | 10%    | 20%   |

LA Abrasion: The acceptable limit is measured by weight loss is “less than 40% loss”. Los Angeles Abrasion test, AASHTO T-96 (ASTM C 131) shall be used to determine this property. Existing tests made for and approved by PennDOT will be accepted.

Sulfate Test: Soundness or resistance to freeze/thaw (i.e. sulfate test) is not specified for this application because a gravel road driving surface aggregate is not bound within a concrete or asphalt mix.

pH: Aggregate must be within the range of pH 6 to pH 9 as measured by EPA 9045C.

Optimum Moisture: Material is to be delivered and placed at optimum moisture content as determined for the particular source. The optimum percentage moisture is to be identified by the supplier in the bid purchasing documents. Loads with excessive moisture shall be rejected. Water draining from the tailgate, excess material sticking to the roller drum or the inability to compact the material are field indicators of excess moisture. In addition, if a load is too dry or does not have enough fines it will be rejected. Visual inspection of the load and poorly consolidated material after compactive effort are field indicators of low moisture or poor product gradation.

Transport: Tarps are to be used to cover 100% of the load’s exposed surface from the time of loading until immediately before dumping. This requirement includes standing time waiting to dump.

**Aggregate producers are required by the program to certify that the aggregate they deliver conforms to the program specifications.** To eliminate segregation of material, stockpiling of material at jobsite will not be permitted unless authorized by COR.

The following are “Local” sources for this material:

Hawbaker – Turtlepoint, PA. 814-237-1444 or 814-642-2500

New Enterprise Stone & Lime Co. – Tyrone, PA 814-695-4405

Allegheny Mineral Corporation, Glacial Sand & Gravel Company – Kittanning, PA 814-548-8101

Road Preparation Specifications: The road surface to receive the aggregate should have template with crown of 2% or ¼ inch per foot. The receiving surface is to be scarified to permit knitting of the aggregate.

Driving Surface Aggregate Placement: Minimum compacted depth of four inches is to be established for driving surface. Driving Surface Aggregate is to be applied by tailgate spreading unless spreader box is specified. Material when placed shall be compacted as follows: Beginning on the lower or berm side of the crown, begin rolling and work your way to the top of the crown by overlapping the successive longitudinal passes. Do not run the roller lengthwise directly on the crown. Compaction with truck tires is not accepted. Steel wheel rollers other than vibratory shall be capable of exerting a force of not less than 250 pounds per inch of width of the compression roller or rollers. Rollers shall be self propelled with a minimum weight of 6 tons. Contractor must have certification in writing that material placed is Driving Surface Aggregate meeting this specification.

**1” Minus Aggregate (DSA Gravel non limestone) Size:** The required amount and allowed ranges, determined by weight, for various size particles are:

| PASSING SIEVE | LOWER% | HIGH% |                               |
|---------------|--------|-------|-------------------------------|
| 1 ½ inch      | 100%   |       |                               |
| ¾ inch        | 65%    | 95%   |                               |
| #4            | 30%    | 65%   | LA Abrasion < 40%             |
| #16           | 15%    | 30%   | Sulfate Test – Not Applicable |
| #200          | 10%    | 15%   | PH between 6 and 9            |

Material available at Glenn O. Hawbacker – Pittsfield Pit 814-563-7911

AI Construction Corporation – Gardland Plant 814-563-7680

**Pennsylvania 2A Gradation:**

The required amount and allowed ranges, determined by weight, for various size particles are:

| PASSING SIEVE | LOWER% | HIGH% |                               |
|---------------|--------|-------|-------------------------------|
| 2 inch        | 100%   |       |                               |
| ¾ inch        | 52%    | 100%  |                               |
| #4            | 24%    | 50%   | LA Abrasion < 40%             |
| #16           | 10%    | 30%   | Sulfate Test – Not Applicable |
| #200          | 0%     | 10%   | PH between 6 and 9            |

**AASHTO 57 Gradation:**

The required amount and allowed ranges, determined by weight, for various size particles are:

| PASSING SIEVE | LOWER% | HIGH% |
|---------------|--------|-------|
| 1-1/2 inch    | 100%   |       |
| 1 inch        | 95%    | 100%  |
| 1/2 inch      | 25%    | 60%   |
| #4            | 0%     | 10%   |
| #8            | 0%     | 5%    |

## 718 - Traffic Signing and Marking Material

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### 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.