

### APPENDIX C

**C5.31# – ROAD MAINTENANCE REQUIREMENTS. (9/04)** Contractor shall maintain roads in accordance with the following Contract Road Maintenance Requirements Summary:

| PRE HAUL                          |         |       |       |                                   |       |       |       |       |       |       |       |       |
|-----------------------------------|---------|-------|-------|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| ROAD                              | TERMINI |       | MILES | ROAD MAINTENANCE T-SPECIFICATIONS |       |       |       |       |       |       |       |       |
|                                   | FROM    | TO    |       | T-101                             | T-103 | T-108 | T-301 | T-310 | T-506 | T-507 | T-508 | T-619 |
| Sharrott Salvage & McCalla-Larson |         |       |       |                                   |       |       |       |       |       |       |       |       |
| 739                               | 1.9     | 12.05 | 10.15 |                                   |       |       |       |       |       |       |       |       |
| 739A                              | 0.00    | 5.11  | 5.11  |                                   |       |       |       |       |       | C     |       |       |
| 739B                              | 0.00    | 0.76  | 0.76  | C                                 |       |       |       |       |       | C     |       |       |
| 739D                              | 0.00    | 3.08  | 3.08  |                                   |       |       |       |       |       |       |       |       |
| 740                               | 0.00    | 1.45  | 1.45  |                                   |       |       |       |       |       | C     |       |       |
| 1319                              | 0.00    | 6.55  | 6.55  |                                   |       |       |       |       |       |       |       |       |
| 13107                             | 0.00    | 0.19  | 0.19  |                                   |       |       |       |       |       |       |       |       |
| 13108                             | 0.00    | 0.8   | 0.8   |                                   |       |       |       |       |       |       |       |       |
| 13109                             | 0.00    | 0.4   | 0.4   | C                                 |       |       |       |       | C     | C     |       |       |
| 74795                             | 0.00    | 0.17  | 0.17  | C                                 |       |       |       |       | C     |       |       |       |
| 62031                             | 0.00    | 0.46  | 0.46  |                                   |       |       |       |       |       |       |       |       |
| C-3400                            | 0.77    | 2.12  | 1.35  |                                   |       |       |       |       |       | C     |       |       |
| Fred Burr                         |         |       |       |                                   |       |       |       |       |       |       |       |       |
| 733                               | 0.24    | 0.68  | 0.44  | C                                 |       |       |       |       |       | C     |       |       |
| 733A                              | 0.00    | 0.25  | 0.25  |                                   |       |       |       |       |       |       |       |       |
| 10011                             | 0.00    | 0.16  | 0.16  | C                                 |       |       |       |       |       | C     |       |       |
| C-4820                            | 0.00    | 1.55  | 1.55  |                                   |       |       |       |       |       | C     |       |       |
| Square Tin                        |         |       |       |                                   |       |       |       |       |       |       |       |       |
| 639                               | 1.5     | 7.37  | 5.87  |                                   |       |       |       |       |       |       |       |       |
| 639B                              | 0.00    | 0.94  | 0.94  | C                                 |       |       |       |       |       |       |       |       |
| 639C                              | 0.00    | 0.16  | 0.16  | C                                 |       |       |       |       |       | C     |       |       |
| 13287                             | 0.00    | 0.35  | 0.35  | C                                 |       |       |       |       |       | C     |       |       |
| 13288                             | 0.00    | 0.94  | 0.94  | C                                 |       |       |       |       |       | C     |       |       |
| Spoon McCoy                       |         |       |       |                                   |       |       |       |       |       |       |       |       |
| 374                               | 0.00    | 2.89  | 2.89  |                                   |       |       |       |       |       |       |       |       |
| 716                               | 0.00    | 4.99  | 4.99  |                                   |       |       |       |       |       |       |       |       |
| 734                               | 0.00    | 4.20  | 4.20  |                                   |       |       |       |       |       |       |       |       |
| 13225                             | 0.00    | 4.21  | 4.21  | C                                 |       |       |       |       |       |       |       |       |
| 13228                             | 0.00    | 0.22  | 0.22  | C                                 |       |       |       |       | C     | C     |       |       |
| 10020                             | 0.00    | 0.03  | 0.03  | C                                 |       |       |       |       | C     | C     |       |       |
| 62895                             | 0.00    | 0.69  | 0.69  | C                                 |       |       |       |       | C     | C     |       |       |
| Cell Tower Rd (Private)           | 0.00    | 0.83  | 0.83  |                                   |       |       |       |       |       |       |       |       |

| DURING HAUL                       |         |       |       |                                   |       |       |       |       |       |       |       |       |
|-----------------------------------|---------|-------|-------|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| ROAD                              | TERMINI |       | MILES | ROAD MAINTENANCE T-SPECIFICATIONS |       |       |       |       |       |       |       |       |
|                                   | FROM    | TO    |       | T-101                             | T-103 | T-108 | T-301 | T-310 | T-506 | T-507 | T-508 | T-619 |
| Sharrott Salvage & McCalla-Larson |         |       |       |                                   |       |       |       |       |       |       |       |       |
| 739                               | 1.9     | 12.05 | 10.15 | C                                 | C     | C     | C     | C     |       |       |       | C     |
| 739A                              | 0.00    | 5.11  | 5.11  | C                                 | C     | C     |       | C     |       |       |       | C     |
| 739B                              | 0.00    | 0.76  | 0.76  | C                                 | C     | C     |       | C     |       |       |       | C     |
| 739D                              | 0.00    | 3.08  | 3.08  | C                                 | C     | C     |       | C     |       |       |       |       |
| 740                               | 0.00    | 1.45  | 1.45  | C                                 | C     | C     |       | C     |       |       |       | C     |
| 1319                              | 0.00    | 6.55  | 6.55  | C                                 | C     | C     | C     | C     |       |       |       |       |
| 13107                             | 0.00    | 0.19  | 0.19  | C                                 | C     | C     |       |       |       |       |       |       |
| 13108                             | 0.00    | 0.8   | 0.8   | C                                 | C     | C     |       |       |       |       |       |       |
| 13109                             | 0.00    | 0.40  | 0.40  | C                                 | C     | C     |       |       |       |       |       |       |
| 74795                             | 0.00    | 0.17  | 0.17  | C                                 | C     | C     |       |       |       |       |       |       |
| 62031                             | 0.00    | 0.46  | 0.46  | C                                 | C     |       |       |       |       |       |       |       |
| C-3400                            | 0.77    | 2.12  | 1.35  | C                                 | C     |       | C     |       |       | C     |       |       |
| Fred Burr                         |         |       |       |                                   |       |       |       |       |       |       |       |       |
| 733                               | 0.24    | 0.68  | 0.44  | C                                 | C     | C     | C     |       |       |       |       |       |
| 733A                              | 0.00    | 0.25  | 0.25  | C                                 | C     | C     |       |       |       |       |       | C     |
| 10011                             | 0.00    | 0.16  | 0.16  |                                   | C     | C     |       |       |       |       |       |       |
| C-4820                            | 0.00    | 1.55  | 1.55  | C                                 | C     |       | C     |       |       | C     |       |       |
| Square Tin                        |         |       |       |                                   |       |       |       |       |       |       |       |       |
| 639                               | 1.5     | 7.37  | 5.87  | C                                 | C     | C     | C     | C     |       |       |       | C     |
| 639B                              | 0.00    | 0.94  | 0.94  | C                                 | C     | C     |       |       |       |       |       |       |
| 639C                              | 0.00    | 0.16  | 0.16  | C                                 | C     | C     |       |       |       |       |       |       |
| 13287                             | 0.00    | 0.35  | 0.35  | C                                 | C     | C     |       |       |       |       |       |       |
| 13288                             | 0.00    | 0.94  | 0.94  | C                                 | C     | C     |       |       |       |       |       |       |
| Spoon McCoy                       |         |       |       |                                   |       |       |       |       |       |       |       |       |
| 374                               | 0.00    | 2.89  | 2.89  | C                                 | C     | C     | C     | C     |       |       |       | C     |
| 716                               | 0.00    | 4.99  | 4.99  | C                                 | C     | C     | C     | C     |       |       |       | C     |
| 734                               | 0.00    | 4.20  | 4.20  | C                                 | C     | C     | C     | C     |       |       |       | C     |
| 13225                             | 0.00    | 4.21  | 4.21  | C                                 | C     | C     |       |       |       |       |       | C     |
| 13228                             | 0.00    | 0.22  | 0.22  | C                                 | C     | C     |       |       |       |       |       |       |
| 10020                             | 0.00    | 0.03  | 0.03  | C                                 | C     | C     |       |       |       |       |       |       |
| 62895                             | 0.00    | 0.69  | 0.69  | C                                 | C     | C     |       |       |       | C     |       | C     |
| Cell Tower Rd (Private)           | 0.00    | 0.83  | 0.83  | C                                 | C     |       |       |       |       |       |       |       |

| POST HAUL                         |         |      |       |                                   |       |       |       |       |       |       |       |       |
|-----------------------------------|---------|------|-------|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| ROAD                              | TERMINI |      | MILES | ROAD MAINTENANCE T-SPECIFICATIONS |       |       |       |       |       |       |       |       |
|                                   | FROM    | TO   |       | T-101                             | T-103 | T-108 | T-301 | T-310 | T-506 | T-507 | T-508 | T-619 |
| Sharrott Salvage & McCalla-Larson |         |      |       |                                   |       |       |       |       |       |       |       |       |
| 739                               | 0.00    | 8.7  | 8.7   | C                                 |       |       | C     | C     |       |       |       |       |
| 739A                              | 0.00    | 5.11 | 5.11  | C                                 |       |       | C     | C     |       |       | C     |       |
| 739B                              | 0.00    | 0.76 | 0.76  | C                                 |       |       |       |       |       |       | C     |       |
| 739D                              | 0.00    | 3.08 | 3.08  | C                                 |       |       |       | C     |       |       |       |       |
| 740                               | 0.00    | 1.45 | 1.45  | C                                 |       |       |       | C     |       |       | C     |       |
| 1319                              | 0.00    | 6.55 | 6.55  | C                                 |       |       | C     | C     |       |       |       |       |
| 13107                             | 0.00    | 0.19 | 0.19  | C                                 |       |       |       |       |       |       |       |       |
| 13108                             | 0.00    | 0.8  | 0.8   | C                                 |       |       |       |       |       |       |       |       |
| 13109                             | 0.00    | 0.40 | 0.40  | C                                 |       |       |       | C     |       |       | C     |       |
| 74795                             | 0.00    | 0.17 | 0.17  | C                                 |       |       |       |       |       |       |       |       |
| 62031                             | 0.00    | 0.46 | 0.46  | C                                 |       |       |       |       |       |       |       |       |
| C-3400                            | 0.77    | 2.12 | 1.35  | C                                 |       |       | C     |       |       |       |       |       |
| Fred Burr                         |         |      |       |                                   |       |       |       |       |       |       |       |       |
| 733                               | 0.24    | 0.68 | 0.44  | C                                 |       |       |       |       |       |       |       |       |
| 733A                              | 0.00    | 0.25 | 0.25  | C                                 |       |       |       |       |       |       |       |       |
| 10011                             | 0.00    | 0.16 | 0.16  | C                                 |       |       |       |       |       |       |       |       |
| C-4820                            | 0.00    | 1.55 | 1.55  | C                                 |       |       | C     |       |       |       |       |       |
| Square Tin                        |         |      |       |                                   |       |       |       |       |       |       |       |       |
| 639                               | 1.5     | 7.37 | 5.87  | C                                 |       |       | C     |       |       |       |       |       |
| 639B                              | 0.00    | 0.94 | 0.94  | C                                 |       |       |       |       |       |       | C     |       |
| 639C                              | 0.00    | 0.16 | 0.16  | C                                 |       |       |       |       |       |       | C     |       |
| 13287                             | 0.00    | 0.35 | 0.35  | C                                 |       |       |       |       |       |       | C     |       |
| 13288                             | 0.00    | 0.94 | 0.94  | C                                 |       |       |       |       |       |       | C     |       |
| Spoon McCoy                       |         |      |       |                                   |       |       |       |       |       |       |       |       |
| 374                               | 0.00    | 2.89 | 2.89  | C                                 |       |       | C     |       |       |       |       |       |
| 716                               | 0.00    | 4.99 | 4.99  | C                                 |       |       | C     |       |       |       |       |       |
| 734                               | 0.00    | 4.20 | 4.20  | C                                 |       |       | C     |       |       |       |       |       |
| 13225                             | 0.00    | 4.21 | 4.21  | C                                 |       |       |       |       |       |       |       |       |
| 13228                             | 0.00    | 0.22 | 0.22  | C                                 |       |       |       |       |       |       | C     |       |
| 10020                             | 0.00    | 0.03 | 0.03  | C                                 |       |       |       |       |       |       | C     |       |
| 62895                             | 0.00    | 0.69 | 0.69  | C                                 |       |       |       |       |       |       | C     |       |
| Cell Tower Rd (Private)           | 0.00    | 0.83 | 0.83  | C                                 |       |       |       |       |       |       |       |       |

Notes:

C = Contractor Performance Item

O = Optional Contract Line Item

NFSR = National Forest Service Road

CR = County Road

JCT = Junction

MP = Milepost

EOR = End of Road

**ROAD MAINTENANCE T-SPECIFICATIONS FOR STEWARDSHIP CONTRACTS**

Contractor shall maintain roads in accordance with the following Contract Road Maintenance Requirements Summary:

Contractor will be responsible for doing all pre, during and post haul road maintenance with no compensation from the Forest Service.

| T-SPECIFICATIONS |                                |
|------------------|--------------------------------|
| T-SPEC NUMBER    | SPECIFICATION TITLE            |
| T-101            | Surface Blading                |
| T-103            | Dust Abatement                 |
| T-108            | Slide Removal and Slump Repair |
| T-301            | Ditch Cleaning                 |
| T-310            | Minor Drainage Structures      |
| T-506            | Clearing Roadway Vegetation    |
| T-507            | Cutting Roadside Vegetation    |
| T-508            | Seeding                        |
| T-619            | Miscellaneous Structures       |

### **SPECIFICATION T-101 SURFACE BLADING**

#### **DESCRIPTION**

1.1 Surface blading is keeping the native or aggregate surfaced road in a condition to facilitate traffic, minimize additional future maintenance, reduce erosion, and provide proper drainage. It includes maintaining the crown, inslope or outslope of the traveled way and shoulders, drainage dips, leadoff ditches, berms, turnouts, removal of minor slides and slumps, and other irregularities that prevent normal runoff from the road surface.

#### **REQUIREMENTS**

3.1 Surface blading shall be performed as often as necessary and to the standards required to facilitate traffic and proper drainage.

3.2 The blading shall be performed in such a manner as to preserve the existing cross section and to conserve surface materials. On gravel surfaced roads, the base must not be disturbed and no surface material may be bladed into the ditch or over the road shoulders. Blading of native surface roads shall be performed so no base material under four (4) inches in the greatest dimension is lost. All ruts, holes, etc., shall be removed by scarifying and/or cutting to the bottom of any surface irregularities. Oversize material brought to the surface in the scarification process shall be removed from the roadway. Surface material which has been displaced to the shoulders, turnouts, outside of curves, etc., shall be brought back so as to leave a uniform depth on the traveled way at completion of blading. Water shall be applied during blading if sufficient moisture is not present to prevent segregation.

3.3 Roadside cutslopes or berms shall not be undercut.

3.4 At intersections, the roadbeds of sideroads shall be graded for a reasonable distance to assure proper blending of the two riding surfaces.

3.5 Drainage dips and leadoff ditches shall be cleaned and continually maintained to conform reasonably to their original constructed lines, grade, and cross section.

3.6 Berms shall be repaired promptly by placing selected material as needed to restore the berm to its original condition.

3.7 Surface blading of native surface roads also includes ditch cleaning, which shall be done in accordance with T-301, Ditch Cleaning.

3.8 All blading operations shall be properly signed in accordance with **B6.33#** and all applicable State Laws.

### **SPECIFICATION T-103 DUST ABATEMENT**

#### **DESCRIPTION**

##### **Option 1**

1.1 Dust abatement consists of road surface preparation and application of materials.

#### **MATERIALS**

2.1 Water, bituminous products, lignin sulfonates, chloride products, and other materials may be used for dust abatement. Materials other than water will require approval of the Forest Service and shall meet specifications furnished by the Forest Service.

#### **REQUIREMENTS**

3.1 Dust abatement materials shall be applied to the road surface as necessary to control surface loss and provide that vehicles are always intervisible within their stopping sight distance. The average user speed on the road shall be used to determine stopping sight distance. Preparation shall be in accordance with Specification T-101, Surface Blading.

3.2 The rate of application shall be such that the selected material will not run off the surface and cause pollution or unnecessary waste.

3.3 When water is the selected material, it shall be applied as often as necessary to abate dust from all Contractor operations.

a. Dust abatement shall be maintained as needed throughout the duration of operations.

##### **Option 2**

When conditions are such that dusting would result in hazardous driving conditions or there would be an appreciable loss of road surface binder material, Contractor may control such dusting by application of a dust abatement treatment to the surface of roadways and other traveled areas according to referenced or attached specifications or other specifications agreed to in writing. This treatment will provide a surface which can be bladed and retreated when necessary. It is not intended to produce a permanent waterproof wearing surface or dust control for more than one year, even though some residual value may be retained. It is intended to be compatible with the physical characteristics of the road surface, such as parent material, percent fines, relative humidity, or possibly some residual dust abatement material.

Dust abatement treatment shall apply only to the road segments listed above in T-103, and will not occur within RHCAs as shown on the Contract Area Map. The provisions of Specification T-103 of in Appendix C shall apply to all other roads when required under Appendix C. Option 2 may be used in lieu of Option 1 at contractors discretion to perform dust abatement during hauling of timber cut.

#### **Dust Abatement Specifications**

| Road Number     | Road Name | Termini | Abatement Treatment | References or Attached |
|-----------------|-----------|---------|---------------------|------------------------|
| See Table above |           |         |                     |                        |

### SURFACE PREPARATION

Prior to application of chlorides, the roadway shall be prepared by T-101 Surface Blading, and watered as necessary to achieve adequate penetration of the chlorides without runoff. If flakes are used, water will be added after placing the flakes to facilitate penetration of the chlorides into the roadway.

### APPLICATION

(a) The Distribution Equipment shall be so designed, equipped, maintained, and operated such that the dust abatement material may be applied uniformly on variable widths of surface.

For liquid products the following requirements shall apply: (1) The spray pattern from each nozzle on the spray bar shall be uniform across the spray bar; (2) Distribution equipment shall include accurate volume measuring devices or a calibrated tank, a thermometer for measuring temperatures of tank contents, and a hose and nozzle attachment for applying material to areas inaccessible to the spray bar.

Calcium Chloride Flake shall be spread with equipment that evenly distributes the material across the required road width. The relative weight of material placed shall be easily determined during application.

(b) Application Rate. Application rates will be as follows:

**Application Rate Table**

| Road Number | Road Name | Termini   | Application Type | Abatement Treatment | Application Rate                                                                                                    | Width of Application (Feet) |
|-------------|-----------|-----------|------------------|---------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------|
| See Above   | See Above | See Above | Initial          | Magnesium Chloride  | MgCl Brine= 0.30 gallons/square yard<br>CaCl Brine= 0.22 gallons/square yard<br>CaCl Flakes=1.17 pounds/square yard | Traveled Way                |

Unless otherwise specified, minimum concentration required is 1.29 – 1.33 Specific Gravity as per ASTM. The Forest Service may field test Chloride brines prior to application to make sure that the products meet the minimum concentrations. Acceptance of the material will be based on the

concentration shown on the manufacturer's certificate, or on results of laboratory quality assurance tests done by the Forest Service on samples taken from distribution or hauling vehicles.

Uniform distribution shall be obtained at all points. For liquid products the spray pattern from each nozzle on the spray bar shall be uniform across the spray bar. For flake products, the coverage will be uniform on the road surface. Overlapping or skipping between spread sections shall be corrected. Accidental spillage and areas with excess dust palliative that are hazardous to traffic shall be covered with additional road surfacing material. The surface of adjacent structures and trees shall be protected from spattering or marring. Dust palliative material shall be discharged only in approved areas, and shall not be allowed to flow into ditches or stream courses. All products may be placed in one application.

All spreading and hauling equipment shall comply with applicable State and Federal requirements including GVW limitations.

(c) Certification with Shipment. When each load of chloride material is delivered, the Purchaser shall furnish one copy of the Bill of Lading, and a fully executed Certificate of Compliance indicating, as a minimum, the following information: **Contract Name, Date of application, road segments where applied, application rate, application width, Material composition by weight of MgCL and CaCl applied, Net weight of shipment, Net gallons at 60 degrees F, Specific Gravity of brine at 60 degrees F, ambient air temperature at time of application.**

A separate Certificate of Compliance will not be required if the standard Bill of Lading contains the essential information required by the certificate.

(d) Sampling. Sampling of chloride material may be required to validate certifications furnished by the Purchaser. When sampling is directed by the Forest Service, the actual samples will be taken by the Purchaser in the presence of the Forest Service representative. All delivery and distribution equipment shall be constructed to permit sampling in conformance with AASHTO T-40 test procedure. Samples shall be obtained from hauling units just prior to application of the material.

### **SPECIFICATION T-108 SLIDE REMOVAL AND SLUMP REPAIR**

#### **DESCRIPTION**

1.1 Slide removal and slump repair consists of all work necessary to restore the road to its original cross section as necessary to facilitate use and provide drainage. This work is such that it cannot be handled by a grader during surface blading and ditch cleaning operations.

Slump repair is the filling with selected material of depressions or washouts in roadway which cannot be routinely filled by a motor grader.

Slide removal and slump repair includes excavation, loading, hauling, placing, and compacting of replacement material and the removal and disposal of waste material. This includes the development of disposal or borrow areas at locations approved by the Forest Service.

## REQUIREMENTS

3.1 Contractor shall deposit slide material in an approved manner at designated locations.

Material shall not be disposed of on road fills unless otherwise agreed.

The slope which contributed the slide material shall be reshaped as practicable to reduce future sliding unless otherwise agreed.

3.2 When filling slumps and depressions, select material shall be used, placed in layers, and compacted to conform with or exceed the density of existing subgrade.

Existing aggregate surfacing shall be salvaged and relayed or replaced after slumps have been filled.

Damaged aggregate base, aggregate surfacing, and asphalt surfacing shall be repaired under Specification T-113, Surfacing Repair.

3.3 Following slide removal, roadway shall be shaped so as to reasonably conform to its original subgrade template.

3.4 Slump, waste, and borrow areas shall be seeded as required under T-508.

## **SPECIFICATION T-301 DITCH CLEANING**

### DESCRIPTION

1.1 Ditch cleaning is removing and disposing of all slough material from roadside ditches to provide an unobstructed waterway conforming reasonably to previous line, grade, and cross section.

## REQUIREMENTS

### 3.1 Slough Material.

A. Native Surfaced Roads. Slough material from ditch cleaning, if suitable, may be placed and blended into the existing road surface or shoulders or placed in a designed berm during surface blading.

B. Aggregate Surface Roads. Slough material from ditch cleaning shall not be mixed with aggregate surfacing or left on the road surface unless otherwise agreed. Material shall be disposed of in an agreed manner at designated locations.

C. Asphalt Surfaced Roads. Equipment, methods, and timing shall be agreed to before start of ditch cleaning operations so as to protect the asphalt pavement. Material shall be disposed of in an agreed manner at designated locations.

ds, gates, H-braces, fencing, guardrails, structure delineators, signs and other similar structures that have been previously installed to insure the safe and efficient operation of the road.

### **SPECIFICATION T-310 MINOR DRAINAGE STRUCTURES**

#### **DESCRIPTION**

1.1 Minor drainage structures are single passages with maximum waterway opening equivalent to a 78-inch round pipe (87- by 63-inch arch) or multiple passages with maximum, single waterway opening equivalent to a 60-inch round pipe (66- by 51-inch arch). They include overside drains. Maintenance is work performed on inlets, outlets, related channels, existing riprap, trash racks, and drop inlets.

#### **MATERIALS**

2.1 All materials used in the maintenance of minor drainage structures shall conform by type and specification to the material in the structure being maintained.

#### **REQUIREMENTS**

3.1 All minor drainage structures are to be maintained in accordance with these specifications in the spring following any significant runoff and prior to the beginning of winter storms.

3.2 Clear inlet and outlet channels, inlet trash racks, and drop inlets of loose material that could cause plugging or prevent the free flow of water. Debris shall be disposed of in agreed manner at designated locations.

3.3 If outlet riprap was originally placed to dissipate water energy, it shall be maintained in good condition including the replacement of riprap if necessary.

4.1 Make whatever minor repairs are necessary to ensure the proper functioning of the head walls, aprons, inlet assemblies, overside drains, riprap, trash racks, and other facilities related to the drainage structure.

### **SPECIFICATION T-506 CLEARING ROADWAY VEGETATION**

#### **DESCRIPTION**

1.1 This work consists of cutting and disposing of all vegetative growth including trees from the road surface that reduces the operational capability of the road. Vegetation removal is required if the growth of the vegetation during the contract period causes unacceptable reduction of sight distance and operation capability.

#### **REQUIREMENTS**

3.1 Vegetative matter on the road surface which reduces sight distance, impedes vehicular travel, or interferes with road maintenance operations such as surface blading and ditch and culvert cleaning shall be removed. Downed timber meeting utilization standards shall be cut in appropriate lengths and decked along the roadside in locations where the traveled way or sight distance will not be impaired.

3.2 Low shrubs and brush which do not restrict sight distance, do not impede road maintenance, and reduce erosion need not be removed if the road surface can be adequately maintained without doing so. Vegetation and nonmerchantable timber removed shall be disposed of by scattering, chipping, hauling to designated disposal areas, or as otherwise agreed upon.

### **SPECIFICATION T-507 CUTTING ROADSIDE VEGETATION**

#### **DESCRIPTION**

1.1 This work consists of cutting and disposing of all vegetative growth, including trees from within the roadway that reduce sight distance and operational capability of the road. Vegetation removal is required if the growth of the vegetation during the contract period causes unacceptable reduction of sight distance and operation capability.

#### **REQUIREMENTS**

3.1 Vegetative matter within the roadway which reduces sight distance, impedes vehicular travel, or interferes with road maintenance operations such as surface blading and ditch and culvert cleaning shall be removed. Downed timber meeting utilization standards shall be cut in appropriate lengths and decked along the roadside in locations where the traveled way or sight distance will not be impaired.

3.2 Low shrubs and brush which do not restrict sight distance, do not impede road maintenance, and reduce erosion shall not be removed. Vegetation removed shall be disposed of by scattering, chipping, hauling to designated disposal areas, or as otherwise agreed upon.

### **SPECIFICATION T-508 SEEDING**

#### **DESCRIPTION**

1.1 Seeding is the application of seed and fertilizer to areas where vegetation has been disturbed as a result of slides, slumps, disposal of materials, and other Contractor operations in connection with road maintenance.

#### **REQUIREMENTS**

3.1 Contractor shall provide and apply the required kinds and amounts of seed and fertilizer in accordance with the requirements in C(T)6.601#.

3.2 Surfaces of areas to be treated shall be in a loose and roughened condition favorable to the retention and germination of seed.

### **SPECIFICATION T-619 MISCELLANEOUS STRUCTURES**

#### **DESCRIPTION**

1.1 Maintenance of miscellaneous structures include the maintenance of retaining walls, guard rails, cattleguards, fences, gates, and any other similar structures that have been previously installed to insure the safe and efficient operation of the road.

#### **MATERIALS**

2.1 Any materials needed in the maintenance of miscellaneous structures shall be similar in type and quality to the material in the structure being maintained.

#### **REQUIREMENTS**

3.1 Guard Rails. Anchors shall be tightened.

3.2 Cattleguards. Tie-in fences shall be sound and secured to the wings. Loose rails shall be welded or bolted back in place. Material deposited into the cattleguard well during operations shall be removed. Drainage into and out of cattleguards shall be maintained.

3.3 Fences. Wire fences shall be tightened if loose. Broken strands of wire or wood railings shall be replaced.

3.4 Gates. Gates shall be properly signed, kept in good repair and made to swing easily. Hinges or latches shall be repaired if not operating properly. Hinges shall be oiled.