KT-CT.3.0.1# - PROTECTED AREAS *(06/2009)*

Notwithstanding the designations for cutting under CT.3.1, CT.3.3, CT.3.4, and CT.3.5, trees within the area to be protected in Payment Unit 03 (Along the eastern Payment Unit Boundary) and 11 (Between the Payment Unit Boundary and the Temporary Road clearing limits) shall be left uncut. Boundary trees along the perimeter of Protected Areas have been identified by 3 Orange slashes, and "PA" at eye level (facing AWAY from the Protected Area), and painted at the stump . Boundary trees are not to be cut. Contract Area Map indicates with the symbol "PA" units within which Protected Areas are identified on the ground and are to be left uncut.

KT-CT.3.5.2# - DESIGNATION BY SPECIES AND DIAMETER *(09/2004)*

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 Blue Paint in Units 06, 07, 10 - 13 & 15 paint.

All NA shall be left as leave trees, unless Marked with Blue paint. Leave NA trees of the designated cut species, NA inches stump diameter or greater, to avoid leave tree spacing greater than NA 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.

Contractor and Forest Service shall agree to skid trail location under BT6.422. Skid trails shall be no greater than NA feet wide with a NA foot spacing. Quantities of trees located in skid trails are not (unless designated species) Included Timber under AT2.

FS-2400-13T (9/04)

WO KT-FT.3.5.2# – DESIGNATION BY SPECIES AND DIAMETER. (09/04)

Tree Designation Table

Payment Unit(s) or Cutting Unit(s)	Designated Species 1/	More Than Stump Diameter (inches) 2/	Less Than Stump Diameter (inches) 2/
06, 07, 11 -13 & 15	All Species Except Red Pine, White Pine, Oak and Elm.	>=6.0"	
10	All Aspen, Jack Pine, Balsam Fir, Black Spruce & White Spruce.	>=6.0"	
03 and 04	All Species Except Hemlock, Cedar, Elm, Red Oak and White Pine	>=6.0"	
09	All Species Except Elm and Red Oak.	>=6.0"	

KT-CT.3.5.5# - 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 Units. Areas of Cut Tree Marking are shown on the Contract Area Map with the symbol "CTM."

PAYMENT UNIT(S)	PAINT COLOR

R9 KT-CT.3.5.5# - INDIVIDUAL TREES. (11/2007)

Cut Tree Marking Table

Payment Units	Paint Color
01	Green
02, 05, 08 & 14	Blue
16 (ROW)	Yellow

[Note: there is no Orange-Painted payment unit boundary associated with Payment Unit 16 (ROW)]

KT-ET.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 Contractor'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 ET.2.1.8;

(iii) Damages pursuant to JT.4;

(iv) Road use fees;

(v) Restoration of downpayment pursuant to ET.2.2;

(vi) Periodic payments pursuant to ET.2.1.3;

(vii) Extension Deposits pursuant to ET.2.1.7; 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 JT.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 Contractor'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 Contractor's Operations, and administrative offset, shall be stayed for so long as:

(i) A bona fide dispute exists as to Contractor's obligation to make such payment and

(ii) Contractor files and prosecutes a timely Claim.

KT-FT.1.0.3# - APPROACHES TO SURFACED ROADS *(06/2009)*

Contractor shall apply and maintain **Payment Unit 04 temporary "L-Turnaround": 30 CY (39 CY Loose) pitrun; Payment Unit 06 temporary "back-in" landing: 30 CY (39 CY Loose) pitrun; Payment Unit 07 temporary "back-in" landing: 15 CY (19.5 CY Loose) Crushed Aggregate Surfacing.** inches of **as directed by Forest Service** on all Temporary Road approaches to surfaced roads for a distance of **as directed by Forest Service** feet back from the surfaced road. Surfaced roads include those with:

gravel - Forest Roads 4700 and 5250.

KT-FT.1.2# - USE OF ROADS BY CONTRACTOR *(09/2004)*

Contractor's use of existing roads identified on Contract 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. Contractor's use of roads coded R, A, or W shall be in accordance with the following restrictions:

See Restricted Road List Table.

FS-2400-13T (94/04)

WO-KT-FT.1.2# – USE OF ROADS BY CONTRACTOR. (09/04)

Restricted Road List

Road Number	Road Name	Termini		Map Legend	Description of Restrictions
		From	To		
4700	FR 4700	4782	South	P	Hauling Prohibited Dec. 01 – March 31 – Designated Snowmobile Trail
4700	FR 4700	5250	South	R	Snow Plowing Prohibited (Snowmobile Trail 107)
4782	FR 4782	0.00	0.07	U	Unsuitable for hauling prior to completion of agreed reconstruction
4782	FR 4782	MP 0.07	End	X	Hauling Prohibited, Use for skidding must be approved prior to use.
4791	FR 4791	0.00	End	X	Hauling Prohibited, Use for skidding must be approved prior to use.
5250	FR 5250	Temp Accessing PU 04	East	P	Hauling Prohibited
5250-M	FR5250-M	MP 0.80	End	X	Hauling Prohibited, Use for skidding must be approved prior to use.
5250-N	FR 5250-N	0.00	0.08	U	Unsuitable for hauling prior to completion of agreed reconstruction
5250-N	FR 5250-N	MP 0.08	End	X	Hauling Prohibited, Use for skidding must be approved prior to use.
5250-O	FR 5250-O	0.0	0.25	U	Unsuitable for hauling prior to completion of agreed reconstruction
5250-O	FR 5250-O	MP 0.25	End	X	Hauling Prohibited, Use for skidding must be approved prior to use.
5235	North Jaybird Pit Rd	5230	End	R	Gate shall be kept closed when gravel hauling operations are not in progress.

KT-FT.2.2.1# - MATERIAL SOURCES *(09/2004)*

Sources of local materials are designated on Plans and Contract Area Map. Forest Service assumes responsibility for the quality and quantity of material in designated sources. Contractor shall determine the equipment and work required to produce the specified product, including the selection of acceptable material that is reasonably available in the source that meets specifications. The designation of source includes the rights of Contractor to use certain area(s) for plant site, stockpiles, and haul roads.

Should the designated source, due to causes beyond the control of Contractor, contain insufficient acceptable material, Forest Service will provide another source with adjustment in accordance with FT.2.5.3.

When Contractor elects not to use designated sources, Contractor shall furnish the specified product with no adjustment in unit rates. Quality testing shall be the responsibility of Contractor. Test results shall be furnished to Forest Service.

When Contractor elects not to use designated sources and Schedule of Items lists pit development separately, cost allowance will be reduced under FT.2.5.3 when Forest Service determines the work will not be required.

When materials are subject to a weight measurement, the specific gravity or weight/volume relationship used as a basis for determination of estimated quantities shall be:

Source I NA , Source II NA , and Source III NA .

Contractor may, when agreed in writing, use on the project such suitable stone, gravel, and sand, or other material found in the excavation, and will earn a cost allowance for the excavation of such materials at the corresponding contract unit price and for the pay items for which the excavated material is used. Contractor shall replace, without additional cost allowance, sufficient suitable materials to complete the portion of the work, which was originally contemplated to be constructed with such material. Contractor shall not excavate or remove any material, except that which is within the excavation limits, without written authorization from Forest Service.

When material is appraised from non-National Forest designated sources, owner charges for the material in terms of unit cost for royalties, purchase of raw materials, or finished products shall be as follows until NA :

See Material Source Table.

Should quantity vary from that estimated, payment to owners shall be for units actually obtained. Contractor shall make arrangements with owner(s) for measurement and payment for royalties, purchase of raw materials, or finished products, as shown above.

Materials produced or processed from National Forest lands in excess of the quantities required for performance of this contract are the property of Forest Service, unless prior written agreement has been obtained to use excess material on other National Forest contracts. Forest Service is not obligated to reimburse Contractor for the cost of their production.

Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials shall be located to facilitate their prompt inspection. Sites on Forest Service administered land, approved by Forest Service, may be used for storage purposes and for the placing of Contractor's plant equipment. All storage sites provided by Forest Service shall be restored at Contractor's expense.

Contractor shall be responsible for making arrangements for storage on other than Forest Service administered lands.

When the construction of the portion of the project for which Temporary Roads used for hauling materials is completed, all such Temporary Roads shall be restored as nearly as practicable to their original ground profile, unless otherwise agreed in writing.

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WO-KT-FT.2.2.1# - MATERIAL SOURCES. (09/04)

Material	Type of Purchase	Owner(s)	Unit of Measure	Unit Price	Estimated Quantity	Total
Pit Run	N/A	USFS	CY	NA	285 (371 Loose)	285 (371 Loose)

NOTE: Pit restoration (per specifications) in the North Jaybird Pit shall be accomplished no later than the end of each operating season.

KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS *(09/2004)*

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

See Contract Road Maintenance Requirements Summary Table.

FS-2400-13T (9/04)

WO-KT-FT.3.1# – ROAD MAINTENANCE REQUIREMENTS. (09/04)

Contract Road Maintenance Requirements Summary

Road	Termini		Miles	Applicable Prehaul Road Maintenance Specifications									
	From	To		T-8030	T-8110	T-8130	T-8310	T-8340	T-8350	T-8360	T-8420	T-8620	
5250-M	0.00	0.80	0.80			P	P	P		P			
5250-P	0.00	0.38	0.38			P	P	P		P			

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

Road	Termini		Miles	Applicable During Haul Road Maintenance Specifications									
	From	To		T-8030	T-8110	T-8130	T-8310	T-8340	T-8350	T-8360	T-8420	T-8620	
4782	0.00	0.07	0.07	P		P[1/]	P	P		P			
5250-M	0.00	0.80	0.80	P		P[1/]	P	P		P			
5250-N	0.00	0.08	0.08	P		P[1/]	P	P		P			
5250-O	0.00	0.25	0.25	P		P[1/]	P	P		P			
5250-P	0.00	0.38	0.38	P		P[1/]	P	P		P			
4700	4782	5250	0.50	P	D		D	D			D		
5250	PU 4	US-45	4.20	P	D		D	D			D		

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

P[1/] **75 CY (97.5 CY loose) to be spot placed as directed by Forest**

Road	Termini		Miles	Applicable Post Haul Road Maintenance Specifications									
	From	To		T-8030	T-8110	T-8130	T-8310	T-8340	T-8350	T-8360	T-8420	T-8620	
4782	0.00	0.07	0.07				P	P	P	P		P	
5250-M	0.00	0.80	0.80				P	P	P	P			
5250-N	0.00	0.08	0.08				P	P	P	P		P	
5250-O	0.00	0.25	0.25				P	P	P	P		P	
5250-P	0.00	0.38	0.38				P	P	P	P			
4700	4782	5250	0.50		D		D	D			D		
5250	PU 4	US-45	4.20		D		D	D			D		

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

KT-FT.3.2# - ROAD MAINTENANCE DEPOSIT SCHEDULE *(08/2012)*

Other provisions herein notwithstanding, when Forest Service requests payment in lieu of Contractor's performance of road maintenance, Contractor shall make Required Deposits (16 USC 537) for current and/or deferred road maintenance. Such deposits are based on the estimated volume and distance hauled and Contractor's commensurate use of each road listed in the Road Maintenance Plan in KT-FT.3.1#.

Contractor and Forest Service may agree in writing on adjustment of such rates. If Contractor uses roads under jurisdiction of Forest Service other than those listed in the Road Maintenance Plan, Forest Service shall establish rates commensurate with Contractor's use of such roads.

The Required Deposits for Forest Service work in lieu of Contractor performance are $1.86 per CCF for recurrent maintenance, and $1.85 per CCF for deferred maintenance.

The following table lists who Contractor will make deposits for road maintenance to, and the rate per unit of measure of the deposit. The Road Maintenance Agreement is available for inspection at the Forest Supervisor's Office.

Deposit Made To	Rate	Unit of Measure
N/A		

KT-FT.3.3# - 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, Contractor shall adhere to the following performance standards, unless otherwise agreed:

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 4 -inch depth compacted snow mat shall be maintained on the roadbed during blading.

Snow shall be removed from the entire road width, including turnouts.

Snow berms shall be reduced at road intersections where plowed road segements join unplowed road segments. Reduce the piled snow in the roadway to create a smooth transition from plowed road to normal snow depth.

Openings shall 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.

Tracked or cleated vehicles shall not be used for snow removal without prior written approval of Forest Service Representative.

KT-GT.3.1.3# - CUTTING SCHEDULE *(06/2009)*

Unless changed by written agreement, only NA Payment Units may be released for operations at one time, and the sequence of cutting Payment Units shall be : PU 12 cut prior to or concurrent with PU 13 and PU 8 cut prior to or concurrent with PU 9 .

Unless there is agreement in writing to postpone specific requirements, all contractual requirements on a Payment Unit shall be accepted by Forest Service prior to the release of an additional Payment Unit.

KT-GT.3.1.4# - OPERATING RESTRICTIONS *(06/2009)*

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

Restricted operations/activities:
Within Payment Units 01, 02 & 05 - Harvest Operations are restricted during the period of 3/16 through 5/31 (due to Soils) and during the period of 06/01 through 7/14 (due to Protection of Residual Stems).

Within Payment Units 03, 04 & 06 - 15 - Harvest Operations are restricted during the period of 3/16 through 5/31 (due to soils).

Within Payment Unit 03 - All equipment and slash shall remain within the Payment Unit boundary along the eastern portion of this unit adjacent to the Protected Area (PA).

Adjacent to the Temporary Road accessing Payment Unit 11 - All vehicles, equipment and logging slash are prohibited from entering the Protected Area situated between Payment Unit 11 and the Temporary Road. All vehicles and equipment shall remain within the road clearing limits in this area.

Within the Sale Area, decked pine and other conifer material must be removed from the Sale Area within 30 days of cutting to minimize the potential breeding areas for pine beetles during the period of May 1 thru September 30.

Pit restoration (per specifications) in the North Jaybird Pit will be accomplished no later than the end of each operating season.

Prohibited operations/activities:
NA

KT-GT.4.1.2 - STUMP MARKS *(06/2009)*

Trees designated for cutting under CT.3.5 have been marked with paint at breast height and below stump height. Trees shall be felled so as to leave paint on stump.

KT-GT.4.2# - SKIDDING AND YARDING REQUIREMENTS *(06/2009)*

As used in this provision, skidding equipment includes rubber-tire and track-mounted skidders, forwarders, bunchers, processors, and any other mechanized equipment that is used off of landings and roads.

Within Payment Unit(s), as shown on Contract Area Map with symbol "SYR": SYR(1): All Included Timber shall be skid/forwarded out of Payment Unit 05, at a location approved by the Forest Service, to a landing location designated by the Forest Service along FR 5250-P.

SYR(2): All Included Timber shall be skid/forwarded out of Payment Unit 09, at a location approved by the Forest Service to a landing location designated by the Forest Service within Payment Unit 08.

SYR(3): All Included Timber shall be skid/forwarded out of Payment Unit 013, at a location approved by the Forest Service to a landing location designated by the Forest Service within Payment Unit 12.

Within portions of Payment Unit(s), as shown on Contract Area Map with symbol "SYR" and cross-hatching:
NA

KT-GT.6.2# - SITE SPECIFIC WETLANDS PROTECTION MEASURES *(09/2004)*

Measures needed to protect wetlands identified on the Sale Area Map or on the ground include:

All logging slash, equipment, and vehicles are prohibited within these areas. Any slash resulting from the Purchaser's Operations shall be removed immediately or treated as directed by the Forest Service.

KT-GT.6.3# - TEMPORARY ROAD CLOSURE *(06/2009)*

In addition to GT.6.3, measures to effectively block temporary roads to normal vehicular traffic shall consist of the following:

Berm will be placed at an angle of 30 to 45 degrees, relative to the road. Dig a trench, 12 to 18 inches below the surface of the road or trail, and extend it to both sidesof the road to prevent runoff from bypassing the berm/waterbar. The uphill end should extend beyond the side ditch of the road and into the earth berm to intercept any ditchflows. The outflow end is to be fully open and extended far enough beyond the edge of the road or trail to safely disperse runoff onto the undisturbed forest floor. When placement of the closure device does not require the berm to function as a waterbar for drainage, the trench will not be required. Height of the berm will be approximately 4 feet. Rocks/boulders, logging slash, cull logs, and stumps may be incorporated into the ridge of earth during construction as long as proper drainage is maintained and the road is completely blocked; unless otherwise agreed in writing. (See Typical Drawing)

KT-GT.7# - SLASH DISPOSAL MEASURES *(06/2009)*

Slash resulting from Contractor'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 KT-GT.6#.

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

Other specific slash disposal requirements are as follows:

SDZ - as shown on the Contract Area Map for Payment Units 01 - 16: Slash resulting from construction clearing (such as from landings and right-of-way clearing associated with pre-haul maintenance requirements listed in Special Provision CT5.31#), including Specified Road Construction, shall be lopped and scattered to lie within 3 feet of the ground. All root wads shall be severed from the stem and righted on the ground or otherwise disposed of as directed by the Forest Service, concurrent with operations.

SDZ(1) - as shown on the Contract Area Map in Payment Units 03, 04, 06, 07, 10 - 13, within a strip 25 feet in width, measured from the forested edge of the road along FR 4700, FR5250 and Temp Road accessing PU 11, all slash resulting from the Purchaser's operations shall be removed; within an adjacent strip 25 feet in width, all slash shall be lopped and scattered to lie within 3 feet of the ground. SDZ(1) shall be performed concurrent with operations.

SDZ(2) - Shown on Contract Area Map for Payment Units 01 - 15: All slash resulting from Purchaser's Operations shall either be 1) left at the stump when severed from the merchantable portion of the stem, 2) delimbed in place when bunched with a processor-type equipment prior to skidding/forwarding to a central processing point, or 3) spread back evenly across the payment unit, concurrent with operations.

Material described above used in the construction of closure berms is excluded from this requirement.

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

KT-GT.9# - STEWARDSHIP PROJECTS *(09/2004)*

Performance of stewardship projects shall be in accordance with the following specifications.

Stewardship Projects

KT-GT.9# - STEWARDSHIP PROJECTS. (09/2004)

Stewardship Projects

Mandatory Stewardship Projects		
Project Number	**Project Description**	**Specification Pages**
CRR-1	4500 Culvert Removal/Replacement Service Projects	SP-2, 3, 6 & 7
CRR-2	4500 Culvert Removal/Replacement Service Projects	SP-3, 4, 6 & 7
CRR-3	4500 Culvert Removal/Replacement Service Projects	SP-4 thru SP-7
SP-003	Aspen Regeneration Site Preparation	SP-27 thru SP-28
SP-004	Aspen Regeneration Site Preparation	SP-27 thru SP-28
SP-009	Aspen Regeneration Site Preparation	SP-27 thru SP-28

KT-HT.2 - FIRE PRECAUTIONS *(06/2009)*

Unless otherwise agreed in writing between the Contractor and the Contracting Officer, the following are specific precautionary measures applicable during Contractor's Operations in Fire Precautionary Period as indicated in AT.9:

1. Contractor shall maintain Forest Service-approved spark arresting devices 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 one-pound multipurpose fire extinguisher readily available.

2. Contractor shall require that smoking and the building of lunch or warming fires by Contractor's employees, contractors, or subcontractors be confined to designated safe places where flammable debris has been cleared away and where, at the option of the Contractor, 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. Contractor shall furnish serviceable firefighting tools. Location, numbers, and types of tools shall be specified in the Fire Prevention and Control Plan in accordance with HT.1.

KT-IT.2.1.2 - 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 AT.17. Contractor 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 Contractor'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 Contractor'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 contract 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 Contractor'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.

SECTION 1. GENERAL

Purchaser's main Road 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 **GT.3.1**.

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 **IT.3.3**.

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 Activitiy. 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.

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.

SECTION 3. ROAD MAINTENANCE REQUIREMENTS SCHEDULE

See **WO-KT-FT.3.1#** Summary Table.

SECTION 4. ROAD MAINTENANCE SPECIFICATIONS

INCLUDED SPECIFICATIONS

Specification No.	Specification Title
T-8030	Snow Removal
T-8110	Maintenance Blading/Grading
T-8130	Spot Surface Course Placement/Replenishment
T-8310	Ditch Cleaning
T-8340	Drainage Structure Maintenance
T-8350	Roadway Drainage Maintenance
T-8360	Composite High Clearance Road Maintenance
T-8420	Cutting Roadway Vegetation
T-8620	Miscellaneous Maintenance

T-8030 Snow Removal

DESCRIPTION

1.1 This Section provides for removal of snow from roads to facilitate logging operations and safe use. Remove snow from all or part of the traveled way, including sufficient turnouts for safe and efficient use for timber transportation and to protect the road. Remove intruding windfalls, debris or slough and slide material and dispose of only as necessary to provide passage for timber transportation. Removed materials may be deposited off the traveled way or outside the traveled way at locations designated by the Forest Service Representative (FSR). Snow may also be compacted as needed to freeze down soft areas or wet areas. This work is considered part of this specification. Equipment used for this work shall be in accordance with this specification and approved in advance by the FSR.

INTERIOR LAKE STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS
FS-2400-13T Contracts (09/04)
WO-KT-FT.3.1# Special Provisions

EQUIPMENT

2.1 Purchaser may use any type of equipment to remove snow, providing:

a. Type or use of equipment is not restricted in **CT5.12#** or Schedule document.

b. Equipment is of the size and type commonly used to remove snow and will not cause damage to the road. Tracked or cleated vehicles shall not be used unless approved in writing by the FSR.

c. The 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 __4__ -inch depth compacted snow mat will be maintained on the roadbed during blading.

REQUIREMENTS

3.1 Erect signs required by the Sign Plan in the SUPPLEMENTAL SPECIFICATIONS or as shown on the Section 3. Road Maintenance Requirements Schedule. Perform work in a manner to preserve and protect roads and appurtenances, and prevent erosion damage to roads, streams, and other forest values.

3.2 Space, construct, and maintain drainage holes in the dike of snow or berm caused by snow removal operations. Place drain holes to obtain surface drainage without discharging on erodible fills.

3.3 Upon seasonal completion of Purchaser's Operations, effectively block the road by a snow barricade, unless otherwise approved by the Contracting Officer.

3.4 Ice control may be performed by Purchaser when approved by the FSR in writing. Such approval will include ice control materials, application rates, and any specific requirements of use.

3.5 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.

T-8110 Maintenance Blading/Grading

DESCRIPTION

1.1 Maintenance Blading/Grading is keeping an 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 Drainage Dips and Lead-off Ditches.

EQUIPMENT

2.1 The equipment required to shape, spread, and compact surfacing is listed below.

INTERIOR LAKE STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS
FS-2400-13T Contracts (09/04)
WO-KT-FT.3.1# Special Provisions

Road Number	Road Termini - From	Road Termini - To	Equipment Description
4700	4782	5250	Motor-grader (or equivalent)
5250	PU 4 Temp	US-45	Motor-grader (or equivalent)

REQUIREMENTS

3.1 Maintenance Blading/Grading shall be performed to facilitate traffic and proper drainage before, during, or after Purchaser's use as required by Section 3. Road Maintenance Requirements Schedule.

3.2 The surface blading shall preserve the existing cross-section. Surface irregularities shall be eliminated and the surface left in a smooth, free-draining state 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 aggregate surfaced roads Material generated from back slope Sloughing and ditch cleaning shall not be blended with Surface or Base Course Material unless agreed otherwise

3.4 Roadway back slopes 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 side casting unless agreed otherwise. Side casting into streams, lakes, or water courses will not be permitted.

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

3.9 Material resulting from this activity, plus any accumulated debris, shall be removed from roadway structures, such as concrete low-water crossings or fords.

T-8130 Spot Surface Course Placement/Replenishment

DESCRIPTION

1.1 Spot Surface Course Placement/Replenishment includes Subgrade preparation, furnishing, hauling, spreading and shaping materials in accordance with the requirements.

INTERIOR LAKE STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS

FS-2400-13T Contracts (09/04)
WO-KT-FT.3.1# Special Provisions

MATERIALS

2.1 Surface Course Material will be in accordance with the subsection 3.2 of these specifications. Only commercial sources of aggregate will be accepted, except surfacing material may also be purchased from the government, where available, by filling out a form 2600, paying the required fees, and obtaining a permit.

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

3.2 Furnish, haul and spread Material at locations designated on the ground by the Forest Service (FS). Compact the aggregate by operating spreading and hauling equipment over the full width of each layer of the aggregate, or by other methods as specified below.

Road Number	Type Material	Finished Compacted Thickness Specified	Total Quantity (Tons or cu.yds.)	Compaction Method
5250-M (MP 0.00 – 0.01)	Crushed Aggregate[1/]	Surface Approach/Radii	15 CY (19.5 CY)[2/]	See 3.2 Above
5250-M (MP 0.03)	Pit Run Gravel[3/]	As Directed by Forest Service	30 CY (39 CY)[2/]	See 3.2 Above
5250-M (MP 0.55)	Pit Run Gravel[3/]	As Directed by Forest Service	15 CY (19.5 CY)[2/]	See 3.2 Above
5250-P (MP 0.00 – 0.01)	Crushed Aggregate[1/]	Surface Approach/Radii	15 CY (19.5 CY)[2/]	See 3.2 Above
Any Purchaser Responsibility Road	Pit Run Gravel[3/]	**To Be Placed as Directed by USFS (During Haul Road Maintenance).**	75 CY (97.5 CY)[2/]	See 3.2 Above

[1/] Furnish, Haul, Place. Must meet M-DOT Designation 22A.

[2/] Quantity of material in ( ) is the approximate loose volume.

[3/] North Jay Bird Pit (as shown on Contract Area Map).

3.3 Variations. The Purchaser will be required to furnish weight tickets to the FS for each load of commercially obtained crushed aggregate prior to the final inspection. For aggregate purchased from the government, a count of truck loads will be required in addition to finished depth checks for the placed and compacted aggregate. Widths and lengths will be as staked or from schedule. 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 **IT.3.3**.

T-8310 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 positive draining waterway of uniform width, depth, and grade.

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 ditches that are not suitable for blending into the existing surface course shall be disposed of in places agreed to in writing by the FSR.

3.3 Roadway back slopes shall not be undercut.

T-8340 Drainage Structure Maintenance

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, necessary geotextiles, pipes, 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 subsection 3.3 below.

REQUIREMENTS

3.1 Drainage Structures and related items shall be cleared of all foreign Material 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 shown below, and as marked on the ground. Installation of structures shall not begin without the presence of a FSR unless agreed to in writing by the FSR.

Road Number	Location	Remove/Install	Type of Structure	Size	Quantity
5250-M	MP's 0.16, 0.42, 0.55	Restore[1/]	Ditches at Pipe Locations	[1/]	As Directed
5250-M	MP 0.16	Protect	Pipe	Existing	One
5250-M	MP 0.42	Protect	Pipe	Existing	One
5250-M	MP 0.55	Protect	Pipe	[2/]	One

[1/] Per Typical Drawing

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

3.5 Culverts designated for removal/disposal shall become the property of the Purchaser and shall be disposed of properly.

3.6 Temporary culverts provided by the USFS shall remain the property of the government.

3.7 Bridges. Any miscellaneous parts needing repair or replacement during normal use of any bridge during haul shall be considered maintenance. This includes minor items such as object markers, running planks that have loosened or cracked deck boards, or drainage structures which may become plugged. Bridge decks that are dirt and dust covered shall be cleaned to allow for proper drainage and for safety of the user.

T-8350 Roadway Drainage Maintenance

DESCRIPTION

1.1 This work consists of providing Post Haul drainage on roads.

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 subsection 3.3.

REQUIREMENTS

3.1 Upon completion of work, shape the roadway to provide for the removal of surface water. The roadway need not be passable to vehicles (ML-1 roads). Repair and reinstall waterbars, barriers or berms existing prior to the Purchaser's operation. Areas where water is ponded by existing centerline profile sags in through cuts may be left untreated.

3.2 Any of the following methods are acceptable for use at eroded or rutted locations:
(a) Method A: Outsloping the roadbed at not less than ½ inch per yard of width.
(b) Method B: Insloping the roadbed at not less than ½ inch per yard of width.
(c) Method C: Water bar roadbed at locations staked on the ground and construct as shown on the enclosed detail.

(d) Method D: Crown the roadbed as shown in the attached detail as the typical section for that length of road.

3.3 Drainage structures located in roadbed through fills and natural watercourses shall be fully functional without obstructions, including inlet and outlet channel within 20 feet of the structure. **(All structures within termini indicated in WO-KT-FT.3.1# Summary Table).**

3.4 Entrance Devices. Upon completion of work, replace entrance devices to effectively eliminate access by motorized vehicles (ML-1).

3.5 Seed and fertilize all disturbed areas in accordance with requirements set forth in T-8410 Vegetation Establishment.

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.

MATERIALS

2.1 Required materials are listed in subsection 3.2.

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, **per Typical Drawing.**

3.2 Drainage Facilities. Clean and recondition drainage facilities in accordance with T-8310 Ditch Cleaning and T-8340 Drainage Structure Maintenance. **See Table T-8340; maintain all structures per 3.1, Item 5 above within termini indicated in WO-KT-FT.3.1# Summary Table.**

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.

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 prieviously, using prior existing methodology.

T-8420 Cutting Roadway Vegetation

DESCRIPTION

1.1 This work includes removal of brush, trees and other vegetative growth from within the clearing limits. This may include brush mowing of shoulders to prevent larger growth which would inhibit travel in the future.

EQUIPMENT

2.2 Equipment use may include farm tractor mounted mowing or brushing equipment. If brushing equipment is required it must be of a size and power to cut off and masticate stems up to four inches in diameter. Larger growth may require hand clearing with a chainsaw or mechanized equipment able to handle larger trees.

REQUIREMENTS

3.1 Vegetative matter within the Roadway which impedes vehicular travel, and/or interferes with road maintenance operations, such as surface blading and ditch and culvert cleaning shall be removed. Downed timber meeting utilization standards shall be cut in appropriate lengths and decked in locations where agreed upon and the Traveled Way or sight distances will not be impaired.

3.2 Vegetative matter removed from the clearing limits shall be scattered outside the clearing limits at least 3 (and lopped to within 3 feet of ground) feet perpendicular to the road surface.

3.3 Trim tree branches that extend over the road surface and shoulders to attain a clear height of 14 feet. Trim branches flush with the tree or as close as possible without causing damage or scarring to the bole. Area shall be left neatly trimmed.

3.4 Any stump removed shall be placed in an upright position out of the clearing limits.

3.5 Area shall not be left in an unsightly condition. The FSR shall have the final say over how the area is left.

T-8620 Miscellaneous Maintenance

DESCRIPTION

1.1 Maintenance of miscellaneous structures includes cattle guards, gates (this includes all types of closure devices such as logs, rocks, dirt berms, dirt and slash berms, metal gates, etc), signs, 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.

INTERIOR LAKE STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS

FS-2400-13T Contracts (09/04)

WO-KT-FT.3.1# Special Provisions

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 six inches from the bottom of the cattle guard frame. Drainage into and from the cattle guard shall be kept open.

3.2 Gates (and other closure devices). 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. Weathered berms or wood piles shall be reconstructed to a height which discourages use and blocks the road.

3.3 Signs. Any signs needing repair or replacement shall be installed per sign placement detail or MUTCD direction. All roads shall have legible sign numbers. ML 3-5 roads shall have horizontal numbering and ML 1-2 roads shall have vertical numbers. The material used shall be as directed by the Forest Service Representative. All new signs must meet retroreflectivity requirements.

Road Number	Road Name	Location	Remove/Install	Type of Item	Size	Quantity
4782	4782	1/, 2/	Install	Berm	3/	1
5250-N	5250-N	1/, 2/	Install	Berm	3/	1
5250-O	5250-O	1/, 2/	Install	Berm	3/	1

1/ **Shown on Contract Area Map**

2/ **At Location Designated by Forest Service**

3/ **Per Typical Drawing – (See Specified Road Package) Earthen Berms/Road Closure Devices**

INTERIOR LAKE STEWARDSHIP

Supplemental Specifications to Special Provision KT-GT.9# - Stewardship Projects

PROJECT SPECIFICATIONS INDEX:

4500 CULVERT REMOVAL/REPLACEMENT SERVICE PROJECTS

SUPPLEMENTAL SPECIFICATIONS (KT-GT.9#)

Statement of Work

The Contractor shall provide any and all equipment, labor, supplies, tools, supervision, transportation, materials including safety and other incidentals necessary to perform all work activities located within the boundaries of the Contract Area, in accordance with the specifications, exhibits and clauses contained or referenced herein.

Schedule of Work – Mandatory

Project No.	Spec. No.	Location/ Milepost	Work Description	Unit of Measure & M of M	Quantity
CRR-1		**FR 4500 MP 0.00 - 2.43**	**Culvert Removal/Replacement**	**CRR-1**	
	203 04	0.92	Remove existing pipe and dispose of off government property	EA AQ	1
	249 03	0.92	Prepare bed for pipe installation. Backfill pipe after installation.	LS LSQ	1
	602 01	0.92	Furnish & install **17" x 13" x 30'** riveted 16 gauge corrugated **aluminized steel pipe-arch.**	Lin/Ft AQ	30
	308 05	0.92	Furnish, haul, place 30 CY (39 cy loose) crushed aggregate for bedding, backfill, and surfacing travelway.	CY DQ	30
	203 04	1.95	Remove existing pipe and dispose of off government property	EA AQ	1
	249 03	1.95	Prepare bed for pipe installation. Backfill pipe after installation.	LS LSQ	1
	602 01	1.95	Furnish & install **21" x 15" x 30'** riveted 16 gauge corrugated **aluminized steel pipe-arch.**	Lin/Ft AQ	30
	308 05	1.95	Furnish, haul, place 30 CY (39 cy loose) crushed aggregate for bedding, backfill, and surfacing travelway.	CY DQ	30
	203 04	2.19	Remove existing pipe and dispose of off government property	EA AQ	1
	249 03	2.19	Prepare bed for pipe installation. Backfill pipe after installation.	LS LSQ	1
	602 01	2.19	Furnish & install **17" x 13" x 30'** riveted 16 gauge corrugated **aluminized steel pipe-arch.**	Lin/Ft AQ	30
	308 05	2.19	Furnish, haul, place 30 CY (39 cy loose) crushed aggregate for bedding, backfill, and surfacing travelway.	CY DQ	30

Project No.	Spec. No.	Location/ Milepost	Work Description	Unit of Measure & M of M ¹	Quantity
	203 04	2.28	Remove existing pipe and dispose of off government property	EA AQ	1
	249 03	2.28	Prepare bed for pipe installation. Backfill pipe after installation.	LS LSQ	1
	602 01	2.28	Furnish & install **17" x 13" x 30'** riveted 16 gauge riveted corrugated **aluminized steel pipe-arch.**	Lin/Ft AQ	30
	308 05	2.28	Furnish, haul, place 30 CY (39 cy loose) crushed aggregate for bedding, backfill, and surfacing travelway.	CY DQ	30
	203 04	2.43	Remove existing pipe and dispose of off government property	EA AQ	1
	249 03	2.43	Prepare bed for pipe installation. Backfill pipe after installation.	LS LSQ	1
	602 01	2.43	Furnish & install **21" x 15" x 30'** riveted 16 gauge riveted corrugated **aluminized steel pipe-arch.**	Lin/Ft AQ	30
	308 05	2.43	Furnish, haul, place 30 CY (39 cy loose) crushed aggregate for bedding, backfill, and surfacing travelway.	CY DQ	30
CRR-2		**FR 4500 MP 2.76 – 4.16**	**Culvert Removal/Replacement**	**CRR-2**	
	203 04	2.76	Remove existing pipe and dispose of off government property	EA AQ	1
	249 03	2.76	Prepare bed for pipe installation. Backfill pipe after installation.	LS LSQ	1
	602 01	2.76	Furnish & install **17" x 13" x 30'** riveted 16 gauge riveted corrugated **aluminized steel pipe-arch.**	Lin/Ft AQ	30
	308 05	2.76	Furnish, haul, place 30 CY (39 cy loose) crushed aggregate for bedding, backfill, and surfacing travelway.	CY DQ	30
	203 04	3.46	Remove existing pipe and dispose of off government property	EA AQ	1
	249 03	3.46	Prepare bed for pipe installation. Backfill pipe after installation.	LS LSQ	1
	602 01	3.46	Furnish & install **24" x 18" x 30'** riveted 16 gauge riveted corrugated **aluminized steel pipe-arch.**	Lin/Ft AQ	30
	308 05	3.46	Furnish, haul, place 30 CY (39 cy loose) crushed aggregate for bedding, backfill, and surfacing travelway.	CY DQ	30

Project No.	Spec. No.	Location/ Milepost	Work Description	Unit of Measure & M of M [1]	Quantity
	203 04	3.55	Remove existing pipe and dispose of off government property	EA AQ	1
	249 03	3.55	Prepare bed for pipe installation. Backfill pipe after installation.	LS LSQ	1
	602 01	3.55	Furnish & install **21" x 15" x 30'** riveted 16 gauge riveted corrugated **aluminized steel pipe-arch.**	Lin/Ft AQ	30
	308 05	3.55	Furnish, haul, place 30 CY (39 cy loose) crushed aggregate for bedding, backfill, and surfacing travelway.	CY DQ	30
	203 04	3.97	Remove existing pipe and dispose of off government property	EA AQ	1
	249 03	3.97	Prepare bed for pipe installation. Backfill pipe after installation.	LS LSQ	1
	602 01	3.97	Furnish & install **24" x 18" x 30'** riveted 16 gauge riveted corrugated **aluminized steel pipe-arch.**	Lin/Ft AQ	30
	308 05	3.97	Furnish, haul, place 30 CY (39 cy loose) crushed aggregate for bedding, backfill, and surfacing travelway.	CY DQ	30
	203 04	4.16	Remove existing pipe, right, and dispose of off government property	EA AQ	1
CRR-3		**FR 4500 MP 4.42 – 4.69**	**Culvert Removal/Replacement**	**CRR-3**	
	249 03	4.42	Remove existing pipe and dispose of off government property	EA AQ	1
	249 03	4.42	Prepare bed for pipe installation. Backfill pipe after installation.	LS LSQ	1
	602 01	4.42	Furnish & install **24" x 18" x 30'** riveted 16 gauge riveted corrugated **aluminized steel pipe-arch.**	Lin/Ft AQ	30
	308 05	4.42	Furnish, haul, place 30 CY (39 cy loose) crushed aggregate for bedding, backfill, and surfacing travelway.	CY DQ	30
	249 03	4.49	Remove existing pipe and dispose of off government property	EA AQ	1
	249 03	4.49	Prepare bed for pipe installation. Backfill pipe after installation.	LS LSQ	1
	602 01	4.49	Furnish & install **21" x 15" x 30'** riveted 16 gauge riveted corrugated **aluminized steel pipe-arch.**	Lin/Ft AQ	30
	308 05	4.49	Furnish, haul, place 30 CY (39 cy loose) crushed aggregate for bedding, backfill, and surfacing travelway.	CY DQ	30

Project No.	Spec. No.	Location/ Milepost	Work Description	Unit of Measure & M of M [1]	Quantity
	249 03	4.55	Remove existing pipe and dispose of off government property	EA AQ	1
	249 03	4.55	Prepare bed for pipe installation. Backfill pipe after installation.	LS LSQ	1
	602 01	4.55	Furnish & install **17" x 13" x 30'** riveted 16 gauge riveted corrugated **aluminized steel pipe-arch.**	Lin/Ft AQ	30
	308 05	4.55	Furnish, haul, place 30 CY (39 cy loose) crushed aggregate for bedding, backfill, and surfacing travelway.	CY DQ	30
	249 03	4.69	Remove existing pipe and dispose of off government property	EA AQ	1
	249 03	4.69	Prepare bed for pipe installation. Backfill pipe after installation.	LS LSQ	1
	602 01	4.69	Furnish & install **17" x 13" x 30'** riveted 16 gauge riveted corrugated **aluminized steel pipe-arch.**	Lin/Ft AQ	30
	308 05	4.69	Furnish, haul, place 30 CY (39 cy loose) crushed aggregate for bedding, backfill, and surfacing travelway.	CY DQ	30

The Contractor shall submit a Quality Control Plan (QCP) with the Technical Proposal, that will detail the methods the Contractor will utilize for self-inspection to ensure the requirements of this contract are performed in accordance with the contract documents and that all equipment used is maintained in good and safe working condition. The plan shall indicate who will be responsible for Quality Control. The Contractor's Representative may serve as the Quality Control monitor. The Government COR will perform periodic independent inspections after the Contractor has performed their inspections if questions develop regarding the results of the Contractor's inspections.

4500 Culvert Removal/Replacement CRR-1, CRR-2, and CRR-3
INTERIOR LAKE STEWARDSHIP
NOTES

NOTE: There may be underground utility lines in unknown locations on this project. **Call MISS DIG** THREE full working days before any work begins. Phone 1-800-482-7171.

NOTE: During gravel hauling "Trucks Hauling" signs shall be placed on FR's 5250 & 4500. **Hauling shall not commence until all signs are placed as directed by the Forest Service.**

NOTE: Contractor shall obtain approval from the Forest Service for the timing of work so closure(s) of FR 4500 may be coordinated with other Purchasers and Contractors, as to not interfere with logging and hauling of forest products. Advance notice will also allow the Forest Service to inform private landowners and forest users of closure(s) affecting access via FR 4500.

NOTE: All indicated milepost locations are identified and begin from 239' south of the intersection of FR 5250 on FR 4500.

NOTE: Any clear and grub operations related to pipe installation and outlet and inlet ditch improvements with related slash resulting from purchasers operation shall be treated as per KT 6.7#.

NOTE: Additional outlet and inlet ditch improvements may be required at culvert locations to allow for proper drainage and all related work shall be considered incidental to the pipe bed preparation.

NOTE: All **culverts shall be riveted 16 gauge corrugated aluminized steel** and any bands shall be a minimum of 2' in length.

NOTE: There is **390 C.Y. of crushed aggregate surfacing** (507 cy loose) to be placed at designated culvert locations. **There is no government source available for this project.** Purchaser furnished material shall meet gradation requirements for the Michigan Department of Transportation Designation 22-A.

NOTE: All material excavated while preparing the pipe bed shall be hauled and disposed of off Government land. Crushed aggregate material shall be used to bed and encapsulate culverts and must be packed in 6" layers to a depth of 12" over pipes locations with the use of a mechanical vibrator compactor. Additional crushed aggregate material may be placed over culvert locations and compacted by operating spreading equipment over the full width (Compaction Method A).

4500 Culvert Removal/Replacement CRR-1, CRR-2, CRR-3
INTERIOR LAKE STEWARDSHIP

SUPPLEMENTAL SPECIFICATIONS

Section 101-109 General Requirements

Section 156 Public Traffic

Section 203 Removal of Structures and Obstructions

Section 209 Structure Excavation and Backfill

Section 301 Untreated Aggregate Courses

Section 602 Culverts and Drains

Section 635 Temporary Traffic Control

Preface

Delete all but the first paragraph and add the following:

The Forest Service, US Department of Agriculture has adopted FP-03 for construction of National Forest System Roads.

101 - Terms, Format, and Definitions

101.01 Meaning of Terms
Delete all references to the TAR (Transportation Acquisition Regulations) in the specifications.

101.01 Meaning of Terms
Delete all references to the FAR (Federal Acquisition Regulations) in the specifications.

101.03 Abbreviations.

Add the following to (a) Acronyms:

AFPA	American Forest and Paper Association
MSHA	Mine Safety and Health Administration
NIST	National Institute of Standards and Technology
NESC	National Electrical Safety Code
WCLIB	West Coast Lumber Inspection Bureau

Add the following to (b) SI symbols:

mp	Milepost
ppm	Part Per Million

101.04 Definitions.

Delete the following definitions and substitute the following:

Bid Schedule--The Schedule of Items.

Bridge--No definition.

Contractor--The individual or legal entity contracting with the Government for performance of prescribed work. In a timber sale contract, the contractor is the "purchaser".

Culvert--No definition.

Right-of-Way--A general term denoting (1) the privilege to pass over land in some particular line (including easement, lease, permit, or license to occupy, use, or traverse public or private lands), or (2) Real property necessary for the project, including roadway, buffer areas, access, and drainage areas.

Add the following:

Adjustment in Contract Price--"Equitable adjustment," as used in the Federal Acquisition Regulations, or "construction cost adjustment," as used in the Timber Sale Contract, as applicable.

Change--"Change" means "change order" as used in the Federal Acquisition Regulations, or "design change" as used in the Timber Sale Contract.

Design Quantity--"Design quantity" is a Forest Service method of measurement from the FS-96 *Forest Service Specifications for the Construction of Roads and Bridges.* Under these FP specifications this term is replaced by the term "Contract Quantities".

Forest Service--The United States of America, acting through the Forest Service, U.S. Department of Agriculture.

Neat Line--A line defining the proposed or specified limits of an excavation or structure.

Pioneer Road--Temporary construction access built along the route of the project.

Purchaser--The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through agents, employees, or subcontractors.

Protected Streamcourse--A drainage shown on the plans or timber sale area map that requires designated mitigation measures.

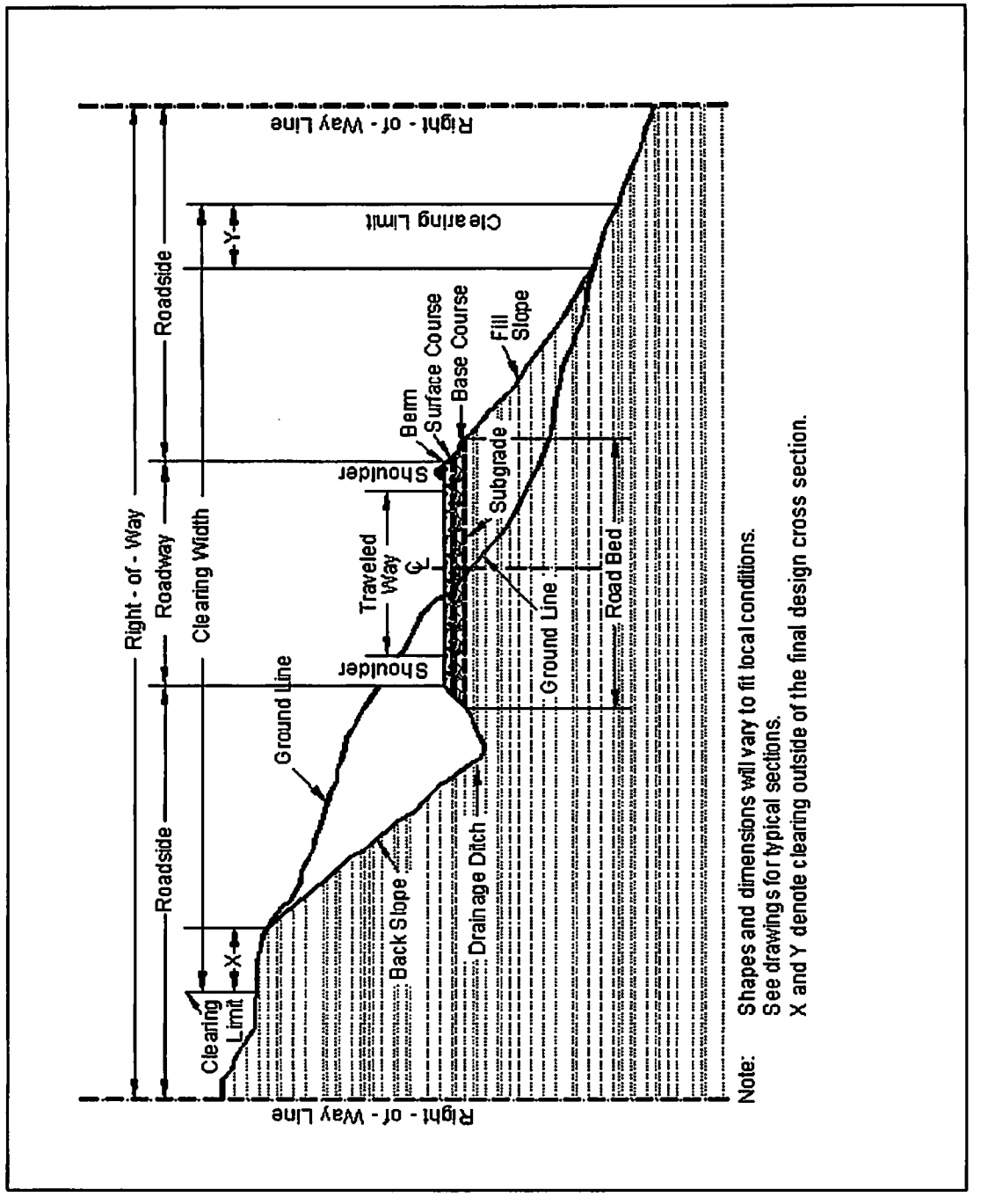
Road Order--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

Schedule of Items--A schedule in the contract that contains a listing and description of construction items, quantities, units of measure, unit price, and amount.

Utilization Standards--The minimum size and percent soundness of trees described in the specifications to determine merchantable timber.

Add Figure 101-1—Illustration of road structure terms:

Figure 101-1—Illustration of road structure terms.



101.04 Definitions.

Delete the following definitions:

Contract Modification
Day
Notice to Proceed
Solicitation

102 - Bid, Award, and Execution of Contract

102 Bid, Award, and Execution of Contract

Delete Section 102 in its entirety.

103 - Scope of Work

Deletions

Delete all but subsection 103.01 Intent of Contract.

104 - Control of Work

Deletions
Delete Sections 104.01, 104.02, and 104.04.

104.03 Drawings and Specifications
Delete subsection 104.03

104.03 Specifications and Drawings.
Delete 104.03.

104.06 Use of Roads by Contractor

The Contractor is authorized to use roads under the jurisdiction of the Forest Service for all activities necessary to complete this contract, subject to the limitations and authorizations designated in the Road Order(s) or described in the contract, when such use will not damage the roads or national forest resources, and when traffic can be accommodated safely.

Add Subsection.

105 - Control of Material

105.02 Material Sources.

105.02(a) Government-provided sources.

Add the following:

Comply with the requirements of 30 CFR 56, subparts B and H. Use all suitable material for aggregate regardless of size unless otherwise designated. When required, re-establish vegetation in disturbed areas according to section 625.

Government-provided optional sources for this project are identified as follows:

Material is available for use as (Borrow/pitrun surfacing material) as needed for the project from North Jay Bird Pit T46N, R39W, Section 30. There is no charge for material taken from these pits for use on this project.

105.05 Use of Material Found in the Work.

Delete 105.05 (a) and (b) and the last sentence of the second paragraph and substitute the following:

Materials produced or processed from Government lands in excess of the quantities required for performance of this contract are the property of the Government. The Government is not obligated to make reimbursement for the cost of producing these materials.

106 - Acceptance of Work

106.01 Conformity with Contract Requirements.
Delete Subsection 106.01 and substitute the following:

References to standard test methods of AASHTO, ASTM, GSA, and other recognized standard authorities refer to the methods in effect on the date of solicitation for bids.

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

Incorporate manufactured materials into the work according to the manufacturer's recommendations or to these specifications, whichever is more strict.

Plan dimensions and contract specification values are the values to be strived for and complied with as the design values from which any deviations are allowed. Perform work and provide material that is uniform in character and reasonably close to the prescribed value or within the specified tolerance range. The purpose of a tolerance range is to accommodate occasional minor variations from the median zone that are unavoidable for practical reasons.

When standard manufactured items are specified (such as fence, wire, plates, rolled shapes, pipe conduits, etc., that are identified by gauge, unit mass, section dimensions, etc.), the identification will be considered to be nominal masses or dimensions. Unless specific contract tolerances are noted, established manufacturing tolerances will be accepted.

The Government may inspect, sample, or test all work at any time before final acceptance of the project. When the Government tests work, copies of test reports are furnished to the Contractor upon request. Government tests may or may not be performed at the work site. If Contractor testing and inspection is verified by the Government, the Contractor's results may be used by the Government to evaluate work for acceptance. Do not rely on the availability of Government test results for process control.

Acceptable work conforming to the contract will be paid for at the contract unit bid price. Four methods of determining conformity and accepting work are described in Subsections 106.02 to 106.05 inclusive. The primary method of acceptance is specified in each Section of work. However, work may be rejected at any time it is found by any of the methods not to comply with 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.

(a) Disputing Government test results. **If the accuracy of Government test results is disputed, promptly inform the CO. If the dispute is unresolved after reasonable steps are taken to resolve the dispute, further evaluation may be obtained by written request. Include a narrative describing the dispute and a proposed resolution protocol that addresses the following:**

(1) Sampling method;
(2) Number of samples;
(3) Sample transport;
(4) Test procedures;
(5) Testing laboratories;
(6) Reporting;
(7) Estimated time and costs; and
(8) Validation process.

If the evaluation requires additional sampling or testing be performed, mutually agree with the Government on witnessing procedures and on sampling and testing by a third party laboratory. Use a third party laboratory accredited by the AASHTO accreditation program. Provide proof of the laboratory's accreditation for the test procedures to be used. Do not use the same laboratory that produced the disputed Government test results or that produced the test results used as a basis for the dispute.

The CO will review the proposed resolution protocol and may modify it before final approval and execution.

The Government will use the approved resolution protocol test results to determine the validity of the disputed testing. If the Government test results are validated, the Contractor will be responsible for all costs associated with developing and performing the resolution protocol. If the Government test results are not validated, the Government will be responsible for all costs associated with developing and performing the resolution protocol. If the validity of the Government test results cannot be determined, the Contractor and Government will equally share all costs associated with developing and carrying out the resolution protocol.

(b) Alternatives to removing and replacing non-conforming work. As an alternative to removal and replacement, the Contractor may submit a written request to:

(1) Have the work accepted at a reduced price; or
(2) Be given permission to perform corrective measures to bring the work into conformity.

The request must contain supporting rationale and documentation. Include references or data justifying the proposal based on an evaluation of test results, effect on service life, value of material or work, quality, aesthetics, and other tangible engineering basis. The CO will determine disposition of the nonconforming work.

106.07 Delete
Delete subsection 106.07.

107 - Legal Relations and Responsibility to the Public

107.05 Responsibility for Damage Claims.

Delete the entire subsection.

107.06 Contractor's Responsibility for Work.
Delete the following from the first paragraph.

"except as provided in Subsection 106.07".

107.08 Sanitation, Health, and Safety
Delete the entire subsection.

107 - Legal Relations and Responsibility To the Public

107.08 Sanitation, Health, and Safety.

Add the following:

Perform all operations in a prudent, conscientious, safe and professional manner. Ensure that all personnel involved in handling and packaging the hazardous waste are trained for the level of expertise required for the proper performance of the task and, in particular, in the areas of chemical incompatibility, general first aid procedures, and spills. Provide handling and personal protective equipment appropriate to ensure safe handling of the hazardous waste according to 29 CFR 1910.120). Notify the Forest Service of all hazardous material that may be brought onto the National Forest.

107 - Legal Relations and Responsibility to the Public

107.09 Legal Relationship of the Parties.

Delete the entire subsection.

107.10 Environmental Protection.

Add the following:

Design and locate equipment repair shops, stationary refueling sites, or other facilities to minimize the potential and impacts of hazardous material spills on Government land.

Before beginning any work, submit a Hazardous Spill Plan. List actions to be taken in the event of a spill. Incorporate preventive measures to be taken, such as the location of mobile refueling

facilities, storage and handling of hazardous materials, and similar information. Immediately notify the CO of all hazardous material spills. Provide a written narrative report form no later than 24 hours after the initial report and include the following:

- Description of the item spilled (including identity, quantity, manifest number, and other identifying information).
- Whether amount spilled is EPA or state reportable, and if so whether it was reported, and to whom.
- Exact time and location of spill including a description of the area involved.
- Containment procedures.
- Summary of any communications the Contractor had with news media, Federal, state and local regulatory agencies and officials, or Forest Service officials.
- Description of clean-up procedures employed or to be employed at the site including final disposition and disposal location of spill residue.

When available provide copies of all spill related clean up and closure documentation and correspondence from regulatory agencies.

The Contractor is solely responsible for all spills or leaks that occur during the performance of this contract. Clean up spills or leaks to the satisfaction of the CO and in a manner that complies with Federal, state, and local laws and regulations.

108 - Prosecution and Progress

108 Delete.

Delete Section 108 in its entirety.

109 - Measurement and Payment

109 Deletions

Delete the following entire subsections:

109.06 Pricing of Adjustments.

109.07 Eliminated Work.

109.08 Progress Payments.109.09 Final Payment.

109.02 Measurement Terms and Definitions.

(b) Contract quantity.

Add the following:

Contract quantities will be adjusted only when there are errors in the original design of 15% or more.

Change the following:

"(b) Cubic yard" to "(c) Cubic yard".

Add the following definition:

(p) Thousand Board Feet (Mbf). 1,000 board feet based on nominal widths, thickness, and extreme usable length of each piece of lumber or timber actually incorporated in the job. For glued laminated timber, 1,000 board feet based on actual width, thickness, and length of each piece actually incorporated in the job.

Disposal of construction slash will be compensated under the designated pay item in Section 201.

SUPPLEMENTAL SPECIFICATION

Section 156- PUBLIC TRAFFIC

156.03 Accommodating traffic During Work.

Delete the following from the last paragraph:

according to Subsection 106.07(b)

Add the following:

Unless otherwise SHOWN ON THE DRAWINGS or described in the SUPPLEMENTAL SPECIFICATIONS, keep existing roads open to all traffic during road improvement work, and maintain them in a condition that will adequately accommodate traffic. Perform no work that interferes or conflicts with traffic or existing access to the roadway surface until a plan for the satisfactory handling of traffic has been approved. Specific requirements for temporary closures, detours, part-width construction, and access to adjacent or intersecting facilities will be SHOWN ON THE DRAWINGS or described in the SUPPLEMENTAL SPECIFICATIONS. Post construction signs and traffic control devices in conformance with the "Manual on Uniform Traffic Control Devices" (MUTCD). Do not proceed with work on the project until all required signs are in place and approved.

Before shutting down any operations, take all necessary precautions to prevent damage to the project, such as temporary detours, approaches, crossings, or intersections; and provide for normal drainage and minimization of erosion. Leave all travelways in a condition suitable for traffic.

The government may permit use of portions of the project during periods when operations have shut down. All maintenance attributed to permitted use during periods of work suspension will be provided by the Government, except for maintenance needed through the fault or negligence of the contractor. The Contractor shall be responsible for any maintenance not attributed to use, or that is necessary during suspensions through the fault or negligence of the Contractor.

When SHOWN ON THE DRAWINGS or described in the SUPPLEMENTAL SPECIFICATIONS, road segments may be closed to all traffic during the period(s) when

construction is in progress. If any of the listed roads are to be closed during construction operations, give at least 14 days advance notice.

Unless otherwise provided, when construction activity is in progress and closure has not been provided for herin, delays may not exceed 30 minutes, in order to reasonably accommodate traffic.

156.04 Maintaining Roadways During Work.

(a) Add the following:

Do not construct detours outside of the clearing limits or use alternate route detours without the approval of the CO.

156.06 Limitations on Construction Operations.

Add the following:

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 SHOWN ON THE DRAWINGS, designated in the Road Order, or described in the SUPPLEMENTAL SPECIFICATIONS, when such use will not damage the roads or national forest resources, and when traffic can be accommodated safely.

156.08 Traffic and Safety Supervisor.

Delete this section in its entirety.

SUPPLEMENTAL SPECIFICATION

Section 203 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS

203.01 Work.

Delete and replace with the following:
This work consists of disposing of clearing slash, salvaging, removing, and disposing of buildings, fences, structures, pavements, culverts, utilities, curbs, sidewalks, and other obstructions.

203.05 Disposing of Material.

(a) Remove from project. Delete second and third sentence. Add: Culverts shall be removed from the project and disposed of off Government land.

Add the following disposal method:

(f) Scattering. Scatter construction slash outside the clearing limits without damaging

trees. Limb all logs. Stumps shall be severed from all trees, and set in an upright position with their root masses resting on the ground. Place logs and stumps away from trees, positioned so that they will not roll, and are not on top of one another. Limb and scatter other construction slash to a maximum height of 3-feet..

SUPPLEMENTAL SPECIFICATION

Section 209. STRUCTURE EXCAVATION AND BACKFILL

209.10 Backfill.

(a) General.

Add the following:

Do not place or backfill pipe that meets any of the following conditions until the excavation and foundation have been approved in writing by the CO:

- Embankment height greater than 6 feet at subgrade centerline.
- Installation in a protected stream course.
- Round pipe with a diameter of 48 inches or greater.
- Pipe arches with a span of 50 inches or greater.
- Any box culvert of structure other than pipe culverts.

209.10 Backfill.

(a) General.

Add the following:

Replace any pipe that is distorted by more than 5 percent of nominal dimensions, or that is ruptured or broken.

(b) Pipe culverts.

(1) Pipe culverts with compacted backfill.

Add the following:
On each side of the pipe there shall be an area of compacted material at least as wide as one diameter or span of the structure, with a minimum of two feet or a maximum of twelve feet. Compact the backfill without damaging or displacing the pipe. Complete the backfilling of the trench with suitable material.

209.11 Compacting.

Delete the subsection and add the following:

Compact backfill using designated compaction method A, B, or C:

Method A. Ensure that backfill density exceeds the density of the surrounding embankment.

Method B. Adjust the moisture content of the backfill material to a moisture content suitable for compaction. Compact each layer using appropriate compaction equipment until visual displacement ceases. For compaction under sections 252, 254, 255, 257, and 258 compact with a vibratory steel wheeled roller with a mass of at least 8 tons.

Method C. Determine optimum moisture content and maximum density according to AASHTO T 99 method C. Adjust the moisture content of the backfill material to a moisture content suitable for compaction. Compact material placed in all layers to at least 95 percent of the maximum density. Determine the in place density and moisture content according to AASHTO T 310 or other approved test procedures.

Table 209-1 Sampling and Testing Requirements

Add the following:

(2) Compaction methods (A) and (B) do not require AASHTO T-99 or T-310 test methods for foundation fill.

249 - Composite Road Construction

249.01 Description

This work consists of clearing and grubbing, excavation and embankment, and removal of all construction slash including all trees designated for removal. Excavation and embankment includes on site borrow excavation; drainage excavation; placing all excavated material; and shaping the roadway; including approaches, turnarounds, ditches and drainage dips. Construct the roadway in conformance with the dimensions "shown on the plans" or as staked on the ground.

249.02 Clearing and Disposal

Protect construction stakes and construction control markers. Remove or treat all trees, snags, downed timber, brush, and stumps within the clearing limits according to the following specifications.

(a) Merchantable Timber. Treat according to the Utilization Standards of the Timber Sale Contract.
(b) Unmerchantable Timber. Treat according to Subsection 249.02 Method A.
(c) Large Construction Slash. Treat construction slash larger than 3 inches in diameter and longer than 3 feet by one or more of the following methods.

(1) Method A. Construction slash shall be scattered outside the clearing limits without damaging trees outside the clearing area. Logs shall be placed away from trees, positioned so that they will not roll, not placed on top of one another or left leaning on other trees. Scattered stumps shall be placed in an upright position

(2) Method B. Stumps, roots, rocks, topsoil and other grubbing debris shall be concentrated in stump dump areas. Stump dump areas shall be located by the Engineer, be a maximum of 300 feet apart along the road centerline, and generally be located in natural depressions or tucked away behind denser vegetation or ground rises. Stump dumps will vary in size depending on each site, but shall not be closer than 10 feet outside of the clearing limits. Stump dump material shall be matted down as much as possible and shall not obstruct natural drainages.

(d) Small Construction Slash. Construction slash less than 3 inches in diameter and less than 3 feet in length may be incorporated into embankments so long as the material is distributed so that it does not result in concentrations or matting.

Immediately remove slash deposited in stream courses.

249.03 Pioneering

Do not undercut the final back slope during pioneer operations. Deposit material inside the roadway limits. Do not restrict drainages.

249.04 Grubbing.

Grub within the specified limits. Stumps outside the grubbing limits remain if cut no higher than 1 foot or one-third of the stump diameter, whichever is greater, above the original ground, measured on the uphill side, unless otherwise designated. Grub all stumps from the Roadway, or stumps that have less than 1 foot of cover, in the Fill slopes, providing they do not interfere with the placement or compaction of embankments.

249.05 Excavation and Embankment.

Construct the roadway to conform to the typical sections shown on the plans. Protect backslopes from being undercut. Embankment shall be placed in layers no more than 12 inches thick.

Locate and use borrow material, and remove and treat unsuitable excess material, as designated.

Place rocks that are too large to be incorporated in the embankment outside the traveled way on the downhill side such that they will not roll, obstruct drainage, or hinder roadbed use and maintenance.

Shape and finish the roadbed to the condition ordinarily accomplished by a crawler tractor with dozer blade to provide drainage of surface water. Do not permit individual rocks to protrude more than 4 inches above the subgrade of the roadbed. A motor grader finish is not required.

Observe a width tolerance of (+) 18 inches max. for the roadbed.

Where shown on the drawings or designated on the ground, offtake ditches shall be constructed to drain water away from the roadbed.

249.06 Erosion Control.

Perform erosin control measures, where shown on the drawings, or staked on the ground.

249.07 Method.

Measure the section 249 items listed in the schedule of items according to subsection 109.02

Payment

249.08 Basis.

The accepted quantities will be paid at the contract price per unit of measurement for Section 249 pay items listed in the Bid Schedule. Payment will be full compensation for the work prescribed in this section. See Subsection 109.05

301 - Untreated Aggregate Courses

301 Title Change.

Change the title to: **Section 301 Aggregate Courses**

301.01 Work.

Add the following:

Work includes producing aggregate by pit-run, grid rolling, screening, or crushing methods, or placing Government-furnished aggregate. Work may include additive mineral filler, or binder.

301.02 Material.

Add the following:

Bentonite	725.30
Calcium Chloride Flake	725.02
Lignon Sulfonate	725.20
Magnesium Chloride Brine or Calcium Chloride Liquid	725.02

301.03 General.

Add the following:

Written approval of the roadbed is required before placing aggregate.

For pit run or grid-rolled material, furnish material smaller than the maximum size. No gradation other than maximum size will be required for pit-run or grid-rolled material. For grid rolling, use all suitable material that can be reduced to maximum size. After processing on the road, remove all oversize material from the road and dispose of it as directed by the CO.

Provide additives or binder, if required, at the proportions specified.

Develop and use Government furnished sources according to Section 105.

If the aggregate is produced and stockpiled before placement, handle and stockpiled according to Section 320. Establish stockpile sites at locations approved. Clear and grub stockpile sites according to Section 201.

301.04 Mixing and Spreading.

Delete the first sentence of the first paragraph and add the following:

Ensure that aggregate and any required additives, water, mineral filler, and binder are mixed by the specified method except, if crushed aggregate products are being produced and mineral filler, binder, or additives are required, uniformly blend following crushing. Control additive proportions to 0.5 percent dry weight.

(a) Stationary Plant Method. Mix the aggregate with other required materials in an approved mixer. Add water during the mixing operation in the amount necessary to provide the moisture content for compacting to the specified density. After mixing, transport the aggregate to the jobsite while it contains the proper moisture content, and place it on the roadbed or base course using an aggregate spreader.

(b) Travel Plant Method. After placing the aggregate for each layer with an aggregate spreader or windrow-sizing device, uniformly mix it with other required materials using a traveling mixing plant. During mixing, add water to provide the necessary moisture content for compacting.

(c) Road Mix Method. After placing the aggregate for each layer, mix it with other required materials at the required moisture content until the mixture is uniform throughout. Mix aggregate, water, and all other materials until a uniform distribution is obtained.

Spread the aggregate in a uniform layer, with no segregation of size, and to a loose depth that will provide the required compacted thickness.

When placing aggregate over geotextile, place aggregate in a single lift to the full depth specified.

Route and distribute hauling and leveling equipment over the width and length of each layer.

301.05 Compacting

Delete and replace with the following:

Compact each layer full width. Roll from the sides to the center, parallel to the centerline of the road. Along curbs, headers, walls, and all places not accessible to the roller, compact the material with approved tampers or compactors.

Compact the aggregate using one of the following methods as specified:

> **Compaction A.** Operate spreading and hauling equipment over the full width of the travelway.
>
> **Compaction B.** Operate rollers and compact as specified in Subsection 204.11(a)(1).
>
> **Compaction C.** Moisten or dry the aggregate to a uniform moisture content between 5 and 7 percent based on total dry weight of the mixture. Operate rollers and compact as specified in Subsection 204.11(a)(1).

Compaction D. Compact to a density of at least 95 percent of the maximum density, as determined by AASHTO T 99, method C or D.

Compaction E. Removed.

Compaction F. Compact to a density of at least 95 per-cent of the maximum density, as determined by AASHTO T 180, method C or D.

Compaction G. Removed.

For all compaction methods, blade the surface of each layer during the compaction operations to remove irregularities and produce a smooth, even surface. When a density requirement is specified, determine the in place density and moisture content according to AASHTO T 310 or other approved test procedures.

301.06 Surface Tolerance.

Add the following:

Thickness and Width requirements:

The maximum variation from the compacted specified thickness is ½ inch. The compacted thickness is not consistently above or below the specified thickness and the average thickness of 4 random measurements for any ½ mile of road segment is within + ¼ inch of the specified thickness.

The maximum variation from the specified width will not exceed +12 inches at any point. The compacted width is not consistently above the specified width and the average of any four random measurements along any ½ mile of road segment is within +4 inches of the specified width.

301.08_nat_us_03_03_2005

Table 301-1: Add the following:

Table 301-1—Acceptance Sampling and Testing Requirements.

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Subbase & Base Courses L, M, N, O, P, Q, R	Measured and tested conformance (Subsection 106.04)	Plastic Limit	-	AASHTO T 90	1 per each 1,000 T	From the windrow or roadbed after processing	Yes	4 Hours

Table 301-1—Acceptance Sampling and Testing Requirements.

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Aggregate Width	Measured and tested conformance (Subsection 106.04)	Width	-	-	4 per each 0.5 mi	Roadbed after processing	-	4 Hours
Aggregate Thickness	Measured and tested conformance (Subsection 106.04)	Thickness	-	-	4 per each 0.5 mi	Roadbed after processing	-	4 Hours
Additive	Measured and tested conformance (Subsection 106.04)	Amount of Additive	-		1 per each 1,000 T	From the windrow or roadbed after processing	No	4 Hours

301.08_nat_us_10_14_2011

Table 301-1 Field Density Requirements.

Table 301-1: Delete laboratory and field density requirements for base, subbase, and surfacing and replace with the following:

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Base and Subbase	Measured and tested conformance (Subsection 106.04)	Moisture Density	---					
		Method C	—	AASHTO T 99	1 per type and source of material	Source of material	Yes	Before using in work
			---		"	"	"	"
		Method D	—	AASHTO T 180	"	"	"	"
			---		"	"	"	"
		Compaction	---					
		Method C, D	—	AASHTO T 310 or other approved procedures	1 per 500 t	In-place	---	Before placing the next layer
Surfacing	Measured and tested conformance (Subsection 106.04)	Moisture Density						
			---		"	"	"	Before using in work
		Method D	—	AASHTO T 180	"	"	"	"
			—		"	"	"	"
		Compaction						
		Method C, D	—	AASHTO T 310 or other approved procedures	1 per 500 t	In-place	---	Before placing the next layer

301.08(b) Plasticity Index.

Add the following to the first sentence:

"and under 703.05(c)(1)".

301.09 Measurement.

Replace the second paragraph with the following:

Measure aggregate by cubic yard compacted in place when payment is by contract quantities.

301.10 Payment

Delete the following:

adjusted according to Subsection 106.05

602 - Culverts and Drains

602.03 General.

Add the following:

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

602.06 Laying Plastic Pipe.

Delete the second paragraph and substitute the following:

Provide soil-tight bell and spigot joints for plastic pipe culverts.

SUPPLEMENTAL SPECIFICATION

Section 635. – TEMPORARY TRAFFIC CONTROL

635.03 General.

(i) Delete.

635.27. Add

Payment will be considered incidental to other pay items in this contract.

INTERIOR LAKE STEWARDSHIP

Supplemental Specifications to Special Provision KT-GT.9# - Stewardship Projects

Aspen Regeneration Site Preparation

Supplemental Specifications to Special Provision KT-GT.9# - Stewardship Projects

Mandatory Stewardship Project: Aspen Site Preparation

Objective: To prepare the site for natural aspen regeneration.

Stewardship Credits Earned: Will be based on the Unit of Measure listed below:

Project #	Payment Unit	Acres	Mandatory/Optional
SP-003	003	13	Mandatory
SP-004	004	9	Mandatory
SP-009	009	16	Mandatory

A. **Site Preparation for Aspen Natural Regeneration**

1) Cut all tree species over 4 feet tall and less than 5 inches DBH, except do not cut any aspen less than 2 inches DBH OR any black spruce or white spruce less than 5 inches DBH, and do not cut any RED PINE, WHITE PINE, HEMLOCK, CEDAR, RED OAK, ELM, SERVICEBERRY (Amelanchier spp.) or ORANGE PAINT-BANDED TREES.

2) When available, retain two to three small clumps per acre of dense conifer saplings with live limbs within one foot of the ground (approximately 100 to 1000 square feet in size). Clumps selected for retention should be those with no, or minimal, logging related damage, i.e. broken and damaged crowns, de-barked stems.

3) Leave good quality spruce, removing damaged trees (leaning, logging-scarred, etc.) and trees with less than 20% crowns.

4) Shrubs, such as alder, are not required to be cut unless specified in the supplemental specifications.

5) Annuals such as grasses, sedges, ferns, etc. are not required to be cut.

6) Do not cut dead trees.

B. **Felling Specifications**

1) All trees required to be cut shall be cut below the lowest live limb except when prevented by rocks, existing downed logs, or other existing obstacles to felling.

2) Trees required to be cut shall be completely severed from the stump and lie flush to the ground. No tops shall be left hanging in standing trees.

3) The stump height of cut trees shall not exceed 6 inches above the ground level on the high side of the stump, or 4 inches above rocks, existing downed logs, or other existing obstacles to felling.

4) The cut angle of such stumps shall not exceed 20 degrees measured from a horizontal plane extending from the stump at ground level.

5) No boundary trees or Reserve Trees shall be cut or damaged. Boundary trees (KT-CT.3) are defined by 3 ORANGE paint slashes at eye level, with stump mark, for exterior boundaries or 2 ORANGE paint slashes at eye level, with stump mark, for interior boundaries. Reserve Trees (KT-CT.3#) are ringed with a single band of ORANGE paint at eye level, with stump mark.

6) All snags shall not be cut.

C. **Equipment Requirements.**

1) The Contractor will provide cutting tools and equipment that are suitable for the job.

2) All power tools shall be equipped with Forest Service approved spark arrestors and in good working condition.

3) Heavy equipment (such as processors used in logging) is permitted to do this work when ground conditions support the equipment. Site preparation work may be performed concurrent with logging operations. (Reference Special Provision KT-GT.3.1.4# for operating restrictions)

D. **Road Use and Maintenance.**

1) All roads, excepting temporary roads, leading into each project area are to be kept open and free of any debris that may occur as a result of the work.

2) All roads used by the Contractor will comply with Special Provisions KT-FT.1.2# - Use of Roads by Contractor and KT-FT.3.1# - Road Maintenance Requirements of this Contract.

E. **Slash Treatment.**

1) All slash/felled stems that fall outside of the boundary for Contractor's site preparation slash shall be pulled back into the unit.

2) Contractor shall treat all slash from site preparation activities which lies within a designated Slash Disposal Zone (SDZ), with the same removal or slash height requirements which apply to slash produced by timber harvest activities.

3) In addition, all slash resulting from the Contractor's site preparation activities shall be removed from the cleared edge of any numbered Forest Service System Road, any road authorizing use under a special use permit, or any road maintained by another ownership or governmental unit other than the Forest Service.

4) All slash shall be removed from all road ditches, leadout ditches or any other drainage structures.

INTERIOR LAKE STEWARDSHIP
SPECIFIED ROAD SCHEDULE OF ITEMS

Item Number	Item Description & Milepost	C or R[1]	Unit & M of M[2]	Quantity	Road Std. (W,D,S)[3]	Unit Allowance	Estimated Allowance
	FR 4782	R			S		
	M.P. 0.00 - 0.07						
249 02	Composite Road Construction. Reconstruct existing road to crown or out slope to match typical drawing to allow for cross drainage. Construct turnaround, right.		DQ Mile	0.07		$ 6,500.00	$455.00
	M.P. 0.00 - 0.01						
249 03	Prepare and deepen culvert bed and shape to ditch to pipe inlet.		LS LSQ	1		$ 250.00	$250.00
602 74	Furnish and install a 17" x13" x 44' corrugated metal pipe arch. **(Riveted 16 gauge with 2' connector band).**		LF AQ	44		$ 19.00	$836.00
	M.P. 0.00 - 0.02						
301 13	Unclassified borrow. Haul and place 45 CY (58.5 CY loose) pit run from North Jay Bird Pit.		CY DQ	45		$ 14.00	$630.00
	M.P. 0.00 - 0.01						
301 01	Untreated Aggregate Courses. Furnish, haul, and place 15 CY crushed aggregate surfacing (19.5 CY loose) to surface approach and radii.		CY DQ	15		$ 30.00	$450.00
	FR 4782 Total Specified Road						**$2,621.00**
	FR 5250-N	R			S		
	M.P. 0.00 - 0.08						
249 02	Composite Road Construction. Reconstruct existing road includes clear, grub, and shape road to crown to match typical drawing. Excavate to widen entrance. Construct turnaround, right.		DQ Mile	0.08		$ 6,500.00	$520.00
	M.P. 0.00 - 0.03						
204 52	Unclassified borrow. Haul and place 45 CY (58.5 CY loose) pit run from North Jay Bird Pit for surfacing.		CY DQ	45		$ 14.00	$630.00
	M.P. 0.00 - 0.01						
301 01	Untreated Aggregate Courses. Furnish, haul, and place 15 CY crushed aggregate surfacing (19.5 CY loose) to surface approach and radii.		CY DQ	15		$ 30.00	$450.00
	FR 5250-N Total Specified Road						**$1,600.00**

[1]C = Construction, R = Reconstruction
[2]Method of Measure
[3]W = Winter, D = Dry Summer, S = Summer

Prepared by Michael Jarvi 04-25-16
Civil Engineering Technician

INTERIOR LAKE STEWARDSHIP
SPECIFIED ROAD SCHEDULE OF ITEMS

Item Number	Item Description & Milepost	C or R[1]	Unit & M of M[2]	Quantity	Road Std. (W,D,S)[3]	Unit Allowance	Estimated Allowance
	FR 5250-O	R			S		
	M.P. 0.00 - 0.25						
249 02	Composite Road Construction. Reconstruct existing road including clear grub and shape road to crown to match typical drawing. Excavate to widen travelway and construct turnaround, left at POE.		DQ Mile	0.25		$ 5,000.00	$1,250.00
	M.P. 0.00 - 0.02						
301 13	Unclassified borrow. Haul and place 30 CY (39 CY loose) pit run from North Jay Bird Pit to surface entrance.		CY DQ	30		$ 14.00	$420.00
	M.P. 0.00 - 0.01						
301 01	Untreated Aggregate Courses. Furnish, haul, and place 15 CY crushed aggregate surfacing (19.5 CY loose) to surface approach and radii.		CY DQ	15		$ 30.00	$450.00
	M.P. 0.08 - 0.11						
249 03	Minor hill widening and realignment of road and repair and reshape hill.		LS LSQ	1		$ 100.00	$100.00
301 13	Unclassified borrow. Haul and place 45 CY (58.5 CY loose) pit run from North Jay Bird Pit to surface hill. **152'L x 12'W x 8"D**		CY DQ	45		$ 14.00	$630.00
	M.P. 0.12 - 0.13						
249 03	Widen road left and reshape back slope left and incorporate material to widen travel way.		LS LSQ	1		$ 250.00	$250.00
	FR 5250-O Total Specified Road						**$3,100.00**
	INTERIOR LAKE STEWARDSHIP GRAND TOTAL SPECIFIED ROAD SCHEDULE OF ITEMS.						**$7,321.00**

[1]C = Construction, R = Reconstruction
[2]Method of Measure
[3]W = Winter, D = Dry Summer, S = Summer

Prepared by Michael Jarvi 04-25-16
Civil Engineering Technician

INTERIOR LAKE STEWARDSHIP
SPECIFIED ROAD NOTES

NOTE: There may be underground utility lines in unknown locations on this project. Call **MISS DIG three full working days** before any work begins. **(1-800-482-7171).**

NOTE: During gravel hauling operations safety signs shall be placed and hauling shall not commence until all signs have been put in place as directed by the Forest Service.

NOTE: **Road shaping will require conserving of topsoil/overburden on segments of the road where sand is present and shaping may be minimized to stabilize travelway surface.**

NOTE: Construct the road bed to conform to the typical detail as noted in the narrative description.

NOTE: Additional lead-off ditches may be required at road segment locations to allow for proper drainage needs and are included under typical blading and shaping requirements. Locations for placement shall be determined by the Forest Service.

NOTE: The construction requirements for composite road construction slash disposal shall be Method A as described in the Supplemental Specification Item 249.

NOTE: **45 CY of crushed aggregate** is required for specified segments of this project. The normal compaction factor of 130% computes to a **loose volume of 58.5 CY. There is no government source available for this material.** Purchaser furnished material shall meet gradation requirements for the Michigan Department of Transportation designation 22A. Compact aggregate by operating spreading and hauling equipment over the full width of material.

NOTE: **165 CY of pit run borrow** is required for the specified road segments on this project. The normal compaction factor of 130% computes to a **loose volume of 214.5 CY.** This material may be taken from the **North Jay Bird pit,** located at T46N, R39W, Sections 30 unless agreed otherwise with the Forest Service. **Some pit development may be required and is considered incidental to associated items.**

NOTE: Pit run material may be substituted from other sources or locations with prior approval of the Forest Service.

NOTE: The 17" x 13" x 44' corrugated metal pipe arch shall be **riveted 16 gauge galvanized metal** and requires a 2' wide connector band and bolts.

Standard Specifications for Construction of Roads & Bridges on Federal Highway Projects

Specification List

Project Name: **INTERIOR LAKE STEWARDSHIP**

Date Prepared: **04/26/2016**

Road Number: FR 4782 FR 5250-N FR 5250-O		4782	5250-N	5250-O	
Road Name:	Termini	Miles	Miles	Miles	
	Const. Reconstruction	0.07	0.08	0.25	
Spec. No.	Title				Latest Revised Edition
101 thru 109	General Requirements	X	X	X	2003
301	Untreated Aggregate Courses	X	X	X	2003
602	Culverts and Drains	X			2003

NOTE: The Forest Service, US Department of Agriculture has adopted FP-03 for Construction of National Forest System Roads.

INTERIOR LAKE STEWARDSHIP

SUPPLEMENTAL SPECIFICATIONS

Section 101-109	General Requirements
Section 249	Composite Road Construction
Section 301	Untreated Aggregate Courses
Section 602	Culverts and Drains

Preface

Delete all but the first paragraph and add the following:

The Forest Service, US Department of Agriculture has adopted FP-03 for construction of National Forest System Roads.

101 - Terms, Format, and Definitions

101.01 Meaning of Terms
Delete all references to the TAR (Transportation Acquisition Regulations) in the specifications.

101.01 Meaning of Terms
Delete all references to the FAR (Federal Acquisition Regulations) in the specifications.

101.03 Abbreviations.

Add the following to (a) Acronyms:

AFPA	American Forest and Paper Association
MSHA	Mine Safety and Health Administration
NIST	National Institute of Standards and Technology
NESC	National Electrical Safety Code
WCLIB	West Coast Lumber Inspection Bureau

Add the following to (b) SI symbols:

mp	Milepost
ppm	Part Per Million

101.04 Definitions.

Delete the following definitions and substitute the following:

Bid Schedule--The Schedule of Items.

Bridge--No definition.

Contractor--The individual or legal entity contracting with the Government for performance of prescribed work. In a timber sale contract, the contractor is the "purchaser".

Culvert--No definition.

Right-of-Way--A general term denoting (1) the privilege to pass over land in some particular line (including easement, lease, permit, or license to occupy, use, or traverse public or private lands), or (2) Real property necessary for the project, including roadway, buffer areas, access, and drainage areas.

Add the following:

Adjustment in Contract Price--"Equitable adjustment," as used in the Federal Acquisition Regulations, or "construction cost adjustment," as used in the Timber Sale Contract, as applicable.

Change--"Change" means "change order" as used in the Federal Acquisition Regulations, or "design change" as used in the Timber Sale Contract.

Design Quantity--"Design quantity" is a Forest Service method of measurement from the FS-96 *Forest Service Specifications for the Construction of Roads and Bridges.* Under these FP specifications this term is replaced by the term "Contract Quantities".

Forest Service--The United States of America, acting through the Forest Service, U.S. Department of Agriculture.

Neat Line--A line defining the proposed or specified limits of an excavation or structure.

Pioneer Road--Temporary construction access built along the route of the project.

Purchaser--The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through agents, employees, or subcontractors.

Protected Streamcourse--A drainage shown on the plans or timber sale area map that requires designated mitigation measures.

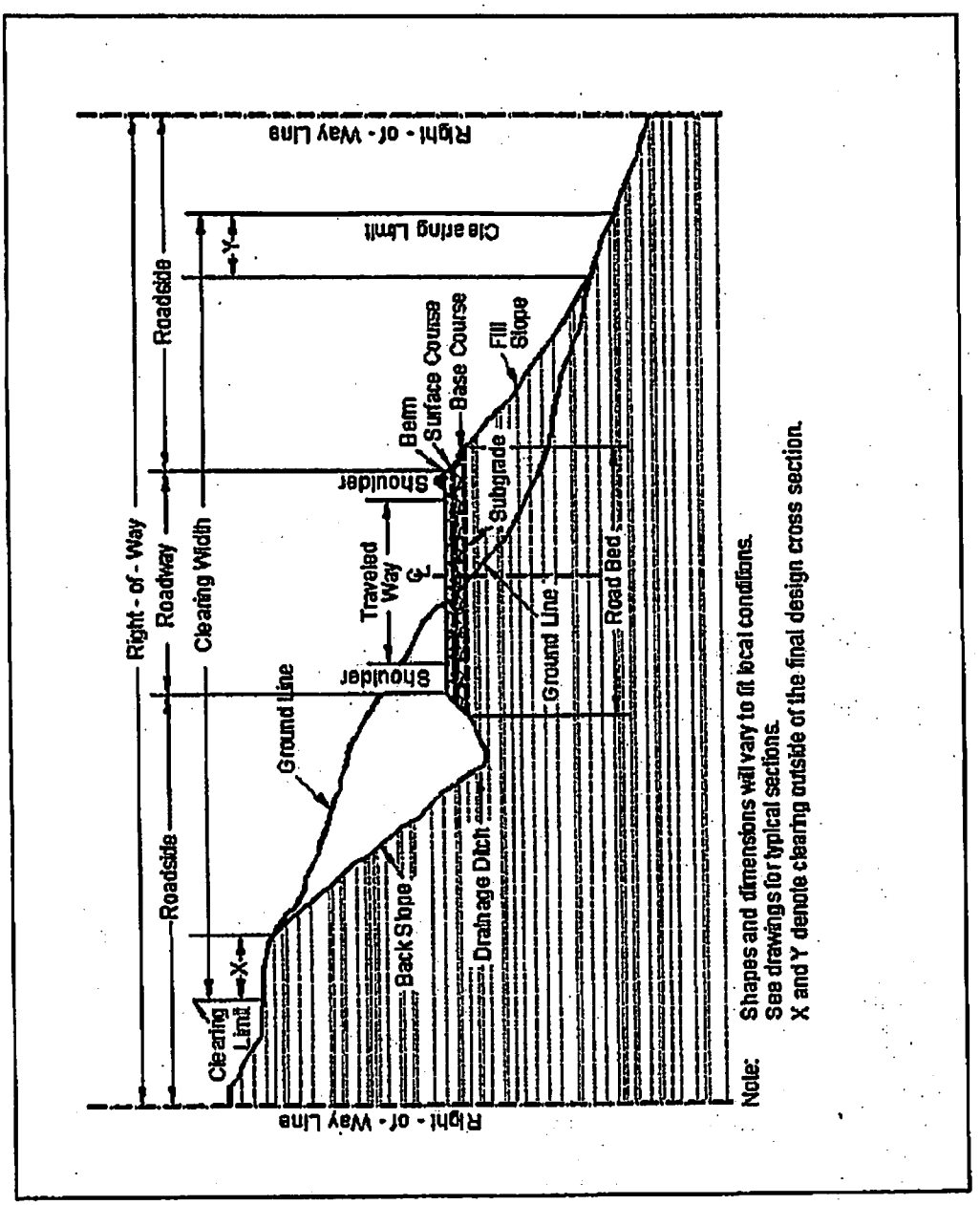
Road Order--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

Schedule of Items--A schedule in the contract that contains a listing and description of construction items, quantities, units of measure, unit price, and amount.

Utilization Standards--The minimum size and percent soundness of trees described in the specifications to determine merchantable timber.

Add Figure 101-1—Illustration of road structure terms:

Figure 101-1—Illustration of road structure terms.



101.04 Definitions.

Delete the following definitions:

Contract Modification

Day

Notice to Proceed

Solicitation

102 - Bid, Award, and Execution of Contract

102 Bid, Award, and Execution of Contract

Delete Section 102 in its entirety.

103 - Scope of Work

Deletions

Delete all but subsection 103.01 Intent of Contract.

104 - Control of Work

Deletions
Delete Sections 104.01, 104.02, and 104.04.

104.03 Drawings and Specifications
Delete subsection 104.03

104.03 Specifications and Drawings.
Delete 104.03.

104.06 Use of Roads by Contractor

The Contractor is authorized to use roads under the jurisdiction of the Forest Service for all activities necessary to complete this contract, subject to the limitations and authorizations designated in the Road Order(s) or described in the contract, when such use will not damage the roads or national forest resources, and when traffic can be accommodated safely.

Add Subsection.

105 - Control of Material

105.02 Material Sources.

105.02(a) Government-provided sources.

Add the following:

Comply with the requirements of 30 CFR 56, subparts B and H. Use all suitable material for aggregate regardless of size unless otherwise designated. When required, re-establish vegetation in disturbed areas according to section 625.

Government-provided optional sources for this project are identified as follows:

Material is available for use as (Borrow/pitrun surfacing material) as needed for the project from North Jay Bird Pit T46N, R39W, Section 30. There is no charge for material taken from these pits for use on this project.

105.05 Use of Material Found in the Work.

Delete 105.05 (a) and (b) and the last sentence of the second paragraph and substitute the following:

Materials produced or processed from Government lands in excess of the quantities required for performance of this contract are the property of the Government. The Government is not obligated to make reimbursement for the cost of producing these materials.

106 - Acceptance of Work

106.01 Conformity with Contract Requirements.

Delete Subsection 106.01 and substitute the following:

References to standard test methods of AASHTO, ASTM, GSA, and other recognized standard authorities refer to the methods in effect on the date of solicitation for bids.

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

Incorporate manufactured materials into the work according to the manufacturer's recommendations or to these specifications, whichever is more strict.

Plan dimensions and contract specification values are the values to be strived for and complied with as the design values from which any deviations are allowed. Perform work and provide material that is uniform in character and reasonably close to the prescribed value or within the specified tolerance range. The purpose of a tolerance range is to accommodate occasional minor variations from the median zone that are unavoidable for practical reasons.

When standard manufactured items are specified (such as fence, wire, plates, rolled shapes, pipe conduits, etc., that are identified by gauge, unit mass, section dimensions, etc.), the identification will be considered to be nominal masses or dimensions. Unless specific contract tolerances are noted, established manufacturing tolerances will be accepted.

The Government may inspect, sample, or test all work at any time before final acceptance of the project. When the Government tests work, copies of test reports are furnished to the Contractor upon request. Government tests may or may not be performed at the work site. If Contractor testing and inspection is verified by the Government, the Contractor's results may be used by the Government to evaluate work for acceptance. Do not rely on the availability of Government test results for process control.

Acceptable work conforming to the contract will be paid for at the contract unit bid price. Four methods of determining conformity and accepting work are described in Subsections 106.02 to 106.05 inclusive. The primary method of acceptance is specified in each Section of work. However, work may be rejected at any time it is found by any of the methods not to comply with 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.

(a) Disputing Government test results. **If the accuracy of Government test results is disputed, promptly inform the CO. If the dispute is unresolved after reasonable steps are taken to resolve the dispute, further evaluation may be obtained by written request. Include a narrative describing the dispute and a proposed resolution protocol that addresses the following:**

(1) Sampling method;
(2) Number of samples;
(3) Sample transport;
(4) Test procedures;
(5) Testing laboratories;
(6) Reporting;
(7) Estimated time and costs; and
(8) Validation process.

If the evaluation requires additional sampling or testing be performed, mutually agree with the Government on witnessing procedures and on sampling and testing by a third party laboratory. Use a third party laboratory accredited by the AASHTO accreditation program. Provide proof of the laboratory's accreditation for the test procedures to be used. Do not use the same laboratory that produced the disputed Government test results or that produced the test results used as a basis for the dispute.

The CO will review the proposed resolution protocol and may modify it before final approval and execution.

The Government will use the approved resolution protocol test results to determine the validity of the disputed testing. If the Government test results are validated, the Contractor will be responsible for all costs associated with developing and performing the resolution protocol. If the Government test results are not validated, the Government will be responsible for all costs associated with developing and performing the resolution protocol. If the validity of the Government test results cannot be determined, the Contractor and Government will equally share all costs associated with developing and carrying out the resolution protocol.

(b) **Alternatives to removing and replacing non-conforming work.** As an alternative to removal and replacement, the Contractor may submit a written request to:

(1) Have the work accepted at a reduced price; or
(2) Be given permission to perform corrective measures to bring the work into conformity.

The request must contain supporting rationale and documentation. Include references or data justifying the proposal based on an evaluation of test results, effect on service life, value of material or work, quality, aesthetics, and other tangible engineering basis. The CO will determine disposition of the nonconforming work.

106.07 Delete
Delete subsection 106.07.

107 - Legal Relations and Responsibility to the Public

107.05 Responsibility for Damage Claims.

Delete the entire subsection.

107.06 Contractor's Responsibility for Work.
Delete the following from the first paragraph.

"except as provided in Subsection 106.07".

107.08 Sanitation, Health, and Safety
Delete the entire subsection.

107 - Legal Relations and Responsibility To the Public

107.08 Sanitation, Health, and Safety.

Add the following:

Perform all operations in a prudent, conscientious, safe and professional manner. Ensure that all personnel involved in handling and packaging the hazardous waste are trained for the level of expertise required for the proper performance of the task and, in particular, in the areas of chemical incompatibility, general first aid procedures, and spills. Provide handling and personal protective equipment appropriate to ensure safe handling of the hazardous waste according to 29 CFR 1910.120). Notify the Forest Service of all hazardous material that may be brought onto the National Forest.

107 - Legal Relations and Responsibility to the Public

107.09 Legal Relationship of the Parties.

Delete the entire subsection.

107.10 Environmental Protection.

Add the following:

Design and locate equipment repair shops, stationary refueling sites, or other facilities to minimize the potential and impacts of hazardous material spills on Government land.

Before beginning any work, submit a Hazardous Spill Plan. List actions to be taken in the event of a spill. Incorporate preventive measures to be taken, such as the location of mobile refueling

facilities, storage and handling of hazardous materials, and similar information. Immediately notify the CO of all hazardous material spills. Provide a written narrative report form no later than 24 hours after the initial report and include the following:

- Description of the item spilled (including identity, quantity, manifest number, and other identifying information).
- Whether amount spilled is EPA or state reportable, and if so whether it was reported, and to whom.
- Exact time and location of spill including a description of the area involved.
- Containment procedures.
- Summary of any communications the Contractor had with news media, Federal, state and local regulatory agencies and officials, or Forest Service officials.
- Description of clean-up procedures employed or to be employed at the site including final disposition and disposal location of spill residue.

When available provide copies of all spill related clean up and closure documentation and correspondence from regulatory agencies.

The Contractor is solely responsible for all spills or leaks that occur during the performance of this contract. Clean up spills or leaks to the satisfaction of the CO and in a manner that complies with Federal, state, and local laws and regulations.

108 - Prosecution and Progress

108 Delete.

Delete Section 108 in its entirety.

109 - Measurement and Payment

109 Deletions

Delete the following entire subsections:

109.06 Pricing of Adjustments.

109.07 Eliminated Work.

109.08 Progress Payments.109.09 Final Payment.

109.02 Measurement Terms and Definitions.

(b) Contract quantity.

Add the following:

Contract quantities will be adjusted only when there are errors in the original design of 15% or more.

Change the following:

"(b) Cubic yard" to "(c) Cubic yard".

Add the following definition:

(p) Thousand Board Feet (Mbf). 1,000 board feet based on nominal widths, thickness, and extreme usable length of each piece of lumber or timber actually incorporated in the job. For glued laminated timber, 1,000 board feet based on actual width, thickness, and length of each piece actually incorporated in the job.

Disposal of construction slash will be compensated under the designated pay item in Section 201.

SUPPLEMENTAL SPECIFICATION

Section 156- PUBLIC TRAFFIC

156.03 Accommodating traffic During Work.

Delete the following from the last paragraph:

according to Subsection 106.07(b)

Add the following:

Unless otherwise SHOWN ON THE DRAWINGS or described in the SUPPLEMENTAL SPECIFICATIONS, keep existing roads open to all traffic during road improvement work, and maintain them in a condition that will adequately accommodate traffic. Perform no work that interferes or conflicts with traffic or existing access to the roadway surface until a plan for the satisfactory handling of traffic has been approved. Specific requirements for temporary closures, detours, part-width construction, and access to adjacent or intersecting facilities will be SHOWN ON THE DRAWINGS or described in the SUPPLEMENTAL SPECIFICATIONS. Post construction signs and traffic control devices in conformance with the "Manual on Uniform Traffic Control Devices" (MUTCD). Do not proceed with work on the project until all required signs are in place and approved.

Before shutting down any operations, take all necessary precautions to prevent damage to the project, such as temporary detours, approaches, crossings, or intersections; and provide for normal drainage and minimization of erosion. Leave all travelways in a condition suitable for traffic.

The government may permit use of portions of the project during periods when operations have shut down. All maintenance attributed to permitted use during periods of work suspension will be provided by the Government, except for maintenance needed through the fault or negligence of the contractor. The Contractor shall be responsible for any maintenance not attributed to use, or that is necessary during suspensions through the fault or negligence of the Contractor.

When SHOWN ON THE DRAWINGS or described in the SUPPLEMENTAL SPECIFICATIONS, road segments may be closed to all traffic during the period(s) when

construction is in progress. If any of the listed roads are to be closed during construction operations, give at least 14 days advance notice.

Unless otherwise provided, when construction activity is in progress and closure has not been provided for herin, delays may not exceed 30 minutes, in order to reasonably accommodate traffic.

156.04 Maintaining Roadways During Work.

(a) Add the following:

Do not construct detours outside of the clearing limits or use alternate route detours without the approval of the CO.

156.06 Limitations on Construction Operations.

Add the following:

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 SHOWN ON THE DRAWINGS, designated in the Road Order, or described in the SUPPLEMENTAL SPECIFICATIONS, when such use will not damage the roads or national forest resources, and when traffic can be accommodated safely.

156.08 Traffic and Safety Supervisor.

Delete this section in its entirety.

SUPPLEMENTAL SPECIFICATION

Section 203 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS

203.01 Work.

Delete and replace with the following:
This work consists of disposing of clearing slash, salvaging, removing, and disposing of buildings, fences, structures, pavements, culverts, utilities, curbs, sidewalks, and other obstructions.

203.05 Disposing of Material.

(a) Remove from project. Delete second and third sentence. Add: Culverts shall be removed from the project and disposed of off Government land.

Add the following disposal method:

(f) Scattering. Scatter construction slash outside the clearing limits without damaging

trees. Limb all logs. Stumps shall be severed from all trees, and set in an upright position with their root masses resting on the ground. Place logs and stumps away from trees, positioned so that they will not roll, and are not on top of one another. Limb and scatter other construction slash to a maximum height of 3-feet..

SUPPLEMENTAL SPECIFICATION

Section 209. STRUCTURE EXCAVATION AND BACKFILL

209.10 Backfill.

(a) General.

Add the following:

Do not place or backfill pipe that meets any of the following conditions until the excavation and foundation have been approved in writing by the CO:

- Embankment height greater than 6 feet at subgrade centerline.
- Installation in a protected stream course.
- Round pipe with a diameter of 48 inches or greater.
- Pipe arches with a span of 50 inches or greater.
- Any box culvert of structure other than pipe culverts.

209.10 Backfill.

(a) General.

Add the following:

Replace any pipe that is distorted by more than 5 percent of nominal dimensions, or that is ruptured or broken.

(b) Pipe culverts.

(1) Pipe culverts with compacted backfill.

Add the following:
On each side of the pipe there shall be an area of compacted material at least as wide as one diameter or span of the structure, with a minimum of two feet or a maximum of twelve feet. Compact the backfill without damaging or displacing the pipe. Complete the backfilling of the trench with suitable material.

209.11 Compacting.

Delete the subsection and add the following:

Compact backfill using designated compaction method A, B, or C:

Method A. Ensure that backfill density exceeds the density of the surrounding embankment.

Method B. Adjust the moisture content of the backfill material to a moisture content suitable for compaction. Compact each layer using appropriate compaction equipment until visual displacement ceases. For compaction under sections 252, 254, 255, 257, and 258 compact with a vibratory steel wheeled roller with a mass of at least 8 tons.

Method C. Determine optimum moisture content and maximum density according to AASHTO T 99 method C. Adjust the moisture content of the backfill material to a moisture content suitable for compaction. Compact material placed in all layers to at least 95 percent of the maximum density. Determine the in place density and moisture content according to AASHTO T 310 or other approved test procedures.

Table 209-1 Sampling and Testing Requirements

Add the following:

(2) Compaction methods (A) and (B) do not require AASHTO T-99 or T-310 test methods for foundation fill.

249 - Composite Road Construction

249.01 Description

This work consists of clearing and grubbing, excavation and embankment, and removal of all construction slash including all trees designated for removal. Excavation and embankment includes on site borrow excavation; drainage excavation; placing all excavated material; and shaping the roadway; including approaches, turnarounds, ditches and drainage dips. Construct the roadway in conformance with the dimensions "shown on the plans" or as staked on the ground.

249.02 Clearing and Disposal

Protect construction stakes and construction control markers. Remove or treat all trees, snags, downed timber, brush, and stumps within the clearing limits according to the following specifications.

(a) Merchantable Timber. Treat according to the Utilization Standards of the Timber Sale Contract.
(b) Unmerchantable Timber. Treat according to Subsection 249.02 Method A.
(c) Large Construction Slash. Treat construction slash larger than 3 inches in diameter and longer than 3 feet by one or more of the following methods.

(1) Method A. Construction slash shall be scattered outside the clearing limits without damaging trees outside the clearing area. Logs shall be placed away from trees, positioned so that they will not roll, not placed on top of one another or left leaning on other trees. Scattered stumps shall be placed in an upright position

(2) Method B. Stumps, roots, rocks, topsoil and other grubbing debris shall be concentrated in stump dump areas. Stump dump areas shall be located by the Engineer, be a maximum of 300 feet apart along the road centerline, and generally be located in natural depressions or tucked away behind denser vegetation or ground rises. Stump dumps will vary in size depending on each site, but shall not be closer than 10 feet outside of the clearing limits. Stump dump material shall be matted down as much as possible and shall not obstruct natural drainages.

(d) Small Construction Slash. Construction slash less than 3 inches in diameter and less than 3 feet in length may be incorporated into embankments so long as the material is distributed so that it does not result in concentrations or matting.

Immediately remove slash deposited in stream courses.

249.03 Pioneering

Do not undercut the final back slope during pioneer operations. Deposit material inside the roadway limits. Do not restrict drainages.

249.04 Grubbing.

Grub within the specified limits. Stumps outside the grubbing limits remain if cut no higher than 1 foot or one-third of the stump diameter, whichever is greater, above the original ground, measured on the uphill side, unless otherwise designated. Grub all stumps from the Roadway, or stumps that have less than 1 foot of cover, in the Fill slopes, providing they do not interfere with the placement or compaction of embankments.

249.05 Excavation and Embankment.

Construct the roadway to conform to the typical sections shown on the plans. Protect backslopes from being undercut. Embankment shall be placed in layers no more than 12 inches thick.

Locate and use borrow material, and remove and treat unsuitable excess material, as designated.

Place rocks that are too large to be incorporated in the embankment outside the traveled way on the downhill side such that they will not roll, obstruct drainage, or hinder roadbed use and maintenance.

Shape and finish the roadbed to the condition ordinarily accomplished by a crawler tractor with dozer blade to provide drainage of surface water. Do not permit individual rocks to protrude more than 4 inches above the subgrade of the roadbed. A motor grader finish is not required.

Observe a width tolerance of (+) 18 inches max. for the roadbed.

Where shown on the drawings or designated on the ground, offtake ditches shall be constructed to drain water away from the roadbed.

249.06 Erosion Control.

Perform erosin control measures, where shown on the drawings, or staked on the ground.

249.07 Method.
Measure the section 249 items listed in the schedule of items according to subsection 109.02

Payment

249.08 Basis.
The accepted quantities will be paid at the contract price per unit of measurement for Section 249 pay items listed in the Bid Schedule. Payment will be full compensation for the work prescribed in this section. See Subsection 109.05

301 - Untreated Aggregate Courses

301 Title Change.

Change the title to: **Section 301 Aggregate Courses**

301.01 Work.

Add the following:

Work includes producing aggregate by pit-run, grid rolling, screening, or crushing methods, or placing Government-furnished aggregate. Work may include additive mineral filler, or binder.

301.02 Material.

Add the following:

Bentonite	725.30
Calcium Chloride Flake	725.02
Lignon Sulfonate	725.20
Magnesium Chloride Brine or Calcium Chloride Liquid	725.02

301.03 General.

Add the following:

Written approval of the roadbed is required before placing aggregate.

For pit run or grid-rolled material, furnish material smaller than the maximum size. No gradation other than maximum size will be required for pit-run or grid-rolled material. For grid rolling, use all suitable material that can be reduced to maximum size. After processing on the road, remove all oversize material from the road and dispose of it as directed by the CO.

Provide additives or binder, if required, at the proportions specified.

Develop and use Government furnished sources according to Section 105.

If the aggregate is produced and stockpiled before placement, handle and stockpiled according to Section 320. Establish stockpile sites at locations approved. Clear and grub stockpile sites according to Section 201.

301.04 Mixing and Spreading.

Delete the first sentence of the first paragraph and add the following:

Ensure that aggregate and any required additives, water, mineral filler, and binder are mixed by the specified method except, if crushed aggregate products are being produced and mineral filler, binder, or additives are required, uniformly blend following crushing. Control additive proportions to 0.5 percent dry weight.

(a) Stationary Plant Method. Mix the aggregate with other required materials in an approved mixer. Add water during the mixing operation in the amount necessary to provide the moisture content for compacting to the specified density. After mixing, transport the aggregate to the jobsite while it contains the proper moisture content, and place it on the roadbed or base course using an aggregate spreader.

(b) Travel Plant Method. After placing the aggregate for each layer with an aggregate spreader or windrow-sizing device, uniformly mix it with other required materials using a traveling mixing plant. During mixing, add water to provide the necessary moisture content for compacting.

(c) Road Mix Method. After placing the aggregate for each layer, mix it with other required materials at the required moisture content until the mixture is uniform throughout. Mix aggregate, water, and all other materials until a uniform distribution is obtained.

Spread the aggregate in a uniform layer, with no segregation of size, and to a loose depth that will provide the required compacted thickness.

When placing aggregate over geotextile, place aggregate in a single lift to the full depth specified.

Route and distribute hauling and leveling equipment over the width and length of each layer.

301.05 Compacting

Delete and replace with the following:

Compact each layer full width. Roll from the sides to the center, parallel to the centerline of the road. Along curbs, headers, walls, and all places not accessible to the roller, compact the material with approved tampers or compactors.

Compact the aggregate using one of the following methods as specified:

> Compaction A. Operate spreading and hauling equipment over the full width of the travelway.
>
> Compaction B. Operate rollers and compact as specified in Subsection 204.11(a)(1).
>
> Compaction C. Moisten or dry the aggregate to a uniform moisture content between 5 and 7 percent based on total dry weight of the mixture. Operate rollers and compact as specified in Subsection 204.11(a)(1).

Compaction D. Compact to a density of at least 95 percent of the maximum density, as determined by AASHTO T 99, method C or D.

Compaction E. Removed.

Compaction F. Compact to a density of at least 95 per-cent of the maximum density, as determined by AASHTO T 180, method C or D.

Compaction G. Removed.

For all compaction methods, blade the surface of each layer during the compaction operations to remove irregularities and produce a smooth, even surface. When a density requirement is specified, determine the in place density and moisture content according to AASHTO T 310 or other approved test procedures.

301.06 Surface Tolerance.

Add the following:

Thickness and Width requirements:

The maximum variation from the compacted specified thickness is ½ inch. The compacted thickness is not consistently above or below the specified thickness and the average thickness of 4 random measurements for any ½ mile of road segment is within + ¼ inch of the specified thickness.

The maximum variation from the specified width will not exceed +12 inches at any point. The compacted width is not consistently above the specified width and the average of any four random measurements along any ½ mile of road segment is within +4 inches of the specified width.

301.08_mat_us_03_03_2005

Table 301-1: Add the following:

Table 301-1—Acceptance Sampling and Testing Requirements.

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Subbase & Base Courses L, M, N, O, P, Q, R	Measured and tested conformance (Subsection 106.04)	Plastic Limit	-	AASHTO T 90	1 per each 1,000 T	From the windrow or roadbed after processing	Yes	4 Hours

Table 301-1—Acceptance Sampling and Testing Requirements.

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Aggregate Width	Measured and tested conformance (Subsection 106.04)	Width	-	-	4 per each 0.5 mi	Roadbed after processing	-	4 Hours
Aggregate Thickness	Measured and tested conformance (Subsection 106.04)	Thickness	-	-	4 per each 0.5 mi	Roadbed after processing	-	4 Hours
Additive	Measured and tested conformance (Subsection 106.04)	Amount of Additive	-		1 per each 1,000 T	From the windrow or roadbed after processing	No	4 Hours

301.08_mat_us_10_14_2011

Table 301-1 Field Density Requirements.

Table 301-1: Delete laboratory and field density requirements for base, subbase, and surfacing and replace with the following:

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Base and Subbase	Measured and tested conformance (Subsection 106.04)	Moisture Density	---					
		Method C	—	AASHTO T 99	1 per type and source of material	Source of material	Yes	Before using in work
			—		"	"	"	"
		Method D	—	AASHTO T 180	"	"	"	"
			—		"	"	"	"
		Compaction	---					
		Method C, D	—	AASHTO T 310 or other approved procedures	1 per 500 t	In-place	—	Before placing the next layer
Surfacing	Measured and tested conformance (Subsection 106.04)	Moisture Density						
			---		"	"	"	Before using in work
		Method D	---	AASHTO T 180	"	"	"	"
			---		"	"	"	"
		Compaction						
		Method C, D	—	AASHTO T 310 or other approved procedures	1 per 500 t	In-place	—	Before placing the next layer

301.08(b) Plasticity Index.

Add the following to the first sentence:

"and under 703.05(c)(1)".

301.09 Measurement.

Replace the second paragraph with the following:

Measure aggregate by cubic yard compacted in place when payment is by contract quantities.

301.10 Payment

Delete the following:

adjusted according to Subsection 106.05

602 - Culverts and Drains

602.03 General.

Add the following:

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

602.06 Laying Plastic Pipe.

Delete the second paragraph and substitute the following:

Provide soil-tight bell and spigot joints for plastic pipe culverts.

SUPPLEMENTAL SPECIFICATION

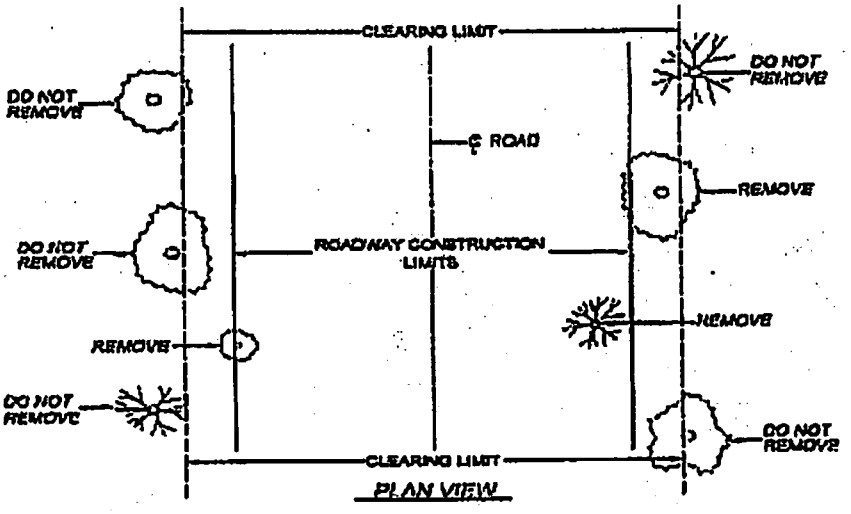
Section 635. – TEMPORARY TRAFFIC CONTROL

635.03 General.

(i) Delete.

635.27. Add

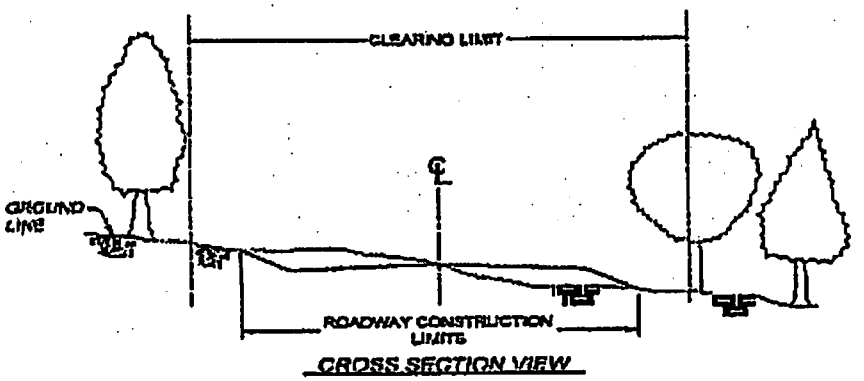
Payment will be considered incidental to other pay items in this contract.



PLAN VIEW

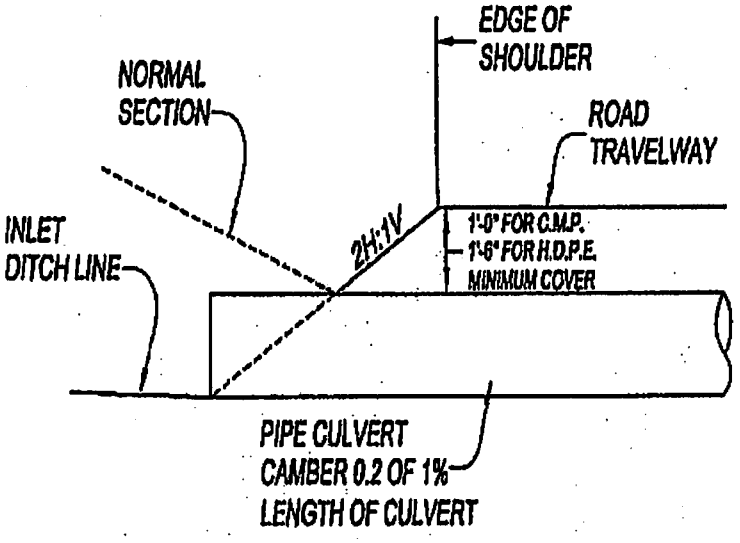
NOTE: TREES ON THE CLEARING LIMIT LINE ARE TO REMAIN UNLESS OTHERWISE DESIGNATED BY THE ENGINEER.

NOTE: YELLOW PAINT INDICATES TREES TO BE REMOVED.



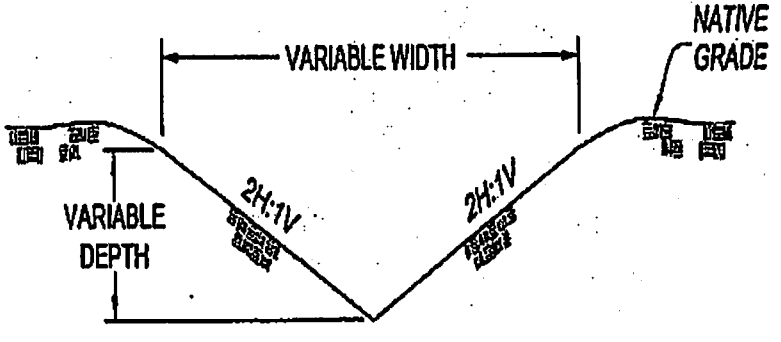
CROSS SECTION VIEW

CONSTRUCTION STAKING
NOT TO SCALE



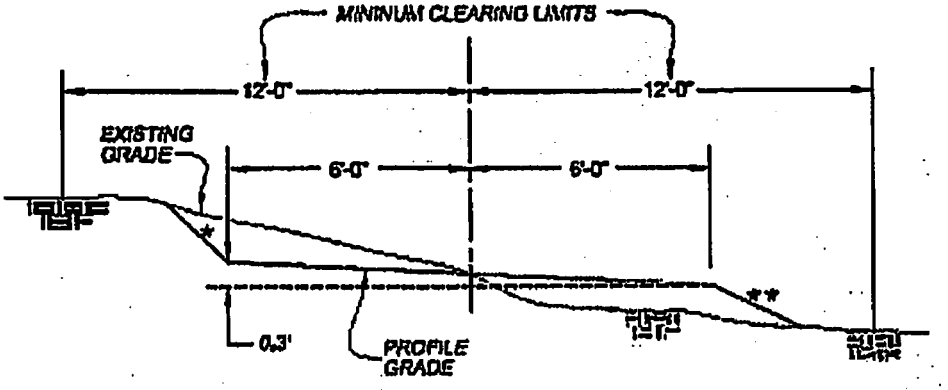
TYPICAL DITCH SECTION AT CULVERT INLET

NOT TO SCALE



TYPICAL INLET AND OUTLET DITCH SECTION

NOT TO SCALE

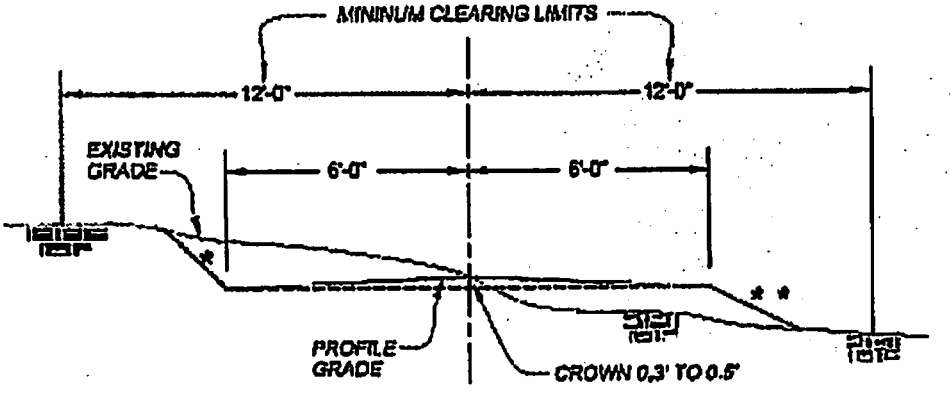


TYPICAL OUTSLOPE DETAIL

NOT TO SCALE

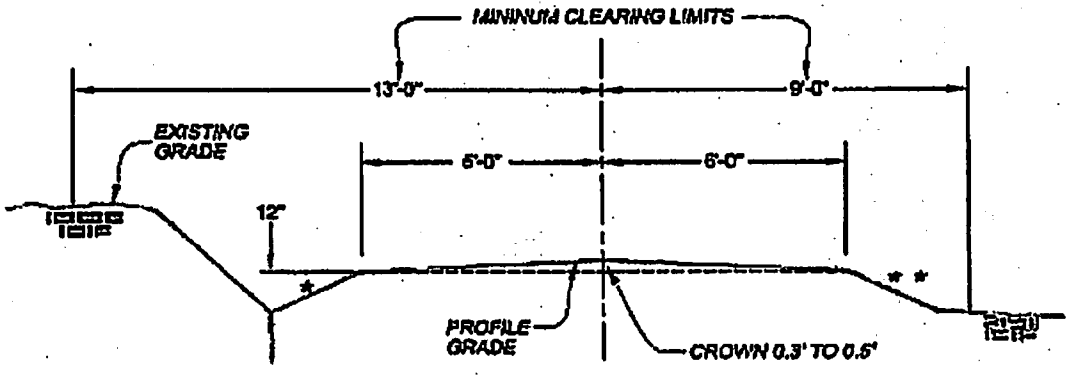
*BACKSLOPE AND DITCH SLOPES MAY VARY FROM 1H:1V TO 2H:1V WHEN CUTS ARE UNDER 2 FT. CUTS OVER 2 FT. SHALL HAVE SLOPES OF 2H:1V

**FILL SLOPES MAY VARY FROM 1-1/2H:1V TO 3H:1V



TYPICAL CROSS SECTION CROWN NO DITCHES

NOT TO SCALE



DITCH SECTION FILL SECTION

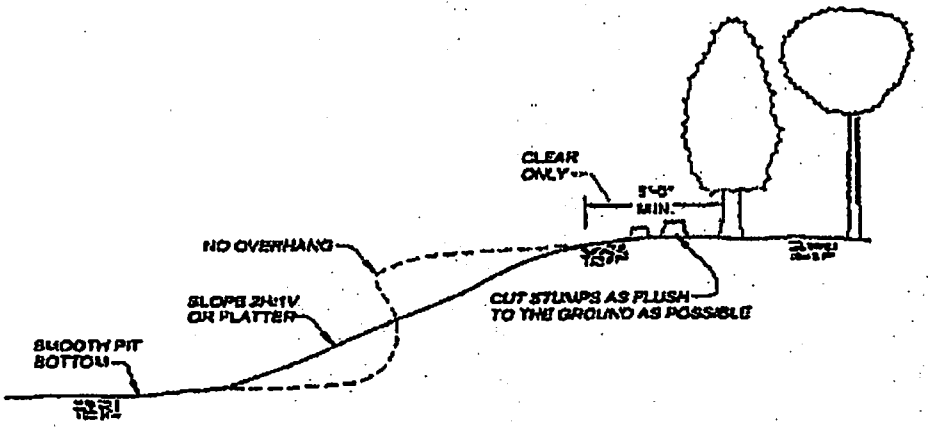
*BACKSLOPE AND DITCH SLOPES MAY VARY FROM 1H:1V TO 2H:1V WHEN CUTS ARE UNDER 2 FT. CUTS OVER 2 FT. SHALL HAVE SLOPES OF 2H:1V

**FILL SLOPES MAY VARY FROM 1-1/2H:1V TO 3H:1V

(SEE NARRATIVE FOR LOCATION)

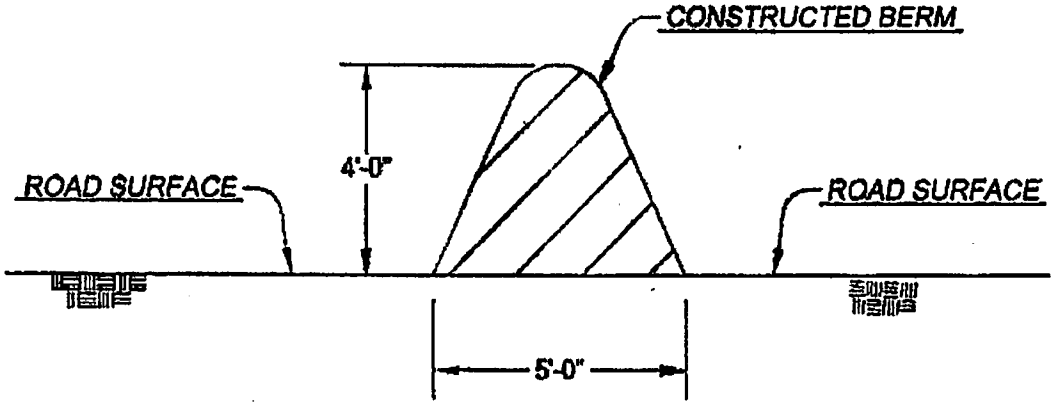
TYPICAL CROSS SECTION WITH 1 FOOT DITCH

NOT TO SCALE



NOTE: TOPS, STUMPS AND TRUNKS SHALL BE DISPOSED OF AS DIRECTED BY THE ENGINEER. STUMPS SHALL BE SEVERED FROM ALL TREES. ALL TIMBER SHALL REMAIN PROPERTY OF THE GOVERNMENT. OVERSIZED ROCK SHALL BE DISPOSED OF IN EXISTING PILES OR AS DIRECTED BY THE ENGINEER. SMOOTH PIT BOTTOM TO REDUCE THE COLLECTION OF WATER. HAUL ROADS SHALL BE MADE SMOOTH AND REPAIRED OF DAMAGE CAUSED BY THE CONTRACTORS HAULING OPERATION OR EQUIPMENT.

BORROW PIT CLEAN UP



NOTE:
BERM TO BE CONSTRUCTED AFTER SALE IS COMPLETED WITH ROCKS/BOULDERS, LOGGING SLASH, CULL LOGS, STUMPS AND EARTH. AS SHOWN IN ABOVE DRAWING, DO NOT DIG DITCHES ON EITHER SIDE OF BERM FOR BORROW MATERIAL TO CONSTRUCT BERM.

TYPICAL BERM DETAIL
NOT TO SCALE