

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE TIMBER SALE CONTRACT (Applicable to Sales to be Measured before Felling)		Name of Purchaser	
National Forest Hiawatha	Ranger District St Ignace	Region Eastern	Contract Number
Sale Name Malibu Salvage		Award Date	Termination Date 09/30/2020

The parties to this contract are The United States of America, acting through the Forest Service, United States Department of Agriculture, hereinafter called Forest Service, and _____ hereinafter called Purchaser.

Forest Service having advertised a sale at which either (1) Purchaser, whose required bid deposit is now held by Forest Service as an initial deposit, was the successful bidder, or (2) no bids were received and Purchaser having subsequently offered at least the minimum advertised price and made an initial deposit in the same amount as the bid deposit specified in the sale advertisement; and the parties hereto desiring to record their agreement; now therefore,

Unless provided otherwise herein, Forest Service agrees to sell and permit Purchaser to cut and remove Included Timber and Purchaser agrees to purchase, cut, and remove Included Timber.

This contract consists of three Divisions: AT - Specific Conditions, BT - Standard Provisions, and CT - Special Provisions, together with Sale Area Map, Plans and specifications for developments (if any), and such attachments as may be provided for in Division CT. Specific Conditions are numbered and apply to the Part, Section, Subsection, or Item of the Standard Provisions, as indicated hereunder. Other conditions of this contract are stated in Division CT - Special Provisions.

IN WITNESS WHEREOF, the parties hereto have executed this contract as of the award date.

SAMPLE
UNITED STATES OF AMERICA

Two Witnesses:^{1/}

(Name)

(Address)

(Name)

(Address)

By _____
Contracting Officer

(Title)

By: _____^{2/}
(Purchaser)

(Title)

(Business Address)

I, ^{3/} _____, certify that I am the _____
 Secretary of the corporation named as Purchaser herein; that _____
 who signed this contract on behalf of Purchaser, was then _____
 of the corporation; that the contract was duly signed for and in behalf of the corporation by authority of its governing body, and is
 within the scope of its corporate powers.

**CORPORATE
 SEAL ^{4/}**

INSTRUCTIONS:

- 1/ The signatures and addresses of two witnesses are required if Purchaser is other than a corporation.
- 2/ If Purchaser is a co-partnership, the signatures should be: XYZ Company, by John Doe, a member of the firm. If Purchaser is a corporation, form of signature should be: XYZ Company, by John Doe, President (or other officer or agent) and the seal of the corporation must be impressed or indicated.
- 3/ The certificate must be completed if Purchaser is a corporation.
- 4/ If the corporation has no corporate seal that fact shall be stated, in which case a scroll or adhesive seal shall follow the corporate name.

EXAMPLE 1/

Subcontractor Certification
Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion

Timber Sale Name: _____
 National Forest: _____

The prospective subcontractor (participants in lower tier covered transactions) certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this timber sale by any Federal department or agency.

Where the prospective subcontractor is unable to certify to any of the statements in this certification, such prospective subcontractor shall attach an explanation to this proposal.

Name of Subcontractor: _____
 Business Address: _____

_____ Date _____ Signature

1/ It is the Purchaser's responsibility to have subcontractors complete this certification and to maintain a file of completed certifications. This certification does not need to be returned to the Forest Service, except at the written request of the Contracting Officer.

The following conditions apply to the indicated portions of Division BT - Standard Provisions issued June 2006.

AT1 - Location and Area, applicable to BT1.1

This Sale Area of 7135 acres more or less is located in:

T42N-R2W, Sec. 1, 9, 10, 11, 12, 15, 16 & 24

AT2 - Volume Estimate and Utilization Standards, applicable to BT2.1, BT2.2, BT2.4, and BT6.4

Species	Product	Estimated Quantity *	Unit of Measure	Minimum Specifications				
				Merchantable Tree		Piece Required to be Removed		
				Diameter Breast High (d.b.h.) (inches)	Number of Minimum Pieces per Tree	Length (feet)	Diameter Inside Bark at Small End (inches)	Net Scale in % of Gross Scale
Cedar	Sawtimber	305.00	CCF	9.0	1	8	7.6	50
Mixed Conifer	Sawtimber	146.00	CCF	9.0	1	8	7.6	50
Mixed Hardwood	Sawtimber	464.00	CCF	11.0	1	8	9.6	50
Pine	Sawtimber	42.00	CCF	9.0	1	8	7.6	50
Aspen	Pulpwood	3,612.00	CCF	5.0	1	8	4.0	70
Cedar	Pulpwood	260.00	CCF	5.0	1	8	4.0	70
Mixed Conifer	Pulpwood	915.00	CCF	5.0	1	8	4.0	70
Mixed Hardwood	Pulpwood	1,500.00	CCF	5.0	1	8	4.0	70
Pine	Pulpwood	8.00	CCF	5.0	1	8	4.0	70
Total Quantity		7,252.00	CCF					

* Quantities not included here are described in BT2.4.

AT3- Timber Designations, applicable to BT2.3; acres are approximate:

	Number	Acres
Clearcutting Units (BT2.31)		
Specified Road Clearing (BT2.32)		
Overstory Removal Units (BT2.33)		
Understory Removal Units (BT2.34)		
Individual Trees (BT2.35)		359.5
Incompletely Measured Payment Units (BT2.36)		

AT4 - Timber Payment Rates, applicable to BT3.1 and BT4.0

AT4a - For Species and Products to be Paid for at Rates Escalated under BT3.2

Not Applicable

AT4b- For Species and Products to be Paid for at Flat Rates

Species	Product	Unit of Measure	Rates per Unit of Measure				Required Deposits Slash Disposal \$
			Base	Advertised	Bid Premium	Bid (Flat)	
			\$	\$	\$	\$	
Cedar	Sawtimber	CCF	8.88	16.76			.00
Mixed Conifer	Sawtimber	CCF	4.69	8.38			.00
Mixed Hardwood	Sawtimber	CCF	24.37	47.78			.00
Pine	Sawtimber	CCF	12.82	22.64			.00
Aspen	Pulpwood	CCF	7.02	13.04			.00
Cedar	Pulpwood	CCF	3.71	6.42			.00
Mixed Conifer	Pulpwood	CCF	3.70	6.40			.00
Mixed Hardwood	Pulpwood	CCF	4.98	8.95			.00
Pine	Pulpwood	CCF	12.63	22.27			.00

For purposes of convenience in collection and bookkeeping, Bid Rates stated in AT4 include payment of deposits for sale area betterment required pursuant to 16 USC 576b. Such deposits are not included as Required Deposits defined hereunder.

SAMPLE

AT4c - Schedule of Payment Units

Payment Unit No.	App rox. Acres	Quantity of Species and Products to be Escalated under AT4a	Total Tentative Payment \$	Quantity of Species and Products to be Paid for at Flat Rates under AT4b	Total Flat Rate Payment \$	Total Required Deposits for Slash Disposal \$
01	7.8			Cedar Sawtimber 2.00 CCF		.00
				Mixed Conifer Sawtimber 3.00 CCF		
				Mixed Hardwood Sawtimber 9.00 CCF		
				Aspen Pulpwood 91.00 CCF		
				Cedar Pulpwood 1.00 CCF		
				Mixed Conifer Pulpwood 16.00 CCF		
				Mixed Hardwood Pulpwood 43.00 CCF		
				Total PU Quantity And Value 165.00 CCF		
02	28			Cedar Sawtimber 6.00 CCF		.00
				Mixed Conifer Sawtimber 9.00 CCF		
				Mixed Hardwood Sawtimber 31.00 CCF		
				Aspen Pulpwood 327.00 CCF		
				Cedar Pulpwood 5.00 CCF		
				Mixed Conifer Pulpwood 56.00 CCF		
				Mixed Hardwood Pulpwood 154.00 CCF		
				Total PU Quantity And Value 588.00 CCF		
03	25.1			Cedar Sawtimber 5.00 CCF		.00
				Mixed Conifer Sawtimber 8.00 CCF		
				Mixed Hardwood Sawtimber 28.00 CCF		
				Aspen Pulpwood 294.00 CCF		
				Cedar Pulpwood 5.00 CCF		
				Mixed Conifer Pulpwood 50.00 CCF		
				Mixed Hardwood Pulpwood 138.00 CCF		
				Total PU Quantity And Value 528.00 CCF		
04	15.1			Cedar Sawtimber 3.00 CCF		.00
				Mixed Conifer Sawtimber 5.00 CCF		
				Mixed Hardwood Sawtimber 17.00 CCF		
				Aspen Pulpwood 177.00 CCF		
				Cedar Pulpwood 3.00 CCF		
				Mixed Conifer Pulpwood 30.00 CCF		
				Mixed Hardwood Pulpwood 83.00 CCF		
				Total PU Quantity And Value 318.00 CCF		
06	7.7			Cedar Sawtimber 2.00 CCF		.00
				Mixed Conifer Sawtimber 3.00 CCF		
				Mixed Hardwood Sawtimber 9.00 CCF		
				Aspen Pulpwood 90.00 CCF		
				Cedar Pulpwood 1.00 CCF		
				Mixed Conifer Pulpwood 15.00 CCF		
				Mixed Hardwood Pulpwood 42.00 CCF		
				Total PU Quantity And Value 162.00 CCF		
07	29.5			Cedar Sawtimber 51.00 CCF		.00
				Mixed Conifer Sawtimber 19.00 CCF		
				Mixed Hardwood Sawtimber 61.00 CCF		
				Pine Sawtimber 10.00 CCF		
				Aspen Pulpwood 256.00 CCF		
				Cedar Pulpwood 43.00 CCF		
				Mixed Conifer Pulpwood 117.00 CCF		
				Mixed Hardwood Pulpwood 101.00 CCF		
				Pine Pulpwood 2.00 CCF		
				Total PU Quantity And Value 660.00 CCF		

SAMPLE

Payment Unit No.	App rox. Acres	Quantity of Species and Products to be Escalated under AT4a	Total Tentative Payment \$	Quantity of Species and Products to be Paid for at Flat Rates under AT4b	Total Flat Rate Payment \$	Total Required Deposits for Slash Disposal \$	
08	38.9			Cedar Sawtimber 56.00 CCF		.00	
				Mixed Conifer Sawtimber 3.00 CCF			
				Mixed Hardwood Sawtimber 5.00 CCF			
				Aspen Pulpwood 282.00 CCF			
				Cedar Pulpwood 51.00 CCF			
				Mixed Conifer Pulpwood 63.00 CCF			
				Mixed Hardwood Pulpwood 15.00 CCF			
				Pine Pulpwood 0.00 CCF			
							Total PU Quantity And Value 475.00 CCF
		11	23.7				
				Mixed Conifer Sawtimber 8.00 CCF			
				Mixed Hardwood Sawtimber 26.00 CCF			
				Aspen Pulpwood 277.00 CCF			
				Cedar Pulpwood 4.00 CCF			
				Mixed Conifer Pulpwood 47.00 CCF			
				Mixed Hardwood Pulpwood 130.00 CCF			
				Total PU Quantity And Value 497.00 CCF			
12	31.8			Cedar Sawtimber 55.00 CCF		.00	
				Mixed Conifer Sawtimber 20.00 CCF			
				Mixed Hardwood Sawtimber 66.00 CCF			
				Pine Sawtimber 11.00 CCF			
				Aspen Pulpwood 276.00 CCF			
				Cedar Pulpwood 47.00 CCF			
				Mixed Conifer Pulpwood 126.00 CCF			
				Mixed Hardwood Pulpwood 109.00 CCF			
				Pine Pulpwood 2.00 CCF			
							Total PU Quantity And Value 712.00 CCF
		13	25				
				Mixed Conifer Sawtimber 0.00 CCF			
				Mixed Hardwood Sawtimber 5.00 CCF			
				Aspen Pulpwood 121.00 CCF			
				Cedar Pulpwood 0.00 CCF			
				Mixed Conifer Pulpwood 5.00 CCF			
				Mixed Hardwood Pulpwood 82.00 CCF			
				Pine Pulpwood 0.00 CCF			
				Total PU Quantity And Value 213.00 CCF			
14	12.5			Cedar Sawtimber 22.00 CCF		.00	
				Mixed Conifer Sawtimber 8.00 CCF			
				Mixed Hardwood Sawtimber 26.00 CCF			
				Pine Sawtimber 4.00 CCF			
				Aspen Pulpwood 109.00 CCF			
				Cedar Pulpwood 18.00 CCF			
				Mixed Conifer Pulpwood 50.00 CCF			
				Mixed Hardwood Pulpwood 43.00 CCF			
				Pine Pulpwood 1.00 CCF			
							Total PU Quantity And Value 281.00 CCF

Payment Unit No.	App rox. Acres	Quantity of Species and Products to be Escalated under AT4a	Total Tentative Payment \$	Quantity of Species and Products to be Paid for at Flat Rates under AT4b	Total Flat Rate Payment \$	Total Required Deposits for Slash Disposal \$
15	30.8			Cedar Sawtimber 54.00 CCF		.00
				Mixed Conifer Sawtimber 20.00 CCF		
				Mixed Hardwood Sawtimber 64.00 CCF		
				Pine Sawtimber 11.00 CCF		
				Aspen Pulpwood 268.00 CCF		
				Cedar Pulpwood 45.00 CCF		
				Mixed Conifer Pulpwood 122.00 CCF		
				Mixed Hardwood Pulpwood 105.00 CCF		
				Pine Pulpwood 2.00 CCF		
16	10.7			Cedar Sawtimber 2.00 CCF		.00
				Mixed Conifer Sawtimber 4.00 CCF		
				Mixed Hardwood Sawtimber 12.00 CCF		
				Aspen Pulpwood 125.00 CCF		
				Cedar Pulpwood 2.00 CCF		
				Mixed Conifer Pulpwood 21.00 CCF		
				Mixed Hardwood Pulpwood 59.00 CCF		
17	15.5			Cedar Sawtimber 27.00 CCF		.00
				Mixed Conifer Sawtimber 10.00 CCF		
				Mixed Hardwood Sawtimber 32.00 CCF		
				Pine Sawtimber 5.00 CCF		
				Aspen Pulpwood 135.00 CCF		
				Cedar Pulpwood 23.00 CCF		
				Mixed Conifer Pulpwood 62.00 CCF		
				Mixed Hardwood Pulpwood 55.00 CCF		
				Pine Pulpwood 1.00 CCF		
18	15.7			Cedar Sawtimber 3.00 CCF		.00
				Mixed Conifer Sawtimber 5.00 CCF		
				Mixed Hardwood Sawtimber 17.00 CCF		
				Aspen Pulpwood 184.00 CCF		
				Cedar Pulpwood 3.00 CCF		
				Mixed Conifer Pulpwood 31.00 CCF		
				Mixed Hardwood Pulpwood 86.00 CCF		
19	40.7			Cedar Sawtimber 9.00 CCF		.00
				Mixed Conifer Sawtimber 13.00 CCF		
				Mixed Hardwood Sawtimber 45.00 CCF		
				Aspen Pulpwood 476.00 CCF		
				Cedar Pulpwood 7.00 CCF		
				Mixed Conifer Pulpwood 81.00 CCF		
				Mixed Hardwood Pulpwood 224.00 CCF		
50	1			Cedar Sawtimber 3.00 CCF		.00
				Mixed Conifer Sawtimber 8.00 CCF		
				Mixed Hardwood Sawtimber 11.00 CCF		
				Pine Sawtimber 1.00 CCF		
				Aspen Pulpwood 124.00 CCF		
				Cedar Pulpwood 2.00 CCF		
				Mixed Conifer Pulpwood 23.00 CCF		
				Mixed Hardwood Pulpwood 33.00 CCF		
				Pine Pulpwood 0.00 CCF		

The following definitions are established for the terms used in AT4:

Base Rates are the lowest rates of payment for timber that are authorized by this contract. Base Rates remain constant throughout the life of this contract and are not subject to change by rate redetermination, except for reduction under BT3.31, BT3.32, or BT3.33.

Advertised Rates are the minimum acceptable Bid Rates for timber, exclusive of Required Deposits. These rates are those indicated by appraisal, with a cost allowance made for construction of Specified Roads listed in AT7, but are never less than Base Rates.

Bid Premium Rates are the amounts by which Purchaser's bid is in excess of Advertised Rates. The Bid Premium Rates are constant during this contract, except as provided in BT3.31, BT3.32, and BT3.33.

Bid Rates are the rates bid by Purchaser (exclusive of Required Deposits for slash disposal and road maintenance) and are the sum of Advertised Rates and Bid Premium Rates. Until a rate redetermination becomes effective, the Bid Rate for species and products in AT4a is the Tentative Rate that is subject to quarterly adjustment under BT3.2; for species and products in AT4b, the Bid Rate is the Flat Rate.

Required Deposits are deposits that Purchaser may be required to pay for slash disposal (16 USC 490) and road maintenance (16 USC 537). Required Deposits may be adjusted as part of a rate redetermination or a Contract Term Extension. The table shows only Required Deposits for slash disposal; road maintenance deposits, if any, are given in CT5.32#.

Base Index is the specified average of the lumber or other product selling value index used as the basis for computing adjustment in rates for variance in product selling value, as provided in BT3.2.

AT5 - Indices Used in Quarterly Adjustment, applicable to BT3.2

Not Applicable

AT6 - High Stumps, applicable to BT6.412

Species	Product	Maximum Stump Height (inches)
All	Sawtimber	12
All	Pulpwood	10

AT7 - Specified Roads, applicable to BT5.2

Name and Date of Governing Road Specifications: Federal Highway Administration Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects(2003)-english

Project		Design Class	Approx. Length (mi./km.)	Sheet Numbers and Approval Date	Performance Responsibility		
Road No.	Name				Survey	Design	Construction Staking ^{1/}
3396	Malibu (C) (segment 0 to .51)	Single Lane - 15 mph	.51 / .82	8 06/20/2016	FS	FS	FS AC
0047	Red Creek to Cedarville Snowmobile Trail (R) (segment 0 to .04)	Single Lane - 10 mph	.04 / .06	9 06/20/2016	FS	FS	FS AC

^{1/} Indicate timing, i.e., before clearing (BC) or after clearing (AC). Applicable to BT5.212.

AT8 - Forest Service Engineering Completion Schedule, applicable to BT5.21

Road No.	Road Name	Type of Work	Completion Date
NOT APPLICABLE			

AT9 - Fire Precautionary Period, applicable to BT7.2

April 01 to December 01, inclusive

AT10 - Purchaser Responsibility to Furnish Crews and Equipment for:

Initial Fire Suppression, applicable to BT7.3

Within 5 road miles

Fire Suppression Reinforcement, applicable to BT7.312 and BT7.313

Within 10 road miles



AT11 - Purchaser's Obligation per Operations Fire, applicable to BT7.41

Maximum Amount: \$ \$1,500

AT12 - Termination Date, applicable to BT8.2

September 30, 2020

AT13 - Normal Operating Season, applicable to BT6.31, BT6.66, BT8.21 and BT9.3

First Period: December 01 to March 31, inclusive

Second Period: _____ to _____, inclusive

AT14 - Performance Bond, applicable to BT9.1

Performance Bond Amount: _____

AT15 - Downpayment, applicable to BT4.211

Downpayment Amount: _____

AT16 - Periodic Payment Amount, applicable to BT4.213

	<u>Periodic Payment Determination Date</u>	<u>Amount</u>
Initial Payment:	_____	_____
Additional Payment:	_____	_____

AT17 - Market-Related Contract Term Addition Producer Price Index, applicable to BT8.212

Index Name: Wood Chips Index Number: 211135

AT18 - Inapplicable Standard Provisions

The following listed Sections, Subsections, or Items of Division BT - Standard Provisions - are hereby made inapplicable. (Instructions: List by reference number and title.)

- BT4.211 DOWNPAYMENT
- BT4.4 PAYMENTS NOT RECEIVED
- BT8.212 MARKET-RELATED CONTRACT TERM ADDITION

AT19 - List of Special Provisions

The following listed special provisions are attached to and made a part of this contract as Division CT. Provisions with reference numbers followed by # contain blanks into which data have been entered for this sale. (Instructions: List by reference number, title, and date.)

- CT2.301# PROTECTED AREAS (06/2009)
- CT2.302# BOUNDARY TREES (06/2009)
- CT2.352# DESIGNATION BY SPECIES AND DIAMETER (04/2004)
- CT2.355# INDIVIDUAL TREES, CUT TREE MARKING (06/2009)
- CT4.211 DOWNPAYMENT (06/2007)
- CT4.212 TEMPORARY REDUCTION OF DOWNPAYMENT (08/2009)
- CT4.4 PAYMENTS NOT RECEIVED (08/2012)
- CT5.12# USE OF ROADS BY PURCHASER (06/1999)
- CT5.31# ROAD MAINTENANCE REQUIREMENTS (07/2001)
- CT5.33# SNOW REMOVAL (06/2009)
- CT6.314# OPERATING REQUIREMENTS (06/2009)
- CT6.412 STUMP MARKS (02/2009)
- CT6.63# TEMPORARY ROAD CLOSURE (06/2009)
- CT6.7# SLASH DISPOSAL MEASURES (06/2009)
- CT7.2 FIRE PRECAUTIONS (06/2009)
- CT8.212 MARKET-RELATED CONTRACT TERM ADDITION (11/2008)



Sale Name: Malibu Salvage

CT2.301# - PROTECTED AREAS (06/2009)

Notwithstanding the designations for cutting under standard provisions BT2.31, BT2.33, BT2.34 and BT2.35, trees within the area to be protected in Payment Unit(s) 01, 08, 18 and 50 shall be left uncut. Boundary trees along the perimeter of Protected Areas have been identified by three vertical spots facing out of the Protected Area, a vertical line on each side of the bole facing the direction of the boundary and a stump mark with ORANGE paint.

There shall be no tree felling, road maintenance, clearing and grubbing or staging of equipment and product within PA's. Included Timber associated with PU-50 may be felled within the PA, however they must be felled into the road clearing and stumps shall be flush cut as low as possible. BOUNDARY TREES ARE NOT TO BE CUT. Sale Area Map indicates, with symbol "PA," units within which Protected Areas are identified on the ground and are to be left uncut.

CT2.302# - BOUNDARY TREES (06/2009)

Boundary trees for all harvest units have been designated with ORANGE paint marks above and below stump height. Boundary trees shall not be cut.

CT2.352# - DESIGNATION BY SPECIES AND DIAMETER (04/2009)

Trees that meet Utilization Standards are designated for cutting, as shown on the Tree Designation Table and Sale Area Map, except trees Marked with ORANGE paint or described to be left uncut.

See Tree Designation Table.

Additional trees to be cut, if any, are Marked with N/A paint.

All N/A shall be left as leave trees, unless Marked with N/A paint. Leave N/A trees of the designated cut species, N/A inches stump diameter or greater, to avoid leave tree spacing greater than N/A feet. Cutting unit boundaries and other trees that shall be left uncut are Marked with ORANGE paint.

Distances are measured horizontal distance, outside bark stump height to outside bark stump height. Stump diameter is measured outside bark at stump height in a horizontal and is the average of a measurement across the short axis through the true center of the stump and a second measurement at right angles to the short axis.

Purchaser and Forest Service shall agree to skid trail location under BT6.422. Skid trails shall be no greater than N/A feet wide with a N/A foot spacing. Quantities of trees located in skid trails ARE NOT Included Timber under AT2.

Sale Name: Malibu Salvage

CT2.352#, Designation by Species & Diameter (DxSPP)

Tree Designation Table

Payment Unit(s)	Designated Species *	More Than Stump Diameter (inches)	Less Than Stump Diameter (inches)
04	All Species except ORANGE banded trees.	6.0	No Maximum
01, 02, 03, 06, 07, 11, 12, 14, 15, 16, 17, 18 and 19.	All species.	6.0	No Maximum

*All trees are live or recently killed.

- Exterior boundaries for Payment Units are designated with three vertical spots facing into the unit, a vertical line on each side of the bole facing the direction of the boundary and a stump mark with ORANGE paint.
- Where Payment Unit boundaries are coincidental with the road only the corners where the boundary meets the road are painted.
- Protected Area boundaries are designated with three vertical spots facing out of the area, a vertical line on each side of the bole facing the direction of the boundary and a stump mark with ORANGE paint.
- No-Cut areas boundaries are designated with three vertical spots facing out of the area, a vertical line on each side of the bole facing the direction of the boundary and a stump mark with ORANGE paint.

Sale Name: Malibu Salvage

CT2.355# - INDIVIDUAL TREES, CUT TREE MARKING (06/2009)

Individual trees to be cut are Marked with indicated color above and below stump height in all or parts of the following Payment Unit(s). Areas of cut tree marking are shown on the Sale Area Map with the symbol "CTM."

PAYMENT UNIT(S)

PAINT COLOR

SAMPLE

Sale Name: Malibu Salvage

CT2.355#, Individual Trees, Cut Tree Marking (CTM)

Paint Color Table

Payment Unit(s)	Paint Color
08 and 13	Blue
50	Yellow

- Exterior boundaries for Payment Units are designated with three vertical spots facing into the unit, a vertical line on each side of the bole facing the direction of the boundary and a stump mark with ORANGE paint.
- Where Payment Unit boundaries are coincidental with the road only the corners where the boundary meets the road are painted.
- Protected Area boundaries are designated with three vertical spots facing out of the area, a vertical line on each side of the bole facing the direction of the boundary and a stump mark with ORANGE paint.
- Payment Unit-50 (Road Right of Way) boundary is the extent of YELLOW paint.

Sale Name: Malibu Salvage

CT4.211 - DOWNPAYMENT (06/2007)

The downpayment amount shown in AT15 may not be applied toward any other payment required under the provisions of this contract, except damages determined pursuant to BT9.4, transferred to other timber sales, or refunded until (a) stumpage value representing 25 percent of the total bid value of the timber sale is shown on Timber Sale Account to have been cut, removed, and paid for, or (b) the estimated value remaining to be cut and removed, as shown on Timber Sale Account, is equal to or less than the amount of the downpayment, or (c) if 36 CFR 223.49(e) is applicable, the estimated value remaining to be cut and removed, as shown on Timber Sale Account, is equal to or less than the amount of the downpayment. For lump sum timber sales, the downpayment may be applied to payment for release of the single payment unit.

If Forest Service makes a determination that this contract should not have been included under increased downpayment requirements (36 CFR 223.49(e)), the downpayment shall be revised and applied in accordance with 36 CFR 223.49(f).

CT4.212 - TEMPORARY REDUCTION OF DOWNPAYMENT (08/2009)

Notwithstanding BT4.211 or CT4.211, upon the Purchaser's written request Forest Service may temporarily reduce the downpayment when Purchaser's scheduled operations are delayed or interrupted for 30 or more consecutive days, or the contract term is extended for 30 or more consecutive days for any of the following reasons:

- (1) Forest Service requests or orders Purchaser to delay or interrupt scheduled operations for reasons other than breach;
- (2) Purchaser interrupts or delays scheduled operations to work on a sale designated by the Forest Service as in urgent need of harvesting; or
- (3) An adjustment of the contract term authorized upon a determination of substantial overriding public interest, including a market-related contract term addition, or an urgent removal contract term extension under 36 CFR 223.53.

When Purchaser is not cutting or removing timber under contract during a qualifying period of delay, interruption, or extension listed above the downpayment may be reduced to \$1000 or 2 percent of the downpayment amount stated in the contract, whichever is greater. The Purchaser must restore the downpayment to the full amount stated in the contract within 15 days from receipt of the bill for collection and written notice from the Contracting Officer that the basis for temporarily reducing the downpayment no longer exists. Purchaser shall not cut or remove timber on a contract where the downpayment has been temporarily reduced until the downpayment amount stated in the contract is fully restored.

CT4.4 - PAYMENTS NOT RECEIVED (08/2012)

(a) Payments are due and payable on the date of issue indicated on the bill for collection. When a payment for timber cut and other charges is not received at the location designated by Forest Service by the date specified in the bill for collection, Contracting Officer will suspend all or any part of Purchaser's Operations until payment or acceptable payment guarantee is received. Other charges include, but are not limited to:

- (i) Slash disposal and road maintenance deposits;
- (ii) Cooperative work at rates established by specific agreement under BT4.218;
- (iii) Damages pursuant to BT9.4;
- (iv) Road use fees;
- (v) Restoration of downpayment pursuant to BT4.22;
- (vi) Periodic payments pursuant to BT4.213;
- (vii) Extension Deposits pursuant to BT4.217; and
- (viii) Other mandatory deposits.

(b) Failure to pay amounts due by the date specified in the bill for collection shall be considered a breach under BT9.3. The 30-day notice period prescribed therein shall begin to run as of the end of business on the date specified for receipt of payments. If the performance or payment is guaranteed by surety bond, the surety will receive a copy of the written notification of breach. Demand will be made on the surety or other institution providing the guarantee or bond instrument for immediate payment 10 days after issuance of written notification of the breach.

(c) Pursuant to the Debt Collection Improvement Act of 1996, as amended, if payment is not received by Forest Service within 15 days after the date of issue indicated on the bill for collection:

(i) Simple interest shall be assessed at the Current Value of Funds Rate as established by the Secretary of the Treasury. Interest will begin to accrue as of the date of issue indicated on the initial bill for collection.

(ii) Debtors will be assessed administrative charges, in addition to the delinquent amount due. Administrative charges are those additional costs incurred by the Government in processing, handling, and collecting delinquent debts.

(iii) A penalty charge of six (6) percent per annum will be assessed on any portion of a debt delinquent more than 90 days. This penalty charge is in addition to interest and administrative charges under paragraphs (c)(i) and (c)(ii). The penalty charge shall accrue from the date of issue indicated on the bill for collection and shall be assessed on all outstanding amounts, including interest and administrative costs assessed under paragraphs (c)(i) and (c)(ii).

(iv) Payments will be credited on the date received by the Federal Depository or Collection Officer designated on the bill for collection.

(d) Forest Service remedies for Purchaser's failure to make payment for timber cut and other charges when due, except for accrual of interest, suspension of all or any part of Purchaser's Operations, and administrative offset, shall be stayed for so long as:

- (i) A bona fide dispute exists as to Purchaser's obligation to make such payment and
- (ii) Purchaser files and prosecutes a timely Claim.

Sale Name: Malibu Salvage

CT5.12# - USE OF ROADS BY PURCHASER (06/1999)

Purchaser's use of existing roads identified on Sale Area Map by the following codes is prohibited or subject to restrictive limitations, unless agreed otherwise:

Code	Use Limitations
X	Hauling prohibited
R	Hauling restricted
U	Unsuitable for hauling prior to completion of agreed reconstruction
P	Use prohibited
A	Public use restriction
W	Regulation waiver

Roads coded A will be signed by the Forest Service to inform the public of use restrictions. Purchaser's use of roads coded R, A, or W shall be in accordance with the following restrictions:

See Restricted Road List Table.

SAMPLE

Sale Name: Malibu Salvage

CT5.12#, Use of Roads by Purchaser

Restricted Road Use Table

Road #	Road Name	Termini		Map Legend	Description of Restrictions
		From	To		
T47	Red Creek to Cedarville Snowmobile Trail	St. Ignace Rd. (Co.221)	Nunns Creek Rd. (Co.222)	R	T47 is a designated snowmobile trail. When operations occur during the winter season, snowplowing will require banks to be sloped at the ends of plowed sections and at crossroads. Warning signs will be required where snowplowing begins and ends. Type of signs and locations will be agreed upon with Forest Service Representative as part of the Traffic Control Plan (BT6.33).
T47	Red Creek to Cedarville Snowmobile Trail	East Boundary of PU-14	NE Corner of PU-11	R	Restricted from use during snowmobile season (December 1-March 31, Inclusive).
T47	Red Creek to Cedarville Snowmobile Trail	FR3387	NW Boundary of PU-07	R	Road must be frozen.
T47	Red Creek to Cedarville Snowmobile Trail	PU-14	Nunns Creek Rd. (Co.222)	P	All use prohibited.
T47	Red Creek to Cedarville Snowmobile Trail	NE corner of PU-11	NW corner of PU-07	P	All use prohibited.

Sale Name: Malibu Salvage

CT5.31# - ROAD MAINTENANCE REQUIREMENTS (07/2001)

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

See Contract Road Maintenance Requirements Summary Table.

SAMPLE

CT5.31#, Road Maintenance Requirements

SECTION 3. ROAD MAINTENANCE REQUIREMENTS SCHEDULE

Contract Road Maintenance Requirements Summary

Road	Termini		Miles	Applicable <u>Pre-Haul</u> Road Maintenance Specification			
	From	To		T-8360			
FR3467	Co. 221	PU-02 Access	0.6	P			
FR3387	Co. 221	End	1.0	P			
T47	FR3387	NW corner of PU-07.	1.1	P			
T47	End of FR3396	NE corner of PU-11.	1.6	P			
FR3433	M-134	FR3433A	0.2	P			
FR3433A	FR3433	End	0.3	P			

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

Road	Termini		Miles	Applicable <u>During-Haul</u> Road Maintenance Specification			
	From	To		T-8360			
FR3396	Co. 222	End	0.6	P			
FR3467	Co. 221	PU-02 Access	0.6	P			
FR3387	Co. 221	End	1.0	P			
T47	FR3387	NW corner of PU-07.	1.1	P			
T47	End of FR3396	NE corner of PU-11.	1.6	P			
FR3433	M-134	FR3433A	0.2	P			
FR3433A	FR3433	End	0.3	P			

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Part

Road	Termini		Miles	Applicable <u>Post-Haul</u> Road Maintenance Specification			
	From	To		T-8360			
FR3396	Co. 222	End	0.6	P			
FR3467	Co. 221	PU-02 Access	0.6	P			
FR3387	Co. 221	End	1.0	P			
T47	FR3387	NW corner of PU-07.	1.1	P			
T47	End of FR3396	NE corner of PU-11.	1.6	P			
FR3433	M-134	FR3433A	0.2	P			
FR3433A	FR3433	End	0.3	P			

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

CT5.31#, Road Maintenance Requirements

SECTION 1. GENERAL

Purchaser's main Road Maintenance responsibility begins: (1) after Purchaser performs Pre-haul 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 (CO) or designee shall determine the Purchaser's commensurate share of road maintenance and/or revise road maintenance deposits.

Unless the CO or designee agrees in writing, all Prehaul Maintenance requirements shall be completed on any portion of road prior to hauling on that portion.

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

Any work or materials that are determined to no longer be needed and are waived shall have the estimated cost charged to the Timber Sale Account as described in BT8.31.

CT5.31#, Road Maintenance Requirements

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.

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 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.

During Haul Maintenance. Road maintenance work to be accomplished during the period of timber removal.

Geotextile. A group of construction fabrics with varying attributes designed for different purposes.

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 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.

Post Haul Maintenance. Road maintenance work to be accomplished after timber removal is completed.

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.

Road Maintenance Cost. An estimate of the cost to perform road maintenance activities; as determined by the Forest Service. Estimates may include any or all of the work activities listed in Section 4, Road Maintenance Activity Specifications.

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.

CT5.31#, Road Maintenance Requirements

SECTION 2. ROAD MAINTENANCE DEFINITIONS (Continued)

Sand Hole. A hole that develops in the running surface of the road which is quite soft and dangerous in nature. Usually found in very sandy soils.

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 ravelling.

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.

CT5.31#, Road Maintenance Requirements

SECTION 4. ROAD MAINTENANCE SPECIFICATIONS

INCLUDED SPECIFICATIONS

<u>Specification No.</u>	<u>Specification Title</u>
T-8360	Composite High Clearance Road Maintenance

CT5.31#, Road Maintenance Requirements

T-8360 Composite High Clearance Road Maintenance

DESCRIPTION

- 1.1 This work consists of making limited use roads passable for project use by Purchaser and providing drainage from the traveled way and roadbed.

REQUIREMENTS

3.1 Traveled Way

A. Purchaser may smooth or fill existing cross ditches and waterbars and, by agreement, modify existing road junction to enable vehicle access. Prior to beginning haul and resumption of haul after an extended stoppage:

1. Remove brush, fallen trees, rocks, and other debris from traveled way, including turnouts, turnarounds, and other locations that interfere with needed maintenance. No object extending over 4 inches above the road surface shall remain within the 12 feet usable traveled way.
2. Center the usable width of the roadbed or position away from the fill slope.
3. Cut and remove standing or down trees, logs, brush, and limbs from within the 12 feet usable traveled way. Remove encroaching limbs to a height of 14 feet above the traveled way surface. Scatter material not meeting utilization standards outside and below the roadbed on the fill side. Limb and remove designated timber which meets utilization standards or deck at agreed locations.
4. Place all removed material away from drainages and in locations previously agreed to in writing by the FSR.
5. During use, maintain drainage structures including dips, ditches and culverts in a usable condition and surface in a flat, Insloped or Outsloped, or Crowned usable condition.

3.3 Slough and Slides

1. Slough and Slides may be left in place provided surface drainage is adequately provided and at least 12 feet of width is available for vehicle passage.
2. Purchaser may reposition or ramp over Slides and Slough when the Traveled Way is less than 12 feet providing the material is capable of supporting vehicles. Limit Outslope to no more than six percent.
3. Reposition Slough or Slide materials, which are not capable of supporting a vehicle, on the roadbed to provide the 12 feet width. When directed by Forest Service, Slough or Slide material will be removed under Section T-8320 Slide, Slump, and Erosion Repair.

3.4 Slumps, Eroded areas, and Washouts

1. Drain the roadbed immediately upgrade of Slumps and longitudinal cracks to prevent water from entering Slump area.
2. Slumps and longitudinal cracks at the edge of the roadbed shall not be considered a part of the usable width. Usable width may be reduced to ten feet in the area of the Slump.
3. Unless Forest Service agrees to material being placed on Slumps, ramp the Slumps on both ends into undisturbed roadbed to provide at least ten feet usable width. Use removed materials to guide vehicles to the ramp location or to aid in draining the area.
4. Eroded areas/washouts may be filled with suitable material and compacted by operating equipment over the fill area.

T-8360 Composite High Clearance Road Maintenance (Continued)

3.5 Posthaul

A. At the end of hauling or prior to entering into seasonal shutdowns or a period of extended inactivity:

1. Shape the traveled way and disturbed roadbed to provide functional drainage.
2. Reinstall removed cross ditches and waterbars and provide any additional drainage structures necessary to offset changes caused through use and maintenance.
3. Leave roads useable for high clearance vehicles. Remove or reshape Purchaser modifications at road junctions to leave the entrance as it was before use, or as agreed at the time of improvement.
4. Close all roads which were closed previously, using prior existing methodology.

Sale Name: Malibu Salvage

CT5.33# - SNOW REMOVAL (06/2009)

Snow removal shall be done in a manner that will preserve and protect roads, provide for safe and efficient transport of timber, and prevent erosion damage to streams and adjacent lands. In performing snow removal, Purchaser shall adhere to the following performance standards, unless otherwise agreed:

1. Blade will be equipped with skid shoes to prevent loss of surfacing and damage to the road bed. On gravel and native surface roads, a minimum ONE-inch depth compacted snow mat will be maintained on the roadbed during blading.
2. Snow shall be removed from the entire road width, including turnouts.
3. Snow berms will be reduced at road intersections where plowed road segments join unplowed road segments. Reduce the piled snow in the roadway to create a smooth transition from plowed road to normal snow depth.
4. Openings will be created in snow berms as needed for proper drainage. Remove snow, ice, and debris from culverts and other drainage structures as needed to ensure efficient flow of water.
5. Tracked or cleated vehicles will not be used for snow removal without prior written approval of Forest Service Representative.

CT6.314# - OPERATING REQUIREMENTS (06/2009)

Within Sale Area, unless changed by written agreement, the following operating requirements apply:

Restricted operations/activities:

Within ALL Payment Units, operations may need to be halted during spring thaw and rainy periods to prevent excessive rutting and compaction.

Equipment operations may only occur when soils are capable of supporting equipment operations without incurring detrimental compaction, puddling or rutting.

Within Payment Units 03, 14 and 18 this is normally judged to be six inches of frozen soil and/or 12-inches of compact snow or when the water table is at least 15-inches below the surface of the ground.

Within Payment Units 01, 02, 04, 06, 07, 08, 15 and 16 this is normally judged to be six inches of frozen soil and/or 12-inches of compact snow.

Prohibited operations/activities:

Where winter access to winter units is along the snowmobile trail, the trail would not be used as a landing or a skid trail.

All slash resulting from Purchaser's operations must lay within four feet of the ground. Windrowing of slash is to be avoided.

Sale Name: Malibu Salvage

CT6.412 - STUMP MARKS (02/2009)

Trees designated for cutting under BT2.35 have been marked with paint at breast height and below stump height. Trees shall be felled so as to leave paint on stump. When necessary to leave paint on stump, stumps of individually Marked trees may exceed maximum heights set forth in AT6.

CT6.63# - TEMPORARY ROAD CLOSURE (06/2009)

Notwithstanding Standard Provision BT6.63, measures to effectively block temporary roads to normal vehicular traffic shall consist of the following:

Stumps and slash shall be scattered for a distance of 300 feet for closure of temporary roads, at agreed upon locations, in enough quantity so as to prohibit the use or access by normal vehicular traffic, and in a manner in which the stumps and slash are not easily removed.

SAMPLE

CT6.7# - SLASH DISPOSAL MEASURES (06/2009)

Slash resulting from Purchaser's operations shall be removed from lakes, ponds, private land, right-of-way clearings for telephone lines, power lines, pipelines, and other authorized facilities, and landings to be seeded under Special Provision CT6.6#.

The tops of felled trees shall not be left hanging in standing trees. All trees cut or pushed for landing and other construction clearings shall be completely felled and not left leaning. Slash resulting from construction clearing shall be treated concurrent with operations.

Slash Disposal treatment zones are shown on the Sale Area Map with symbol "SDZ."

Other specific slash disposal requirements are as follows:

Within Payment Units 07, 11, 14, 17 and 18 all slash resulting from Purchaser's operations shall be removed for a distance of 10 feet from the cleared edge of T47 (snowmobile trail).

Sale Name: Malibu Salvage

CT7.2 - FIRE PRECAUTIONS (06/2009)

Unless other methods are agreed to in writing between the Purchaser and the Contracting Officer, the following specific precautionary measures are applicable during Purchaser's Operations in Fire Precautionary Period indicated in AT9.

1. Purchaser shall maintain Forest Service-approved spark arresting device on any piece of equipment operated by an internal combustion motor. In addition, each piece of motorized equipment shall be equipped with a serviceable round-pointed shovel and an operational fire extinguisher of at least five-pound rating suitable for the equipment being used. All chainsaw operators will have a serviceable round-pointed shovel and a one-pound multipurpose fire extinguisher readily available.
2. Purchaser shall require that smoking and the building of lunch or warming fires by Purchaser's employees, contractors, or employees of contractors be confined to designated safe places where flammable debris has been cleared away and where, at the option of the Purchaser, smoking or the building of lunch or warming fires may be permitted.
3. Adequate spark arresters shall be maintained on chimneys or stovepipes where wood or coal is being burned in an enclosed device.
4. Purchaser shall furnish serviceable firefighting tools. Location, numbers, and types of tools shall be specified in the Fire Prevention and Control Plan in accordance with BT7.1.

SAMPLE

CT8.212 - MARKET-RELATED CONTRACT TERM ADDITION (11/2008)

The term of this contract may be adjusted when a drastic reduction in wood product prices has occurred in accordance with 36 CFR 223.52. The Producer Price Index used to determine when a drastic reduction in price has occurred is stated in AT17. Purchaser will be notified whenever the Chief determines that a drastic reduction in wood product prices has occurred. If the drastic reduction criteria specified in 36 CFR 223.52 are met for 2 consecutive calendar quarters, after contract award date, Contracting Officer will add 1 year to the contract term, upon Purchaser's written request. For each additional consecutive quarter such a drastic reduction occurs, Contracting Officer will, upon written request, add an additional 3 months to the term during Normal Operating Season, except that no single 3-month addition shall extend the term of the contract by more than one year. Contracting Officer must receive Purchaser's written request for a market-related contract term addition before the expiration of this contract.

No more than 3 years shall be added to a contract's term by market-related contract term addition unless the following conditions are met:

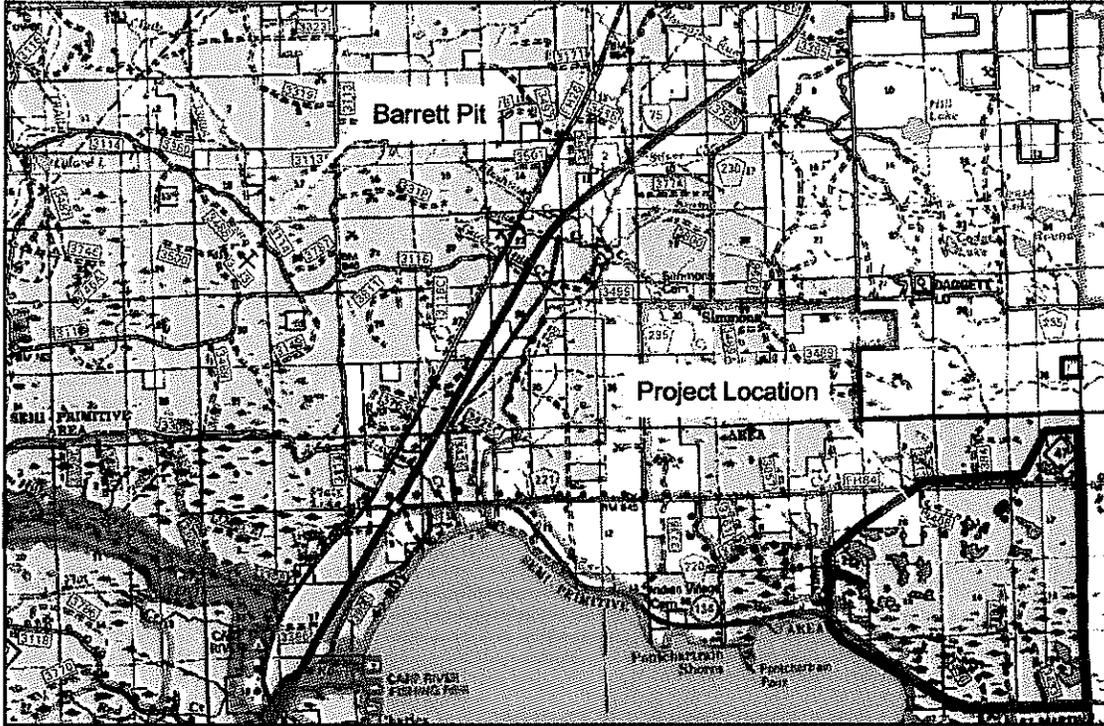
- (i) The sale was awarded after December 31, 2006; and
- (ii) A drastic reduction in wood product prices occurred in at least ten of twelve consecutive quarters during the contract term, but not including the quarter in which the contract was awarded.

For each qualifying quarter meeting the criteria in paragraphs (i) and (ii) of this provision, the Forest Service will, upon the Purchaser's written request, add an additional 3 months during the normal operating season to the contract, except no single 3-month addition shall extend the term of a contract by more than 1 year.

In no event shall a revised contract term exceed 10 years as a result of market-related contract term addition.

Additional contract time may not be granted for those portions of the contract that have a required completion date or for those portions of the contract where Contracting Officer determines that the timber is in need of urgent removal or that timber deterioration or resource damage may result from delay.

HIAWATHA NATIONAL FOREST
 SPECIFIED ROAD DRAWINGS
MALIBU TIMBER SALE
 ST. IGNACE DISTRICT



LOCATION MAP

1 inch equals 2.5 miles



INDEX OF SHEETS

- 1.....Cover Sheet
- 2.....Schedule of Items - Estimate
- 3.....Construction Notes
- 4-7.....Typicals
- 8-9.....Description of Work Sheets
- 10.....Planview

Road No.	RoadName	C/R	Length (mi)
3396	Malibu	C	.51
0047	Red Creek to Cedarville Snowmobile Trail	R	.04

Plans, Specifications, and Estimates Reviewed and Certified as to Content and Correctness

DESIGNED:

Jennifer A. Piggott 6/14/16
 Civil Engineering Technician date

REVIEWED:

John M. Hagan 6/14/16
 Title: *Eastzone Engineer* date

APPROVED:

Guy Gantner 6/20/16
 Forest Engineer date

Robert West 6/21/2016
 District Ranger date

MALIBU SALE ROADS

SHEET TITLE
COVER SHEET

SCALE
AS SHOWN

FILE NO.
HI-534

SHEET
1 OF 10

SCHEDULE OF ITEMS - ESTIMATE - MALIBU SALE SPECIFIED ROADS

COST ESTIMATE

Work Item No.	Description	Unit	3396	0047	Total Est. Quantity	Unit Price	TOTAL COST
10101	Mobilization	Lump sum	0.50	0.50	1.00	\$1,500.00	\$1,500.00
10102	Temporary Traffic Control	Lump Sum	1.00	0.00	1.00	\$100.00	\$100.00
20101	Clearing and Grubbing	Lump sum	0.98	0.02	1.00	\$1,050.00	\$1,050.00
20301A	Excavation on 3396	Station	10.00	0.00	10.0	\$57.00	\$570.00
20301B	Excavation on Snowmobile Trail	Station	0.00	2.50	2.50	\$96.00	\$240.00
20302	Install road closure, type stump/berm	Each	1	0	1.00	\$200.00	\$200.00
30401	Aggregate base - Pit Run (haul and place), Compaction A	Cubic Yard*	280	0	280	\$10.00	\$2,800.00
30402	Gravel Pit Development	Lump sum	1.00	0.00	1.00	\$300.00	\$300.00
30403	Screened Aggregate - 3" to 6" size Grading	Cubic Yard	0	8	8	\$50.00	\$400.00
30404	Geotextile (nonwoven) for permanent erosion control	Square Yard	0	45	45	\$6.25	\$281.25
60301	Permanent Culvert, diameter as specified	Each	1	0	1	\$1,656.00	\$1,656.00
						Grand Total	\$9,097.25

All items are contract quantities.

* Quantity for item 30401 is shown as loose volume hauled.

This was estimated by calculating the compacted in place volume and adding 25%.

CONSTRUCTION NOTES

CONSTRUCTION STAKING

The Forest Service will initially set all construction stakes and flagging. It is the responsibility of the contractor to maintain the construction stakes, lath, and flagging for the duration of the project.

PERMITS

Contractor is responsible for obtaining required roadway permits. Contact the the Mackinac County Road Commission before replacing the culvert and reconstructing the 3396 intersection with CO RD 222.

101 - TRAFFIC CONTROL

Traffic control signs, approved by the County, must be in place during culvert replacement and reconstruction of the 3396 intersection with CO RD 222.

201 - CLEARING AND GRUBBING

Slash Disposal - Remove all road construction slash from the area within 50' of the edge of clearing along CO RD 222.

203 - EXCAVATION

Construction Tolerances:

Roadbed width +1.0'

Alignment 2.0'

Slopes +/- 1/2:1

Grade: Profile grade closely follows existing ground, cuts and fills up to 1' are expected.

304 - AGGREGATE

The source for item 30401, Pit Run Aggregate, will be the Barrett Pit, located on FR3500 in T43N, R3W, S19. Prior to obtaining this material, the engineer would designate the exact location in the pit to excavate the material from. Other Pit Run sources must be approved in writing by the engineer.

Gravel Pit Development: Pit development item includes work to clear and grub the pit area and to slope all banks to 2:1 or flatter. Merchantable trees have been removed by others. Dispose of stumps and slash as directed by the engineer.

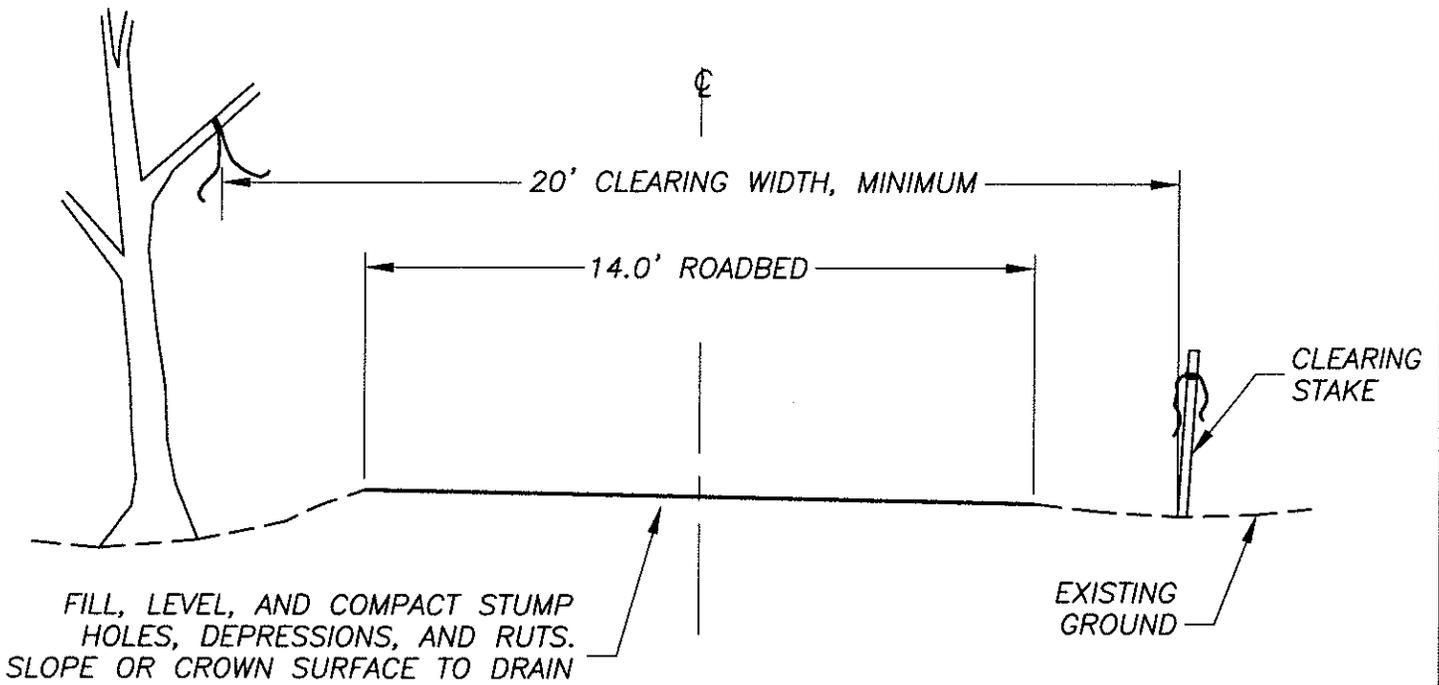
Item 30403 (3" - 6" Screened Rock) is not available from the Forest Service. Cost estimate includes haul and place in CY price.

GEOTEXTILE

Geotextile shall meet or exceed Type IV-B (nonwoven) requirements for permanent erosion control in accordance with the Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-03). The following table details physical requirements for Type IV-B geotextile: Material should also meet AASHTO M288-6 for Class I applications.

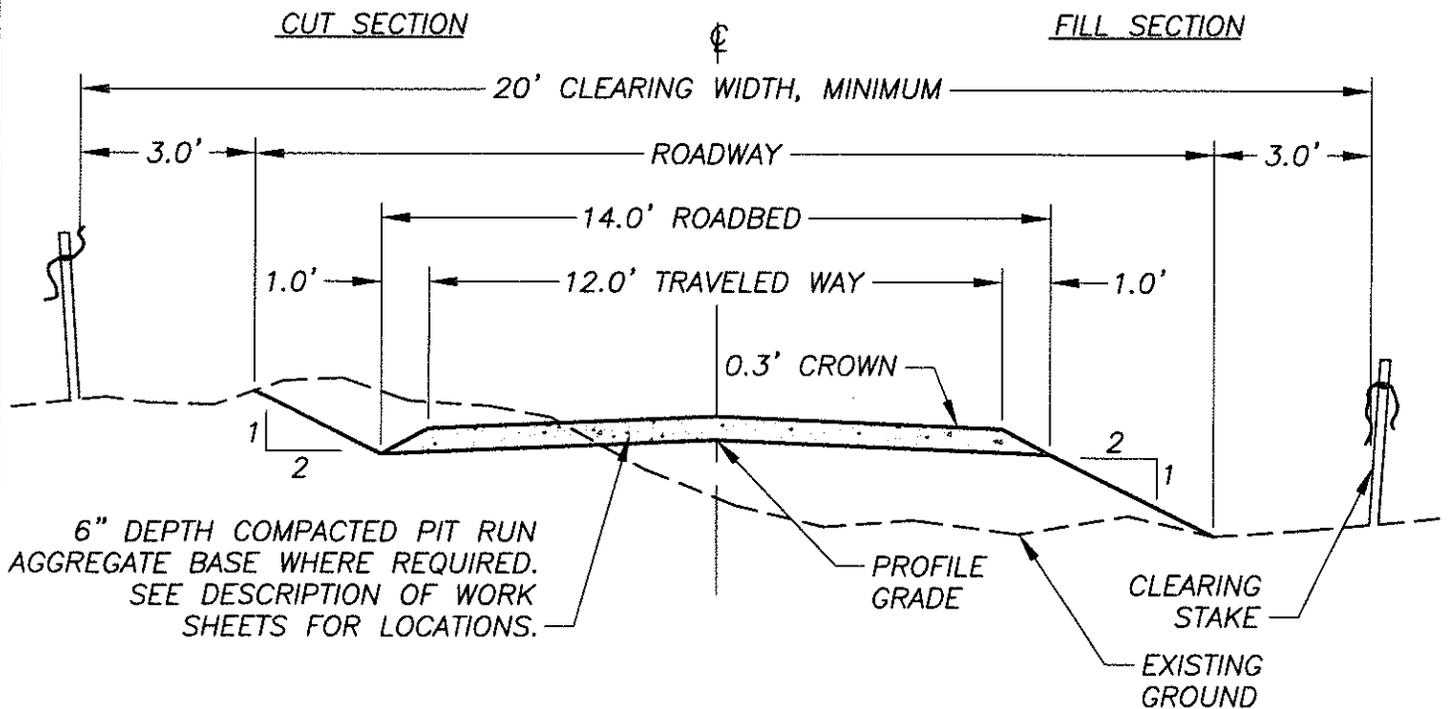
Property	ASTM Test	Units	Type IV-B
Grab strength	D 4632	N	1400/900
Sewn seam strength	D 4632	N	1260/810
Tear strength	D 4533	N	500/350
Puncture strength	D 4833	N	500/350
Burst strength	D 3786	kPa	3500/1750
Permittivity	D 4491	S _{pwr} (-1)	0.2
Apparent opening size	D 4751	mm	0.25
Ultraviolet stability	D 4355	%	50% after 500 hours

ADDITIONAL INFORMATION: An Excavator or similar type of equipment will more than likely be needed when working on the culvert replacement/intersection reconstruction, and on the low water crossing. This was included in the mobilization cost estimate.



TYPICAL CROSS SECTION A

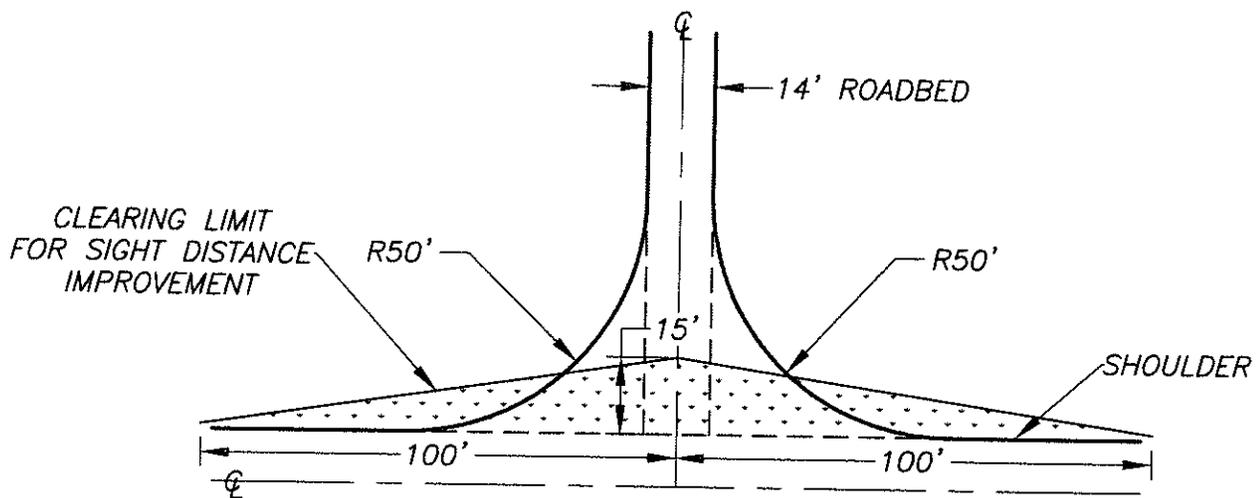
SEE DESCRIPTION OF WORK SHEETS FOR LOCATIONS.



TYPICAL CROSS SECTION B

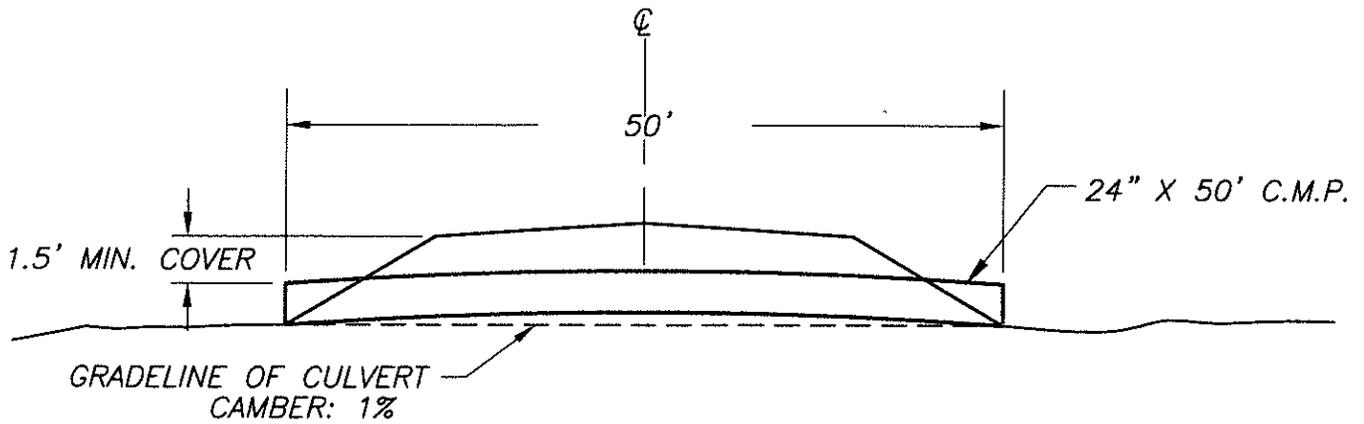
SEE DESCRIPTION OF WORK SHEETS FOR LOCATIONS.

MALIBU SALE ROADS	SHEET TITLE TYPICAL CROSS SECTIONS	SCALE NO SCALE	FILE NO. HI-534	SHEET 4 OF 10
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TYPICAL INTERSECTION

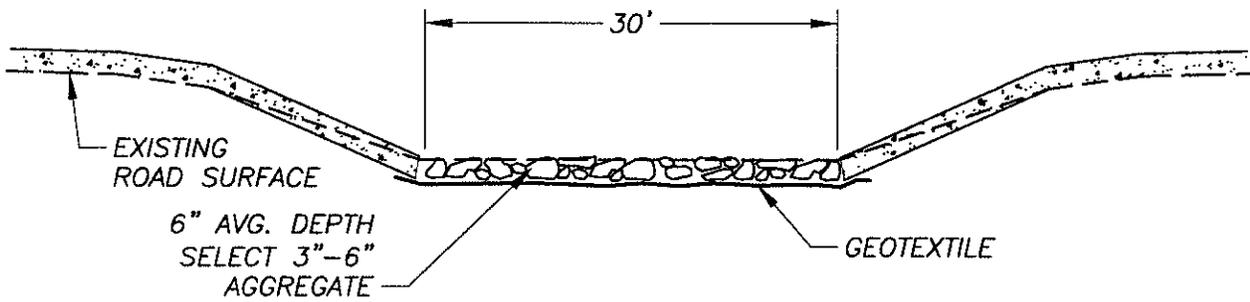
SEE DESCRIPTION OF WORK SHEETS FOR LOCATIONS.



CULVERT INSTALLATION DETAIL

LOCATION: 3396 INTERSECTION WITH CO RD 222.
 REMOVE AND DISPOSE OF EXISTING CULVERT.

PROFILE VIEW

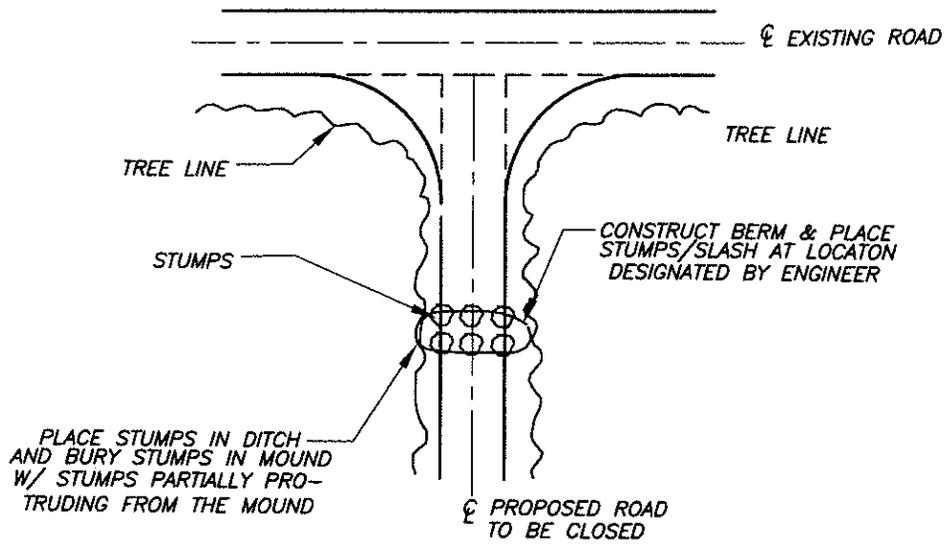


EXCAVATE 6" AS STAKED, DISPOSE OF EXCESS AS APPROVED BY THE ENGINEER.

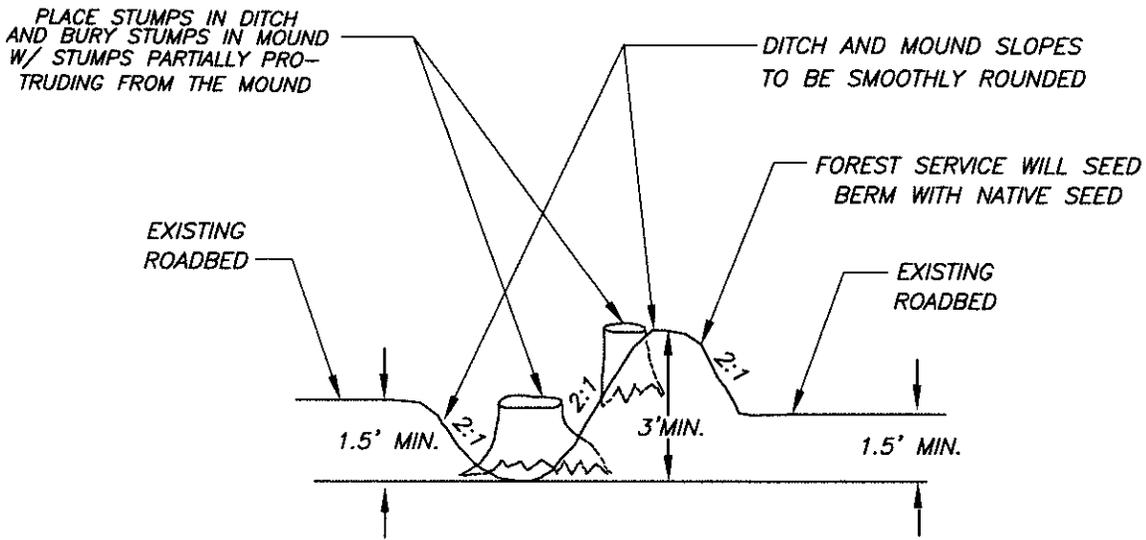
NO SCALE

TYPICAL LOW WATER CROSSING

SEE DESCRIPTION OF WORK SHEETS FOR LOCATION.
 NUMBER TO BUILD IS 1.



PLAN VIEW
NOT TO SCALE



PROFILE VIEW
NOT TO SCALE

TYPICAL STUMP/BERM ROAD CLOSURE

LOCATION WILL BE STAKED ON THE GROUND.

DESCRIPTION OF WORK

ROAD NO.
3396

LOCATION
(STATION)

TYPICAL CROSS
SECTION

CLEARING AND
GRUBBING

EXCAVATION

PIT RUN
AGGREGATE

DETAILS

P.O.E
26+70

END OF SPECIFIED PORTION OF ROAD

17+00

14+00

6+65

1+65

1+00

0+00

P.O.B.

TYPICAL A
TYPICAL B
TYP B
TYP A
TYPICAL A
TYPICAL B

20' MINIMUM WIDTH

3.00 STA
90 CY

6.65 STA
150 CY

ADDTL.
40 CY

HAUL AND PLACE PIT RUN THRU
WET AREA.

HAUL AND PLACE PIT RUN THRU
500' WET AREA PAST OPENING.

1+65 END OF OPENING

REPLACE CULVERT AND
RECONSTRUCT INTERSECTION
USING EXISTING MATERIAL
PLUS AN ADDTL 40CY PIT RUN.

INTERSECTION W/CO RD 222

MALIBU SALE ROADS

SHEET TITLE
DESCRIPTION OF WORK

SCALE
NO SCALE

FILE NO.
HI-543

SHEET
8 OF 10

DESCRIPTION OF WORK

ROAD NO.
0047

LOCATION
(STATION)

TYPICAL CROSS
SECTION

CLEARING AND
GRUBBING

EXCAVATION

3-6" SCREENED
AGGREGATE

DETAILS

P.O.E
5+00

4+75

4+50

1+50

0+00

P.O.B.

TYPICAL A

20' MIN WIDTH

6" DEPTH FOR 30'

8 CY 3"-6" AGG

NO SPEC ROAD WORK

TYPICAL B

1.50 STA

END SPECIFIED ROAD WORK

CONSTRUCT LOW WATER CROSSING
AS STAKED, ACCORDING TO TYPICAL
DRAWING ON PAGE 6.

KNOCK DOWN SAND BERM
AND SPREAD MATERIAL
BACK TOWARDS 3387.

SNOWMOBILE TRAIL 0047, LEAVES
3387 AND HEADS SOUTHEAST

MALIBU SALE ROADS

SHEET TITLE
DESCRIPTION OF WORK

SCALE
NO SCALE

FILE NO.
HI-543

SHEET
9 OF 10

HIAWATHA NATIONAL FOREST

SPECIFICATIONS FOR TIMBER SALE ROADWORK

Malibu Timber Sale

Index of included specifications:

Section 101 – Control of Work

Section 201 – Clearing and Grubbing

Section 203 – Excavation

Section 304 – Aggregate

Section 603 – Culvert

SECTION 101 – CONTROL OF WORK

101.01 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.

101.02 Inspection of Construction.

Maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. Record the work and perform calculations to determine quantities for each work item. Maintain complete inspection records and make them available to the Government. Use an acceptable format for measurement records and include, at a minimum: project name, work item, date the work was performed, location of the work, measured quantity, calculations made to arrive at the quantity, and name of person(s) measuring the work.

The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Contracting Officer's written authorization.

The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

Perform all work to the lines, grades, cross-sections, dimensions, and processes or material requirements shown on the plans or specified in the contract.

Remove and replace work that does not conform to the contract, or to prevailing industry standards where no specific contract requirements are noted, at no cost to the Government.

101.03 Public Traffic.

Description

This work consists of controlling and protecting public traffic adjacent to and with the project. All signing shall conform to the Michigan Manual on Uniform Traffic Control Devices (MMUTCD)

General

Unless otherwise provided for, keep existing roads open to all traffic during road improvement work, and maintain them in a condition that will adequately accommodate traffic. Delays may not exceed 30 minutes at any one time followed by an open period of no less than 5 minutes.

Perform no work that interferes or conflicts with traffic or existing access to the roadway surface until a traffic control plan has been approved. Post construction signs and traffic control devices in conformance with MUTCD. All required signs will be in place and approved prior to beginning work on project.

If the Contractor agrees in writing to allow public traffic to use a new road being constructed prior to completion, it will be considered an existing road for traffic control purposes.

Temporary Traffic Control

Install and maintain temporary traffic control devices adjacent to and within the project as required by the approved traffic control plan and the MUTCD. Install and maintain traffic control devices as follows:

- (a) Furnish and install traffic control devices before the start of construction operations.
- (b) All detours outside of clearing limits will be approved in writing by the Contracting Officer as part of the traffic control plan.
- (c) Install only those traffic control devices needed for each stage or phase.
- (d) Relocate temporary traffic control devices as necessary.
- (e) Remove devices that no longer apply to the existing conditions.
- (f) Immediately replace any device that is lost, stolen, destroyed, or inoperative.
- (g) Keep temporary traffic control devices clean.
- (h) Remove all temporary traffic control devices upon contract completion or when approved.
- (i) When required, use flaggers certified by the American Traffic Safety Services Association, the National Safety Council, the International Municipal Signal Association, a state agency, or other acceptable organization. Perform the work described under MUTCD Part 6. Use type III, VII, VIII, or IX retroreflective sheeting on flagger paddles. Do not use flags. Flaggers must wear high visibility safety apparel as required by MUTCD 6E.02.

Temporary Closures

Road segments may be closed as agreed to by the CO. The maximum consecutive days of closure shall be followed by a minimum number of consecutive days open to traffic. Maintain traffic control devices during closure period(s). Appropriate barricades and signs will be erected and maintained as shown in the traffic control plan or as otherwise designated.

Prior to closing roads during construction, give written notice to the Contracting Officer at least 10 days in advance.

SECTION 201 – CLEARING AND GRUBBING

DESCRIPTION

201.01 This work shall consist of clearing, grubbing, and disposing of or treatment of timber, construction slash, and debris.

CONSTRUCTION

201.02 **CLEARING & GRUBBING.** All debris, trees, stumps, roots, and other protruding vegetative material within the clearing limits shall be cleared, grubbed, removed, and disposed of, except that undisturbed stumps in locations **SHOWN ON THE DRAWINGS** may remain.

Cut stumps to be grubbed to 12” maximum height before or immediately after grubbing.

Roadway must be grubbed. Stump holes caused by grubbing shall be leveled. Areas outside the roadway but within the clearing limits need not be grubbed. Height of stumps left shall not exceed 12” above ground.

Branches on remaining trees or shrubs shall be trimmed to give a clear height of 14 feet above the roadbed.

Trim tree limbs as near flush with the trunk as practicable.

Clearing shall be done in such a manner to prevent damage to remaining trees and other property.

Grubbing shall include removal of stumps and exposed roots over 3” in diameter.

201.03 **PIONEERING.** Pioneering operations shall be conducted to minimize mixing of slash and excavated material. Final back slopes shall not be undercut, material shall not be deposited outside the fill and excavation limits, nor shall drainage be restricted.

201.04 **DISPOSAL.** Treatment of construction slash shall be accomplished by scattering slash outside the clearing limits without damaging trees. All logs shall be limbed. Logs and stumps shall be placed away from trees, positioned so they will not roll, and not be placed on top of one another. Scattered slash shall be lopped and scattered to reduce concentrations and made to lie within four feet of the ground concurrent with the clearing and grubbing operations unless other requirements are **SHOWN ON THE DRAWINGS**. Grubbed and scattered stumps shall be turned upright with roots down.

Dispose of merchantable timber designated for removal according to the B(BT) provisions of the timber sale contract. Deck merchantable timber adjacent to the roadway in areas approved by the Engineer.

MEASUREMENT

201.05 When Clearing & Grubbing is shown in the Schedule of Items, the work will be either on a lump sum basis where no measurement will be made, or on an area basis. For the area basis the original design quantity as shown on the Schedule of Items will be the final quantity, unless adjustments are made as specified in the changes provision. The design quantity is the number of acres calculated to be cleared and/or grubbed within the limits **SHOWN ON THE DRAWINGS**.

SECTION 203 – EXCAVATION

DESCRIPTION

203.01 This work shall consist of all excavation regardless of its nature, borrow excavation, embankment construction, and shaping of roadway including such items as drainage dips, ditches, turnarounds, and other subsidiary work.

CONSTRUCTION

203.02 All suitable excavated material shall be used to construct a roadway conforming to the typical section(s) and tolerances SHOWN ON THE DRAWINGS.

Side casting and end dumping will be permitted for embankment construction; however, excavation and embankment shall be confined within the roadway limits. Compaction shall be accomplished by operating equipment over the full width of the traveled way. Rocks too large for incorporation shall be placed to the side of the embankment so they will not roll, obstruct drainage, or hinder use and maintenance of the road. Excess excavation and unsuitable material shall be disposed of as SHOWN ON THE DRAWINGS or in locations approved by the Engineer.

Location and requirements for borrow excavation are SHOWN ON THE DRAWINGS.

The finished slopes shall be left in a roughened condition to facilitate vegetative growth.

Rocks in the roadbed that protrude less than 2” above the finished road surface will be allowed to remain in place.

When specified, topsoil shall be salvaged in sufficient quantity to meet the quantity requirements SHOWN IN THE SCHEDULE OF ITEMS. Topsoil shall consist of loose, friable, sandy loam, free of admixture of subsoil, refuse, stumps, roots, rocks, brush, weeds, of other material that would be detrimental to the development of vegetative growth. Topsoil, as used herein, shall mean that portion of the soil profile defined technically as the “A” horizon by the Soil Science Society of America.

MEASUREMENT

203.03 The method of measurement will be on a linear basis or cubic yard basis. In both cases the original design quantity as shown on the Schedule of Items will be the final quantity, unless adjustments are made as specified in the changes provision. For linear measurements the design quantity is the length of road measured along the centerline. Quantity is computed using the average end area method.

SECTION 304 – AGGREGATE

DESCRIPTION

304.01 This work shall consist of furnishing, hauling, and placing one or more courses of aggregate surface course on the approved subgrade. Aggregate shall be pit-run, screened, crushed, or furnished by the Government as SHOWN IN THE SCHEDULE OF ITEMS.

MATERIALS

304.02 Materials shall be obtained from sources SHOWN ON THE DRAWINGS or other approved sources. Aggregate quality, production, and gradation requirements are SHOWN ON THE DRAWINGS.

When a gradation is specified, the Contractor shall submit test results and a Certificate of Compliance that states that the gradation of the aggregate meets the contract requirements. Aggregates shall be stockpiled, removed, transported, and placed in a manner that will preserve specified gradation and avoid contamination. Samples may be required at any time to validate gradation.

CONSTRUCTION

304.03 Prior to aggregate placement, the proposed portion of the roadbed shall (1) be completed in accordance with the specifications; (2) have hauling and spreading equipment operated uniformly over the full width; and (3) be approved in writing by the Engineering Representative.

The aggregate shall be spread in a uniform layer, with no segregation of size, and to a loose depth that shall have the required thickness when compacted. The maximum compacted thickness of any one layer shall not exceed six inches.

The aggregate shall be compacted by one of the following methods as specified on the Schedule of Items:

Compaction A. Aggregate shall be compacted by operating spreading and hauling equipment over the full width of each layer of the aggregate.

Compaction B. Each layer of aggregate shall be compacted to a density of at least 95 percent of the maximum density, as determined by AASHTO T 99, Method C or D.

The final compacted surface shall be smooth and the thickness shall not vary more than the tolerance SHOWN ON THE DRAWINGS. The compacted thickness shall not be consistently above or below the specified thickness.

MEASUREMENT

304.04 The method of measurement will be on a volume basis or a weight basis as shown in the Schedule of Items. The volume basis will be the computed number of cubic yards adjusted for compaction, that is, loose volume. The original design quantity shown in the Schedule of Items will be the final quantity unless adjustments are made as specified in the changes provision.

SECTION 603 – CULVERT

DESCRIPTION

603.01 This work shall consist of furnishing and installing, or installing only, steel, aluminum, or polyethylene culvert and appurtenances, including all excavation, bedding and backfilling required to complete the work.

MATERIALS

603.02 Culvert and coupling bands shall meet the following requirements: (1) metal coated corrugated steel culverts (CSC) shall comply with AASHTO M36, (2) corrugated aluminum alloy culverts (CAC) shall comply with AASHTO M196, and (3) corrugated polyethylene culvert (CPC) shall comply with AASHTO M294.

The materials used in each culvert installation shall be compatible with each other to prevent electrolysis or physical failure.

The lengths and locations of individual culverts **SHOWN ON THE TYPICAL DRAWINGS** are approximate. Culverts should not be ordered until locations are **DESIGNATED** on the ground and a written list of correct lengths is issued by the Engineer.

Riprap shall be obtained from sources **SHOWN ON THE TYPICAL DRAWINGS** or other approved sources. Riprap quality and size requirements are also **SHOWN ON THE TYPICAL DRAWINGS**.

CONSTRUCTION

603.03 EXCAVATION. Excavation for culverts shall be to the lines and grades **DESIGNATED** on the ground. The width of trenches shall permit satisfactory joining and thorough tamping of the bedding material under and around the culvert.

Unsuitable foundation material shall be excavated below the invert of the culvert to an approximate depth of 2 feet and a width of at least the culvert diameter plus 4 feet. Unsuitable material shall be replaced with selected granular foundation material and compacted in accordance with Subsection 603.05.

All suitable excavated material shall be utilized as backfill or embankment. No excavated material shall be placed in live streams. All surplus material shall be disposed of as **SHOWN ON THE TYPICAL DRAWINGS**.

603.04 BEDDING. The bedding for culverts shall consist of selected mineral soil meeting the requirement for backfill in Subsection 603.05. The bedding shall be uniformly compacted in accordance with Subsection 603.05. The cross section of the culvert bed shall be flat or shaped to fit the culvert.

603.04 LAYING CULVERT. Culverts shall be unloaded and handled with reasonable care. Culverts shall be placed on the bed starting at downstream end with any inside circumferential laps pointing downstream. Longitudinal laps on riveted or spot-welded culvert shall be

positioned at any location between 45 degrees above or below horizontal. Lock-seam culvert shall be installed with the seam at the inlet end placed below the horizontal centerline. Culvert shall be firmly joined by form-fitting coupling bands. Dimpled bands shall not be used when the slope of the pipe is greater than 25 percent.

The centerline of the culvert shall not vary horizontally from a straight line drawn from inlet to outlet by more than 2% of the culvert length. The invert of the culvert shall not vary from the grade line by more than 2% of the culvert length. No reverse grades shall exist.

603.05 BACKFILLING. Backfill material shall be readily compactable material free of frozen lumps, chunks of highly plastic clay or other objectionable material. Rocks larger than 1 inch in diameter for CPC and 3 inches for metal culvert shall not be used within 1 foot of the culvert. After the bedding is prepared and the culvert is placed, selected material shall also be placed equally on both sides of the culvert in layers with a loose average depth of 6 inches, maximum depth 8 inches, thoroughly compacting each layer to the density SHOWN ON THE TYPICAL DRAWINGS. Such compacted layers shall extend for at least one diameter on each side of the culvert. Backfill shall be compacted without damaging or displacing the culvert. Backfilling and compacting shall be continued until the backfill is 12 inches above the top of the culvert. After being bedded and backfilled culvert shall be protected by an adequate cover of embankment before heavy equipment is permitted to cross during roadway construction.

Pipe distorted more than 5 percent of nominal dimensions, ruptured, or broken shall be displaced.

MEASUREMENT

603.07 Culverts will be measured along the invert by the linear foot in place. Excavation, bedding and backfill will not be measured but will be considered a subsidiary obligation of the culvert item(s).