

## 807 – Equipment Rental

### 807.01 Service Required

Furnishing and operating equipment.

### 807.02 Performance Standards

- A. Equipment will be weed free before it is used on National Forest System lands.
- B. Make equipment available for inspection and approval before use. Furnish the equipment specified in the table below:

Description	Max Age	Min HP	Min Reach	Weight		Capacity	Attachments	Remarks
Mini Excavator	2004 or newer			Minimum 4,000#			Operating thumb	Similar to Kubota U25S
Medium Size Excavator	1996 or newer	100	28'	Minimum 35,000#		0.6 cy	Operating thumb	Similar to Hitachi 160
Large Size Excavator	1996 or newer	140	30'	Minimum 50,000#		1 cy	Operating thumb	Similar to Caterpillar 225D
Backhoe	2004 or newer	75	14'	Minimum 12,000#		0.5 cy		Similar to Case 580
Grader							Minimum 12' wide moldboard	Similar to Cat 14G
Small Dozer	2004 or newer	80		Minimum 17,000#				Similar to Cat D1
Medium Dozer	2004 or newer	80						Similar to Cat D6
Dump Truck						Minimum 10 cy		

Front End Loader						Minimum 3 cy		Similar to Cat 938
Roller								Minimum 7 ton vibratory
Snowplow							Minimum 6' wide plow	

### 807.03 Location of Work

Location of work is as specified on Work List, shown on Plans, or as order by the Contracting Officer.

### 807.04 Measurement

A. The accepted quantities will be paid at the established hourly rate, rounded to the nearest half (1/2) hour, that the equipment is in operation at the project work site.

B. Non-operable equipment or equipment dependent on another piece of non-operable equipment will not be paid for.

C. Hours of operation shall be the same as for the Service Provider's regular work shift, unless otherwise directed in writing by the Contracting Officer.

D. Moving equipment to and from the project work site is considered part of mobilization.

### 807.05 Payment

The accepted quantities will be paid at the contract price per unit of measurement for the Section 807 pay items listed in the schedule of items. Payment will be full compensation for the work prescribed in this Section.

### 807.06 Acceptable Quality Levels

Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
Weed free equipment	Equipment not weed free	N/A	0	N/A	Equipment rejected until it can be made weed free	N/A
Maintenance of Equipment	Equipment not capable of operating at least 90% of the time	N/A	0	N/A	Replace defective equipment	N/A
Equipment meets all state and federal regulations	Does not meet state and federal regulations	N/A	0	N/A	Bring equipment up to state and federal regulations or replace equipment	N/A
	Equipment leaks in sensitive areas or				Replace equipment and restore affected	

Equipment leaks	leaks that are large and not typically inherent in the specific equipment	Small leaks inherent in the specific type equipment	0	N/A	site as directed by the Contracting Officer	Place absorbent pads under equipment when not operating
Equipment will be operated by a fully trained, qualified, and competent operator at all times	Operator not full trained, qualified, and competent	N/A	0	N/A	Stop equipment operation until a fully trained, qualified, and competent operator is available. Repair any damage done by incompetent operator as directed by the Contracting Officer	N/A

## 811 – Surface Maintenance

### 811.01 Service Required.

Smooth and shape native or aggregate surfaced roads including traveled way, shoulders, turnouts, and intersections.

### 811.02 Performance Standards.

A road surface is maintained to standard when the surface, including turnouts, is shaped (crowned at least 3%, or sloped to drain, depending on road geometry) and compacted, without segregation of the surfacing materials. The road surface has no ruts, rills or potholes, suitable materials have been recovered and incorporated. Unsuitable materials have been removed. Fine material deposited along the road edges from previous traffic will be incorporated into the road surface.

### 811.03 Location of Work.

As specified on roads listed on the Road List, shown on the Plans, or as ordered by the Contracting Officer.

#### **811.04 Compaction.**

Roads requiring compaction will be included in the Road Listing. Unless Compaction Method B is designated in the Schedule of Items and Road Listing, all traveled ways requiring compaction shall be compacted by Method A. Compaction shall commence immediately following blading. Compaction methods are:

- Compaction Method A: By breaking track while operating equipment on the traveled way.
- Compaction Method B: Operate 7-10 ton pneumatic, steel or equivalent smooth wheel vibratory roller over the full width until visual displacement ceases.

#### **811.05 Measurement.**

Measurement under this Section will be made by the total number of units for each item listed in the Schedule of Items completed and accepted.

- A. Measurement for blading will be linear mile measured along the centerline of the roadway. Measurement will be measured to the nearest one-tenth (0.1) mile.

#### **811.06 Acceptable Quality Levels**

<b>Performance Standards</b>	<b>Required Services</b>	<b>Surveillance Method &amp; Performance Threshold</b>
Potholes and washboards removed from road surface, crown, inslope or outslope is uniform, 3% is typically acceptable	Grade and shape road surface	Visual Inspection Incidental variances allowed
Road surface material contains sufficient moisture, is not too wet or too dry to achieve compaction	Moisture content suitable for compaction	Visual Inspection No variances allowed
For roads to be graded and compacted under Compaction Method B, entire treated road width is compacted with rolling equipment until visual displacement ceases	Compaction of road surface	Visual Inspection No variances allowed

Side roads open to traffic are graded to ensure smooth transitions a minimum of 100 feet from the intersection	Intersections	Visual Inspection No variances allowed
Road segments being graded are no longer than 1 mile in length. Roads treated under compaction Method B have less than 3 miles of un-compacted segments. Berms created during grading operations are removed from the roadway prior to the end of each day's work and not left in place overnight	Working area lengths and overnight conditions	Visual Inspection Incidental variances allowed
Bridge decks on permanent bridges are clean of rock and dirt generated from grading operations	Bridge decks cleaned	Visual Inspection Incidental variances allowed

## 813 – Spot Surfacing

### 813.01 Service Required.

Load, haul, and place surface material to repair or stabilize road surfaces.

### 813.02 Performance Standard.

Spot surfacing is complete when the designated quantity of the ordered material has been placed, shaped and compacted.

### 813.03 Location of Work.

As specified on roads listed on the Work List, shown on the Plans, or as ordered by the Contracting Officer.

### 813.04 Measurement.

Measurement under this Section will be made by the total number of units for each item listed in the Schedule of Items completed and accepted.

A. The quantity will be the number of cubic yards measured in the vehicles, or cubic yards of aggregate placed.

### 813.05 Payment.

The accepted quantities will be paid at the contract price per unit of measurement for the Section 813 pay items listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section.

## 832 – Load, Haul and Place Material

### 832.01 Service Required.

Sidecast or load, haul, and place slide and slough material at designated sites. Sidecast material shall be placed on the downhill side of the roadway. No material shall be placed in streams or on streambanks. In Juneau, there will be no designated sites for slough material on National Forest System lands.

#### **832.02 Performance Standard.**

Work is complete when the road is in a smooth drivable condition with no obstruction remaining on or adjacent to the roadway or in ditches which would have the potential to interfere with traffic use, block or divert water from structures or channels. This includes relocation, repositioning, stabilization, and re-vegetation as ordered by the Contracting Officer.

#### **832.03 Location of Work.**

As specified on roads listed on the Work List, shown on the Plans, or as ordered by the Contracting Officer. End haul distances will generally be less than 2 miles.

**832.04 Measurement.** Measurement under this Section will be made by the total number of units for each item listed in the Schedule of Items completed and accepted.

A. Cubic Yard: The quantity will be the number of cubic yards measured in the vehicles.

#### **832.05 Payment.**

The accepted quantities will be paid at the contract price per unit of measurement for the Section 832 pay items listed in the Schedule of Items. Payment will be full compensation for the work prescribed in this Section.

#### **832.06 Acceptable Quality Levels**

<b>Performance Standards</b>	<b>Required Services</b>	<b>Surveillance Method &amp; Performance Threshold</b>
Slopes stabilized, drainages are not blocked, no undercut backslopes remain, ditches clean, road is clear of debris	Clean slide material from roadway	Visual Inspection No variances allowed
Disposal sites are stable and located at approved locations.	Place slide material at designated sites to lines and grades shown on drawings	Visual Inspection Incidental variances allowed

## **833 – Drainage Structure Removal, Installation or Replacement**

### **833.01 Service Required.**

Installation or replacement of drainage structures including water-bars and cross ditches. Removal of drainage structures including culverts.

### **833.02 Performance Standard.**

Drainage structure installation, replacement or removal is complete when designated water-bars or cross ditches have been installed to the lines and grades specified, and removed culverts have been properly disposed. Drainage structure removal is complete when structures are removed from National Forest land, completed side slopes are shaped to the lines and grades as shown on the Drawings, and excess excavated material is placed on the downhill side of the road not encroaching on any streams.

### **833.03 Location of Work.**

As specified on roads listed on the Work List, shown on the Plans, or as ordered by the Contracting Officer.

### **833.04 Measurement.**

Measurement under this Section will be made by the total number of units for each item listed in the Schedule of Items completed and accepted.

- A. Culvert Removal Depth: Depth will be measured as the vertical distance between the elevation of the road centerline and the elevation of the bottom of the culvert inlet.

### **833.05 Payment.**

The accepted quantities will be paid at the contract price per unit of measurement for the Section 833 pay items listed in the schedule of items. Payment will be full compensation for the work prescribed in this Section.

## **834 – Roadway Drainage Maintenance**

### **834.01 Service Required.**

Clean and recondition roadway drainage systems including culverts, ditches, inlet and outlet channels, catch basins, and appurtenances.

### **834.02 Performance Standard.**

Drainage system maintenance is complete when no obstruction or debris remains on the roadway or in the defined area adjacent to the structure or in ditches which would have the potential to block water from entering the structure, back water into the structure (except for structures designed to function in a back-flooded manner), or divert water outside the defined channel. Equipment

operation in live streams or hydraulic flushing of drainage structures is not permitted. Excess excavated materials will be placed on the downhill side of the road. Completed ditches will be a minimum of 3' wide by 1' deep.

#### **834.03 Location of Work.**

As specified on roads listed on the Work List, shown on the Plans, or as ordered by the Contracting Officer and;

1. Drainage structures including inlet structures, culverts, catch basins, inlet/outlet channels, and ditches within the area shown on the Plans or in the Supplemental Specifications.
2. Culverts - a minimum external horizontal distance of 10 feet in any direction from the inlet and outlet end and a minimum internal distance of 3 feet from the inlet and outlet ends.
3. Ditches adjacent to the roadbed.
4. This work does not include bridges, drain dips, or water bars.

#### **834.04 Measurement.**

Measurement under this Section will be made by the total number of units for each item listed in the Schedule of Items completed and accepted.

Work activity will be measured along the centerline of the road regardless of the number of lanes. One mile of road includes work on both sides of the road.

#### **834.05 Payment.**

The accepted quantities will be paid at the contract price per unit of measurement for the Section 834 pay items listed in the schedule of items. Payment will be full compensation for the work prescribed in this Section.

## **842 – Roadside Brushing**

#### **842.01 Service Required.**

Remove vegetation, including trees, on roadway surfaces and roadsides.

#### **842.02 Performance Standard.**

Roadway vegetation maintenance is complete when the vegetation has been removed from the designated treatment area which interferes with traffic, obscures signs, impedes the flow of water or diverts water from drainage structures.

- **Method A Treatment Area:** From 5 ft. slope distance beyond toe of ditch to 10 ft. slope distance on fill slope.
- **Method B Treatment Area:** From toe of ditch to 5 ft. slope distance on fill slope.
- **General Notes:** Cut all brush within treatment area which is less than or equal to 6 inches in diameter measured 6 inches above the ground.  
Cut all brush within 5 feet of culvert inlets.  
Cut brush to provide overhead clearance of 14 feet on road surface.



Remove debris from road surface, ditches, and cut slope above the road. Scatter to fill slopes below the road, no debris piles allowed at culvert outlets.  
 Clean culvert inlets and outlets of debris a minimum of 2 culvert diameters.  
 Cut brush to provide sufficient site distance on the inside of sharp curves to eliminate blind corners and intersections.

#### **842.03 Location of Work.**

As specified on roads listed on the Road List, shown on the Plans, or as ordered by the Contracting Officer.

#### **842.04 Measurement.**

Measurement under this Section will be made by the total number of units for each item listed in the Schedule of Items completed and accepted.

- A. Work activity will be measured along the centerline of the road regardless of the number of lanes. One mile of road includes treatment on both sides of the road.

#### **842.05 Payment.**

The accepted quantities will be paid at the contract price per unit of measurement for the Section 842 pay items listed in the schedule of items. Payment will be full compensation for the work prescribed in this Section.

#### **842.06 Acceptable Quality Levels**

<b>Description</b>	<b>Standard</b>	<b>Maximum Allowable Deviation from Standard</b>	<b>Corrective Action for Work Exceeding Standard</b>
Tree Damage	No Unnecessary Damage to a tree bole greater than 6" in diameter	Unnecessary damage resulting in more than 30% of the tree bole that is greater than 6" in diameter	Remove or Treat
Slope Distance Clearance	Vegetation cleared to the specified distance from road edge on each side of road	None	Rework
		None	Rework

Vertical Clearance	Vegetation cleared to a specified distance of 14 feet from road surface elevation		
Height Above Ground Surface	Vegetation shall be removed to a maximum height of 6 inches above the nearby ground surface	None	Rework
Drainage	Vegetation shall be removed from drainage structures or ditches that impede flow or divert water	None	Rework
Oversized Material	Material greater than 3" in diameter and 24" in length remaining on the roadway surface and/or roadways drainages or has the potential to move into drainages	None	Rework
Concentrations	Any concentration that affect sight distance or drainage	None	Rework
Work Area Management	Following approved safety plan which may include signs and other temporary traffic control measures	None	Suspend work until in compliance

## 851 – Danger Tree Removal

### 851.01 Service Required.

Fall and remove from the roadway a tree that has been identified by the Contracting Officer as a Danger Tree. "Danger Tree" means a standing live or dead tree, including snags, with deterioration, or physical damage to the root system or stem. The degree and direction of lean is also an important factor when determining if a tree is dangerous.

### 851.02 Performance Standard.

Maintenance requirements include:

- A. Work shall comply with all State of Alaska requirements for removal of Danger Trees.
- B. Flaggers must stop all traffic when Danger Trees within reach of roads are felled. Danger Trees that are unsafe to cut must be felled by other safe methods approved by the Contracting Officer.

- C. Limb and deck removed logs outside ditches and drainages, away from the traveled way and turnouts or at locations approved by the Contracting Officer.
- D. Do not leave woody debris and slash in excess of 12 inches in length or 3 inches in diameter on the roadway, or concentrations that may plug ditches or culverts, in ditches or drainage channels, or on backslopes, travel way, shoulders, or turnouts.

**851.03 Location of Work.**

As specified on roads listed on the Work List, shown on the Plans, or as ordered by the Contracting Officer.

**851.04 Measurement.**

Measurement under this Section will be made by the total number of units for each item listed in the Schedule of Items completed and accepted.

**851.05 Payment.**

The accepted quantities will be paid at the contract price per unit of measurement for the Section 851 pay items listed in the schedule of items. Payment will be full compensation for the work prescribed in this Section

## **861 – Maintenance of Bridge Surface**

**861.01 Service Required.**

Remove old bridge untreated wear surface and install new bridge untreated wear surface.

**861.02 Performance Standard.**

Bridge wear surface maintenance is complete when: old surfacing has been removed and disposed of off National Forest land: new running surface has been installed in accordance with drawings; surface is free of structural defects, the deck provides a smooth, stable, compact transition to the adjacent road surface, and presents no traffic hazards. Prior to placing new planks on bridge deck all remaining protruding fasteners shall be removed from the bridge deck. All plank ends shall be squared prior to installation.

**861.03 Location of Work.**

As specified on roads listed on the Work List, shown on the Plans, or as ordered by the Contracting Officer.

**861.04 Measurement.**

Measurement under this Section will be made by the total number of units for each item listed in the Schedule of Items completed and accepted.

- A. Square Foot: Work activities by the square foot measured by using standard survey methods rounded to the nearest one (1) foot.

**861.05 Payment.** The accepted quantities will be paid at the contract price per unit of measurement for the Section 861 pay items listed in the schedule of items. Payment will be full compensation for the work prescribed in this Section.