

# ROAD MAINTENANCE REQUIREMENTS

## FS-2400-6T Contracts (6/06)

### Sam Houston N.F.: Kidhaw WMA Wildlife Habitat Improvement Project

#### **SECTION 1. GENERAL**

Purchaser's maintenance responsibility begins (1) after purchaser performs Prehaul Maintenance on a road listed in the Road Maintenance Requirements Schedule; or (2) for all other roads, when Purchaser begins to use the road. Occasional travel by Purchaser's light vehicles, prior to beginning of construction clearing or logging operations in the area accessed by the road, does not constitute beginning of use. Purchaser is not required to perform routine maintenance during periods of inactivity. During periods of inactivity, Forest Service will perform maintenance only as required to meet its needs.

The Purchaser shall maintain roads, commensurate with the Purchaser's use, in accordance with the Road Maintenance Requirements Summary and Road Maintenance Specifications. Performance of road maintenance work by the Purchaser may be required prior to, during, or after each period of use. The timing of work accomplishment shall be based on the Purchaser's operating schedule under Standard Provision BT6.31.

If the Purchaser elects to use different roads than those listed in the Road Maintenance Requirements Summary, the Contracting Officer or designee shall determine the Purchaser's commensurate share of road maintenance and/or revise road maintenance deposits.

Unless the Contracting Officer or designee agrees in writing otherwise, prehaul maintenance shall be completed on any portion of road prior to hauling on that portion.

The Purchaser shall attend to the following situations as they occur and concurrently with sale operations: remove slides, fallen timber and other obstructions and overhanging brush obstructing road sight distance. Excess material resulting from any maintenance activity shall not be placed at locations where it will wash into streams.

The Forest Service shall prepare a revised Road Maintenance Requirements Schedule to reflect changes in the original haul route.

#### **SECTION 2. ROAD MAINTENANCE DEFINITIONS**

Wherever the following terms are used in the Road Maintenance Specifications, the meaning shall be:

Base Course. Material placed on the Subgrade to distribute concentrated wheel loads.

Berm. Curb or dike constructed to prevent Roadway runoff water from discharging onto embankment slope.

Borrow. Select Material taken from designated borrow sites.

Crown, Inslope, and Outslope. The cross slope of the Traveled Way to aid in drainage and traffic maneuverability.

Culverts. A conduit or passageway under a road, trail, or other obstruction. A culvert differs from a bridge in that it is usually entirely below the elevation of the Traveled Way.

Drainage Dip. A dip in the Traveled Way which intercepts surface runoff and diverts the water off the

# **ROAD MAINTENANCE REQUIREMENTS**

## **FS-2400-6T Contracts (6/06)**

### **Sam Houston N.F.: Kidhaw WMA Wildlife Habitat Improvement Project**

Traveled Way. A Drainage Dip does not block the movement of traffic.

Drainage Structures. Manufactured structures which control the runoff of water from the Roadway including Inslope, overside drains, aprons, flumes, downdrains and downpipes.

Lead-off Ditches. A ditch used to transmit water from a Culvert, Drainage Structure or Drainage Dip outlet to the natural drainage area.

Maintenance Activity. Items of work leading to the minor restoration and upkeep of a road and necessary to sustain the road's anticipated traffic.

Material. Any substance specified for use in the performance of the work.

Prehaul Maintenance. Road maintenance work to be accomplished prior to the roads use. Roads receiving prehaul maintenance shall be shown on the Sale Area Map.

Roadbed. The portion of a road between the intersection of Subgrade and sideslopes, excluding that portion of the ditch below Subgrade.

Roadside. A general term denoting the area adjoining the outer edge of the Roadway.

Roadway. The portion of a road within the limits of excavation and embankment.

Shoulder. That portion of Roadway contiguous with Traveled Way for accommodation of stopped vehicles, for emergency use, and lateral support of Base and Surface Course, if any.

Slide. A concentrated deposit of materials from above or on backslope extending onto the Traveled Way or Shoulders, whether caused by mass land movements or accumulated raveling.

Slough. Material eroded from the backslope which partially or completely blocks the ditch, but does not encroach on the Traveled Way so as to block passage of traffic.

Slump. A localized portion of the Roadbed which has slipped or otherwise become lower than that of the adjacent Roadbed and constitutes a hazard to traffic.

Subgrade. Top surface of Roadbed upon which Base Course or Surface Course is constructed. For roads without Base Course or Surface Course, that portion of Roadbed prepared as the finished wearing surface.

Surface Course. The Material placed on the Base Course or Subgrade to enhance traction, distribute concentrated wheel loads and resist abrasion and the effects of climate. Surface Course may be referred to as surfacing.

Traveled Way. That portion of Roadway, excluding Shoulders, used for the movement of vehicles.

Turnouts. That portion of the Traveled Way constructed as additional width on single lane roads to allow for safe passing of vehicles.

Waterbar. A dip in the Roadbed which intercepts surface runoff and diverts the water off the Roadway. A Waterbar is not designed to be traversable by logging trucks.

# ROAD MAINTENANCE REQUIREMENTS

FS-2400-6T Contracts (6/06)

Sam Houston N.F.: Kidhaw WMA Wildlife Habitat Improvement Project

## SECTION 3. ROAD MAINTENANCE REQUIREMENTS SCHEDULE

### Contract Road Maintenance Requirements Summary

NFSR Road	Termini		Miles	Applicable Prehaul Road Maintenance Specifications									
	From	To		1020	1030	1040	3010	4020	4050				
2007	Welch Road	EOP	1.12	---	P	P	---	P	---				
2007 A	2007	EOP	0.75	P	---	P	P	---	P				

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party  
EOP = End of Project

NFSR Road	Termini		Miles	Applicable During Haul Road Maintenance Specifications									
	From	To		1020	3010	4020	6020						
2007	Welch Road	EOU	1.50	P	P	P	P						
2007 A	2007	EOU	0.75	P	P	P	---						
2007 B	2007	EOU	0.10	P	P	P	---						
2007 C1	2007	EOU	0.34	P	P	P	---						
2035	Taliaferro Road	EOU	0.20	P	P	P	---						
265	Taliaferro Road	EOU	0.26	P	P	P	---						
266	Taliaferro Road	EOU	0.34	P	P	P	---						
2030	Taliaferro Road	EOU	0.10	P	P	P	---						

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party  
EOU = End of Use

NFSR Road	Termini		Miles	Applicable Post Haul Road Maintenance Specifications									
	From	To		1020	3010	4020	6020						
2007	Welch Road	EOU	1.50	P	P	P	P						
2007 A	2007	EOU	0.75	P	P	P	---						
2007 B	2007	EOU	0.10	P	P	P	---						
2007 C1	2007	EOU	0.34	P	P	P	---						
2035	Taliaferro Road	EOU	0.20	P	P	P	---						
265	Taliaferro Road	EOU	0.26	P	P	P	---						
266	Taliaferro Road	EOU	0.34	P	P	P	---						
2030	Taliaferro Road	EOU	0.10	P	P	P	---						

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party  
EOU = End of Use

**ROAD MAINTENANCE REQUIREMENTS**  
**FS-2400-6T Contracts (6/06)**  
**Sam Houston N.F.: Kidhaw WMA Wildlife Habitat Improvement Project**

**SECTION 4. ROAD MAINTENANCE ACTIVITY SPECIFICATIONS**

**INCLUDED SPECIFICATIONS**

<u>Activity No.</u>	<u>Activity Specification Title</u>
1020	Surface Blading (Dozer)
1030	Surface Blading (Grader)
1040	Spot Surface Course Placement
3010	Drainage Structures
3020	Ditch Cleaning
4020	Roadway Mowing and Clearing
4050	Seeding
6020	Miscellaneous Structures

**ACTIVITY 1020 - SURFACE BLADING (DOZER)**

**DESCRIPTION**

1.1 Surface blading is keeping a native or aggregate surfaced Roadbed in a condition to facilitate traffic and provide proper drainage. It includes maintaining the Crown, Inslope or Outslope of the Traveled Way, Turnouts, and Shoulder; repairing Berms; blending approach road intersections; and cleaning bridge decks, Drainage Dips, and Lead-off Ditches. This work may be accomplished using a crawler tractor with a dozer blade capable of angling.

**REQUIREMENTS**

3.1 Surface blading shall be performed before, during, and after Purchaser's use as often as necessary to facilitate traffic and proper drainage.

3.2 The surface blading shall preserve the existing cross-section. Ruts, chuckholes and corrugations that affect the smoothness of ride do not have to be removed unless they become excessive or interfere with proper drainage. Surface Course Material which has been displaced to the Shoulders or Turnouts shall be returned to the Traveled Way. The blading operation shall be conducted to conserve surface Material and to provide for a thorough mixing of the Material being worked.

3.3 On native surfaced roads, Material generated from backslope Sloughing, and ditch cleaning may be blended with the surface Material being worked. On aggregate surfaced roads this Material shall not be blended with Surface or Base Course Material unless agreed otherwise.

3.4 Roadway backslopes shall not be undercut.

3.5 Drainage Dips and Lead-off Ditches shall be cleaned and maintained to retain the existing line, grade, and cross-section.

3.6 Intersecting roads shall be bladed for a distance of 50 feet to assure blending of the surfaces.

3.7 Rocks or other Material remaining on the Traveled Way after the final pass that are 4 inches in diameter or larger shall be removed. The unsuitable Material shall be disposed of by sidecasting unless agreed otherwise.

3.8 Material resulting from this activity shall not remain on or in structures, such as Culverts, cattle guards, ditches and Drainage Dips.

3.9 Material resulting from this activity, plus any accumulated debris, shall be removed from bridge decks and the deck drains opened.

**ROAD MAINTENANCE REQUIREMENTS**  
**FS-2400-6T Contracts (6/06)**  
**Sam Houston N.F.: Kidhaw WMA Wildlife Habitat Improvement Project**

ACTIVITY 1030 - SURFACE BLADING (GRADER)

DESCRIPTION

1.1 Surface blading is keeping a native or aggregate surfaced Roadbed in a condition to facilitate traffic and provide proper drainage. It includes maintaining the Crown, Inslope or Outslope of the Traveled Way, Turnouts, and Shoulder; repairing Berms; blending approach road intersections; and cleaning bridge decks, Drainage Dips, and Lead-off Ditches. This work shall be completed with a motor grader.

REQUIREMENTS

3.1 Surface blading shall be performed before, during, and after Purchaser's use as often as necessary to facilitate traffic and proper drainage.

3.2 The surface blading shall preserve the existing cross-section. Surface irregularities shall be eliminated and the surface left in a free-draining state and to a smoothness needed to facilitate traffic. Surface Course Material which has been displaced to the Shoulders or Turnouts shall be returned to the Traveled Way. The blading operation shall be conducted to conserve surface Material and to provide for a thorough mixing of the Material being worked.

3.3 On native surfaced roads, Material generated from backslope Sloughing, and ditch cleaning may be blended with the surface Material being worked. On aggregate surfaced roads this Material shall not be blended with Surface or Base Course Material unless agreed otherwise.

3.4 Roadway backslopes shall not be undercut.

3.5 Drainage Dips and Lead-off Ditches shall be cleaned and maintained to retain the existing line, grade, and cross-section.

3.6 Intersecting roads shall be bladed for a distance of 50 feet to assure blending of the surfaces.

3.7 Rocks or other Material remaining on the Traveled Way after the final pass that are 4 inches in diameter or larger shall be removed. The unsuitable Material shall be disposed of by sidecasting unless agreed otherwise.

3.8 Material resulting from this activity shall not remain on or in structures, such as Culverts, cattle guards, ditches and Drainage Dips.

3.9 Material resulting from this activity, plus any accumulated debris, shall be removed from bridge decks and the deck drains opened.

ACTIVITY 1040 - SPOT SURFACE COURSE PLACEMENT

DESCRIPTION

1.1 Spot surface course placement includes subgrade preparation, furnishing, spreading and shaping Materials in accordance with the Requirements.

MATERIALS

2.1 Surface course Material will be in accordance with the Requirements, 3.2.

REQUIREMENTS

3.1 Subgrade Preparation. Prepare subgrade to receive surface course Material at locations as designated on-the-ground by the Forest Service on roads listed below. Prepare the subgrade by

# ROAD MAINTENANCE REQUIREMENTS

## FS-2400-6T Contracts (6/06)

### Sam Houston N.F.: Kidhaw WMA Wildlife Habitat Improvement Project

shaping the Roadbed to approximately the original cross-section and consistent with adjacent sections.

3.2 Furnish and spread Material at spot locations designated on the ground by the Forest Service as follows.

Road Number	Road Name	Pre Haul	Type Material	Quantity (C.Y./Tons)
2007	N/A	Yes	Limestone Road Base	575 Tons
2007 A	N/A	Yes	Limestone Road Base	109 Tons
2007 A	N/A	Yes	Limestone 1" x 3" Road Base	375 Tons

3.3 Variations. The purchaser will be required to furnish weight or volume tickets to the Forest Service for the amount of surface course material placed. When it is mutually agreed that all or part of the surface course Material is not needed, the estimated cost of surfacing not placed shall be charged to the Timber Sale Account in accordance with BT8.31.

### ACTIVITY 3010 - DRAINAGE STRUCTURES

#### DESCRIPTION

1.1 This work consists of maintaining and/or installation/removal of Drainage Structures and related items such as inlet and outlet channels, existing riprap, trash racks, and drop-inlets.

#### MATERIALS

2.1 All Materials used in the maintenance and/or installation/removal of Drainage Structures shall conform by type and specification to the Material in the structure being maintained or as indicated in the Requirements, 3.3.

#### REQUIREMENTS

3.1 Drainage Structures and related items shall be cleared of all foreign Material which has been deposited above the bottom of the structure and all vegetative growth which interferes with the water flow. Material removed that cannot be incorporated into maintenance work shall be uniformly placed on fill slopes unless agreed otherwise.

3.2 Perform maintenance to insure the proper functioning of the head walls, aprons, inlet assemblies, riprap, trash racks, and other facilities related to the Drainage Structure.

3.3 Install/remove ditches, drainage dips, rock crossings and/or culverts as follows and as marked on the ground. Installation of structures shall not begin without the presence of a Forest Service representative.

Road Number	Road Name	Remove/Install	Type of Structure	Size	Quantity
2007 A	N/A	Clean	"J" lead off ditch	60' Each	7

3.4 Installation shall be in accordance with construction industry standards and practices.

3.5 Culvert designated for removal shall become the property of the Purchaser.

**ROAD MAINTENANCE REQUIREMENTS**  
**FS-2400-6T Contracts (6/06)**  
**Sam Houston N.F.: Kidhaw WMA Wildlife Habitat Improvement Project**

**ACTIVITY 3020 - DITCH CLEANING**

**DESCRIPTION**

1.1 Ditch cleaning is the removal and disposal of all accumulated organic and Slough Material from Roadway ditches to provide a free-draining waterway.

**REQUIREMENTS**

3.1 Ditch cleaning shall be repeated during sale operations as often as necessary to facilitate proper drainage.

3.2 All Slough Material or other debris which might obstruct water flow in the Roadway ditch shall be removed. Material removed from the ditch, if suitable, may be blended into existing native road surface or Shoulder or placed in designated Berms in conjunction with Surface Blading, Activity 4020, operations.

Material removed from ditches that is not suitable for blending into the existing surface course shall be placed on adjacent fill slopes or disposed of as agreed otherwise.

3.3 Roadway backslopes shall not be undercut.

**ACTIVITY 3050 - WATERBARS**

**DESCRIPTION**

1.1 This work consists of installing or removing Waterbars in the Roadbed.

**REQUIREMENTS**

3.1 Waterbars shall be installed at locations designated or staked on the ground.

All Material excavated shall be used in the installation of the Waterbar. The bar Material shall be compacted by operating heavy equipment over the length and width of the bar.

3.2 Waterbars designated on the ground shall be removed by blading the bar Material into the adjacent depression to form a smooth transition along the Traveled Way. The length and width of the fill Material shall be compacted by the equipment performing the work.

3.3 Waterbars may be required to be installed between seasons of use and then removed when haul is resumed. Waterbar installation may also be required when use of a road has been completed.

**ACTIVITY 4020 - ROADWAY MOWING AND CLEARING**

**DESCRIPTION**

1.1 This work includes removal of brush, trees and other vegetative growth from within the Roadway limits.

**REQUIREMENTS**

3.1 Vegetative matter within the Roadway which 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

# ROAD MAINTENANCE REQUIREMENTS

## FS-2400-6T Contracts (6/06)

### Sam Houston N.F.: Kidhaw WMA Wildlife Habitat Improvement Project

decked along the Roadside in locations where the Traveled Way or sight distances will not be impaired.

3.2 Vegetative matter removed from the Roadway shall be uniformly placed on fill slopes unless agreed otherwise.

#### ACTIVITY 4050 - SEEDING

##### DESCRIPTION

1.1 This work includes ground preparation, furnishing and placing seed, fertilizer, limestone and mulch.

##### MATERIALS

2.1 Materials will be those required in the table below.

##### REQUIREMENTS

3.1 Place seed, fertilizer and mulch of the types, application rates and time of year as follows and as marked on the ground.

Road Number	Road Name	Type and Application Rate				Time of Year
		Seed	Limestone	Fertilizer	Mulch	
2007 A	N/A	Per CT6.601	N/A	Per CT6.601	N/A	Per CT6.601

#### ACTIVITY 6020 - MISCELLANEOUS STRUCTURES

##### DESCRIPTION

1.1 Maintenance of miscellaneous structures includes cattle guards, gates, and other similar structures that have been previously installed to insure 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 Cattle guards. Loose rails shall be welded or bolted back in place.

Excess Material carried into the cattle guard shall be removed when drainage is blocked or when it reaches 6 inches from the bottom of the cattle guard frame. Drainage into and from the cattle guard shall be kept open.

3.2 Gates. Gates shall be kept in good repair and made to swing easily. Hinges or latches shall be repaired if not operating properly. Brush and debris shall be removed from within the swinging radius.