

**SCHEDULE OF ITEMS, SPECIFICATIONS & DRAWINGS
FOR FR 150B STEWARDSHIP SALE-Project # 001**

I. Road Summary

II. Schedule of Items

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ROAD SUMMARY

SPECIFIED ROADS

a. Description of Work:

Reconstruction/Maintenance: FR 279, FR 295 and FR 587

Mobilization, removal of culverts, brushing, machine placed riprap, pit run, limestone surfacing, reconditioning, culvert installation, ditch lining, seeding and pit development.

b. Reconstruction Costs:

| <u>Road No.</u> | <u>Miles</u> | <u>Estimated road cost</u> | <u>Reconst. Deposits</u> |
|-----------------|--------------|--------------------------------|------------------------------|
| 279 | 6.3 | | |
| 295 | 0.8 | | |
| 587 | 0.5 | | |
| Total | | | |

Completion dates: 11/30/2011

FR 279 Station 147+00-481+35

| Pay Item | Description | Method of Measure | Pay Unit | Estimated Quantity | Unit Price | Extended Total |
|--------------|--|-------------------|----------|--------------------|------------|----------------|
| 15101 | Mobilization | LSQ | All | 1 | | \$ - |
| 20301 | Removal of Culverts | CQ | Each | 41 | | \$ - |
| 20601 | Alkaline Road Runoff Channels | CQ | Foot | 8095 | | \$ - |
| 23050 | Brushing | CQ | Mile | 6.3 | | \$ - |
| 25102 | Machine Placed Riprap, NSA Size Number R-4 | VQ | Ton | 50 | | \$ - |
| 25102 | Machine Placed Riprap, NSA Size Number R-5 | VQ | Ton | 22 | | \$ - |
| 30111 | Aggregate surface course, Type pit run, compaction method A | CQ | C.Y. | 1056 | | \$ - |
| 30115 | Aggregate surface course, Type DSA limestone, compaction method B | VQ | Ton | 2438 | | \$ - |
| 30318 | Road reconditioning, roadbed, compaction method A | CQ | Mile | 6.3 | | \$ - |
| 60263 | 18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A | CQ | Foot | 1382 | | \$ - |
| 60263 | 24 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A | CQ | Foot | 120 | | \$ - |
| 60263 | 30 inch aluminized steel, type 2, corrugated steel pipe, 0.079 inch thickness, method A | CQ | Foot | 30 | | \$ - |
| 60263 | 36 inch aluminized steel, type 2, corrugated steel pipe, 0.079 inch thickness, method A | CQ | Foot | 28 | | \$ - |
| 60263 | 84 inch aluminized steel, type 2, corrugated steel pipe, 0.138 inch thickness, method A | CQ | Foot | 32 | | \$ - |
| 60264 | 71 inch span, 47 inch rise aluminized steel, type 2 corrugated steel pipe arch, 0.138 inch thickness, method A | CQ | Foot | 80 | | \$ - |
| 62503 | Seeding hydraulic or dry method | LSQ | All | 1 | | \$ - |
| 65101 | Pit and quarry development | LSQ | All | 1 | | \$ - |
| TOTAL | | | | | | \$ - |

Specification List

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://fh.fhwa.dot.gov/resources/pse/specs/>

Supplemental Specifications – These specifications were prepared by the Forest Service and are a supplement to or change the FHWA specifications. These are designated SS.

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

Preface

101 - Terms, Format, and Definitions

SS101 - Terms, Format, and Definitions

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SS102 - Bid, Award, and Execution of Contract

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SS103 - Scope of Work

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SS104 - Control of Work

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SS105 - Control of Materials

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SS301 - Untreated Aggregate Courses

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SS602 - Culverts and Drains
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SS625 - Turf Establishments
SS651 - Development of Pits & Quarries
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SPS705 - Rock

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 | <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.

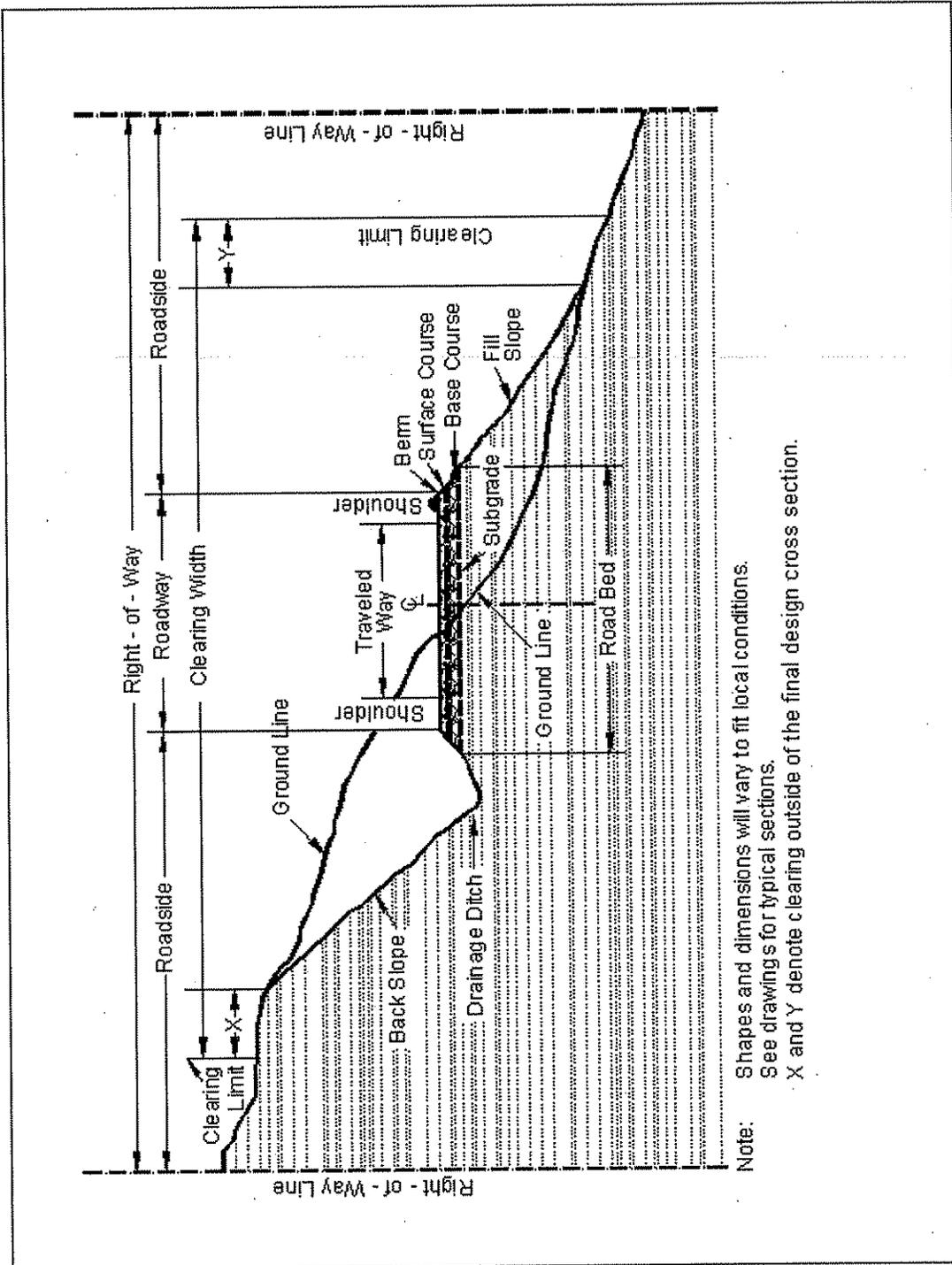
Road Order--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

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.



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.

155 - Schedules for Construction Contracts

155.00_nat_us_05_11_2004

155 Delete.

Delete Section 155 in its entirety.

206 – Alkaline Road Runoff Channels

Description

206.01 Work. Work will include the reconstruction of the ditch and placement of government furnished AASHTO #10 limestone sand and AASHTO #1 limestone coarse aggregate in sections..

Materials

206.02 Requirements. Government furnished AASHTO #10 limestone sand and AASHTO #1 limestone coarse aggregate will be stockpiled in the FR 279H pit.

Construction

206.03 Performance. At locations designated in the work description, construct Alkaline Road Runoff Channels (ARRC) AS SHOWN ON THE DRAWINGS. #10 limestone sand will be placed to a depth of four (4) inches in these channels.

In areas with a grade over 4%, construct grade control structures AS SHOWN ON THE DRAWINGS. These grade control structures will be 8' long. Use a backhoe loader bucket to place a 4" layer of AASHTO #1 limestone coarse aggregate over the limestone sand. Pack the coarse aggregate into the sand with the backhoe loader. These grade control rock structures will be placed at 2' changes in elevation. Locations of these grade control rock structures will be marked in the field. An estimated 60 grade control rock structures will be required.

Measurement

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

Payment

206.05 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 206 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

230 - Roadside Brushing

230.00_0114_us_08_04_2005

Description

230.01 Work. This work consists of removing all vegetative material including limbs, residual slash, live roadside brush, and small trees within the brushing limits designated on the plans.

Construction

230.02 Brushing. Cut all brush and small trees (6 inches diameter, or less, at the point of cut) inside the brushing limits and outside the roadbed no higher than 4 inches above ground level (6 inches for machine brushing). If rocks or other obstructions are encountered, cut no higher than 6 inches above the obstruction. Limb live trees with a diameter larger than 6 inches to provide a clear height of 14 feet above the road surface.

Cut all brush and trees located on the roadbed as nearly flush to the road surface as possible so stumps will not become a hazard to vehicle tires.

230.03 Windfalls. Limb windfalls lying within or across the brushing limits, cut off at the top of the existing cut slope or 5 feet from the shoulder on the fill slope. Dispose of windfall material as slash.

230.04 Road Junctions. Do not deposit brushing debris on the roadway of adjoining roads.

230.05 Slash Treatment. Scatter slash outside the brushing limits without damaging residual trees. Slash is defined as any material that has a length greater than 36 inches or a diameter greater than 2 inches at any point. Do not deposit material in streams, streambeds, culvert inlets or outlets, drainage ways, or cattle guards.

230.06 Acceptance. Roadside brushing will be evaluated under Subsection 106.02.

Measurement

230.07 Method. Measure the Section 230 items listed in the bid schedule according to Subsection 109.02 and the following.

Linear measurements will be horizontal along the road centerline.

Quantities will be the number of miles (or stations) and fractions thereof along the road centerline.

Payment

230.08. The accepted quantities will be paid at the contract price per unit of measurement for the section 230 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.

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 $\frac{1}{2}$ inch. The compacted thickness is not consistently above or below the specified thickness and the average thickness of 4 random measurements for any $\frac{1}{2}$ mile of road segment is within $+\frac{1}{4}$ 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 $\frac{1}{2}$ mile of road segment is within +4 inches of the specified width.

301.08_nat_us_03_30_2005

301.08(b) Plasticity Index.

Add the following to the first sentence:

“and under 703.05(c)(1)”.

301.10_nat_us_03_03_2005

301.10 Payment

Delete the following:

adjusted according to Subsection 106.05

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.

602 - Culverts and Drains

602.03_nat_us_09_06_2005

602.03 General.

Add the following:

Ensure that the final installed alignment of all pipe allows no reverse grades, and does not permit horizontal and vertical alignments to vary from a straight line drawn from center of inlet to center of outlet by more than 2 percent of pipe center length or 1.0 feet, whichever is less.

625 - Turf Establishment

625.03_nat_us_07_02_2007

625.03 General.

Delete this subsection and replace with the following:

Apply turf establishment to prepared ground or any disturbed area between April 15th and September 30th. Apply turf establishment to the areas shown on the plans or worklists within 7 days after completion of ground disturbing activities. Unless otherwise specified in writing by the CO apply turf establishment after each 1000 foot section of road has been constructed to template lines. Seeded areas damaged by construction activities shall be reseeded within 10 days of the damage. Do not seed during windy weather or when the ground is excessively wet, frozen, or snow covered. Assure that all seed and mulch used in the work conforms to the weed free requirements of Section 713.

625.04 Preparing Seedbed.

Delete entire subsection and replace with the following:

Ensure that the surface soil is in a roughened condition favorable for germination and growth.

625.05 Watering

Delete entire subsection.

625.06 Fertilizing.

Delete entire subsection and replace with the following:

Apply fertilizer having a chemical analysis as listed below by the following methods.

(a) Dry Method. Apply the fertilizer with approved mechanical equipment. Hand operated methods are satisfactory on areas inaccessible to mechanical equipment.

(b) Hydraulic method. Use hydraulic-type equipment capable of providing a uniform application using water as the carrying agent. Add fertilizer to the slurry and mix before adding seed. Add the tracer material when designated by the CO.

Fertilizer. Apply fertilizer at the rate of 500 pounds per acre. Insure that the fertilizer meets the following chemical analysis:

| <u>Nutrient</u> | <u>Percent</u> |
|---|----------------|
| Nitrogen, N | <u>10</u> |
| Phosphorus, P ₂ O ₅ | <u>20</u> |
| Potassium, K | <u>20</u> |

625.07 Seeding.

Delete the first sentence and add the following.

Apply seed mix by the following methods:

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

Add the following after subsection (b).

Seed Mix. Furnish and apply the following kinds and amounts of pure live seed from the Ernst Conservation Seeds, 9006 Mercer Pike, Meadville, PA. 16335 (800) 873-3221 or Fax (814) 336-5191 or www.ernstseed.com Native Right-of-Way Woods Seed Mix with Annual Ryegrass-ERNMX-132-1:

| <u>Type of Seed</u> | <u>Quantity of Pure Live Seed (Lbs/Acre)</u> |
|----------------------------|--|
| 1. 30% Virginia Wild Rye | 9 |
| 2. 20% Annual Ryegrass | 6 |
| 3. 15% Shelter Switchgrass | 4.5 |
| 4. 10% Creeping Red Fescue | 3 |
| 5. 5% Autumn Bentgrass | 1.5 |
| 6. 5% Fox Sedge | 1.5 |
| 7. 5% Showy Tick Trefoil | 1.5 |
| 8. 5% Nimble Will | 1.5 |
| 9. 5% Tioga Deer Tongue | 1.5 |

Total Seeding rate 30 lb per acre

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

625.08 Mulching.

Delete the entire subsection and replace with the following:

Apply Mulch within 24 hours after seeding by the following methods.

(a) **Dry Method.** Apply mulch with a hand spreader or a spreader utilizing forced air at a rate of 4000 pounds per acre. Anchor the mulch with an approved stabilizing emulsion tackifier at a rate of 0 gallons per acre. Do not mark or deface structure, pavements, utilities, or plant growth with tackifier.

(b) **Hydraulic Method.** Apply mulch in a separate application from the seed using hydraulic-type equipment according to Subsection 625.07(b). Apply wood fiber or grass straw cellulose fiber mulch at a rate of 775 pounds per acre.

Apply bonded fiber matrix hydraulic mulch at a minimum rate of 775 pounds per acre. Apply so no hole in the matrix is greater than 0.04 inches. Apply so that no gaps exist between the matrix and the soil.

Inaccessible areas may be mulched by hand. Apply mulch uniformly over the entire disturbed area.

625.09 Protecting and Caring for Seeded Areas

Delete the first sentence and add the following:
Protect and care for seeded areas until final acceptance.

625.11 Measurement.

Delete the entire Subsection and replace with the following:
Measure the Section 625 items listed in the bid schedule according to Subsection 109.02.

651 - Development of Pits & Quarries

651.00_nat_us_03_02_2005

Description

651.01 This work consists of clearing, grubbing, stripping topsoil, removing overburden, constructing access roads, conducting restoration activities, and performing other incidental work required for pit or quarry development.

Construction Requirements

651.02 General. Submit a plan of operations according to Section 105. Perform all work in accordance with Sections 105, 201, 203, 204, 625, and 635, landscape preservation requirements, and the approved pit and quarry development plan of operations. Perform the work in accordance with MSHA 30 CFR, part 56.

651.03 Acceptance. Developing pits and quarries will be evaluated under Subsections 106.02 and 106.04.

Measurement

651.04 Measure the Section 651 items listed in the bid schedule according to Subsection 109.02.

Payment

651.05 The accepted quantities will be paid at the contract price per unit of measurement for the Section 651 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

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

Road Preparation Specifications: The road surface to receive the aggregate should have template with crown of 2% or $\frac{1}{4}$ 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 full depth in small quantities and with a spreader box in quantities over 5000 tons. 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 $\frac{1}{2}$ inch | 100% | | |
| $\frac{3}{4}$ 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.

Pennsylvania 2A Gradation:

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

| PASSING SIEVE | LOWER% | HIGH% | |
|--------------------|--------|-------|-------------------------------|
| 2 inch | 100% | | |
| $\frac{3}{4}$ inch | 52% | 100% | |
| #4 | 24% | 50% | LA Abrasion < 40% |
| #16 | 10% | 30% | Sulfate Test - Not Applicable |
| #200 | 0% | 10% | PH between 6 and 9 |

SPS 705 - Rock

Replace 705.02 with the following:

705.02 **Riprap Rock.** Furnish rock sound, free from structural defects and foreign substances such as soil, shale, and organic materials. Use rock conforming to the following requirements:

No shale seams

Hard and angular shaped rock with neither width nor thickness less than one-third its length.

Minimum specific gravity of 2.5 as determined according to AASHTO T 85, bulk saturated, but surface-dry basis.

Each load of rock well-graded, from smallest to the largest size

| Class, Size No. | Percent Passing (Square Openings) | | | | |
|--------------------|-----------------------------------|-------|-------|-------|-------|
| | R-7 | R-6 | R-5 | R-4 | R-3 |
| Rock Size (inches) | | | | | |
| 30 | 100 | | | | |
| 24 | | 100 | | | |
| 18 | 15-50 | | 100 | | |
| 12 | 0-15 | 15-50 | | 100 | |
| 9 | | | 15-50 | | |
| 6 | | 0-15 | | 15-50 | 100 |
| 4 | | | 0-15 | | |
| 3 | | | | 0-15 | 15-50 |
| 2 | | | | | 0-15 |
| Nominal | | | | | |
| Thickness | 36 | 30 | 24 | 18 | 12 |

DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION 9
ALLEGHENY NATIONAL FOREST

FR 150B Stewardship Sale

| | | |
|--------|--------------|---|
| FR 279 | Headwaters | 6.3 Mile Reconst. - Maintenance - Level C & D |
| FR 295 | South Branch | 0.8 Mile Reconst. - Maintenance - Level D |
| FR 587 | Lower Meade | 0.5 Mile Reconst. - Maintenance - Level C |

Marienville Ranger District
McKean County
Pennsylvania

| | |
|-------|-----------------------------------|
| 1 | Title Sheet |
| 2 | Vicinity Map |
| 3-5 | Schedule of Items & General Notes |
| 6-16 | Road Log/Work Description |
| 17-18 | Drainage Summary |
| 19-22 | Roadbed Details |
| 23 | Pit Development Plan |

The location and design elements of this facility have been correlated with the plans, policies and constraints of the approved North End Environmental Assessment.

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:

Henry S. Hus

Approved By:

Carl A. Zell

District Ranger

1/10/2011

Date

Forest Engineer

Forest Supervisor

Dan Slon

1-19-2011

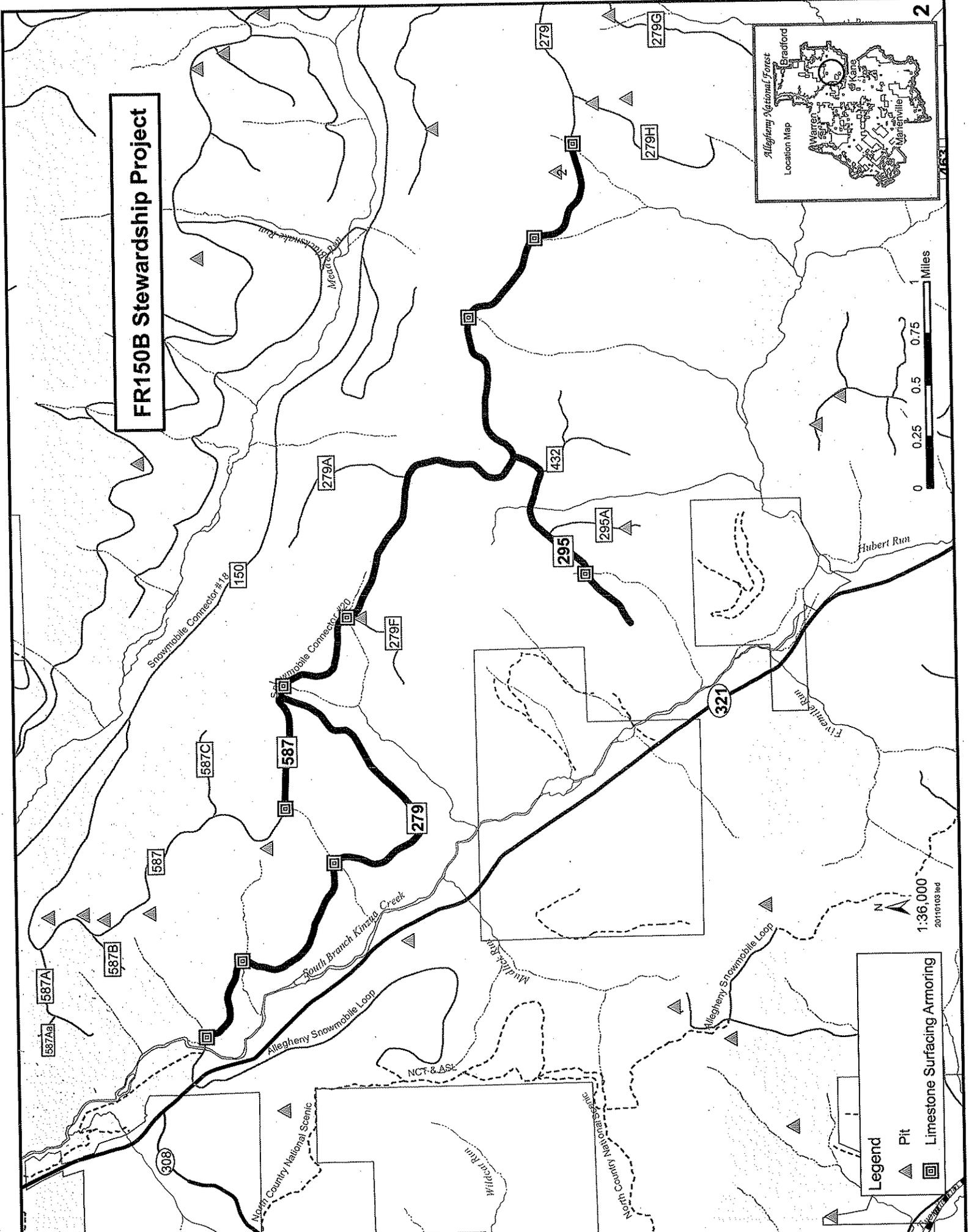
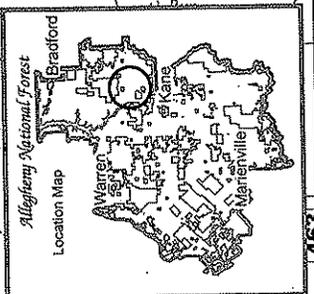
Date

Tom P. H.

2-1-2011

Date

FR150B Stewardship Project



Legend

- ▲ Pit
- ◻ Limestone Surfacing Armoring

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SCHEDULE OF ITEMS

FR 279

| ITEM | DESCRIPTION | UNIT | QTY |
|-------|--|------------|------|
| 15101 | Mobilization | All | 1 |
| 20301 | Removal of culverts | Each | 41 |
| 20601 | Alkaline Road Runoff Channels | Foot | 8095 |
| 23050 | Brushing | Mile | 6.3 |
| 25102 | Machine Placed Riprap, NSA Size Number R-4 | Ton | 50 |
| 25102 | Machine Placed Riprap, NSA Size Number R-5 | Ton | 22 |
| 30111 | Aggregate surface course, type pit run, compaction method A | Cubic Yard | 1056 |
| 30115 | Aggregate surface course, Type DSA limestone, compaction Method B | Ton | 2438 |
| 30326 | Road reconditioning | Mile | 6.3 |
| 60263 | 18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A | Foot | 1382 |
| 60263 | 24 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A | Foot | 120 |
| 60263 | 30 inch aluminized steel, type 2, corrugated steel pipe, 0.079 inch thickness, method A | Foot | 30 |
| 60263 | 36 inch aluminized steel, type 2, corrugated steel pipe, 0.079 inch thickness, method A | Foot | 28 |
| 60263 | 84 inch aluminized steel, type 2, corrugated steel pipe, 0.138 inch thickness, method A | Foot | 32 |
| 60264 | 71 inch span, 47 inch rise, aluminized steel, type 2, corrugated steel pipe arch, 0.138 inch thickness, method A | Foot | 80 |
| 62503 | Seeding, hydraulic or dry method | All | 1 |
| 65101 | Pit and quarry development | All | 1 |

FR 295

| ITEM | DESCRIPTION | UNIT | QTY |
|-------|---|------------|-----|
| 15101 | Mobilization | All | 1 |
| 20301 | Removal of Culverts | Each | 1 |
| 23050 | Brushing | Mile | 0.8 |
| 30111 | Aggregate surface course, Type pit run, compaction method A | Cubic Yard | 12 |
| 30115 | Aggregate surface course, Type DSA limestone, compaction method B | Ton | 486 |
| 30318 | Road reconditioning, roadbed, compaction method A | Mile | 0.8 |
| 60263 | 24 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A | Foot | 26 |

FR 587

| ITEM | DESCRIPTION | UNIT | QTY |
|-------|---|------------|-----|
| 15101 | Mobilization | All | 1 |
| 20301 | Removal of culverts | Each | 1 |
| 20350 | Brushing | Mile | 0.5 |
| 30111 | Aggregate base, grading pit run, compaction A | Cubic Yard | 12 |
| 30115 | Aggregate surface course, Type DSA limestone, compaction Method B | Ton | 234 |
| 30326 | Road reconditioning | Mile | 0.5 |
| 60263 | 24 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A | Foot | 28 |

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.

-Culvert cleaning and repair will be considered incidental to road reconditioning.

-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.

-Contractor shall install "ROAD CONSTRUCTION AHEAD" signs on all roads worked on in this project area and at ATV trail crossings. Signs shall conform to the Manual on Uniform Traffic Control Devices (MUTCD). Signs shall be covered when construction activity is not taking place.

-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.

-Forest Service gate plans are available at the Allegheny National Forest Supervisor's Office, Warren, PA. 16365. The following are gate manufacturers:

Gary Asel
Marienville, PA.
(814) 927-8380

ADM Welding
2818 Penna. Ave. West
Warren, PA. 16365
(814) 723-7227

-Contouring, topsoil respreading, 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 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. 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.

FR 279 Headwaters (Level C)

| Station | Road Log/Work Description |
|----------------------|--|
| 0+00 | Intersection with FR 150, 3.4 miles west of State Route 219 |
| 90+85 | FR 279B right |
| 96+65 | FR 279G left |
| 126+55 | FR 279H left |
| 147+00 | Pit access road right |
| 147+00-481+35 | Recondition roadbed, see TYPICAL RECONDITION SECTION, perform roadside brushing, 12' from shoulder and 14' high, and clean all culverts |
| 147+25 | Remove 22" x 13" x 28' CMPA, install 18" x 30' CMP, apply 12 CY pit run |
| 147+95 | Construct turnout left, apply 24 CY pit run |
| 150+20 | Remove 22" x 13" x 28' CMPA, install 18" x 30' CMP, apply 12 CY pit run |
| 152+10 | Log landing left |
| 152+20 | Turnout left |
| 156+70 | Remove 22" x 13" x 28' CMPA, install 18" x 30' CMP, apply 12 CY pit run |
| 158+45 | Remove 18" x 28' CMP, install 18" x 30' CMP, apply 12 CY pit run |
| 160+00-166+45*** | Construct Alkaline Road Runoff Channel (ARRC) in right ditch, place limestone sand and (AASHTO #1) |
| 161+67 | Remove 18" x 26' CMP, install 18" x 28' CMP, apply 12 CY pit run |
| 163+00 | 18" x 28' CMP |
| <u>163+00-170+85</u> | <u>Apply 4" DSA limestone surfacing (322 tons)</u> |
| 164+40 | Turnout left |

| | | |
|----------------------|---|--|
| 164+40-168+90 | | 2RC limestone |
| 166+45*** | 5 | Salvage 36" x 40' CMP, return to the Sheffield Work Center, install 71" x 47" x 44' CMPA, apply 60 CY pit run (DEP permit needed for this stream crossing) bury outlet 6" into streambed |
| 166+45-178+85*** | | Construct Alkaline Road Runoff Channel (ARRC) in left ditch, place limestone sand and (AASHTO #1) |
| 169+00 | | Reconstruct turnout right, apply 24 CY pit run |
| 170+85 | | Remove 22" x 13" x 36' CMPA, install 18" x 36' CMP, apply 12 CY pit run |
| 174+05 | | Construct leadoff ditch right |
| 174+05-178+85*** | | Construct Alkaline Road Runoff Channel (ARCC) in right ditch, place limestone sand and (AASHTO #1) |
| 177+10 | | Construct leadoff ditch right |
| 178+85 | | Remove 22" x 13" x 28' CMPA, install 18" x 30' CMP, apply 12 CY pit run |
| 180+95 | | Reconstruct turnout right, apply 24 CY pit run |
| 185+50 | | Leadoff ditch left and right |
| 188+00 | | 18" x 26' CMP |
| 190+40 | | Turnout left |
| 192+10-193+10 | | Place 20 tons riprap in right ditch |
| <u>193+05-198+25</u> | | <u>Apply 4" DSA limestone surfacing (206 tons)</u> |
| 193+10 | | 18" x 28' CMP |
| 195+30*** | 6 | Remove 18" x 28' CMP, install 36" x 28' CMP, apply 24 CY pit run |
| 198+25 | | Construct turnout left, apply 24 CY pit run |
| 199+25 | | Log landing right |

| | | |
|----------------------|----|--|
| 205+35 | | Remove 18" x 26' CMP, install 18" x 30' CMP, apply 12 CY pit run |
| 206+30 | | Turnout right |
| 210+90 | | Remove 22" x 13" x 26' CMPA, install 18" x 30' CMP, apply 12 CY pit run |
| 211+00 | | Turnout left |
| 213+35 | | Turnout right |
| 218+45 | | 18" x 26' CMP, place 2 tons riprap at outlet |
| 220+50 | | Reconstruct turnout left, apply 24 CY pit run |
| <u>221+80-227+80</u> | | <u>Apply 4" DSA limestone surfacing (211 tons)</u> |
| 224+80 | | Remove 18" x 28' CMP, install 30" x 30' CMP, apply 24 CY pit run, place 2 tons riprap at outlet (live drainage) |
| 229+90 | 6A | Remove 18" x 26' CMP, install 18" x 26' CMP, apply 12 CY pit run |
| 233+20 | | Turnout left |
| 234+15 | | Log landing right and left |
| 237+95 | | FR 295 left |
| 237+85-258+15*** | | Construct Alkaline Road Runoff Channel (ARRC) in right ditch, place limestone sand and (AASHTO #1) |
| 238+90 | | Remove 22" x 13" x 24' CMPA, install 18" x 26' CMP, apply 12 CY pit run |
| 239+00 | | Turnout right |
| 243+90 | | 18" x 28' CMP |
| 244+80 | | Construct turnout left, apply 24 CY pit run |
| 248+90 | | Install 18" x 28' CMP, apply 12 CY pit run |
| <u>248+90-256+96</u> | | <u>Apply 4" DSA limestone (329 tons)</u> |

| | |
|---------------|---|
| 251+00 | Turnout right |
| 252+65 | 18" x 30' CMP, place 2 tons riprap at outlet (this pipe collects 4-5 small springs) |
| 255+55 | Construct turnout left, apply 24 CY pit run |
| 256+95 | Remove 18" x 28' CMP, install 18" x 30' CMP, apply 12 CY pit run |
| 260+60 | 18" x 26' CMP, place 2 tons riprap at outlet |
| 266+30 | Turnout right |
| 266+95 | Remove 18" x 26' CMP, install 18" x 28' CMP, apply 12 CY pit run |
| 270+50 | FR 279A right |
| 272+20 | Remove 18" x 28' CMP, install 18" x 28' CMP, apply 12 CY pit run |
| 276+05 | Turnout right |
| 280+55 | Turnout right |
| 280+90 | Remove 22" x 13" x 28' CMPA, install 18" x 28' CMP, apply 12 CY pit run |
| 285+65 | Log landing left |
| 288+85 | Remove 18" x 26' CMP, install 18" x 26' CMP, apply 12 CY pit run |
| 291+65 | Reconstruct turnout right, apply 24 CY pit run |
| 295+65 | Remove 18" x 26' CMP, install 18" x 26' CMP, apply 12 CY pit run |
| 297+10 | Turnout left |
| 301+10 | Construct turnout right, apply 24 CY pit run |
| 302+25 | Remove 18" x 26' CMP, install 18" x 28' CMP, apply 12 CY pit run |

| | | |
|-----------------------------|----------|---|
| 302+25-307+00*** | | Construct Alkaline Road Runoff Channel (ARRC) in left ditch, place limestone sand and (AASHTO #1) |
| <u>306+90-316+33</u> | | <u>Apply 4" DSA limestone surfacing (355 tons)</u> |
| 307+00 | | Install 18" x 28' CMP, apply 12 CY pit run |
| 308+20 | | FR 279F left |
| 309+40-309+90 | | Place 10 tons riprap right ditch |
| 309+90*** | 7 | Remove 24" x 28' CMP, install 71" x 47" x 36' CMPA, apply 36 CY pit run (Permit required) |
| 309+90-342+15*** | | Construct Alkaline Road Runoff Channel (ARRC) in right ditch, place limestone sand and (AASHTO #1) |
| 313+35 | | Construct turnout right, apply 24 CY pit run |
| 316+33 | | Install 18" x 28' CMP, apply 12 CY pit run |
| 320+26 | | Install 18" x 28' CMP, apply 12 CY pit run |
| 321+85 | | Turnout right |
| 325+00 | | Turnout left |
| 325+55 | | 18" x 26' CMP |
| 326+60 | | Turnout left |
| 333+00 | | Turnout right |
| <u>335+30-341+30</u> | | <u>Apply 4" DSA limestone surfacing</u> |
| 337+60 | | ROAD CLOSED 500 FEET sign right |
| 338+30*** | 8 | Remove 18" x 26' CMP, install 24" x 30' CMP, apply 12 CY pit run |
| 341+50 | | Remove 18" x 26' CMP, install 18" x 28' CMP, apply 12 CY pit run |
| 342+15 | | FR 587 right |
| 343+35 | | Forest Service gate |

| | |
|---------------|--|
| 346+25 | Turnout right |
| 349+55 | 18" x 28' CMP on left forward skew |
| 355+55 | 18" x 28' CMP on left forward skew |
| 355+90 | Turnaround right |
| 357+50 | 18" x 28' CMP |
| 362+00 | Turnout left |
| 365+35 | 18" x 26' CMP, place 2 tons riprap at outlet |
| 372+90 | Remove 18" x 36' CMP, install 18" x 36' CMP, apply 12 CY pit run |
| 373+10 | Turnout right |
| 377+00 | Install 18" x 28' CMP, apply 12 CY pit run |
| 377+90 | Install 18" x 28' CMP, apply 12 CY pit run, spring |
| 378+50 | Remove 18" x 26' CMP, install 18" x 28' CMP, apply 12 CY pit run |
| 379+60 | Install 18" x 28' CMP, apply 12 CY pit run, springs right |
| 382+55 | Install 18" x 28' CMP, apply 12 CY pit run |
| 383+80 | Remove 18" x 24' CMP, install 18" x 26' CMP, apply 12 CY pit run, place 2 tons riprap at outlet |
| 384+00 | Place 12 CY pit run |
| 388+60 | Turnout right |
| 389+25 | Install 18" x 28' CMP, apply 12 CY pit run |
| 391+50 | Remove 18" x 26' CMP, install 18" x 28' CMP, place 2 tons riprap at outlet |
| 394+85 | Install 18" x 28' CMP, apply 12 CY pit run, spring right |
| 395+25 | Remove 18" x 26' CMP, install 18" x 28' CMP on right forward skew, apply 12 CY pit run |
| 403+00 | Turnout right |

| | | |
|----------------------|----|--|
| 407+25 | | 18" x 26' CMP |
| 414+25 | | Remove 18" x 26' CMP, install 18" x 28' CMP, apply 12 CY pit run |
| 414+85 | | Turnout right |
| <u>417+70-423+70</u> | | <u>Apply 4" DSA limestone surfacing (234 tons)</u> |
| 420+70*** | 10 | Remove 24" x 26' CMP, install 24" x 32' CMP, apply 12 CY pit run |
| 421+50 | | Install 18" x 28' CMP, apply 12 CY pit run, springs right |
| 422+15 | | Turnout left |
| 426+05 | | Install 18" x 28' CMP, apply 12 CY pit run, springs right |
| 426+85 | | Install 18" x 28' CMP, apply 12 CY pit run, springs right |
| 429+90 | | Remove 18" x 26' CMP, install 18" x 30' CMP, place 4 tons riprap at outlet |
| 431+40 | | Remove 18" x 26' CMP, install 18" x 28' CMP, apply 12 CY pit run, spring |
| 434+00 | | Install 18" x 28' CMP, apply 12 CY pit run, spring |
| 436+25 | | Old turnaround right, wet |
| 438+80 | | Remove 18" x 26' CMP, install 18" x 28' CMP, apply 12 CY pit run |
| 441+40 | | Remove 18" x 26' CMP, install 18" x 28' CMP, apply 12 CY pit run |
| 442+20 | | Short turnaround right, wet |
| 448+40 | | 18" x 26' CMP, place 2 tons riprap at outlet |
| 449+25 | | Turnout right |
| 52+95 | | 18" x 26' CMP |
| 454+75 | | Turnout left |

| | | |
|----------------------|----|---|
| 458+45 | | Remove 18" x 26' CMP, install 18" x 28' CMP, apply 12 CY pit run |
| <u>458+45-467+00</u> | | <u>Apply 4" DSA limestone surfacing</u> |
| 459+75 | | Turnout left |
| 460+00 | | Install 18" x 36' CMP, apply 12 CY pit run, spring drainage right |
| 462+00*** | 11 | Remove 36" x 30' CMP, install 84" x 32' CMP, live drainage, apply 36 CY pit run (DEP permit required for this crossing) bury culvert 3.5 feet into stream (Forest Service will stake inlet and outlet), place 22 tons R-5 riprap in bottom of buried pipe |
| 464+00 | | Remove 18" x 26' CMP, install 24" x 28' CMP, spring right, apply 12 CY pit run |
| 466+50 | | Remove 18" x 34' CMP, install 18" x 34' CMP, apply 12 CY pit run, spring right |
| 467+70 | | Turnout left |
| 470+20 | | Short turnout right |
| 473+50 | | Remove 18" x 26' CMP, install 18" x 28' CMP, apply 12 CY pit run, spring right |
| 476+60 | | Remove 18" x 26' CMP, install 18" x 28' CMP, apply 12 CY pit run, spring right |
| <u>477+20-481+35</u> | | <u>Apply 4" DSA limestone surfacing (239 tons)</u> |
| 478+35 | | ROAD CLOSED 500 FEET sign right |
| 480+20 | | Remove 18" x 26' CMP, install 24" x 30' CMP, apply 12 CY pit run |
| 480+95 | | Short turnaround left |
| 481+35 | | End of road, snowmobile trail continues ahead |

NOTE: AASHTO #10 Limestone sand and AASHTO #1 limestone rock for Alkaline Road Runoff Channels will be stockpiled in the FR 279H pit.

FR 295 South Branch (Level D)

| Station | Road Log/Work Description |
|--------------------|--|
| 0+00 | Center line of FR 279 station 244+40 |
| 0+00-44+70 | Recondition roadbed see TYPICAL recondition section, perform roadside brushing (12' from edge of road to a minimum height of 14') |
| 0+30 | Road number sign right |
| 0+45 | 18" x 28' CMP on right forward skew |
| 0+50 | Forest Service gate |
| 6+00 | 18" x 28' CMP on right forward skew |
| 7+75 | Turnout left |
| 8+00 | FR 432 left (no sign) |
| 8+75 | Leadoff ditch left |
| 11+95 | 18" x 28' CMP |
| 13+90 | Short OGM road right |
| 13+60-19+60 | Recondition roadbed for surfacing application, apply 4" DSA limestone surfacing (243 tons) |
| 16+75 | Sediment basin left and right |
| 17+10 | 64" x 43" x 36' CMPA, four 4 x 4 posts with yellow delineators at each corner |
| 18+75 | Turnout right |
| 19+60 | 18" x 26' CMP |
| 19+60 | End limestone surfacing |
| 24+55 | 18" x 26' CMP on right forward skew |
| 26+95 | FR 295A left |
| 31+35 | Turnout left |
| 36+20 | Leadoff ditch right |
| 37+35 | Well right, tank battery left |
| 38+70-44+70 | Apply 4" DSA limestone surfacing (243 tons) |
| 41+70 | Remove 18" x 26' CMP, install 24" x 26' CMP, apply 12 CY pit run (stream origin) |
| 42+50 | OGM road right |

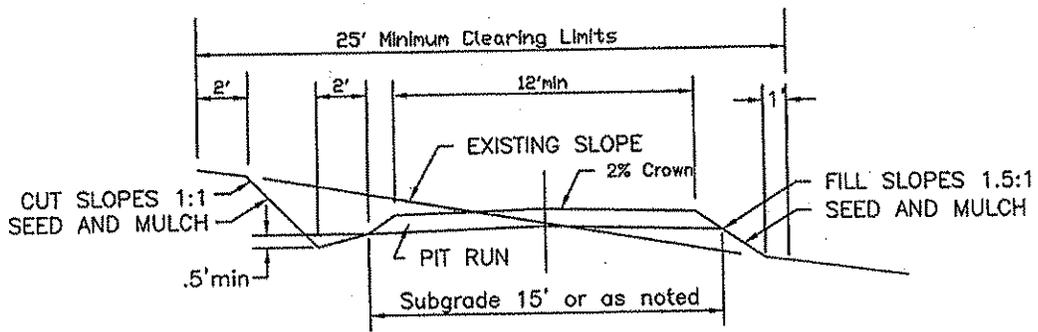
| | |
|---|--|
| 43+80 | Turnout right |
| 44+10 | Leadoff ditch left |
| 44+70 | End limestone surfacing |
| 48+25 | 18" x 26' CMP |
| 52+00 | Turnout left |
| 53+30 | ROAD CLOSED 500 FEET sign right |
| 56+40 | 18" x 32' CMP on left forward skew |
| 58+65 | Turnaround right |
| 59+05 | Earthen barrier |
| NOTE system road continues 1950' behind earthen barrier | |
| 65+05 | 15" x 24' CMP |
| 69+05 | Turnout right |
| 73+05 | 15" x 24' CMP |
| 74+90 | 15" x 24' CMP |
| 78+00 | Turnaround right |
| 78+50 | End of system road, old road continues ahead |

FR 587 Lower Meade (Level C)

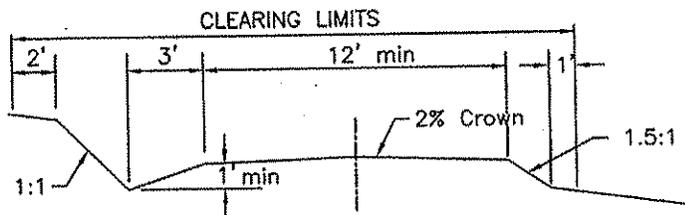
| Station | Road Log/Work Description |
|-----------------------------|--|
| 0+00 | Intersection with FR 150 |
| 1+90 | Forest Service gate |
| 69+30 | FR 587A right |
| 87+50 | FR 587B right |
| 137+00 | FR 587C left |
| 166+15-193+10 | Recondition roadbed, see TYPICAL RECONDITION SECTION, perform roadside brushing, clean all culverts |
| <u>166+15-172+15</u> | <u>Apply 4" DSA limestone surfacing</u> |
| 168+20 | Turnout right |
| 169+15 | Remove 18" x 28' CPP, install 24" x 28' CMP, apply 12 CY pit run |
| 169+65 | OGM road left, with casing in ditch line |
| 173+05 | Turnout/turnaround old landing |
| 177+75 | 18" x 28' CPP |
| 178+40 | Turnout left, well pad right |
| 180+95 | 18" x 28' CPP |
| 187+10 | Turnout right |
| 189+20 | Turnout right |
| 190+45 | 18" x 28' CPP |
| 192+40 | Forest Service gate |
| 192+45 | YIELD sign right |
| 192+75 | Road number sign left |
| 193+10 | End of road, junction with FR 279 |

| FR 279 | Quantity Summary | | Install 18" | Install Other | Riprap | Pit run | DSA |
|--------|------------------|----------|-------------|---------------|--------|---------|-----|
| | Station | Existing | | | | | |
| 147+25 | 22x13x28 | 1 | 30 | | | 12 | |
| 147+95 | | | | | | 24 | |
| 150+20 | 22x13x28 | 1 | 30 | | | 12 | |
| 156+70 | 22x13x28 | 1 | 30 | | | 12 | |
| 158+45 | 18x30 | 1 | 30 | | | 12 | |
| 161+67 | 18x26 | 1 | 28 | | | 12 | |
| 163+00 | | | | | | | 322 |
| 166+45 | 36x40 | 1 | | 71x47x44 | | 60 | |
| 169+00 | | | | | | 24 | |
| 170+85 | 22x13x36 | 1 | 36 | | | 12 | |
| 178+85 | 22x13x28 | 1 | 30 | | | 12 | |
| 180+95 | | | | | | 24 | |
| 188+00 | 18x26 | | | | | | |
| 190+10 | | | | | | | 206 |
| 192+10 | | | | | 20 | | |
| 193+10 | 18x28 | | | | | 24 | |
| 195+30 | 18x28 | 1 | | 36x28 | | | |
| 198+25 | | | | | | 24 | |
| 205+35 | 18x26 | 1 | 30 | | | 12 | |
| 210+90 | 22x13x26 | 1 | 30 | | | 12 | |
| 218+45 | 18x26 | | | | 2 | | |
| 220+50 | | | | | | 24 | |
| 221+80 | | | | | | | 211 |
| 224+80 | 18x28 | 1 | | 30x30 | 2 | 24 | |
| 229+90 | 18x26 | 1 | 26 | | | 12 | |
| 238+90 | 22x13x24 | 1 | 26 | | | 12 | |
| 243+90 | 18x28 | | | | | | |
| 244+80 | | | | | | 24 | |
| 248+90 | | | 28 | | | 12 | |
| 248+90 | | | | | | | 329 |
| 252+65 | 18x30 | | | | 2 | | |
| 255+55 | | | | | | 24 | |
| 256+95 | 18x28 | 1 | 30 | | | 12 | |
| 260+60 | 18x26 | | | | 2 | | |
| 266+95 | 18x26 | 1 | 28 | | | 12 | |
| 272+20 | 18x28 | 1 | 28 | | | 12 | |
| 280+90 | 22x13x28 | 1 | 28 | | | 12 | |
| 288+85 | 18x26 | 1 | 26 | | | 12 | |
| 291+65 | | | | | | 24 | |
| 295+65 | 18x26 | 1 | 26 | | | 12 | |
| 301+10 | | | | | | 24 | |
| 302+25 | 18x26 | 1 | 28 | | | 12 | |
| 306+90 | | | | | | | 355 |
| 307+00 | | | 28 | | | 12 | |
| 309+40 | | | | | 10 | | |
| 309+90 | 24x28 | 1 | | 71x47x36 | | 36 | |
| 313+35 | | | | | | 24 | |
| 316+33 | | | 28 | | | 12 | |
| 320+26 | | | 28 | | | 12 | |
| 325+55 | 18X26 | | | | | | |

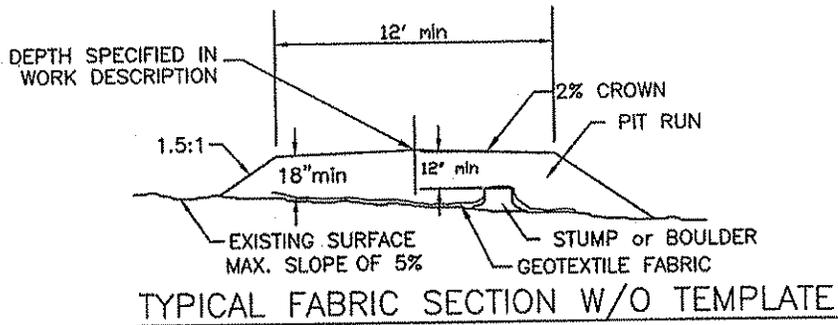
| | | | | | | | |
|--------|-------|----|------|-------|----|------|------|
| 335+30 | | | | | | | 218 |
| 338+30 | 18x26 | 1 | | 24x30 | | 12 | |
| 341+50 | 18x26 | 1 | 28 | | | 12 | |
| 349+55 | 18x28 | | | | | | |
| 355+90 | 18x28 | | | | | | |
| 357+50 | 18x28 | | | | | | |
| 365+35 | 18x26 | | | | 2 | | |
| 372+90 | 18x36 | 1 | 36 | | | 12 | |
| 377+00 | | | 28 | | | 12 | |
| 377+90 | | | 28 | | | 12 | |
| 378+50 | 18x26 | 1 | 28 | | | 12 | |
| 379+60 | | | 28 | | | 12 | |
| 382+55 | | | 28 | | | 12 | |
| 383+80 | 18x24 | 1 | 26 | | 2 | 12 | |
| 384+00 | | | | | | 12 | |
| 389+25 | | | 28 | | | 12 | |
| 391+50 | 18x26 | 1 | 28 | | 2 | 12 | |
| 394+85 | | | 28 | | | 12 | |
| 395+25 | 18x26 | 1 | 28 | | | 12 | |
| 407+25 | 18x26 | | | | | | |
| 414+25 | 18x26 | 1 | 28 | | | 12 | |
| 417+70 | | | | | | | 234 |
| 420+70 | 24x26 | | | 24x32 | | 12 | |
| 421+50 | | | 28 | | | 12 | |
| 426+05 | | | 28 | | | 12 | |
| 426+85 | | | 28 | | | 12 | |
| 429+90 | 18x26 | 1 | 30 | | 4 | 12 | |
| 431+40 | 18x26 | 1 | 28 | | | 12 | |
| 434+00 | | | 28 | | | 12 | |
| 438+80 | 18x26 | 1 | 28 | | | 12 | |
| 441+40 | 18x26 | 1 | 28 | | | 12 | |
| 448+40 | 18x26 | | | | 2 | | |
| 452+95 | 18x26 | | | | | | |
| 458+45 | 18x26 | 1 | 28 | | | 12 | |
| 458+45 | | | | | | | 324 |
| 460+00 | | | 36 | | | 12 | |
| 462+00 | 36x30 | 1 | | 84x32 | | 36 | |
| 464+00 | 18x26 | 1 | | 24x28 | | 12 | |
| 466+50 | 18x34 | 1 | 34 | | | 12 | |
| 473+50 | 18x26 | 1 | 28 | | | 12 | |
| 476+60 | 18x26 | 1 | 28 | | | 12 | |
| 477+20 | | | | | | | 239 |
| 480+20 | 18x26 | 1 | | 24x30 | | 12 | |
| | | 41 | 1382 | | 50 | 1056 | 2438 |



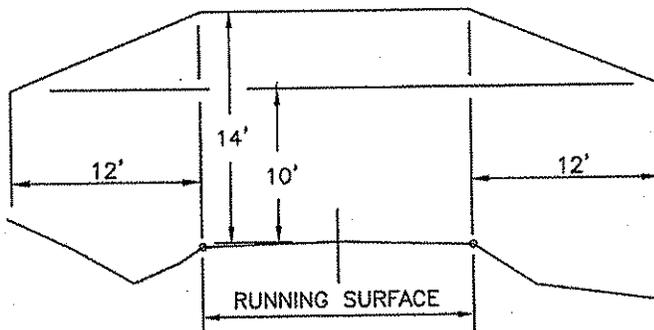
TYPICAL CONSTRUCTION SECTION



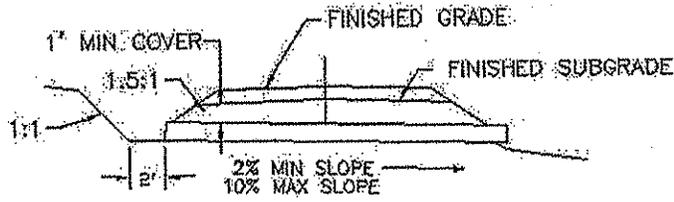
TYPICAL RECONDITION SECTION



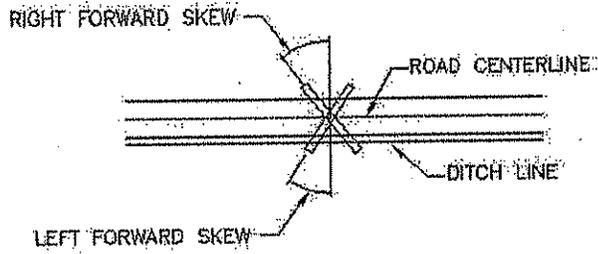
TYPICAL FABRIC SECTION W/O TEMPLATE



ROADSIDE BRUSHING DETAIL



CULVERT SECTION



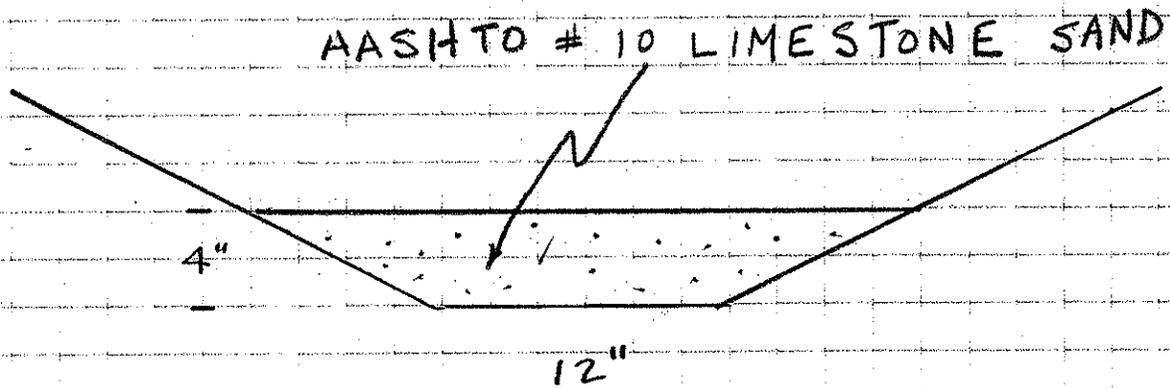
SKEW DETAIL

NOTE: Field locate ditch to minimize new clearing



OUTLET/LEAD OFF DITCH SECTION

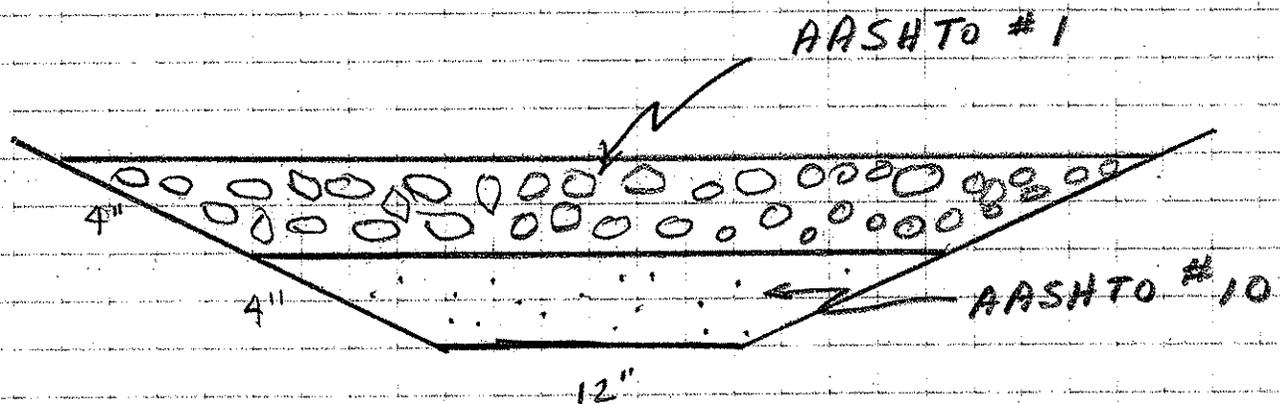
ALKALINE ROAD RUNOFF CHANNEL



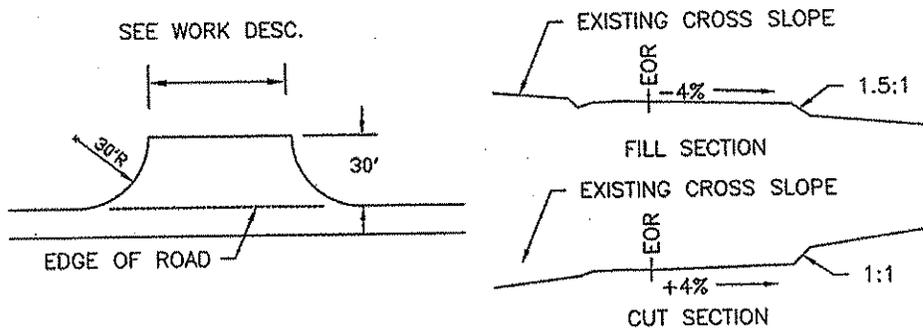
DITCH SPECIFICATIONS

- LIMESTONE AASHTO # 10 SAND
- 4 INCH DEPTH
- 12 INCH WIDTH AT BASE
- DITCH SIDE SLOPE 2/1

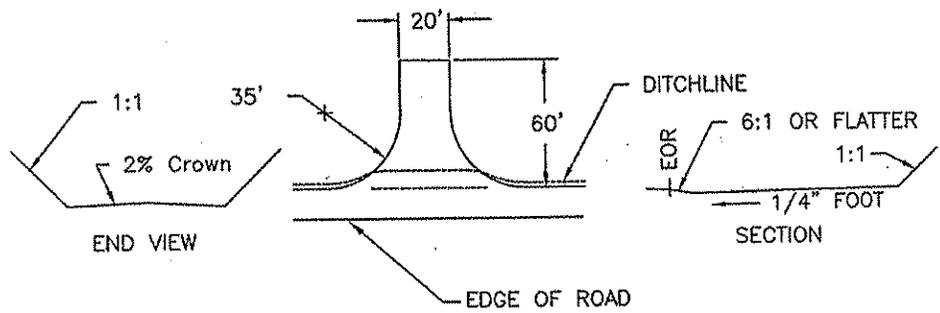
GRADE CONTROL SECTION



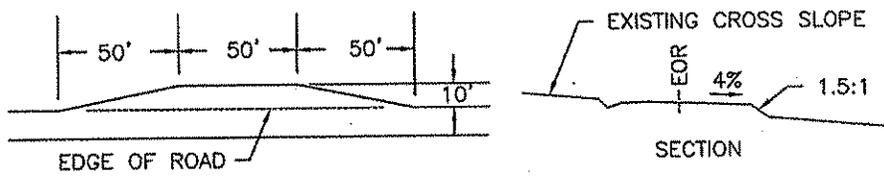
PLACE AASHTO # 1 ROCK (LOADER BUCKET WIDE)
AT 2% GRADE INTERVALS.



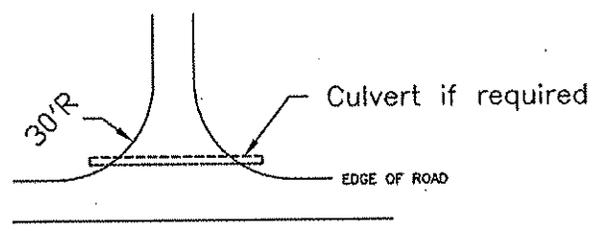
PARKING LOT DETAIL



TURNAROUND DETAIL



TURNOUT DETAIL



INTERSECTION DETAIL

Pit Development Plan

Pit run for this project will come from the FR 279 pit.

A. Pit Development

1. The overburden removed will be stockpiled in a location agreed upon by the Forest Service and the contractor, and used for pit reclamation.
2. Only ONE face of the pit is to be open and worked on at any given time.
3. High walls are a violation of OSHA regulations.
4. The pit floor will be sloped to prevent pooling of water.
5. Any oversized material left over in the pit area shall be stockpiled at a mutually agreed upon, by Forest Service and contractor, location.
6. No disposed equipment, trash, vehicles, pipe, or miscellaneous supplies will be allowed to accumulate or be stored in the pit and surrounding areas unless first agreed to by the Forest Service.
7. Operator will not undermine any boundary of the pit area.
8. No slash, soil or stumps will be permitted against live trees. No undercutting of roots of live trees allowed.

B. Timber

1. Slash resulting from this project will be scattered outside the clearing limits of the road and pit site. Stumps will be scattered at random and set upright. Stumps will be pulled into the pit floor not out into the woods.
2. The Forest Service will mark any further pit expansion after being notified, in advance by the Operator.
3. Any timber stored within the pit area that is decked for a timber sale shall not be damaged or buried. Timber shall be decked at a location designated by the Forest Service.
4. No timber may be cut or pushed over unless it is marked by the Forest Service and compensated for.

C. Pit Reclamation

1. As each open face is depleted of suitable rock material, that area will be reclaimed promptly to a slope of 1.5:1 or greater using the previously stockpiled overburden.
2. The slope/reclaimed area will then promptly be seeded, fertilized, and mulched using a non-exotic seed mixture designed by the Forest Service.
3. Areas seeded that are not receiving 50% or greater germination will be reseeded within 30 days, or the next suitable seeding season.
4. No open face of the pit will be closed without prior notification to the Forest Service.
5. When excavation of material is complete, the Forest Service will be notified to approve and document the reclamation work.