

Department of Transportation
Federal Highway Administration
Central Federal Lands Highway Division

UT PFH 39-1(2)
Sevenmile-Gooseberry Road
Fish Lake National Forest
Sevier County, Utah

INVITATION FOR BID

This invitation for bid cites Federal Highway Administration
Specifications FP-96, Metric, 1996

Cut & Paste on Bid Submittal Envelope

OF-17 (cflhd7/03) FAR (48) CFR 53.214(g)
OFFER LABEL FAR (48) CFR 53.215-1(h)

NOTICE TO OFFEROR

1. THIS LABEL MAY ONLY BE USED ON ENVELOPES LARGER THAN 156 mm (6 ½ INCHES) IN HEIGHT AND 292 mm (11 ½ INCHES) IN LENGTH.
2. Print or type your name and address in the UPPER left corner of the envelope containing your offer.
3. Complete the bottom portion of this form and paste it on the lower left corner of the envelope, unless the envelope is 156 mm by 292 mm (6 ½ inches by 11 ½ inches) or smaller.

OFFER

SOLICITATION NO.
DATE FOR RECEIPT OF OFFERS
TIME FOR RECEIPT OF OFFERS
OFFICE DESIGNATED TO RECEIVE OFFERS

Contractor _____

Street Address _____

City/State/Zip _____

State: Utah

County: Sevier

Location: Fish Lake National Forest

Length: Schedule A = 8.166 km
Option X = 15.221 km
Option Y = 8.166 km

Type of Improvement: Road reconstruction, grading, drainage and base

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NOTICE TO BIDDERS AND OFFERORS

Before mailing your offer, please check the following:

- Your offer sets forth full, accurate, and complete information as required by this solicitation, including representations and certifications/bidder qualifications and acknowledgement of any amendments that may have been issued.
- You have completed the bid schedule and checked your bid figures, including calculations on your work sheets.
- You have provided the required minimum Bid Guarantee in proper form and amount including Power of Attorney Affidavit. See FAR Provision 52.228-1.
- You have completed and signed all required documents.

INVITATION FOR BID BOOKLET

It is the responsibility of the bidder to verify that this solicitation booklet is complete as listed in the table of contents. Also, the bidder is responsible for submitting all required forms and documents with the bid.

Applicable FAR provisions and clauses in this IFB are incorporated by reference or full text. FAR provisions and clauses incorporated by reference can be accessed on the Internet at www.arnet.gov/far/. Bidders are strongly encouraged to review the provisions and clauses referenced in this document before submitting a bid.

Bidders **must** fill out and submit with their offers: (1) this page completed, which indicates interest in partnering; (2) pages A-1 and A-2; (3) pages number B-1 through B-13; (4) Sections C and D in their entirety; and (5) page F-3 of the Contract Clauses indicating Bidder's option to waive the price evaluation preference for HUBZone Certified Firms. The remaining pages may be retained by the bidder for their information.

PARTNERING (See Subsection 103.05 of the FP)

Please indicate your interest in participating in Partnering by checking the appropriate blank below.

The offeror is interested in participating in partnering.

The offeror is not interested in participating in partnering.

NOTICE TO BIDDERS AND OFFERORS

BONDING

FAR Provision 52.228-1, Bid Guarantee, requires a bid guarantee of not less than 20 percent of the amount of the bid (see page A-3). A bid bond from a corporate surety must be from a surety acceptable to the Government as appearing on the Department of the Treasury's list of approved sureties. The bid bond must have an original signature and an embossed seal for the surety. If a Power of Attorney is required with the bid bond, an original, photocopy or facsimile of an original Power of Attorney is sufficient evidence of authority to bind the surety. If the Power of Attorney form contains any language stating that the Power of Attorney can be revoked at any time, the document must contain an original signature or an embossed seal in the certification section.

Small business concerns, including minority business enterprises, may obtain assistance in securing necessary bonding for this project by contacting the office of the Small Business Administration located in their State.

INDIVIDUAL SURETIES

See FAR contract clause 52.228-11, Pledges of Assets.

UTILIZATION OF SMALL BUSINESS, HUBZone SMALL BUSINESS, SMALL DISADVANTAGED BUSINESS, WOMEN-OWNED SMALL BUSINESS, VETERAN OWNED, AND SERVICE-DISABLED VETERAN OWNED SMALL BUSINESS CONCERNS SUBCONTRACTING PROGRAM

FAR Clause 52.219-8, Utilization of Small Business Concerns states that Prime Contractors afford small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns the maximum practicable opportunity to participate in performing contracts let by any Federal agency.

FAR Clause 52.219-9, Small Business Subcontracting Plan, Alternate I, requires that the large business concern who is the successful low bidder on a Federal project with an anticipated award amount exceeding \$1 million, is required to submit a subcontracting plan prior to contract award. The subcontracting plan expresses goals in terms of percentages of total planned subcontracting dollars for the use of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns as subcontractors. To view and download a sample plan for subcontracting requirements, visit <http://www.cflhd.gov/procurement/construction/reference-links.cfm>. If the apparent successful low bidder fails to submit a subcontracting plan acceptable to the CO within the allowable time, that bidder may be ineligible for award of the contract.

A list of currently known business concerns owned and controlled by socially and economically disadvantaged individuals and/or women-owned small business concerns that have indicated an interest in participating in highway construction is available at <http://www.ccr.gov>

NOTICE TO BIDDERS AND OFFERORS

PRICE EVALUATION PREFERENCE FOR HUBZONE SMALL BUSINESS CONCERNS

The award of this contract is subject to a 10% Price Evaluation Preference for HUBZone Small Business Concerns (SBC). Refer to FAR Clause 52.219-4. This price evaluation preference can apply to any qualified HUBZone SBC certified by the Small Business Administration. For any HUBZone SBC electing to waive the preference, see Page F-3 of this solicitation.

NOTICE TO POTENTIAL HUBZONE SBC BIDDERS

In the event this full and open competition results in a contract award to a qualified HUBZone SBC after a price evaluation preference, FAR Clause 52.236-1, Performance of Work by the Contractor, on page F-4, does not apply.

§126.700 of the Code of Federal Regulations (Title 13, Part 126, Subpart G), stated below, will replace the performance of work requirements stated in the above mentioned FAR clause.

A qualified HUBZone SBC receiving a contract under this solicitation for general construction must spend at least 50% of the cost of the contract incurred for personnel on its own employees or employees of other qualified HUBZone SBCs. This requirement may be met by expending at least 50% of the cost of the contract incurred for personnel on its employees or it may subcontract at least 35% of the cost of the contract performance incurred for personnel to one or more qualified HUBZone SBCs. A qualified HUBZone SBC prime contractor may not, however, subcontract more than 50% of the cost of the contract incurred for personnel to non-qualified HUBZone SBCs.

PROGRESS PAYMENTS

DFARS 204.7302, NASA, DOT and Treasury FAR Supplements, requires prospective bidders be registered in Central Contractor Registration (CCR) system prior to the award of a contract, basic agreement, basic ordering agreement, or blanket purchase agreement (Refer to FAR Clause 52.204-7, Central Contractor Registration). The DOT has partnered with the Department of Defense (DOD) to use the CCR system to obtain contractor financial electronic funds transfer (EFT) information.

FAR Clause 52.232-33, Payment by Electronic Funds Transfer -- Central Contractor Registration requires that the EFT information in the CCR must be accurate in order for contractors' invoices to be considered proper invoices for the purpose of prompt payment. Contractors must input and maintain their current EFT information.

To register in CCR, access the following DOD web site: www.ccr.gov .

FAR Clause 52.232-5, Payments Under Fixed-Price Construction Contracts, states reimbursement will be made for premiums paid by the Contractor to obtain performance and payment bonds as required under this contract. As specified in the Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP), Section 151, Mobilization, payment for performance and payment bond premiums will be included in the mobilization item and shall not be in addition to the contract price.

NOTICE TO BIDDERS AND OFFERORS

FAR Clause 52.232-27, Prompt Payment for Construction Contracts, states the due date for progress payments shall be the 14th day after receipt of a proper payment request by the Government's designated billing office. Bidders are advised to review Subsection 109.08, Progress Payments and Subsection 109.05, Scope of Payment of the FP concerning direct and indirect payments.

FACSIMILE OR TELEGRAPHIC BIDS ARE NOT AUTHORIZED FOR THIS SOLICITATION

Bids may be modified or withdrawn by facsimile or telegraphic notice, if such notice is received by the time specified for receipt of bids. The Government will not be responsible for ANY failure attributable to the transmission or receipt of telegraphic or facsimile data. See FAR Provision 52.214-5, Submission of Bids.

FAX Number to submit modifications to bids for this project is (801) 963-0093.

SOLICITATION, OFFER AND AWARD <i>(Construction, Alteration or Repair)</i>	1. SOLICITATION NO. DTFH68-08-B-00001	2. TYPE OF SOLICITATION <input checked="" type="checkbox"/> SEALED BID (<i>IFB</i>) <input type="checkbox"/> NEGOTIATED (<i>RFP</i>)	3. DATE ISSUED 10/16/2007	PAGE OF PAGES 1 OF 2
IMPORTANT - THE "OFFER SECTION ON THE REVERSE MUST BE FULLY COMPLETED BY OFFEROR.				
4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO.	6. PROJECT NO. UT PFH 39-1(2)		
7. ISSUED BY: FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS DIVISION 12300 WEST DAKOTA AVENUE, SUITE 167 LAKEWOOD, COLORADO 80228		CODE: 69050001	8. ADDRESS OFFER TO: Federal Highway Administration Utah Division Office Attn: Carlos Machado, Program Manager 2520 West 4700 South, Suite 9A Taylorsville, UT 84118-1880	
9. FOR INFORMATION CALL SEE PAGE A-3	A. NAME: SEE PAGE A-3		B. TELEPHONE NO. (<i>Include area code</i>) SEE PAGE A-3	
SOLICITATION				
<i>NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder."</i>				
10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS: CONSTRUCTION OF UT PFH 39-1(2), Sevenmile-Gooseberry Road project, IN STRICT ACCORDANCE WITH: <ol style="list-style-type: none"> 1. FEDERAL ACQUISITION AND TRANSPORTATION ACQUISITION REGULATIONS (<i>FAR & TAR</i>) 2. DEPARTMENT OF LABOR, DAVIS BACON MINIMUM WAGE RATES (<i>See Section G</i>) 3. SPECIAL CONTRACT REQUIREMENTS (<i>See Section I</i>) 4. PLANS 5. BID SCHEDULE (<i>See Section B</i>) 6. STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS, FP-96, (1996) 7. SUBCONTRACTING PLAN (IF APPLICABLE) <p>See Subsection 104.04 of the FP for governing order of precedence</p> <p style="text-align: right;">***ALL WORK MUST BE COMPLETED BY DECEMBER 1, 2009***</p>				
11. The Contractor shall begin performance within <u>10</u> calendar days and complete it within <u>*</u> calendar days after receiving <input type="checkbox"/> award <input checked="" type="checkbox"/> notice to proceed. The performance period is <input checked="" type="checkbox"/> mandatory <input type="checkbox"/> negotiable.				
12A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? (<i>If "YES," indicate within how many calendar days after award in Item 12B.</i>) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				12B. CALENDAR DAYS 10
13. ADDITIONAL SOLICITATION REQUIREMENTS: <ol style="list-style-type: none"> A. Sealed offers in original and <u>1</u> copies to perform the work required are due at the place specified in Item 8. by <u>2:00 p.m.</u> local time on <u>11/16/2007</u>. If this is a sealed bid solicitation, offers will be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due. B. An offer guarantee <input checked="" type="checkbox"/> is <input type="checkbox"/> is not required. C. All offers are subject to the (1) work requirements and (2) other provisions and clauses incorporated in the solicitation in full text or by reference. D. Offers providing less than <u>60</u> calendar days for Government acceptance after the date offers are due will not be considered and will be rejected. 				

OFFEROR (Must be fully completed by offeror)

14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code)	15. TELEPHONE NO. (Include area code)
CODE	16. REMITTANCE ADDRESS (Include only if different than Item 14)
FACILITY CODE	

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing with calendar days after the date offers are due. (Insert any number equal to or greater than the minimum requirement stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)

AMOUNTS	SEE INDIVIDUAL BID SCHEDULE(S)
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18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS
(The offeror acknowledges receipt of amendments to the solicitation - give number and date of each)

AMENDMENT NO.										
DATE										

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)	20B. SIGNATURE	20C. OFFER DATE
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AWARD (To be completed by Government)

21. ITEMS ACCEPTED:

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA
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24. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 27 (4 copies unless otherwise specified)	25. <input type="checkbox"/> OTHER THAN FULL AND <input type="checkbox"/> OPEN COMPETITION PURSUANT TO 15 U.S.C. 637() <input type="checkbox"/> 41 U.S.C. 253(c)()
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26. ADMINISTERED BY CODE: _____	27. PAYMENT WILL BE MADE BY FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION 12300 W. DAKOTA AVENUE, SUITE 167 LAKEWOOD, COLORADO 80228
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CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

<input type="checkbox"/> 28. NEGOTIATED AGREEMENT (Contractor is required to sign this document and return _____ copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all work requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.	<input type="checkbox"/> 29. AWARD (Contractor is not required to sign this document.) Your offer on this solicitation is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.
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30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN (Type or print)	31A. NAME OF CONTRACTING OFFICER (Type or print)
30B. SIGNATURE	30C. DATE
31B. UNITED STATES OF AMERICA BY	31C. AWARD DATE

ADDITIONAL SOLICITATION INFORMATION

Block 9: DATA AVAILABLE FOR REVIEW

The following materials are available electronically at www.cflhd.gov/procurement/construction/advertised-projects.cfm

Geotech Report – Dated March 2005

Geotech Addendum 1 – Dated August 2007

Hydraulic Report – Updated March 2005

The following materials are available electronically:

Manual of Uniform Traffic Control Devices for Streets and Highways, (Current Edition published by U.S. Government Printing Office found at <http://mutcd.fhwa.dot.gov> .

AASHTO Manuals found at <http://fhwapap04.fhwa.dot.gov/index.jsp> under the Standard Specifications and Supplements link.

FP-96, Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, 1996, found at <http://www.cflhd.gov/design/index.cfm#> under the Construction Specs tab.

Contractor Guidelines for Quality Control Plans and example QC Plans found at <http://www.cflhd.gov/design/index.cfm#> under the Construction Specs tab.

For amendments, bid results and tabulations or other procurement information please visit our website at www.cflhd.gov/procurement/construction

Block 13: A bid guarantee of not less than 20 percent of the amount of the bid or \$3 million, whichever is less, is required. If the bidder fails to provide the required bid guarantee in the proper form and amount, such failure may result in rejection of the bid. See FAR Provision 52.228-1, Bid Guarantee. If the bid guarantee is a bid bond, it must be submitted on Standard Form 24. Also refer to Subsections 102.03 and 102.04 of the FP for additional information.

Block 26: The Contractor shall submit invoices to:

FHWA, CFLHD, Project Engineer's Office (Address to be designated at preconstruction conference), for submission to the designated billing office shown in Block 7.

Final billing shall be submitted directly to the address shown in Block 7.

Other: The estimated price range of the project work is between \$8,000,000 and \$12,000,000.

For questions regarding access to the Federal Business Opportunities (FBO) website or how to obtain plans and other solicitation documents, please contact either DD Daly at (720) 963-3355 or Brenda McGehee at (720) 963-3353.

All technical and contracting questions regarding this solicitation must be submitted in writing to one of the following:

E-mail address: CFLContracts@fhwa.dot.gov
FAX Number: 720-963-3360
Mailing Address: Federal Highway Administration
Central Federal Lands Highway Division
Attention: Acquisition and Contracting
12300 W. Dakota Avenue, Suite 360
Lakewood, Colorado 80228

Responses will be provided to the individual questioner and also be posted on our website at <http://www.cflhd.gov/procurement/construction/advertised-projects.cfm> under the project link. Potential Offerors are advised to check this site on a regular basis to assure the most current and up-to-date information.

All amendments resulting from this solicitation will be uploaded to the FBO website at http://www.fbo.gov/spg/DOF/FHWA/68/postdatePrevDays_1.html and posted on our website at <http://www.cflhd.gov/procurement/construction/advertised-projects.cfm> under Current Solicitations.

**BIDDERS PLEASE BE ADVISED THAT QUESTIONS RELATIVE TO THIS
IFB WILL NOT BE ACCEPTED AFTER 4:00 P.M. MST ON November 13, 2007.**

Bid Schedule Instructions

BIDDERS, PLEASE NOTE: Before preparing the bid, carefully read the Solicitation Provisions.

This Bid Proposal is comprised of two schedules as follows:

Schedule A: road reconstruction, grading, drainage and base on 8.166 km of roadway.

Option X: road reconstruction, grading, drainage and base on 15.221 km of roadway.

Option Y: road reconstruction, grading, drainage and base on 8.166 km of roadway.

- Insert a numeric unit price for each pay item for which a quantity appears in the bid schedule and each option.
- When the words “Lump Sum” appear as a unit price, insert an amount for each lump sum pay item.
- Multiply the unit price by the quantity for each pay item and show the amount bid.
- Total all amounts bid for each pay item and show the Total on line provided on
Pages: B-8 for Schedule A, B-9 for Option X and B-10 for Option Y.
- Complete the Summary Sheet on Page B-11.

Field Laboratory Trailer – a base bid will be solicited using “Item 15401-0000, Contractor Testing. A bid item alternative, “Item 15401-0000, Contractor Testing, *using Government Furnished Field Laboratory*” has been included and requires pricing on the Bid Summary Page (B-11).

Evaluation Factors for Award

To be eligible for award of a contract, the bidder shall submit prices for each item necessary to complete all contract work in Schedule A, Option X and Option Y.

Evaluation for award of a contract will consist of Schedule A contingent on funds available. Accordingly, contract award will be made to the lowest responsible bidder conforming to the solicitation, provided funds are available.

Evaluation of each option does not obligate the Government to exercise either or both options (FAR Provision 52.217-3, Evaluation Exclusive of Options, April 1984). The Government has the right to exercise either or both options, depending on available funds, no later than 30 days after contract award (FAR Clause 52.217-7), Option for Increased Quantity-Separately Priced Line Item, March 1989).

Once the lowest responsible bidder has been selected for the schedule to be awarded, the Government will determine whether the alternative bid item for the schedule to be awarded will be included. If included, Bid Item 15401, Contracting Testing, will be replaced with Bid Item 15401-0000, Contractor Testing, *using Government Furnished Field Laboratory* in the awarded contract and the final contract award amount will be determined.

All work must be completed by December 1, 2009.

SCHEDULE A
UT PFH 39-1(2)
SEVENMILE-GOOSEBERRY ROAD
FISHLAKE NATIONAL FOREST

Bid Schedule

Project: UT PFH 39-1(2)
SEVENMILE GOOSEBERRY - PHASE 2

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
15101	Mobilization ALL	Lump Sum	\$ _____
15202	Slope, reference, and clearing and grubbing stakes 9.000 km	\$ _____	\$ _____
15203	Centerline re-establishment 9.000 km	\$ _____	\$ _____
15204	Drainage structure survey and staking 41 Each	\$ _____	\$ _____
15207	Grade finishing stakes 33.000 km	\$ _____	\$ _____
15209	Miscellaneous survey and staking 200 Hour	\$ _____	\$ _____
15210	Miscellaneous survey and staking ALL	Lump Sum	\$ _____
15401	Contractor testing ALL	Lump Sum	\$ _____
15501	Construction schedule ALL	Lump Sum	\$ _____
15702	Temporary turf establishment 20 ha	\$ _____	\$ _____
15703	Silt fence 7,800 m	\$ _____	\$ _____

Bid Schedule A

Project: UT PFH 39-1(2)
SEVENMILE GOOSEBERRY - PHASE 2

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
15709	Check dams (type B) 160 Each	\$ _____	\$ _____
15729	Excelsior log (erosion log) 4,000 m	\$ _____	\$ _____
15737	Check dams (type A) 280 m	\$ _____	\$ _____
20101	Clearing and grubbing 32.0 ha	\$ _____	\$ _____
20301H	Removal of pipe culverts 33 Each	\$ _____	\$ _____
20302V	Removal of fence 98 m	\$ _____	\$ _____
20401	Roadway excavation 356,000 m3	\$ _____	\$ _____
20402	Subexcavation 4,400 m3	\$ _____	\$ _____
20405	Select borrow 28,000 m3	\$ _____	\$ _____
20412	Waste 10,000 m3	\$ _____	\$ _____
20701AB	Earthwork geotextile type I-B 34,000 m2	\$ _____	\$ _____
20701BB	Earthwork geotextile type II-B 1,300 m2	\$ _____	\$ _____

Bid Schedule A

Project: UT PFH 39-1(2)

SEVENMILE GOOSEBERRY - PHASE 2

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
20701CB	Earthwork geotextile type III-B 600 m2	\$ _____	\$ _____
21001	Permeable backfill 7,200 m3	\$ _____	\$ _____
21101	Roadway obliteration 24,000 m2	\$ _____	\$ _____
25101A	Placed riprap class 1 220 m3	\$ _____	\$ _____
25101B	Placed riprap class 2 61 m3	\$ _____	\$ _____
25101C	Placed riprap class 3 500 m3	\$ _____	\$ _____
25101D	Placed riprap class 4 140 m3	\$ _____	\$ _____
25101D	Placed riprap class 4 (stabilization) 2,140 m3	\$ _____	\$ _____
25112A	Riprap ditch, class 1 (type 3) 860 m	\$ _____	\$ _____
25112A	Riprap ditch, class 1 (type 1) 3,130 m	\$ _____	\$ _____
25112B	Riprap ditch, class 2 (type 3) 140 m	\$ _____	\$ _____
25112B	Riprap ditch, class 2 (type 1) 630 m	\$ _____	\$ _____

Bid Schedule A

Project: UT PFH 39-1(2)

SEVENMILE GOOSEBERRY - PHASE 2

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
25112C	Riprap ditch, class 3 (type 3) 260 m	\$ _____	\$ _____
25112C	Riprap ditch, class 3 (type 1) 1,190 m	\$ _____	\$ _____
25206	Rockery wall 100 m2	\$ _____	\$ _____
25901	Geogrid reinforcement 2,380 m2	\$ _____	\$ _____
30101Z	Aggregate base grading C or D or E 27,000 t	\$ _____	\$ _____
60101	Concrete 22 m3	\$ _____	\$ _____
60201K	450 mm pipe culvert 100 m	\$ _____	\$ _____
60201M	600 mm pipe culvert 700 m	\$ _____	\$ _____
60201N	750 mm pipe culvert 83 m	\$ _____	\$ _____
60201P	900 mm pipe culvert 42 m	\$ _____	\$ _____
60201R	1200 mm pipe culvert 74 m	\$ _____	\$ _____
60206K	End section for 450 mm pipe culvert (metal) 12 Each	\$ _____	\$ _____

Bid Schedule A

Project: UT PFH 39-1(2)

SEVENMILE GOOSEBERRY - PHASE 2

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
60206M	End section for 600 mm pipe culvert (metal) 56 Each	\$ _____	\$ _____
60206N	End section for 750 mm pipe culvert (metal) 6 Each	\$ _____	\$ _____
60206P	End section for 900 mm pipe culvert (metal) 2 Each	\$ _____	\$ _____
60501	Underdrain system (fill) 970 m	\$ _____	\$ _____
60501	Underdrain system (cut) 1,440 m	\$ _____	\$ _____
60506GP	200 mm perforated collector pipe 530 m	\$ _____	\$ _____
60507G	200 mm outlet pipe 810 m	\$ _____	\$ _____
61001	Horizontal drain pipe 1,710 m	\$ _____	\$ _____
61101	Water system ALL	Lump Sum	\$ _____
61103ND	150 mm encasement pipe polyvinyl chloride (PVC) 147 m	\$ _____	\$ _____
61806	Barrier stone 37 Each	\$ _____	\$ _____
61901BC	Fence barbed wire type, 4 strand 200 m	\$ _____	\$ _____
61901FA	Fence temporary construction 600 m	\$ _____	\$ _____

Bid Schedule A

Project: UT PFH 39-1(2)

SEVENMILE GOOSEBERRY - PHASE 2

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
61902BJ	Gate metal type, 5400 mm width 5 Each	\$ _____	\$ _____
61903D	Cattle guard, 6.0 meter 2 Each	\$ _____	\$ _____
61903K	Cattle guard, 9.6 meter 2 Each	\$ _____	\$ _____
62201AE	Dump truck, 8 cubic meter minimum capacity 80 Hour	\$ _____	\$ _____
62201BA	Backhoe loader, 60 liter minimum rated capacity bucket (300 mm width) 40 Hour	\$ _____	\$ _____
62201CD	Wheel loader, 2 cubic meter minimum rated capacity 80 Hour	\$ _____	\$ _____
62201DA	Bulldozer, 50 kW minimum flywheel power 80 Hour	\$ _____	\$ _____
62201DD	Bulldozer, 120 kW minimum flywheel power 80 Hour	\$ _____	\$ _____
62201L	Motor grader 80 Hour	\$ _____	\$ _____
62201M	Hydraulic excavator 160 Hour	\$ _____	\$ _____
62301	General labor 200 Hour	\$ _____	\$ _____
62406	Placing conserved topsoil 44,000 m3	\$ _____	\$ _____

Bid Schedule A

Project: UT PFH 39-1(2)

SEVENMILE GOOSEBERRY - PHASE 2

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
62501B	Seeding, hydraulic method 19.0 ha	\$ _____	\$ _____
62504B	Mulching, hydraulic method 17.0 ha	\$ _____	\$ _____
62504BBFM	Mulching, hydraulic method, bonded fiber matrix 3.0 ha	\$ _____	\$ _____
63302	Sign installation 39 m2	\$ _____	\$ _____
63307B	Delineators type 2 80 Each	\$ _____	\$ _____
63315	Removing and resetting sign ALL	Lump Sum	\$ _____
63504C	Barricade type 3 114 m	\$ _____	\$ _____
63505B	Barricade type 2 40 Each	\$ _____	\$ _____
63506A	Cone type A 100 Each	\$ _____	\$ _____
63507	Construction sign 154 m2	\$ _____	\$ _____
63508	Drum 400 Each	\$ _____	\$ _____
63509	Flagger 3,000 Hour	\$ _____	\$ _____
63510	Pilot car 350 Hour	\$ _____	\$ _____

Bid Schedule A

Project: UT PFH 39-1(2)

SEVENMILE GOOSEBERRY - PHASE 2

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
63511	Temporary concrete barrier 1,000 m	\$ _____	\$ _____
63521B	Warning light type B 2 Each	\$ _____	\$ _____

TOTAL \$ _____

Submitted by: _____
Name of Bidder

OPTION X
UT PFH 39-1(2)
SEVENMILE-GOOSEBERRY ROAD
FISHLAKE NATIONAL FOREST

Bid Schedule

Project: UT PFH 39-1(2)
SEVENMILE GOOSEBERRY - PHASE 2

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
15101	Mobilization ALL	Lump Sum	\$ _____
15203C	Centerline verification and staking 16.000 km	\$ _____	\$ _____
40901GD	Surface treatment aggregates gradation D 2,330 t	\$ _____	\$ _____
40901GE	Surface treatment aggregates gradation E 950 t	\$ _____	\$ _____
40904AP	Emulsified asphalt grade HFMS-2P 360 t	\$ _____	\$ _____
40908BA	Fog seal grade CSS-1 or CSS-1h, SS-1 or SS-1h 90 t	\$ _____	\$ _____
63401AA	Pavement markings type A, solid 121,800 m	\$ _____	\$ _____

TOTAL \$ _____

Submitted by: _____
Name of Bidder

OPTION Y
UT PFH 39-1(2)
SEVENMILE-GOOSEBERRY ROAD
FISHLAKE NATIONAL FOREST

Bid Schedule

Project: UT PFH 39-1(2)
SEVENMILE GOOSEBERRY - PHASE 2

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
15101	Mobilization ALL	Lump Sum	\$ _____
40901GD	Surface treatment aggregates gradation D 1,330 t	\$ _____	\$ _____
40901GE	Surface treatment aggregates gradation E 540 t	\$ _____	\$ _____
40904AP	Emulsified asphalt grade HFMS-2P 230 t	\$ _____	\$ _____
40908BA	Fog seal grade CSS-1 or CSS-1h, SS-1 or SS-1h 60 t	\$ _____	\$ _____
63401AA	Pavement markings type A, solid 65,300 m	\$ _____	\$ _____
TOTAL			\$ _____

Submitted by: _____
Name of Bidder

BID SUMMARY SHEET
FOR
UT PFH 39-1(2)
SEVENMILE-GOOSEBERRY ROAD
FISHLAKE NATIONAL FOREST

SCHEDULE A BID TOTAL \$ _____

OPTION X BID TOTAL \$ _____

OPTION Y BID TOTAL \$ _____

BID SCHEDULE A, ALTERNATIVE BID
ITEM 15401-0000, CONTRACTOR TESTING,
USING GOVERNMENT FURNISHED FIELD
LABORATORY \$ _____

Continuation of Bid Schedule

**BUY AMERICAN ACT- CONSTRUCTION MATERIALS
UNDER TRADE AGREEMENTS**

It is understood and agreed that the materials and components listed in Subpart 25.1 of the FAR are a part of this contract and are deemed to be Domestic Construction Material for the purposes of this contract.

NOTE TO CONTRACTOR:

The following information and any applicable supporting data is required for evaluation of requests under FAR Clause 52.225-11 Paragraph (c) & (d) and FAR Provision 52.225-12 Paragraph (b).

Material and/or Component

Construction Material Description	Unit of Measure	Quantity	*Cost Delivered to Job Site
Foreign Construction Material			
Comparable Domestic Material			

Material and/or Component

Construction Material Description	Unit of Measure	Quantity	*Cost Delivered to Job Site
Foreign Construction Material			
Comparable Domestic Material			

[Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).]
[Please include name, address, telephone number and contact for suppliers surveyed. Attach copy of response; if oral, attach summary. Include all applicable supporting information.]*

HAZARDOUS MATERIALS

As required by FAR Clause 52.223-3, Hazardous Materials Identification and Safety Data - Alternate I, the apparent low bidder must submit prior to award a Material Safety Data Sheet (MSDS) for all hazardous materials that the bidder identifies in paragraph (b) of the FAR clause and defined under the latest version of Federal Standard No. 313.

Hazardous Material	Identification Number

USE OF RECOVERED MATERIALS ON FEDERAL LANDS HIGHWAY PROJECTS

Use of fly ash and ground granulated blast furnace slag and construction materials containing fly ash and ground granulated blast furnace slag on Federal Lands Highway projects:

- It is the policy of the United States Government that fly ash and ground granulated blast furnace slag and materials containing fly ash and ground granulated blast furnace slag shall have maximum practicable opportunity for incorporation into its construction projects.
- The Contractor agrees to investigate the use of fly ash and ground granulated blast furnace slag and materials containing fly ash and ground granulated blast furnace slag to the fullest extent consistent with the efficient performance of this contract. Both the contractor and the subcontractors are urged to seek out suppliers of fly ash and ground granulated blast furnace slag, cement and concrete containing fly ash and ground granulated blast furnace slag and to solicit bids for these materials.
- Names of firms that supply fly ash and ground granulated blast furnace slag and materials containing fly ash and ground granulated blast furnace slag are available from the American Coal Ash Association and the National Slag Association.

BID BOND (See instructions on reverse)			DATE BOND EXECUTED (Must not be later than bid opening date)			OMB NO. 9000-0045		
Public reporting burden for this collection of information is estimated to average 25 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the FAR Secretariat (MVR), Federal Acquisition Policy Division, GSA, Washington, D.C. 20405.								
PRINCIPAL (Legal name and business address)						TYPE OF ORGANIZATION (aX@ one)		
						<input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> PARTNERSHIP <input type="checkbox"/> JOINT VENTURE <input type="checkbox"/> CORPORATION		
						STATE OF INCORPORATION		
SURETY(IES) (Name and business address)								
PENAL SUM OF BOND				BID IDENTIFICATION				
PERCENT OF BID PRICE 20 PERCENT	AMOUNT NOT TO EXCEED				BID DATE	INVITATION NO. UT PFH 39-1(2)		
	MILLION(S)	THOUSAND(S)	HUNDRED(S)	CENTS	FOR (Construction, Supplies or Services)	CONSTRUCTION		
<p>OBLIGATION:</p> <p>We, the Principal and Surety(ies) are firmly bound to the United States of America (hereinafter called the Government) in the above penal sum. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally. However, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us. For all other purposes, each Surety binds itself, jointly and severally with the Principal, for the payment of the sum shown opposite the name of the Surety. If no limit of liability is indicated, the limit of liability is the full amount of the penal sum.</p> <p>CONDITIONS:</p> <p>The Principal has submitted the bid identified above.</p> <p>THEREFORE:</p> <p>The above obligation is void if the Principal - (a) upon acceptance by the Government of the bid identified above, within the period specified therein for acceptance (sixty (60) days if no period is specified), executes the further contractual documents and gives the bond(s) required by the terms of the bid as accepted within the time specified (ten (10) days if no period is specified) after receipt of the forms by the principal; or (b) in the event of failure to execute such further contractual documents and give such bonds, pays the Government for any cost of procuring the work which exceeds the amount of the bid.</p> <p>Each Surety executing this instrument agrees that its obligation is not impaired by any extension(s) of time for acceptance of the bid that the Principal may grant to the Government. Notice to the surety(ies) of extension(s) are waived. However, waiver of the notice applies only to extensions aggregating not more than sixty (60) calendar days in addition to the period originally allowed for acceptance of the bid.</p> <p>WITNESS:</p> <p>The Principal and Surety(ies) executed this bid bond and affixed their seals on the above date.</p>								
PRINCIPAL								
SIGNATURE(S)	1. <div style="text-align: right;">(Seal)</div>		2. <div style="text-align: right;">(Seal)</div>		3. <div style="text-align: right;">(Seal)</div>		Corporate Seal	
NAMES(S) & TITLE(S) (Typed)	1.		2.		3.			
INDIVIDUAL SURETY(IES)								
SIGNATURE(S)	1. <div style="text-align: right;">(Seal)</div>				2. <div style="text-align: right;">(Seal)</div>			
NAME(S) (Typed)	1.				2.			
CORPORATE SURETY(IES)								
SURETY A	NAME & ADDRESS				STATE OF INC.	LIABILITY LIMIT \$		Corporate Seal
	SIGNATURE(S)	1.			2.			
	NAMES(S) & TITLE(S) (Typed)	1.			2.			

CORPORATE SURETY(IES) (Continued)					
SURETY B	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT \$	Corporate Seal
	SIGNATURE(S)	1.	2.		
	NAMES(S) & TITLE(S) (Typed)	1.	2.		
SURETY C	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT \$	Corporate Seal
	SIGNATURE(S)	1.	2.		
	NAMES(S) & TITLE(S) (Typed)	1.	2.		
SURETY D	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT \$	Corporate Seal
	SIGNATURE(S)	1.	2.		
	NAMES(S) & TITLE(S) (Typed)	1.	2.		
SURETY E	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT \$	Corporate Seal
	SIGNATURE(S)	1.	2.		
	NAMES(S) & TITLE(S) (Typed)	1.	2.		
SURETY F	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT \$	Corporate Seal
	SIGNATURE(S)	1.	2.		
	NAMES(S) & TITLE(S) (Typed)	1.	2.		
SURETY G	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT \$	Corporate Seal
	SIGNATURE(S)	1.	2.		
	NAMES(S) & TITLE(S) (Typed)	1.	2.		

INSTRUCTIONS

1. This form is authorized for use when a bid guaranty is required. Any deviation from this form will require the written approval of the Administrator of General Services.
2. Insert the full legal name and business address of the Principal in the space designated "Principal" on the face of the form. An authorized person shall sign the bond. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representative is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved.
3. The bond may express penal sum as a percentage of the bid price. In these cases, the bond may state a maximum dollar limitation (e.g., 20% of the bid price but the amount not to exceed 3,000,000.00 dollars).
4. (a) Corporations executing the bond as sureties must appear on the Department of the Treasury's list of approved sureties and must act within the limitation listed therein. Where more than one corporate surety is involved, their names and addresses shall appear in the spaces (Surety A, Surety B, etc.) headed "CORPORATE SURETY(IES)." In the space designated "SURETY(IES)" on the face of the form, insert only the letter identification of the sureties.
 (b) Where individual sureties are involved, a completed Affidavit of Individual Surety (Standard Form 28), for each individual surety, shall accompany the bond. The Government may require the surety to furnish additional substantiating information concerning its financial capacity.
5. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Corporate Seal"; and shall affix an adhesive seal if executed in Maine, New Hampshire, or any other jurisdiction requiring adhesive seals.
6. Type the name and title of each person signing this bond in the space provided.
7. In its application to negotiated contracts, the terms "bid" and "bidder" shall include "proposal" and "offeror."

D-1
FEDERAL ACQUISITION REGULATION
SOLICITATION PROVISIONS

REPRESENTATIONS AND CERTIFICATIONS

Effective January 2005, offerors/bidders must submit Representations and Certifications online at www.bpn.gov. All offerors/bidders should submit/update this information at least annually. Refer to the Federal Acquisition Provision 52.204-8 *Annual Representations and Certifications* below. If you have previously accomplished your on-line registration and the NAICS code for this solicitation is different than the code listed in your online profile, please note the amended changes on the lines provided in the Provision below.

REFER TO CFLHD'S WEBSITE AT www.cflhd.gov/procurement-construction/reference-links.cfm FOR ON-LINE REGISTRATION INSTRUCTIONS

52.204-8 ANNUAL REPRESENTATIONS AND CERTIFICATIONS (JAN 2006)

- (a) (1) The North American Industry Classification System (NAICS) code for this acquisition is 237310.
(2) The small business size standard is 31.0 million or fewer.
(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

- (b) (1) If the clause at 52.204-7, Central Contractor Registration, is included in this solicitation, paragraph (c) of this provision applies.

(2) If the clause at 52.204-7 is not included in this solicitation, and the offeror is currently registered in CCR, and has completed the ORCA electronically, the offeror may choose to use paragraph (c) instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:

(i) Paragraph (c) applies.

(ii) Paragraph (c) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(c) The offeror has completed the annual representations and certifications electronically via the Online Representations and Certifications Application (ORCA) website at <http://orca.bpn.gov>. After reviewing the ORCA database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [*offeror to insert changes, identifying change by clause number, title, date*]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR CLAUSE	TITLE	DATE	CHANGE
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.

(End of Provision)



FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

BIDDER'S QUALIFICATIONS

INSTRUCTIONS: Answer all questions on this form inserting "none" or "not applicable" where appropriate. If more space is required attach additional sheets. Return the signed, dated and completed form with the bid to the address shown in the invitation for bids on or before the time set for bid opening. The prospective bidder shall provide any additional information requested by the Government during evaluation of the bids.

If the prospective bidder is a joint venture or general partnership, a separate Bidder's Qualifications form shall be provided individually for each joint venture participant or partner.

1. Name and address of business:

Name _____			DUNS Number (See FAR Provision 52.204-6)* _____
Street _____			Home Office Congressional District (Insert District #) * _____
City _____	State _____	Zip Code _____	* Necessary for Government reporting purposes only To obtain a Dun & Street number, call 800-333-0505.
County _____			
Telephone Number (Include Area Code) _____			
Fax Number (Include Area Code) _____			

2. a. Type of organization (check appropriate box):

<input type="checkbox"/> Individual	<input type="checkbox"/> Non-profit organization	<input type="checkbox"/> Corporation
<input type="checkbox"/> Partnership	<input type="checkbox"/> Joint Venture	<input type="checkbox"/> Incorporated in: _____

If a Foreign entity:

<input type="checkbox"/> Individual	<input type="checkbox"/> Non-profit organization	<input type="checkbox"/> Corporation
<input type="checkbox"/> Partnership	<input type="checkbox"/> Joint Venture	<input type="checkbox"/> Registered in: _____

b. Size and type of Business Concern (check appropriate boxes):

<input type="checkbox"/> Large Business Concern	<input type="checkbox"/> Small Disadvantaged Business Concern	<input type="checkbox"/> Emerging Small Business
<input type="checkbox"/> Small Business Concern	<input type="checkbox"/> Women-Owned Small Business	<input type="checkbox"/> SBA 8(a) Certified
<input type="checkbox"/> HUB Zone Business Concern	<input type="checkbox"/> Veteran Owned Business Concern	<input type="checkbox"/> Service-Disabled Veteran-Owned Business Concern

3. If a joint venture or general partnership:

- a. Provide the name under which the project will be bid, the home office address, and name of the principal who will represent the company with regard to this project if different from "1." above.

Principal _____

Business Name _____

Street _____

City _____ State _____ Zip Code _____

- b. Provide the name and home office addresses of each of the joint venture partners; indicate which partner is the sponsoring partner. Attach a separate sheet for additional partners.

Sponsoring Partner _____	Other Partner _____
Street _____	Street _____
City _____ State _____ Zip Code _____	City _____ State _____ Zip Code _____

4. Date organization established: _____

5. Name of succeeded business, if any: _____

6. How many years have you been in business as:

- a. General contractor ___ years.
- b. Subcontractor ___ years.

7. a. Furnish the following information concerning the owner, partners, officers and directors:

Name	Title	Percent of Business Owned	Years of Business Experience	
			Contracting	Other

- b. Attach resumes of these key personnel as well as the on-site project manager(s) and superintendent(s), and specifically identify the following:
- Present position, responsibility, and length of employment.
 - Amount and type of construction experience.
 - Amount and type of highway construction experience, including position, responsibility, and a brief project description of each period of employment.
 - Formal education and training, professional or technical registrations or licenses.

FEDERAL ACQUISITION REGULATIONSOLICITATION PROVISIONSInstructions to Bidders**52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)**

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also the full text of a solicitation provision may be accessed electronically at this address:

<http://www.arnet.gov/far/>.

(End of Provision)

- 52.204-5 WOMEN-OWNED BUSINESS OTHER THAN SMALL BUSINESS (MAY 1999)
- 52.211-6 BRAND NAME OR EQUAL (AUG 1999)
- 52.214-3 AMENDMENTS TO INVITATIONS FOR BIDS (DEC 1989)
- 52.214-4 FALSE STATEMENTS IN BIDS (APR 1984)
- 52.214-5 SUBMISSION OF BIDS (MAR 1997)
- 52.214-6 EXPLANATION TO PROSPECTIVE BIDDERS (APR 1984)
- 52.214-7 LATE SUBMISSIONS, MODIFICATIONS, AND WITHDRAWALS OF BIDS (NOV 1999)
- 52.214-18 PREPARATION OF BIDS - CONSTRUCTION (APR 1984)
- 52.214-19 CONTRACT AWARD - SEALED BIDDING - CONSTRUCTION (AUG 1996)
- 52.214-34 SUBMISSION OF OFFERS IN THE ENGLISH LANGUAGE (APR 1991)
- 52.214-35 SUBMISSION OF OFFERS IN U.S. CURRENCY (APR 1991)
- 52.217-3 EVALUATION EXCLUSIVE OF OPTIONS (APR 1984)
- 52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995)

**52.211-4 AVAILABILITY FOR EXAMINATION OF SPECIFICATIONS NOT LISTED
IN THE GSA INDEX OF FEDERAL SPECIFICATIONS, STANDARDS AND
COMMERCIAL ITEM DESCRIPTIONS (JUN 1988)**

Specifications cited in this solicitation which are not available for distribution may be examined at the following location:

Federal Highway Administration
Central Federal Lands Highway Division
12300 West Dakota Avenue, Suite 360
Lakewood, Colorado 80228
Contact: DD Daly @ (720) 963-3355 or Brenda McGehee @ (720) 963-3353

(End of Provision)

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a firm-fixed price contract resulting from this solicitation.

(End of Provision)

**52.222-23 NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE
EQUAL EMPLOYMENT OPPORTUNITY (FEB 1999)**

(a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation for each trade	Goals for female participation for each trade
5.1%	6.9%

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on

(1) its implementation of the Equal Opportunity clause,

(2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and

(3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the -

(1) Name, address, and telephone number of the subcontractor;

(2) Employer's identification number of the subcontractor;

(3) Estimated dollar amount of the subcontract;

(4) Estimated starting and completion dates of the subcontract; and

(5) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is Sevier County, Utah.

(End of Provision)

**52.225-12 NOTICE OF BUY AMERICAN ACT REQUIREMENTS-
CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (JAN 2005)**

(a) *Definitions.*

“Construction material,” “designated country construction material,” “domestic construction material,” and “foreign construction material,” as used in this provision, are defined in the clause of this solicitation entitled “Buy American Act—Construction Materials Under Trade Agreements” (Federal Acquisition Regulation (FAR) clause 52.225-11).

(b) *Requests for determination of inapplicability.* An offeror requesting a determination regarding the inapplicability of the Buy American Act should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of FAR clause 52.225-11 in the request. If an offeror has not requested a determination

regarding the inapplicability of the Buy American Act before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) Evaluation of offers.

(1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act, based on claimed unreasonable cost of domestic construction materials, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(4)(i) of FAR clause 52.225-11.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) Alternate offers.

(1) When an offer includes foreign construction material, other than designated country construction material, that is not listed by the Government in this solicitation in paragraph (b)(3) of FAR clause 52.225-11, the offeror also may submit an alternate offer based on use of equivalent domestic or designated country construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of FAR clause 52.225-11 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of FAR clause 52.225-11 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic or designated country construction material, and the offeror shall be required to furnish such domestic or designated country construction material. An offer based on use of the foreign construction material for which an exception was requested—

- (i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or
- (ii) May be accepted if revised during negotiations.

Alternate II (Nov 2006). As prescribed in [25.1102\(d\)\(3\)](#), add the definitions of “Bahrainian construction material” and “Mexican construction material” to paragraph (a) and substitute the following paragraph (d) for paragraph (d) of the basic provision:

(d) Alternate offers.

(1) When an offer includes foreign construction material, except foreign construction material from a designated country other than Bahrain or Mexico, that is not listed by the Government in this solicitation in paragraph (b)(3) of FAR clause 52.225-11, the offeror also may submit an alternate offer based on use of equivalent domestic or designated country construction material other than Bahrainian or Mexican construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of FAR clause 52.225-11 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of FAR clause 52.225-11 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic or designated country construction material other than Bahrainian or Mexican construction material. An offer based on use of the foreign construction material for which an exception was requested--

- (i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or
- (ii) May be accepted if revised during negotiations.

(End of Provision)

52.228-1 BID GUARANTEE (SEP 1996)

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The bidder shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.

(c) The amount of the bid guarantee shall be 20 percent of the bid price or \$3,000,000, whichever is less.

(d) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

(End of Provision)

52.233-2 SERVICE OF PROTEST (SEPT 2006)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the Government Accountability Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from:

Edward S. Hammontree, P.E.
Contract Development Engineer
Central Federal Lands Highway Division
12300 West Dakota Avenue, Suite 360
Lakewood, Colorado 80228

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of Provision)

52.252-3 ALTERATIONS IN SOLICITATION (APR 1984)

Portions of this solicitation are altered as follows:

None.

(End of Provision)

FEDERAL ACQUISITION REGULATION
CONTRACT CLAUSES
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52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also the full text of a clause may be accessed electronically at this address:

<http://www.arnet.gov/far/>.

(End of Clause)

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**52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK
(APR 1984)--ALTERNATE I (APR 1984)**

The Contractor shall be required to (a) commence work under this contract within 10 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than (See Standard Form 1442). The time stated for completion shall include final cleanup of the premises.

The completion date is based on the assumption that the successful offeror will receive the notice to proceed by the 70th day following the bid opening. The completion date will be extended by the number of calendar days after the above date that the Contractor receives the notice to proceed, except to the extent that the delay in issuance of the notice to proceed results from the failure of the Contractor to execute the contract and give the required performance and payment bonds within the time specified in the offer.

(End of Clause)

52.211-12 LIQUIDATED DAMAGES - CONSTRUCTION (SEPT 2000)

(a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of (See Page 41 of the FP-03, Table 108-1 under Subsection 108.04) for each calendar day of delay until the work is completed or accepted.

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

(End of Clause)

**52.222-39 NOTIFICATION OF EMPLOYEE RIGHTS CONCERNING
PAYMENT OF UNION DUES OR FEES (DEC 2004)**

(a) *Definition.* As used in this clause—

“United States” means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b) Except as provided in paragraph (e) of this clause, during the term of this contract, the Contractor shall post a notice, in the form of a poster, informing employees of their rights concerning union membership and payment of union dues and fees, in conspicuous places in and about all its plants and offices, including all places where notices to employees are customarily posted. The notice shall include the following information (except that the information pertaining to National Labor Relations Board shall not be included in notices posted in the plants or offices of carriers subject to the Railway Labor Act, as amended (45 U.S.C. 151-188)).

Notice to Employees

Under Federal law, employees cannot be required to join a union or maintain membership in a union in order to retain their jobs. Under certain conditions, the law permits a union and an employer to enter into a union-security agreement requiring employees to pay uniform periodic dues and initiation fees. However, employees who are not union members can object to the use of their payments for certain purposes and can only be required to pay their share of union costs relating to collective bargaining, contract administration, and grievance adjustment.

If you do not want to pay that portion of dues or fees used to support activities not related to collective bargaining, contract administration, or grievance adjustment, you are entitled to an appropriate reduction in your payment. If you believe that you have been required to pay dues or fees used in part to support activities not related to collective bargaining, contract administration, or grievance adjustment, you may be entitled to a refund and to an appropriate reduction in future payments.

For further information concerning your rights, you may wish to contact the National Labor Relations Board (NLRB) either at one of its Regional offices or at the following address or toll free number:

National Labor Relations Board
Division of Information
1099 14th Street, N.W.
Washington, DC 20570
1-866-667-6572
1-866-316-6572 (TTY)

To locate the nearest NLRB office, see NLRB's website at <http://www.nlr.gov>.

(c) The Contractor shall comply with all provisions of Executive Order 13201 of February 17, 2001, and related implementing regulations at 29 CFR part 470, and orders of the Secretary of Labor.

(d) In the event that the Contractor does not comply with any of the requirements set forth in paragraphs (b), (c), or (g), the Secretary may direct that this contract be cancelled, terminated, or suspended in whole or in part, and declare the Contractor ineligible for further Government contracts in accordance with procedures at 29 CFR part 470, Subpart B—Compliance Evaluations, Complaint Investigations and Enforcement Procedures. Such other sanctions or remedies may be imposed as are provided by 29 CFR part 470, which implements Executive Order 13201, or as are otherwise provided by law.

(e) The requirement to post the employee notice in paragraph (b) does not apply to—

(1) Contractors and subcontractors that employ fewer than 15 persons;

(2) Contractor establishments or construction work sites where no union has been formally recognized by the Contractor or certified as the exclusive bargaining representative of the Contractor's employees;

(3) Contractor establishments or construction work sites located in a jurisdiction named in the definition of the United States in which the law of that jurisdiction forbids enforcement of union-security agreements;

(4) Contractor facilities where upon the written request of the Contractor, the Department of Labor Deputy Assistant Secretary for Labor-Management Programs has waived the posting requirements with respect to any of the Contractor's facilities if the Deputy Assistant Secretary finds that the Contractor has demonstrated that—

(i) The facility is in all respects separate and distinct from activities of the Contractor related to the performance of a contract; and

(ii) Such a waiver will not interfere with or impede the effectuation of the Executive order;
or

(5) Work outside the United States that does not involve the recruitment or employment of workers within the United States.

(f) The Department of Labor publishes the official employee notice in two variations; one for contractors covered by the Railway Labor Act and a second for all other contractors.

The Contractor shall—

(1) Obtain the required employee notice poster from the Division of Interpretations and Standards, Office of Labor-Management Standards, U.S. Department of Labor, 200 Constitution Avenue, NW, Room N-5605, Washington, DC 20210, or from any field office of the Department's Office of Labor-Management Standards or Office of Federal Contract Compliance Programs;

(2) Download a copy of the poster from the Office of Labor-Management Standards website at <http://www.olms.dol.gov>; or

(3) Reproduce and use exact duplicate copies of the Department of Labor's official poster.

(g) The Contractor shall include the substance of this clause in every subcontract or purchase order that exceeds the simplified acquisition threshold, entered into in connection with this contract, unless exempted by the Department of Labor Deputy Assistant Secretary for Labor-Management Programs on account of special circumstances in the national interest under authority of 29 CFR 470.3(c). For indefinite quantity subcontracts, the Contractor shall include the substance of this clause if the value of orders in any calendar year of the subcontract is expected to exceed the simplified acquisition threshold. Pursuant to 29 CFR part 470, Subpart B—Compliance Evaluations, Complaint Investigations and Enforcement Procedures, the Secretary of Labor may direct the Contractor to take such action in the enforcement of these regulations, including the imposition of sanctions for noncompliance with respect to any such subcontract or purchase order. If the Contractor becomes involved in litigation with a subcontractor or vendor, or is threatened with such involvement, as a result of such direction, the Contractor may request the United States, through the Secretary of Labor, to enter into such litigation to protect the interests of the United States.

(End of Clause)

52.225-11 Buy American Act—Construction Materials under Trade Agreements (Nov 2006)

(a) *Definitions.* As used in this clause—

“Caribbean Basin country construction material” means a construction material that—

- (1) Is wholly the growth, product, or manufacture of a Caribbean Basin country; or
- (2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a Caribbean Basin country into a new and different construction material distinct from the materials from which it was transformed.

“Component” means an article, material, or supply incorporated directly into a construction material.

“Construction material” means an article, material, or supply brought to the construction site by the Contractor or subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

“Cost of components” means—

- (1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or
- (2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the construction material.

“Designated country” means any of the following countries:

- (1) A World Trade Organization Government Procurement Agreement country (Aruba, Austria, Belgium, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea (Republic of), Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, or United Kingdom);
- (2) A Free Trade Agreement country (Australia, Bahrain, Canada, Chile, El Salvador, Guatemala, Honduras, Mexico, Morocco, Nicaragua, or Singapore);
- (3) A least developed country (Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Djibouti, East Timor, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Laos, Lesotho, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Nepal, Niger, Rwanda, Samoa, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, Tanzania, Togo, Tuvalu, Uganda, Vanuatu, Yemen, or

Zambia); or

(4) A Caribbean Basin country (Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, British Virgin Islands, Costa Rica, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Montserrat, Netherlands Antilles, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, or Trinidad and Tobago).

“Designated country construction material” means a construction material that is a WTO GPA country construction material, an FTA country construction material, a least developed country construction material, or a Caribbean Basin country construction material.

“Domestic construction material” means—

- (1) An unmanufactured construction material mined or produced in the United States; or
- (2) A construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.

“Foreign construction material” means a construction material other than a domestic construction material.

“Free Trade Agreement country construction material” means a construction material that—

- (1) Is wholly the growth, product, or manufacture of a Free Trade Agreement (FTA) country; or
- (2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a FTA country into a new and different construction material distinct from the materials from which it was transformed.

“Least developed country construction material” means a construction material that—

- (1) Is wholly the growth, product, or manufacture of a least developed country; or
- (2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a least developed country into a new and different construction material distinct from the materials from which it was transformed.

“United States” means the 50 States, the District of Columbia, and outlying areas.

“WTO GPA country construction material” means a construction material that—

- (1) Is wholly the growth, product, or manufacture of a WTO GPA country; or
- (2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a WTO GPA country into a new and different construction material distinct from the materials from which it was transformed.

(b) Construction materials.

(1) This clause implements the Buy American Act (41 U.S.C. 10a-10d) by providing a preference for domestic construction material. In addition, the Contracting Officer has determined that the WTO GPA and Free Trade Agreements (FTAs) apply to this acquisition. Therefore, the Buy American Act restrictions are waived for designated country construction materials.

(2) The Contractor shall use only domestic or designated country construction material in performing this contract, except as provided in paragraphs (b)(3) and (b)(4) of this clause.

(3) The requirement in paragraph (b)(2) of this clause does not apply to the construction materials or components listed by the Government as follows:

1. None

[Contracting Officer to list applicable excepted materials or indicate “none”]

(4) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(3) of this clause if the Government determines that—

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the restrictions of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) Request for determination of inapplicability of the Buy American Act.

(1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(4) of this clause shall include adequate information for Government evaluation of the request, including—

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American Act applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(4)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American Act applies, use of foreign construction material is noncompliant with the Buy American Act.

(d) *Data*. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison

Construction Material Description	Unit of Measure	Quantity	Price (Dollars)*
-----------------------------------	-----------------	----------	------------------

Item 1:

Foreign construction material	_____	_____	_____
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Domestic construction material	_____	_____	_____
--------------------------------	-------	-------	-------

Item 2:

Foreign construction material	_____	_____	_____
-------------------------------	-------	-------	-------

Domestic construction material	_____	_____	_____
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[List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.]

[Include other applicable supporting information.]

[* Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).]

(End of clause)

Alternate I (Nov 2006). As prescribed in 25.1102(c)(3), add the following definitions of “Bahrainian construction material” and “Mexican construction material” to paragraph (a) of the basic clause, and substitute the following paragraphs (b)(1) and (b)(2) for paragraphs (b)(1) and (b)(2) of the basic clause:

“Bahrainian construction material” means a construction material that—

- (1) Is wholly the growth, product, or manufacture of Bahrain; or
- (2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in Bahrain into a new and different construction material distinct from the materials from which it was transformed.

“Mexican construction material” means a construction material that—

- (1) Is wholly the growth, product, or manufacture of Mexico; or
- (2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in Mexico into a new and different construction material distinct from the materials from which it was transformed.

(b) *Construction materials.* (1) This clause implements the Buy American Act (41 U.S.C. 10a - 10d) by providing a preference for domestic construction material. In addition, the Contracting Officer has determined that the WTO GPA and all the Free Trade Agreements except NAFTA apply to this acquisition. Therefore, the Buy American Act restrictions are waived for designated country construction materials other than Bahrainian or Mexican construction materials.

(2) The Contractor shall use only domestic or designated country construction material other than Bahrainian or Mexican construction material in performing this contract, except as provided in paragraphs (b)(3) and (b)(4) of this clause.

52.236-4 PHYSICAL DATA (APR 1984)

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

(a) The indications of physical conditions on the drawings and in the specifications are the result of site investigations by _____*.

(b) Weather conditions: Contact National Weather Service.

(c) Transportation facilities NA.

(d) _____*.

* See continuation of Standard Form 1442.

(End of Clause)

52.252-4 ALTERATIONS IN CONTRACT (APR 1984)

Portions of this contract are altered as follows: None.

(End of Clause)

General Decision Number: UT070029 09/07/2007 UT29

Superseded General Decision Number: UT20030029

State: Utah

Construction Type: Highway

County: Sevier County in Utah.

HIGHWAY CONSTRUCTION PROJECTS

Modification Number Publication Date

0	02/09/2007
1	07/06/2007
2	09/07/2007

ENGI0003-012 07/01/2007

	Rates	Fringes
Power equipment operators:		
Bulldozer, Over D7.....	\$ 22.78	10.86
Concrete Pump Operator.....	\$ 21.78	10.86
Cranes (over 35 tons).....	\$ 25.40	10.86
Cranes 35 tons and under.....	\$ 24.11	10.86
Crusher.....	\$ 23.78	10.86
Heavy Duty Repairman.....	\$ 22.78	10.86
Loader, 2 to 5 cu. yds.....	\$ 22.78	10.86
Lube and Service Engineer.....	\$ 22.78	10.86
Motor Patrol		
(Blade, Rough).....	\$ 22.78	10.86
(Blade, Smooth/Finish).....	\$ 22.78	10.86
Roller, Grade Compaction.....	\$ 19.91	10.86
Scraper, Single Engine.....	\$ 22.78	10.86
Self-Propelled Compactor (with/without dozer).....	\$ 19.91	10.86
Tractor Operator (Sheep's Foot Compactor).....	\$ 21.78	10.86
Truck Crane Oiler.....	\$ 21.00	10.86

* IRON0027-004 01/01/2006

	Rates	Fringes
IRONWORKER, REINFORCING.....	\$ 21.84	9.92

* LABO0295-002 07/01/2007

	Rates	Fringes
LABORER: Powderman.....	\$ 20.25	4.85

* SUUT1992-011 03/26/1992

	Rates	Fringes
CARPENTER.....	\$ 16.13	2.65
CEMENT MASON/CONCRETE FINISHER.....	\$ 14.40	2.41
Flagger.....	\$ 7.05	1.75
Ironworkers:		
Structural and Ornamental.....	\$ 16.65	3.65
Laborers:		
Concrete Laborer(Compaction, underground fine grading, operation of shute or bucket).....	\$ 13.25	2.79
General Laborer, Asphalt Raker, Fence Erection Laborer.....	\$ 13.25	2.79
Laborer, Power Tools (Cutting Torch, Operators of gasoline, electric or pneumatic tools, (e.g.) compressor, compactor, jackhammer, vibrator, concrete saw, chain saw, and concrete cutting torch).....	\$ 13.69	2.79
Pipelayer (Smooths sides and bottom of trenches, does rigging of pipe, assembles and installs concrete and tile pipe).....	\$ 13.25	2.79
PAINTER (Spray).....	\$ 14.05	1.62
Power equipment operators:		
Backhoe, Tire & Track over 5 cu. yds.....	\$ 21.05	7.08
under 5 cu. yds.....	\$ 18.36	6.82
Backhoe/Loader Combo.....	\$ 18.05	7.23
Batch Plant, Concrete/Asphalt.....	\$ 18.05	7.16
Bulldozer, D7 or less.....	\$ 18.93	7.05
Crane, 45-100 tons.....	\$ 18.24	6.93
Grade Setter.....	\$ 18.43	7.08
Loader, over 10 cu. yds.....	\$ 18.95	7.23
Loader, under 2 1/2 cu. yds.....	\$ 17.84	6.93
Paver Concrete/Asphalt.....	\$ 18.35	7.63
Roller, Asphalt.....	\$ 20.15	7.08
Screedman.....	\$ 17.78	7.21

Tractor, small rubber tire with attachments.....	\$ 20.15	7.08
Tractor, small rubber tire.....	\$ 17.84	7.19

Truck drivers:

Dump Trucks-Water Level Capacity (Bottom, End and Side), Including Dumpster Truck, Turnawagons, Turnarockers and Dumpcrete):		
14 cu. yds. and less than 35 cu. yds.....	\$ 17.31	5.72
8 cu. yds. and less than 14 cu. yds.....	\$ 18.99	5.72
Less than 8 cu. yds.....	\$ 16.68	5.96
Water, Fuel and Oil Trucks:		
2500 gallons to less than 4000 gallons.....	\$ 16.29	5.77
Oiler Spreader Operator where Boot Man is not required.....	\$ 17.64	5.94

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	Rates	Fringes
Truck drivers:		
Transit Mix Trucks - 0 cu. yds. to 8 cu. yds.....	\$ 16.415	7.52
8 1/4 cu.yds. to 14 cu.yds....	\$ 16.515	7.52
Transport Trucks		
Less than 10 tons.....	\$ 16.09	7.52
10 tons and less than 15 tons.....	\$ 16.24	7.52
15 tons and less than 20 tons.....	\$ 16.34	7.52
20 tons and over.....	\$ 16.49	7.52
Pickup.....	\$ 16.015	7.52
Water, Fuel and Oil Trucks		
4000 Gallons to less than 6000 Gallons.....	\$ 16.64	7.52

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations.

Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7).

Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board).

Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

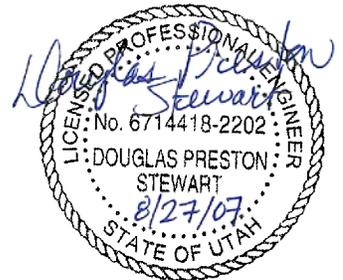
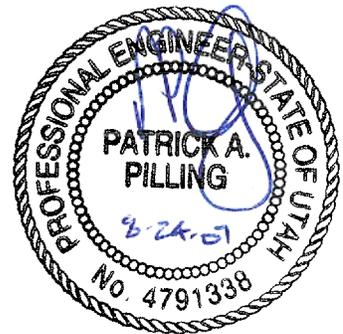
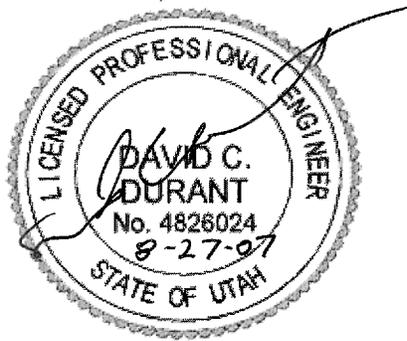
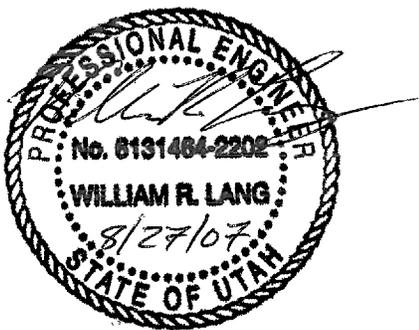
SPECIAL CONTRACT REQUIREMENTS

The following Special Contract Requirements amend and supplement the *Standard Specifications for Construction of Roads and Bridges, on Federal Highway Projects (FP-96)*, Department of Transportation, Federal Highway Administration.

SI (METRIC) TO ENGLISH CONVERSION FACTORS (approximate)

To the table on page iv, amend the second and third lines of the MASS portion of the table as follows:

Symbol	When You Know	Multiply By	To Find	Symbol
kg	kilograms	2.2046	pounds	lb
Mg (or "t")	megagrams (or "metric ton")	1.1023	short tons (2000 lb)	T



Section 101 - TERMS, FORMAT, AND DEFINITIONS

101.02 Specifications Format. Delete the third and fourth paragraphs and substitute the following:

Division 150 consists of project contract requirements that are applicable to all contracts. Work under Division 150 is paid for directly or indirectly according to Subsection 109.05 and the Section ordering the work. When there is no pay item in the bid schedule, no direct payment is made.

Divisions 200 through 600 consist of construction contract requirements for specific items of work. Work under these Divisions is paid for directly or indirectly according to Subsection 109.05 and the Section ordering the work.

101.04 Definitions. Add the following:

Certificate of Compliance - A signed statement by a person having legal authority to bind a company or supplier to its product, stating that the materials or assemblies furnished fully comply with the requirements of the contract.

Delete the twelfth paragraph and substitute the following:

Construction Limits - The limits along the left and right of the roadway that are intended to be disturbed during normal construction operations. These operations would include clearing and grubbing, slope rounding and minor work to accommodate features in the project. In general, the normal construction limits are equivalent to the clearing limits except when selective clearing may be required to remove such things as hazardous trees or minor clearing for drainage facilitation.

Slope Stake Limits - The catch point for the slope stakes at the top of cuts and the bottom (toe) of fills. These theoretical catches are generally included in the plans and are typically drawn on the plan and profile sheets. The designed slope catch points may be adjusted during the construction phase to accommodate such things as slope ratio changes, grade raises, line shifts, and/or drainage modifications.

Suitable Material - Add the following:

Suitable material may necessitate drying, the addition of moisture, reduction in size, screening, or other common methods of manipulation prior to use. Suitable material includes the classification(s) of materials, resulting R-values and other characteristics, for which the project was designed.

Unsuitable Material - Delete the text and substitute the following:

Material which the CO determines to be unsuitable for use in the construction of foundations, embankments, or roadbeds. Unsuitable materials generally include muck and soils with high organic contents.

Section 102 - BID, AWARD, AND EXECUTION OF CONTRACT**102.03 Bid Guarantee.**

(a) **General.** Delete the first sentence and substitute the following:

Submit a bid guarantee of 20 percent of the amount of the bid or \$3 million, whichever is less.

102.06 Performance and Payment Bonds. Delete the first paragraph including lines (a), (b), and (c), and substitute the following:

FAR Clause 52.228-15 - Performance and Payment Bonds - Construction is supplemented as follows. Furnish a performance bond and a payment bond in the penal amounts of 100 percent of the original contract price.

Section 103- SCOPE OF WORK

103.03 Value Engineering. Delete the second paragraph and substitute the following:

Before undertaking significant expenditures, provide the CO with a written description of the value engineering change proposal (VECP) concept. Within 14 days, the CO will inform the Contractor as to whether the concept appears to be viable or if the concept is unacceptable. If the CO indicates that the concept appears to be viable, prepare and submit the formal VECP proposal.

103.05 Partnering. Delete the last sentence of the fourth paragraph and substitute the following:

The Government's share will not exceed \$5,000.

Section 104 – CONTROL OF WORK

104.03 Specifications and Drawings. Add the following:

(c) **As-built working drawings.** Prepare and furnish as-built working drawings prior to final acceptance. The Government will provide one set of 280 x 430 millimeter contract drawings to be used exclusively for recording the as-built details of the project. Mark plans on title sheet "As-Built Plans". Use red ink to record the information described below.

Note all additions or revisions to the location, character and dimensions of the prescribed work shown on the contract drawings. Location changes are to be shown in the same

coordinate system used for the staking notes. Strikeout all details shown that are not applicable to the completed work. Check and initial all plan sheets that were incorporated into the completed work without change.

Retain the drawings at the project site and, as work progresses, continuously update them to reflect the as-built details. Upon request, make the drawings available to the CO to review for compliance with these specifications.

As a minimum, show the following information on the as-built drawings:

(1) Title Sheet

- (a) Name of contractor.
- (b) Name of Project Engineer.
- (c) Project completion date.
- (d) Revisions to project length.
- (e) Revisions to begin and end stations of project.
- (f) Revisions to index to sheets.
- (g) Strikeout any schedules or options not awarded.
- (h) A note stating "All work was constructed as designed unless otherwise noted."

(2) Typical section(s)

- (a) Revisions in dimensions.
- (b) Revisions in materials.
- (c) Revisions in station ranges.
- (d) Revisions to begin and end stations of project, and length of project.
- (e) Revisions to station equations.
- (f) Revisions to slope ratio and curve widening tables.
- (g) Revisions to any notes.

(3) Summary of Quantities and Tabulation Sheets

- (a) Revisions to all quantities, locations, notes/remarks, including totals.
- (b) Strikeout unused pay items.
- (c) Revisions to application rates.
- (d) Revisions to location, type, end treatments, riprap, skew, on drainage summary.

(4) Control Sheets

- (a) Show any control that was removed, destroyed, established, according to subsections 107.02, paragraph 2; 152.02, paragraph 2; and 152.03.
- (b) Use a unique naming convention for newly established control points. Do not reuse CFL control point numbers.

(5) Plan and profile and layout sheets

- (a) Revisions to the alignment; grades, elevations and stationing of intersection PIs; station equations and superelevation.
- (b) Major changes in the construction limits; particularly changes requiring additional design, additional right of way, or contract modifications. (Show information on plan and profile, layout sheets, and right of way plans if applicable.).
- (c) Changes in permanent rights of way caused by acquisition during construction. (Show information on plan and profile, layout sheets, and right of way plans if applicable). In addition, annotate any construction completed according to agreements made with landowners during construction.
- (d) Revisions in location, type and grade of road approaches.
- (e) Revisions in locations of sub-excavation and roadway obliteration.
- (f) Location, type and elevation of all constructed or relocated utilities, aerial and underground. Location, type and elevation of utilities not previously or inaccurately mapped, but encountered during construction, indicated as “approximate” or “as mapped”. (Show information on plan and profile and layout sheets and utilities plans if applicable).
- (g) Location, size and type of underdrains.
- (h) Location, number and type of horizontal, lateral, trench and blanket drains.
- (i) Revisions to culvert diameter, length, type, stationing, skew, riprap and end treatments.
- (j) Length of culvert extension, skew, and offset from centerline to the ends of extended culverts.
- (k) Channel changes.
- (l) Location of monuments and permanent references replaced according to subsection 107.02.
- (m) Location, length and type of fencing.
- (n) Location, length, stationing and type of walls.
- (o) Location, length, stationing and end treatment of roadside design features, including, but not limited to, guardrail, guardwall, signs, fences, gates, etc.
- (p) Revisions in location of pavement markings.
- (q) Revisions to parking areas or turnouts location.
- (r) Revisions in location, type and length of curbs, sidewalks, and accessible ramps.
- (s) Revisions to any notes.
- (t) Revisions to permanent erosion control measures.

(6) Standards, Details, and Specials

Revisions to notes, dimensions, locations, and materials.

No direct payment will be made for preparing and furnishing as-built working drawings. A retention of 1/10th of 1% of payment due will be withheld from project pay estimates if the Contractor has not kept current the designated set of as-built plans. In addition, a retention of 1/10th of 1% of the contract amount paid to date will be withheld at the end of the project until the set of as-built plans has been submitted to and accepted by the Project Engineer. The final completed as-built working drawings must be submitted to and accepted by the Contracting Officer before final acceptance will be granted on the project.

104.05 Load Restrictions. Delete the entire second paragraph and substitute the following:

Comply with all legal load restrictions when hauling material and equipment on public roads, including the newly constructed Phase 1 portion of the project, to and from the project. A special permit does not relieve the Contractor of liability for damage resulting from the moving of material or equipment.

Section 105 - CONTROL OF MATERIAL**105.01 Source of Supply and Quality Requirements.** Add the following:

Submit samples of materials for quality verification testing for materials required to conform to Sections 703, 704, and 705.

Materials containing petroleum-based solvents such as cutback asphalts and traffic paints may be restricted from use by local laws or ordinances in certain geographic areas. Upon presenting proof of such restrictions, alternate materials considered acceptable to the CO may be substituted for the materials specified in the contract.

105.02 Local Material Sources**(a) Government-provided sources.** Add the following:

The Gates Lake material source located off of Gates Lake Road, which intersects the mainline Gooseberry road approximate station 16+100, is available at the contractor's option. The material may be used to produce the following construction materials:

- Select Borrow
- Riprap
- Rock for Rockery Wall Rock
- Aggregate Subbase
- Aggregate Base

If the contractor elects to use the Gates Lake material source, submit a Material Source Development Plan to the CO. Refer to the Geotechnical report, Sevenmile-Gooseberry Road, station 10+010 to 23+654, Utah PFH 39-1(2), Sevier County, Utah March 2005, and addendum for material analysis and to develop the Material Source Development plan. The plan will be approved by the CO prior to performing work within the Government-provided source. The Material Source Development Plan will include the method to best optimize all the material to produce the material types required in the contract. The contractor will perform all work necessary to produce acceptable material including site development, preparation, erosion control and reclamation. The Material Source Development Plan must address, but is not limited to, the following:

- Reclamation plan
- Erosion control plan

- Optimization plan to utilize material source for applicable construction material types

The contractor will be responsible to ensure all materials meet the specifications prior to being incorporated into the project. Removal of materials will be authorized without payment of a royalty.

Add the following:

(d) Material Furnished by the Government. Obtain materials for item 301, aggregate base grading C, D or E from the Government-owned aggregate stockpiles located in the vicinity of the I-70 and Gooseberry – Sevenmile Road interchange. The government will acquire and make available to the contractor the right to utilize stockpiled material from the source described in the contract, together with the right of access to such property. Blending of individual stockpiles will be required to produce material meeting the Grading C, D or E requirements.

See Section 301 for approximate quantities. Use materials in their entirety for item 301 and if necessary, supplement any remaining item 301 material needs from a material source as determined by Contractor. Material from Government-owned stockpiles will be depleted prior to obtaining material from alternate sources.

Any material furnished by the Government will be made available to the Contractor at the points specified in the contract. The cost of handling and placing all such materials will be included in the contract price of the item in connection with which it is specified.

The contractor will perform all work necessary to produce acceptable material including erosion control and reclamation of the site. Regrade and seed areas where material has been removed from the stockpile site. Submit an Erosion Control plan and a Reclamation plan to the CO.

105.04 Storing and Handling Material.

Add the following after the third sentence of the second paragraph:

For Contractor-located, non-commercial staging, storing, and material handling areas, secure environmental clearances according to Subsection 107.10.

Add the following at the end of the subsection:

The Contractor may use the Gates Lakes Road material source with limits identified in the Special Use Permit, areas identified in the contract documents, and areas designated for obliteration for a staging area/storage of materials/stockpiles/ etc.

Section 106 - ACCEPTANCE OF WORK

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

Follow the requirements of FAR Clause 52.246-12 Inspection of Construction.

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
- (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.

Where sample/testing procedures make reference to AASHTO, ASTM, or other standards (designated as FLH T), the procedure as modified in the Materials Manual shall govern.

Where the specifications make reference to AASHTO Test T11, "Procedure B - Washing Using a Wetting Agent" shall be the procedure followed.

Delete references made to AASHTO T-238 or T-239 and substitute with ASTM D 2922 and D3017 or AASHTO T-310. When AASHTO Test T310 is referenced, "Direct Transmission Method of In-Place Nuclear Density and Moisture Content" shall be the procedure followed.

Reference to the Materials Manual means the Federal Lands Highway "Field Materials Manual, U.S. Department of Transportation, Federal Highway Administration," Publication No. FHWA-FL-91-002, dated March 1991, revised March 1994, and all amendments and supplements thereto. Copies are available from the Materials Engineer, Federal Highway Administration, Central Federal Lands Highway Division, Materials Branch, P.O. Box 25246, Denver, Colorado 80225-0246, Telephone: (720) 963-3537.

106.03 Certification. Add the following after the first paragraph:

Other than references in or to the FAR or Federal Law, when this contract references certifications; certificates; or certified documents, equipment or individuals, these references are not certifications within the meaning of Section 4301 of Public Law 104-106, the National Defense Authorization Act for Fiscal Year 1996. These references simply refer to documentation of peripheral contract requirements required to be validated by an individual or organization having unique knowledge or qualifications to perform such validation.

Add the following after the second paragraph:

See Table 106-3 for Schedule for Full or Partial Acceptance by Material Certification. Submit certification and sample of material for testing as required.

(a) Production certification. Delete items (2) through (5) and substitute the following:

(2) Lot number or other means of cross-referencing to the manufacturer's inspection and testing system

(3) Substantiating evidence that the material conforms to the contract quality requirements as required by FAR 46.105(a)(4), including all of the following:

(a) Test results on material from the same lot and documentation of the inspection and testing system

(b) Manufacturer's statement that the material complies with all contract requirements

(c) Manufacturer's signature or other means of demonstrating accountability for the certification

106.05 Statistical Evaluation of Work and Determination of Pay Factor (Value of Work).

(b) Acceptance. Delete the last sentence of the second paragraph and substitute the following:

If a lot is concluded or terminated with fewer than five samples, the samples will be combined with those of an adjacent lot. In the event there is no adjacent lot, the material will be accepted according to Subsection 106.04.

Delete the third paragraph and substitute the following:

If the current pay factor of a lot falls below 0.90, terminate production. The current lot is terminated at this point and the material represented by the lot will be accepted as provided in the following paragraphs. After the Contractor has taken effective actions to improve the quality of the production, production may resume and a new lot will begin.

Table 106-3
Schedule For Full or Partial Acceptance by Materials Certification

Section	Description	Material	Material Property or Specification	Frequency	
				Certification	Sample
306	Dust Palliative	Magnesium Chloride, Emulsified Asphalt, Lignin Sulfonate, Calcium Chloride	As specified	1 per shipment	First shipment
308	Minor Crushed Aggregate	Crushed Aggregate	Source, Quality and Gradation	1 per source	1 per source
402 and 417	Minor Hot Asphalt Concrete, Minor Cold Asphalt Mix	Aggregate Asphalt Mix	Source quality, Gradation, Stability, and Grade	1 per mix	1 per source
634 and 635	Permanent Pavement Markings, Temporary Traffic Control	634.02 as applicable, 635 as applicable	As specified	1 per source	-----
701	Hydraulic Cement	Portland Cement, Blended Hydraulic Cement and Masonry Cement	AASHTO M 85, M 240, and ASTM C 91	1 per shipment	1 per 100 tons
702.01	Asphalt Material	Asphalt Cement	AASHTO M 20, M 226, MP 1 or as applicable	1 per shipment	1 per shipment
702.02	Asphalt Material	Cut-back Asphalt	AASHTO M 81 or M 82 as applicable	1 per shipment	1 per shipment
702.03	Asphalt Material	Emulsified Asphalt	AASHTO M 140 or M 208 as applicable	1 per shipment	1 per shipment

702.05	Asphalt Material	Asphalt Materials used for Damproofing and Waterproofing Concrete Surfaces	As specified for each type of asphalt material	1 per shipment	-----
702.06	Recycling Agent	As specified	As applicable	1 per shipment	1 per shipment
702.08	Antistrip	As specified	As applicable	1 per shipment	-----
706	Concrete and Plastic Pipe	As specified	As applicable	1 per shipment	-----
707	Metal Pipe	Metal Pipe as specified	As applicable	1 per shipment	-----
708	Paint	As specified	As applicable	1 per batch\lot	1 sample for quantities >100L
709	Reinforcing Steel and Wire Rope	As specified	As applicable	1 per shipment	For 709.01 & 709.03 submit 3, 1-meter bars of each size and grade of bar furnished. 709.02 submit 1 2-meter length for each size furnished
710	Fence and Guardrail	As specified	As applicable	1 per shipment	-----
711	Concrete Curing Material and Admixtures	As specified	As applicable	1 per material source per material type	-----
712	Joint Material (all)	As specified	As applicable	1 per shipment	-----
713	Roadside Improvement Materials (all)	As specified	As applicable	1 per shipment	-----
714	Geotextile and Geocomposite Drain	As specified	As applicable	1 per shipment	1 per project per type
715	Piling	As specified	As applicable	1 per shipment	-----

716	Material for Timber Structures	Timber and Hardware	As applicable	1 per shipment	-----
717	Structural Metal	As specified	As applicable	1 per shipment	717.01(e) minimum 6 per shipment for each size used. 717.10 1 per project
718	Traffic Signing and Marking (all)	As specified	As applicable	1 per shipment	-----
720	Structural Wall and Stabilized Materials (all)	As specified	As applicable	1 per shipment per material type	-----
721	Electrical and Illumination Material (all)	As specified	As applicable	1 per shipment per material type	-----
722	Anchor Material	As specified	As applicable	1 per shipment per material type	-----
725	Miscellaneous materials	As specified	As applicable	1 per shipment per material type	-----

Section 107 - LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

Add the following:

107.01 Laws to be Observed:

Enter into the Forest Service Timber Settlement contract and pay to the Forest Service the lump sum price of \$934.00 as payment in full for all merchantable and sub-merchantable timber involved in clearing and grubbing and selective removal of trees from stations 19+450 through 20+450. Coordinate the contract through the Richfield District Forest Ranger at (435) 896-9233. This price represents the amount of timber taken from within the Fishlake National Forest only. The merchantable and sub-merchantable timber paid for and provided for above becomes the property of the Contractor. See Subsection 201.06.

Section 401 and 404 of the Clean Water Act.

The Federal Highway Administration has applied for the 404 permit and the 401 certification, the anticipated receipt date is prior to bid opening.

Comply with the terms and conditions of the 404 permit and with the terms and conditions specified in the 401 certification by the Utah Department of Environmental Quality. Comply with the terms and conditions of any permits that are issued for the performance of work within the jurisdictional waters of the U.S. **See Appendix D

National Pollutant Discharge Elimination System (NPDES)

Obtain a separate NPDES permit associated with industrial activity for any mobile asphalt and concrete plants that provide material for the project.

Implement the requirements of the (NPDES) for erosion control due to storm water runoff during construction as specified under the NPDES General Permit UTR100000 for Utah.

(a) General. Designate the erosion control/water quality supervisor according to Subsection 157.03 who will be responsible for implementing the SWPPP. The erosion control/water quality supervisor shall be familiar with the SWPPP procedures and practices and shall ensure that emergency procedures and the SWPPP are updated as needed and available for inspection.

(b) Preparation of SWPPP. At least three weeks prior to beginning construction, provide a draft SWPPP for the project, which includes the following information and forms:

- (1) Site Description
- (2) Expected sequencing of operations and construction schedule
- (3) Weather monitoring procedure

- (4) Descriptions and details of erosion and sediment controls, including dust control
- (5) Erosion Control Details and Quantities provided in the Plans
- (6) Controls for other potential onsite storm water pollutants
- (7) Spill prevention, control, and countermeasures plan (see (e) below)
- (8) Applicable specifications and Special Contract Requirements
- (9) Maintenance and inspection procedures and forms
- (10) Description of potential non-storm water discharges at the site
- (11) Notice of Intent (NOI) form submitted by CFLHD
- (12) Blank Notice of Termination (NOT) form
- (13) Contractor and Subcontractor Certification forms
- (14) Other record keeping forms and procedures
- (15) “Good housekeeping” practices and requirements

Modify the erosion and sediment control details, layout sheets, and quantities included in the plans if necessary to address project site conditions and proposed construction operations and include them in the SWPPP.

To comply with the General Permit, jointly review the draft SWPPP with the CO and agree to any needed revisions. Jointly approve and sign the revised SWPPP. The approved SWPPP will describe and ensure the implementation of practices, which will be used to reduce the pollutants in storm water discharges to assure compliance with the terms and conditions of the General Permit. When the SWPPP is approved and signed by the CO and Contractor, it will be the document in force on the project. Implement the SWPPP as required throughout the construction period.

Place the SWPPP and all updates in a three-ring binder so that completed inspection forms and other records may be inserted. Maintain a current copy of the SWPPP, including a copy of the General Permit, NOI, and all associated records and forms at the job site throughout the duration of the project. Make the SWPPP available for public inspection and for the inspection and use of the CO.

Maintain all related erosion control elements in proper working order throughout construction. Do not perform clearing and grubbing or earthwork until the SWPPP has been implemented.

Prior to construction, the Contractor and all subcontractors must sign certifications (included in the SWPPP) that they understand the requirements of the General Permit. Ensure that all subcontractors comply with the requirements of the General Permit under the supervision of the Contractor.

At the completion of the project, provide the CO with the SWPPP, including inspection forms and all data used in developing and modifying the SWPPP. The Contractor is also required to retain a copy for a period of at least three years from the date the site is finally stabilized.

(c) Notice of Intent (NOI). Post the NOI at the construction site bulletin board throughout the duration of the project.

(d) Erosion Controls. Implement soil erosion controls according to the SWPPP and Section 157.

(e) Controls for Other Pollutants. Implement controls to eliminate the discharge of pollutants (other than erodible soil) into storm water, such as pollutants from materials stored onsite. Include the implementation of spill prevention and material management controls and practices to prevent the release of pollutants into storm water. Include these controls and practices and storage procedures for chemicals, construction materials and other pollution prevention measures in the **Spill Prevention, Control, and Countermeasures** section of the SWPPP. In addition, contact the appropriate federal, state, and local authorities to determine the quantity of discharge that initiates reporting of petroleum products and hazardous material spills to those authorities. List the quantities in the SWPPP for all petroleum products and hazardous material used on the project.

A spill prevention, control and countermeasures plan is required if the volume of fuel or oil in a single container exceeds 2500 liters (600 gallons), or if the total storage volume of petroleum products at any one site exceeds 5000 liters (1,320 gallons).

Assist in efforts to clean up hazardous material spills as instructed by the CO or other authorities. Haul soil contaminated with smaller spills from the project site and dispose of according to applicable State and Federal laws.

In the event of any spill of a hazardous material contact the CO immediately and the following:

Department of Environmental Quality
Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870
(801) 538-6146

(f) “Good Housekeeping” Practices and Requirements. Specify the Contractor’s “good housekeeping” practices and requirements, including vehicle wash-down areas, onsite and offsite tracking control, protection of equipment storage and maintenance areas, sweeping of highways and roadways related to hauling activities, and procedures to prevent litter, construction debris, and construction chemicals exposed to stormwater from becoming a pollutant source for stormwater discharges in the SWPPP.

Take precautions to prevent pollution of streams, lakes, and reservoirs with fuels, oil, bitumens, calcium chloride, magnesium chloride, Portland cement, fresh Portland cement

concrete, raw sewage, muddy water, chemicals or other harmful materials. Do not discharge these materials into channels leading to any stream, lake or reservoir.

Locate machinery service and refueling areas away from streambeds and washes to reduce the possibility and minimize the impacts of accidental spills or discharges.

Remove non-waste materials, such as used cans, oils, machine and equipment parts, paint, hazardous materials, plastic and rubber parts, discarded metals, and building materials from the construction site and dispose of at an approved landfill.

Where the contractor's working area encroaches on a running or intermittent stream, construct and maintain adequate barriers to prevent the discharge of any contaminants into the stream.

Do not operate mechanical equipment in running streams unless approved in writing by the CO. Forging of running streams with construction equipment will not be permitted. Obtain approval from the CO to use temporary bridges or other structures whenever crossings are necessary.

Immediately clear streams, lakes and reservoirs of all work items, debris or other obstructions inadvertently placed thereby or resulting from construction operations.

(g) Inspections and Revisions to the SWPPP.

Conduct inspections at least once every 14 calendar days, before anticipated storm events (or series of storm events such as intermittent showers over one or more days) expected to cause a significant amount of runoff, and within 24 hours of the end of a storm that is 13 millimeters (0.5 inches) or greater. Inspection frequency can be reduced to at least one per month, if: 1) the site is temporarily stabilized, 2) runoff is unlikely due to winter conditions (site is covered with snow, ice, or the ground is frozen, or 3) during seasonal arid and semi-arid periods (areas with an average rainfall of 510 millimeters (20 inches) or less), with the exception of when rain is predicted and within 24 hours after the end of a storm event of 13 millimeters (0.5 inches) or greater. The area of inspection includes, but is not limited to, disturbed areas that have not been finally stabilized, areas used for storage of materials, locations where vehicles enter or exit the site, and all of the erosion and sediment controls that are included in the SWPPP. Where sites have been finally or temporarily stabilized, or during seasonal arid periods in arid areas (rainfall of 0-10 inches) and semi-arid areas (average rainfall of 10-20 inches) such inspection shall be conducted at least once every month. Monitor rainfall with a rain gauge accurate to the nearest 3 millimeters (0.125 inches) of rain.

Document the inspections on forms provided in the SWPPP. Sign inspection forms according to the requirements of the SWPPP and the General permit. Retain inspection forms onsite in the SWPPP notebook throughout the construction period.

Revisions to the SWPPP may be necessary during construction to make improvements or to respond to unforeseen conditions noted during construction or site inspections. For that purpose, specify in the SWPPP the mechanism whereby revisions may be proposed by the Contractor or the CO and incorporated into the plan, including review and approval of minor changes. Jointly approve and sign each revision to the SWPPP before implementation. Implement approved modifications within 7 calendar days following the date of the inspection when deficiencies or necessary corrections were first noted.

107.02 Protection and Restoration of Property and Landscape.

Add the following to the fourth paragraph:

Federal law prohibits the excavation, removal, damage, alteration, or defacement of any archeological resource on Federal or Indian lands. Control the actions of employees and subcontractors at the job site to ensure that any protected sites are not be disturbed or damaged. Cease work in the event of a newly discovered site until further authorization is obtained.

Cultural resources clearance has been obtained for the project. Should any prehistoric or historic artifacts or features be encountered, suspend all operations in the vicinity of the site and notify the CO and the Forest Archaeologist and continue operations in other areas. Appropriate action regarding the site will be determined in accordance with 36 CFR Station 800.11. Should the temporary suspension of work at the site result in any delays or additional work, compensation will be provided by an equitable adjustment under the Provisions of the contract.

When directed by the CO, install fencing or other barriers to delineate and protect specific areas of vegetation and other environmental features within or adjacent to the clearing limits to be protected, including, but not limited to existing wetland areas. Such work will be paid for in accordance with the applicable pay items. However, the fact that areas of vegetation and other environmental features are not delineated does not necessarily mean that these items are expendable. Perform all activities in such a manner that the least environmental damage will result. Bring any questionable areas or items to the attention of the CO for approval prior to removal or any damaging activity.

Add the following:

Locate and protect existing underground water lines crossing under the existing road near stations 15+820 and 15+920. Contact Sevier county if the water line goes out of service. Protect the existing spring box near station 15+900. If a minimum cover of 900 mm cannot be maintained above the waterlines, notify the CO and relocate the waterline as directed by the CO and according to Section 611 of the SCR's.

107.03 Bulletin Board. Add the following paragraph after Subsection 107.03(f):

(g) “Beck” poster, according to FAR Clause 52.222-39 Notification of Employee Rights Concerning Payment of Union Dues or Fees.

107.10 Environmental Protection. Delete this Subsection and substitute the following:

(a) Spills of Petroleum Products or Hazardous Materials. Properly clean up, mitigate, and remedy, if necessary, all spills of petroleum products, hazardous materials, or other chemical or biological products released from construction, fleet, or other support vehicles, or stationary sources. Respond in accordance with federal, state, and local regulations.

Immediately report to the CO any spill of petroleum products or a hazardous material. Report the spill to the appropriate federal, state, and local authorities, if the spill is a reportable quantity as determined by federal, state and local regulations.

(b) Water pollution. Do not operate mechanized equipment or discharge or otherwise place any material within the wetted perimeter of any waters of the U.S. within the scope of the Clean Water Act (33 USC § 1251 et seq.). This includes wetlands unless authorized by a permit issued by the U.S. Army Corps of Engineers according to 33 USC § 1344, and, if required, by any State agency having jurisdiction over the discharge of material into the waters of the U.S. In the event of an unauthorized discharge:

- (1) Immediately prevent further contamination;
- (2) Immediately notify appropriate authorities; and
- (3) Mitigate damages as required.

Comply with the terms and conditions of any permits that are issued for the performance of work within the wetted perimeter of the waters of the U.S.

Separate work areas, including material sources, by the use of a dike or other suitable barrier that prevents sediment, petroleum products, chemicals, or other liquid or solid material from entering the waters of the U.S. Use care in constructing and removing the barriers to avoid any discharge of material into, or the siltation of, the water. Remove and properly dispose of the sediment or other material collected by the barrier.

(c) Vehicles and equipment. All vehicles and equipment entering the project area must be clean of noxious weeds and free from oil leaks and are subject to inspection. Wash all construction equipment to thoroughly remove all dirt, plant, and other foreign material prior to entering the project. Particular attention must be shown to the under carriage and any surface where soil containing exotic seeds may exist. These efforts are critical to prevent the introduction and establishment of non-native plant species into the project area. Make arrangements for the CO to inspect each piece of equipment before entering the project. The CO will maintain records of inspections.

Equipment found operating on the project that has not been inspected, or has oil leaks will be shut down and subject to citation by the Utah Department of Health.

In general, when gasoline, diesel fuel, antifreeze, hydraulic fluid or any other chemical contained within the vehicle is released to the pavement or ground, proper corrective, clean-up, and safety actions specified in the SWPPP must be immediately implemented. All vehicles with load rating of 2 tons or greater should carry, at minimum, enough absorbent materials to effectively immobilize the total volume of fluids contained within the vehicle.

Repair oil leaks immediately on discovery. Do not use equipment that is leaking. Have oil pans and absorbent material in place prior to beginning repair work. Have the “on scene” capability of catching and absorbing leaks or spillages of petroleum products including antifreeze from breakdowns or repair actions with approved absorbent materials. Keep a supply of acceptable absorbent materials at the job site in the event of spills, as defined in the SWPPP. Sand or soil are not approved absorbent materials.

Use oil pans and absorbent materials to prevent leaks, spills and draining petroleum fluids from falling onto bare ground and paved surfaces during servicing of equipment. Dig up soils contaminated with such fluids, place in appropriate safety containers, and dispose of according to state and/or federal regulations.

Limit staging, stockpiles, or equipment parking and turnaround areas, within the designated construction limits and approved staging areas. The Contractor may use the Gates Lakes Road material source with limits identified in the Special Use Permit, areas identified in the contract documents, and areas designated as obliteration for a staging area/storage of materials/stockpiles/ etc. Install temporary fencing or protective barriers around the perimeter of the staging, stockpile, or equipment parking and turnaround areas. Do not allow equipment outside the designated construction limits and approved staging area limits under any circumstances without specific authorization by the CO.

Present the limits of the staging areas to the CO for approval prior to beginning staging operations.

Camping on Forest land will not be permitted.

All Contractor equipment will be properly muffled

(d) Environmental Clearances.

- (1) Contractor-Selected, Non-Commercial Areas.** Contractor-selected, non-commercial areas, include, but are not limited to material sources, disposal sites, waste areas, haul roads, and staging areas. (A commercial source is a current operating concern, which has in the recent past provided same-type materials or services).

These requirements do not apply for areas identified by the FHWA as having previously received clearance.

Prior to construction activities in contractor-selected, non-commercial areas, provide the following to the CO and the FHWA Environmental section (12300 West Dakota Avenue, Lakewood, CO 80228/Fax 720-963-3610):

(a) A report with documentation, according to the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, to determine if prehistoric or historic buildings, structures, sites, objects, or districts listed or eligible for listing in the National Register of Historic Places (NRHP) are present and if they will be affected by the proposed activity. Include information identifying the location, total land area, and type of activity proposed. The FHWA will review this documentation. If NRHP listed or eligible sites are present and/or will be affected, the FHWA will coordinate with the State Historic Preservation Officer (SHPO) and other parties, which will require the following time frames:

- (1) Coordination on a "no effect" determination may require 30 days or longer.
- (2) Coordination on eligibility and affects may require 45 days or longer.
- (3) Coordination on mitigation of adverse effects may require 60 days or longer.

(b) Written documentation that such activities will not affect any "Waters of the U.S." as defined by the U.S. Army Corps of Engineers. Provide documentation by an individual capable of performing wetland delineations according to the 1987 Corps of Engineers' manual. Documentation of effects to wetlands or other Waters of the U.S. will be submitted to the CO and to the FHWA Environment section for coordination with the Corps of Engineers. This coordination may require 45 days or longer. Substantial additional delays could result from wetland impacts.

(c) Written documentation that such activities will not affect any species protected under the Endangered Species Act (ESA). Provide documentation prepared by a biological specialist. The written documentation will include a "no affect," a "may affect-is not likely to adversely affect," or a "may affect-is likely to adversely affect," determination according to Section 7 of the Endangered Species Act. Submit the documentation to the CO and the FHWA Environmental section. If the determination is "may affect-is not likely to adversely affect" or "may affect-is likely to adversely affect," the FHWA will coordinate with the U.S. Fish and Wildlife Service (FWS), which will require the following time frames:

- (1) "May affect-is not likely to adversely affect" may require 45 days or longer.
- (2) "May affect-is likely to adversely affect" may require 150 days or longer.

Mitigation monitoring for wetlands and wildlife surveys for sensitive species (as determined in coordination with the USFWS and the USFS) will be conducted by FHWA personnel. There are 7 species and 2 avian guilds to be evaluated along the right-of-way (ROW): flammulated owl, boreal toad, sage grouse, Barnes pika, spotted bat, northern goshawk (nesting), three-toed woodpecker (nesting), cavity nesters, and riparian guild species. The USFS requires that surveys for toads and ANY construction work in or near wetlands be followed by disinfection. That is, the contractor shall disinfect people's boots and equipment between sites in order to halt the spread of Chytrid.

Contract time will not be increased due to the submittal and approval process for the above three items.

107.11 Protection of Forests, Parks, and Public Lands. Add the following:

The following Forest Service fire prevention plan involving emergency curtailment of operations is in effect on this project. The CO will order the suspension of burning and other operations when directed to do so by the Forest Service. No adjustment in the contract completion date will be made for partial or total suspensions of burning operations.

FIRE PLAN, RICHFIELD RANGER DISTRICT, FISHLAKE NATIONAL FOREST

1. SCOPE

The provisions set forth below outline the channels of responsibility for fire prevention and suppression activities and establish an attack procedure for fires within the Project Area. The provisions set forth below also specify conditions under which project activities will be curtailed or shut down. See Emergency Measures below.

2. RESPONSIBILITIES

A. Contractor

- (1) Shall abide by the requirements of this Fire Plan.
- (2) Shall take all steps necessary to prevent his/her employees, subcontractors and their employees from setting fires not required in construction of the project, shall be responsible for preventing the escape of fires set directly or indirectly as a result of project construction operations, and shall extinguish all such fires which may escape.
- (3) Shall complete the Contractor's Plan Regarding Personnel, and organization and will furnish the CO with copy prior to commencing work at the site. Shall currently advise the CO of any changes in personnel, equipment and organization as the changes occur. Shall revise 6.B to reflect current activities upon request of the CO.

B. Forest Service

- (1) District Ranger or his/her designated representative.
 - (a) Will inspect the project to assure compliance with the requirements of this Fire Plan.
 - (b) Will notify CO on the event of Contractor's non-compliance with this Fire Plan.

C. Federal Highway Administration

- (1) Contracting Officer
 - (a) Will accompany District Ranger or his/her representative on project inspection for compliance with provisions of this Fire Plan.
 - (b) Will notify Contractor to correct any discrepancies with regard to the requirements of the Fire Plan.

3. TOOLS AND EQUIPMENT

A. Contractor

- (1) Shall equip all diesel and/or gasoline-operated engines, both stationary and mobile, used in any project and camp operations with spark arresters that meet Forest Service standards set forth in the Forest Service Spark Arrester Guide. Spark arresters are not required on equipment powered by exhaust-driven turbo-charged engines.
- (2) Shall furnish sufficient fire tools of a kind and type satisfactory for fire suppression to equip persons engaged in Contractor's operations. Fire tools shall be used only for suppressing wildfires. Tools shall be stored in fireboxes provided by Contractor and readily available to employees. Each toolbox shall be marked "Tools for Fire Only," painted red and kept sealed.

In addition, the following hand tools and/or equipment are required as follows:

- (a) One fully charged fire extinguisher U.L. rated at 4 B:C or more on each truck, personnel vehicle, tractor, grader and other heavy equipment.
- (b) One shovel and one back-pack 19 liter water-filled tank with pump with each welder.

- (c) One shovel and one chemical pressurized fire extinguisher (full charged) for each gasoline-powered tool, including but not restricted to chain saws, soil augers, rock drills, etc. Fire extinguisher shall be 1/4 liter capacity by weight or larger.

(3) All tools and equipment required in (1) and (2) above shall be in good workable condition and shall meet the following U.S. Forest Service specifications for fire tools:

- (a) Shovels shall be size "O" or larger and not be less than 1100 mm in over-all length.

4. GENERAL

A. State Law. The Contractor must comply with all applicable laws of the State of Utah. These include, but are not limited to, the State Forestry and Fire Control Laws.

B. Permits Required. The Contractor must secure a special written permit from the District Ranger or his/her representative before engaging in any of the activities listed below.

(1) Blasting and Storage of Explosives and Detonators.

(2) Burning.

(3) Camp, Lunch and Warming Fires.

(4) Welding and Cutting.

C. Regulations for Burning. Before setting any fires whatsoever, the Contractor shall notify the Engineer of his intentions and check with the Forest Service to assure that the clearing index is high enough to allow burning. Special care shall be taken to prevent scorching or causing any damage to adjacent structures, trees, and shrubbery. Piles of material to be burned shall be of such size and so placed that during burning no damage shall result to adjacent objects. A 7,580 liter, or larger, water tanker must be available during all burning operations. All fires must be patrolled until dead out.

D. Storage and Parking Areas. Equipment service areas, parking areas and gas and oil storage areas shall be cleared of all flammable material for a radius of at least 15 meter. Small mobile or stationary engine sites shall be cleared of flammable material for a radius of at least 4.5 meters from such engine. Areas of the type described above must be approved in writing by the CO.

5. EMERGENCY MEASURES

An Activity Level based on fire conditions on the project area will be monitored by the Forest Service. The CO will be advised when conditions require the Contractor to either

restrict or shut down operations due to high fire activity levels. The CO will then require the Contractor, by written order, to confirm with these instructions.

6. REPORTING ALL WILD FIRES

A. Contractor’s forces (employees) shall report all fires to the following Forest Service facilities and /or personnel listed below:

<u>NAME</u>	<u>LOCATION</u>	<u>PHONE</u>
Richfield Interagency Fire Center	1660 South Industrial Richfield, Utah 84701	(435) 896-8404

B. Contractor’s Plan Regarding Personnel, Equipment, and Organization:

Contractor shall within 10 days after request or 10 days after notice to proceed, whichever is sooner, complete the following form relating to his key personnel, tools, equipment available for the purpose of fighting wild fires within and adjacent to the project area.

<u>Title</u>	<u>Name</u>	<u>Working Hours Address and/or Telephone</u>	<u>Off Working Hours Address and/or</u>

7. FIRE SUPPRESSION

The Forest Service, under 16 USC 572, is responsible for fire suppression activities. In cooperation with the Forest Service, the Contractor shall independently take all reasonable and practical action to prevent and suppress any forest fire in the project area. The Contractor’s independent initial fire suppression action on such fires shall be immediate and

shall include the use of all necessary personnel and equipment at the Contractor’s disposal in the project area.

Fire Suppression Costs - The Contractor’s obligation for cost of fire suppression vary according to the classification of fires as follows:

Operations Fires - An operations fire is a fire caused by the Contractor's operation other than a Negligent Fire. The Contractor agrees to reimburse the Forest Service for the cost of each Operations Fire, subject to a maximum of the amount of this contract. If the Contractor's actual cost exceeds the Contractor's obligation stated above, the Forest Service shall reimburse the Contractor for the excess.

Negligent Fire - A negligent fire is a fire caused by negligence or fault of the Contractor's operations including, but not limited to, one caused by smoking by persons engaged in Contractor's operations during the course of their employment, or during rest or lunch periods; or if Contractor's failure to comply with the requirements of this Fire Plan results in a fire starting or permits a fire to spread. Damages and the cost of suppressing negligent fires shall be borne by the Contractor.

Section 108 - PROSECUTION AND PROGRESS

108.01 Commencement, Prosecution, and Completion of the Work: Delete the second paragraph and substitute the following:

A preconstruction conference will be held after the contract is awarded and before beginning work. Seven days before the preconstruction conference, furnish three copies of the preliminary construction schedule according to Section 155.

Add the following:

Limit operations as follows:

- (a) All work for this project shall be completed within the time specified in the contract. The contractor shall perform work in a manner which will minimize impacts to the adjacent existing roadways.
- (b) Limitations of operations for temporary traffic control are specified in Section 156.
- (c) Limit clearing and grubbing and grading operations in accordance with Subsection 157.04.
- (d) Complete all excavation, embankment, and placement of select borrow prior to October 15th of each construction season for all disturbed areas. Aggregate base may be placed after October 15th. If required, grade, reshape, and add aggregate base to restore the design template in subsequent construction seasons at no cost to the government.
- (e) Construct embankment and roadway to top of select borrow from station 18+830 to 18+900 within the first construction season.
- (f) Perform no work except to maintain traffic control, erosion control devices, maintain the roadway driving surface, and to control dust during the Federal and local holidays and surrounding days listed in Section 156 of the SCR's.

(g) Construct rockery walls as late in the season as scheduling permits to avoid higher ground water levels.

(h) Night closures will not be allowed unless approved by County and Forest Service.

(i) Perform no work except to maintain traffic control, erosion control devices, maintain the roadway driving surface, and to control dust during the listed Federal and local holidays and surrounding days:

- Memorial Day Weekend: Noon Friday to 6:00 am Tuesday.
- Independence Day: Noon July 3 to 6:00 am July 5. If July 4th falls on a weekend, Friday, or Monday, do not work the weekend.
- Pioneer Day: Noon July 23rd to 6:00 am July 25. If July 24th falls on a weekend, Friday, or Monday, do not work the weekend.
- Labor Day Weekend: Noon Friday to 6:00 am Tuesday.
- Thanksgiving: Noon Wednesday to 6:00 am Monday.
- Christmas/New Years Holiday: Noon Dec. 23 to 6:00 am Jan. 2.
If December 23 or January 1 falls on a Monday, do not work the adjacent weekend and do not work on December 23. If January 1 falls on a Friday, do not work the weekend.

Schedule at least 2 non-work days out of every 14 calendar days. The selected non-work days do not need to be consecutive, but they must be scheduled. Provide at least 2 weeks notice before changing the scheduled days off.

Exemptions to scheduled days off may be granted by written approval from the CO for specific project operations and/or for periods of limited duration.

A Notice to Proceed must be issued before commencement of any work. The count of contract time will begin upon issuance of the Notice to Proceed and shall run continuously until final construction completion.

Install culvert pipes part-width at a time in order to maintain traffic continuously. Substantially complete excavation and backfill operations for installation of each culvert pipe before beginning such work on another culvert pipe.

108.04 Failure to Complete Work on Time. Delete the contents of the Table 108-1 and substitute the following:

Original Contract Price		Daily Charge
From More Than	To and Including	
\$ 0.00	\$ 2,000,000.00	\$ 600.00
2,000,000.00	5,000,000.00	1,600.00
5,000,000.00		1,800.00

Section 109 - MEASUREMENT AND PAYMENT**109.01 Measurement Methods.** Delete the first sentence and substitute the following:

Take or convert all measurement of work according to the International System of Units (SI), IEEE/ASTM SI 10.

Add the following after the third paragraph:

Submit measurement notes to the CO within 24 hours of performing the work. For on-going work, submit measurement notes weekly. When work is not complete, identify the measurement as being an interim measurement. Submit the final measurement when the installation is completed. Measurement notes form the basis of the Government's receiving report (see Subsection 109.08(d)). For lump sum items, submit documentation to support invoiced progress payment on a monthly basis.

Use an acceptable format for measurement records. As a minimum, include the following information in all records of measurement:

- (a) Project name and number
- (b) Contract item number
- (c) Date the work was performed
- (d) Location of the work
- (e) Measured quantity
- (f) Calculations made to arrive at the quantity
- (g) Supporting sketch and/or details as needed to clearly define the work performed and the quantity measured.
- (h) Names of persons measuring the work
- (i) Identification as to whether the measurement is interim or final
- (j) Signed certification statement by the persons taking the measurements, performing the calculations, and submitting them for payment that the measurement and calculations are correct to the best of their knowledge and that the quantity being measure is subject to direct payment for the identified item under the contract.

109.06 Pricing of Adjustments.**(a) Proposal.****(3) Cost or pricing data.** Delete the third paragraph and substitute the following:

Submit with the cost or pricing data a written proposal for pricing the work according to (1) above. See Table 15-2 following FAR Subpart 15.4 for guidance.

109.08 Progress Payments. Delete the text of this subsection and substitute the following:

FAR Clauses 52.232-5 - Payments under Fixed-Price Construction Contracts and 52.232-27 - Prompt Payment for Construction Contracts are supplemented as follows:

(a) General. Only invoice payments will be made under this contract. Invoice payments include progress payments made monthly as work is accomplished and the final payment made upon final acceptance. Only one progress payment will be made each month. No progress payment will be made in a month when the work accomplished results in a net payment of less than \$1,000. Full or partial progress payment will be withheld until a construction schedule or schedule update is submitted to and accepted by the CO.

(b) Closing date and invoice submittal date. The closing date for progress payments will be designated by the CO. Include work performed after the closing date in the following month's invoice. Submit invoices to the designated billing office by the 7th day after the closing date. Invoices received by the designated billing office after the 16th day following the closing date will not be accepted for payment processing that month. Include late, unprocessed invoice submittals in the following month's invoice.

(c) Invoice requirements. Submit the invoice to the government's designated billing office. Include the following items in the invoice:

- (1) The information required in FAR Clause 52.232-27(a)(2)(I) through (a)(2)(x).
- (2) A tabulation of total quantities and unit prices of work accomplished or completed on each pay item as of the monthly closing date. Do not include any quantities unless field note documentation for those quantities was submitted by the closing date. Do not include any work involving material for which test reports required under Sections 153 or 154 or certifications required by Subsection 106.03 are past due as of the closing date.
- (3) The certification required by FAR Clause 52.232-5(c) and, if applicable, the notice required by FAR Clause 52.232-5(d). Provide an original signature on the certification. Facsimiles are not acceptable.
- (4) If applicable, a copy of the notices that are required by FAR Clause 52.232-27(e)(5) and (g).
- (5) The amount included for work performed by each subcontractor under the contract.
- (6) The total amount of each subcontract under the contract.
- (7) The amounts previously paid to each subcontractor under the contract.

(8) Adjustments to the proposed total payment which relate to the quantity and quality of individual items of work. Adjustments for the following may be made by the Government after validation of the invoice.

- (a) Retent resulting from a failure to maintain acceptable progress.
- (b) Retent resulting from violations of the labor provisions.
- (c) Retent pending completion of incomplete work, other "no pay" work, and verification of final quantities.
- (d) Obligations to the Government such as excess testing cost or the cost of corrective work pursuant to FAR Clause 52.246-12(g).
- (e) Liquidated damages for failure to complete work on time.

(d) Government's receiving report. The Government's receiving report will be developed using the measurement notes received and accepted by the CO. Within 4 days after the closing date, the CO will be available by appointment at the Government's designated billing office to advise the Contractor of quantities and unit prices appearing on the Government's receiving report.

(e) Processing progress payment requests. No payment will be made for work unless field note documentation for the work was provided by the closing date.

(1) Invoices received by the 7th day following the closing date.

(a) *Proper invoices.* If the invoice meets the requirements of Subsection 109.08(c), and the quantities and unit prices shown on the contractor's invoice agree with the corresponding quantities and unit prices shown on the Government's receiving report, the invoice will be paid.

(b) *Defective invoices.* If the invoice does not meet the requirements of Subsection 109.08(c), or if any of the quantities or unit prices shown on the contractor's invoice exceed the corresponding quantities and unit prices shown on the Government's receiving report, the invoice will be deemed defective and the Contractor so notified according to FAR Clause 52.232-27(a)(2). Defective invoices will not be corrected by the Government and will be returned to the Contractor within 7 days after the Government's designated billing office receives the invoice.

Revise and resubmit returned invoices by the 18th day following the closing date. The CO will evaluate the revised invoice. If the invoice still does not meet the requirements of Subsection 109.08(c), the Contractor will be so notified according to FAR Clause 52.232-27(a)(2), and no progress payment will be made that month. Correct the deficiencies and resubmit the invoice the following month.

If the revised invoice meets the requirements of Subsection 109.08(c), but still had quantities or unit prices exceeding the corresponding quantities and unit prices shown on the Government's receiving report, the Government's data for that item or work will be used. The Contractor's invoice, as revised by the Government's receiving report, will be

forwarded for processing by the 23rd day following the closing date. The Contractor will be notified by the 23rd day following the closing date of the reasons for any changes to the invoice.

(2) Invoices received between the 8th and 16th day following the closing date.

(a) Proper invoices. If the invoice meets the requirements of Subsection 109.08(d), and the quantities and unit prices shown on the Contractor's invoice agree with the corresponding quantities and unit prices shown on the CO's receiving report, the invoice will be deemed proper and forwarded for processing within 7 days of receipt.

(b) Defective invoices. If the invoice does not meet the requirements of Subsection 109.08(d), the invoice will be deemed defective, the Contractor so notified according to FAR Clause 52.232-27(a)(2), and no progress payment will be made that month. Correct the deficiencies and resubmit the invoice the following month.

If the invoice meets the requirements of Subsection 109.08(d), but has quantities or unit prices exceeding the corresponding quantities and unit prices shown on the Government's receiving report, the Government's data for that item of work will be used. The Contractor's invoice, as revised by the Government's receiving report, will be forwarded for processing within 7 days of the Government's receipt of the invoice. The Contractor will be notified of the reasons for any changes to the invoice.

(f) Partial payments. Progress payments may include partial payment for material to be incorporated in the work, provided the material meets the requirements of the contract and is delivered on or in the vicinity of the project site or stored in acceptable storage places.

Partial payments for stockpiled manufactured material (aggregates) will be based on Contractor process control test results. If test results show the material to be out-of-specification, or in "reject" where statistical evaluation procedures are used, no payment for stockpiled materials will be made.

Partial payment for material does not constitute acceptance of such material for use in completing items of work. Partial payments will not be made for living or perishable material until incorporated into the project.

Partial payments for material will not exceed the lesser of:

- (1) 80 percent of the contract bid price for the item, or
- (2) 100 percent of amount supported by copies of invoices submitted.

The quantity paid will not exceed the corresponding quantity estimated in the contract.

109.09 Final Payment. Delete the first sentence and substitute the following:

FAR Clause 52.232-5, Payment under Fixed-Price Construction Contracts, and FAR Clause 52.232-27 - Prompt Payment for Construction Contracts are supplemented as follows:

Section 152 - CONSTRUCTION SURVEY AND STAKING

Construction Requirements

152.02 General. Delete the first paragraph and substitute the following:

The Government will furnish to the Contractor one copy of each of the following information:

- (a) 3D coordinates and offset distance from centerline for subgrade and surface course finishing stakes at 20 meter intervals and miscellaneous intermediate stations.
- (b) Slope stake books containing centerline grade and slope staking information at 20 meter station intervals and miscellaneous intermediate stations.
- (c) Computer listings containing: horizontal alignment, vertical alignment, earthwork quantities, and staking details showing superelevation template data and slope information.

The Government will provide files for downloading 3D data. Following is the information that will be provided electronically:

- (a) 3D coordinates of traverse control points.
- (b) 3D coordinates of grade finishing stakes.
- (c) 3D coordinates of slope stakes.

The Government will perform the following:

- (a) Establish basic survey control points for vertical and horizontal control of the project.
- (b) Set centerline stakes, take cross-sections, and set reference hubs at 20 meter intervals and miscellaneous intermediate stations.

Delete the second sentence of the second paragraph and substitute the following:

Reestablish missing terrain cross-section reference hubs, control points, and stakes before slope staking begins.

Add the following to the fourth paragraph:

When necessary to relocate or reestablish U.S.G.S. bench marks or control points, do so according to the current procedures of the United States Geologic Survey..

Add the following:

Furnish a practicable schedule of staking activities with the construction schedule submitted according to Section 155. Include the dates and sequence of staking requirements.

152.03 Survey and Staking Requirements.

(b) Roadway cross-sections. Delete the text of this paragraph and substitute the following:

Take roadway cross-sections when required to re-catch slope stakes according to 152.03(c). Take roadway cross-sections normal to centerline. Along each cross-section, measure and record points at breaks in topography, but no farther apart than 5 meters. Space the points so that the maximum variation in vertical distance from a straight line between two consecutive points and the ground line does not exceed ± 0.2 meters. Measure and record points to at least the anticipated slope stake and reference locations. Reduce all cross-section distances to horizontal distances from centerline.

Submit one printed copy and one electronic file of the cross-sectional data in GEOPAK ASCII text format: station, offset, elevation, north coordinate, east coordinate, p-code text format. Include a file header that defines the data type of the column. (Contact Central Federal lands Survey Manager, at 303-716-2078 for more information on the format.) Include one shot per line in the submitted files showing the following data:

Station (nominal), offset from centerline, elevation, north coordinate, east coordinate, p-code (Feature code: RH for reference hub, CL for centerline).

152.03 Survey and Staking Requirements.

(e) Centerline reestablishment. Delete the text of this paragraph and substitute the following:

(Reestablish centerline from instrument control points. The maximum spacing between centerline points is 10 meters when centerline curve radius is less than or equal to 75 meters. When the centerline curve radius is greater than 75 meters, the maximum distance between centerline points is 20 meters. Reestablish centerline as many times as necessary to construct the work.

(f) Grade finishing stakes. Delete the third paragraph and substitute the following:

The maximum longitudinal spacing between stakes is 10 meters when the centerline curve radius is less than or equal to 75 meters. When the centerline curve radius is greater than 75

meters, the maximum longitudinal spacing between stakes is 20 meters. The maximum transverse spacing between stakes is 10 meters. Reset grade finishing stakes as many times as necessary to construct the subgrade and each aggregate course. Use brushes or guard stakes at each stake.

(g) Drainage structures. Add the following:

Verify, in the field, the approximate location of each individual structure with the CO prior to surveying, designing, and staking culverts. Use the “Guide for Designing and Staking Culvert in the Field”, dated January 9, 1996, issued by the U.S. Department of Transportation, Central Federal Lands Highway Division, Lakewood, CO, as a guide to the work in this section.

(5) Add the following:

Plot at a scale of 1:100.

Add the following:

(7) When the field design has been approved, set drainage structure survey stakes, reference stakes, and stake inlet and outlet ditches to make the structure, including end treatments (e.g., drop inlets) functional.

(8) Adjust slope stakes to provide for catch basins (and transitions into and out of catch basins) which correspond to the final culvert location and design. If the culvert was moved from location shown in the plans, review the slope stakes in the vicinity of the plan location and adjust the slope stakes to remove the planned catch basin.

(l) Miscellaneous survey and staking. Add the following:

(6) Re-establishing land survey monuments, property corners, and geodetic control monuments found within the construction limits.

(7) Reestablishment of missing reference hubs prior to construction.

(8) Change slope stakes as directed by the CO to blend slopes into existing terrain and preserve significant vegetation. This will also include taking original ground cross sections and setting reference hubs and/or slope stakes for portions of approach roads and parking areas not initially referenced under Subsection 152.03 and at selected intermediate points as determined by the CO, but does not include work specified in Subsection 152.03(c) for cross-section locations initially referenced by the Government. This does not include changing slope stakes due to errors made by the Contractor.

(9) Parking area layout, scenic pullout, slope staking, contours, and finish grade control for Cold Springs Trailhead and Lost Creek Overlook and Niotche Trailheads.

- (10) Layout and grade control for trench drains, collector pipes, discharge channels, horizontal drains and all drainage ditches.
- (11) Minor roads and approach road layout and grade control.
- (12) Underdrain system layout and grade control as shown in the plans or as approved by the CO.

(m) Intermediate surveying and staking. Delete the text of the third paragraph and substitute the following:

Remeasure quantities if it has been determined that any portion of the work is acceptable but has not been completed to the lines, grades, and dimensions shown on the plans or established by the CO.

(o) Centerline verification and staking. Verify the line diagram stationing, the GPS stationing, or the as-constructed stationing shown in the plans by measuring along the existing centerline with a measuring wheel, cloth tape, or other method approved by the CO. Calibrate all measuring devices and furnish calibration data to CO before use. Use transit points (e.g., PC's, PT's) and landmarks (e.g., culverts, turnouts, approach roads) to verify that the ground stationing matches the stationing shown on the plans. Use white spray paint to mark each centerline station. If the stationing in the plans is as-constructed stationing, add station equations to adjust field stationing to match the plans. Allow the CO to comment on any required changes to the stationing and/or readjust or establish additional centerline points. Minor adjustments in grade and/or alignment may need to be made during construction to produce a smooth, uniform project.

The final alignment need not be a geometrically computed centerline and may be field adjusted up to 300 millimeters at the direction of the CO to provide a smooth flowing, best-fit alignment.

152.03 Surveying and Staking Requirements. Delete Table 152-1 and substitute the following:

**Table 152-1
Construction Survey and Staking Tolerances ⁽⁷⁾**

Staking Phase	Horizontal	Vertical
Existing Government network control points	±20 mm	±8 mm * √K ⁽⁵⁾
Local supplemental control points set from existing Government network points	±10 mm	±3 mm * √N ⁽⁶⁾
Centerline points ⁽¹⁾ – (PC), (PT), (POT), and (POC) including references	±10 mm	±10 mm
Other centerline points	±50 mm	±50 mm
Cross-section points and slope stakes ⁽²⁾	±50 mm	±50 mm
Slope stake references ⁽²⁾	±50 mm	±50 mm
Culverts and minor drainage structures	±50 mm	±20 mm
Retaining walls and curb and gutter	±20 mm	±10 mm
Bridge substructures	±10 mm ⁽³⁾	±10 mm
Bridge superstructures	±10 mm ⁽³⁾	±10 mm
Clearing and grubbing limits	±500 mm	---
Roadway subgrade finish stakes ⁽⁴⁾	±50 mm	±10 mm
Roadway finish grade stakes ⁽⁴⁾	±50 mm	±10 mm

⁽¹⁾ Centerline points: PC – point of curve; PT – point of tangent; POT – point on curve.

⁽²⁾ Take the cross-sections normal to the centerline ±1 degree.

⁽³⁾ Bridge control is established as a local network and the tolerances are relative to that network.

⁽⁴⁾ Includes paved ditches

⁽⁵⁾ K is the distance in kilometers

⁽⁶⁾ N is the number of instrument setups.

⁽⁷⁾ At 95% confidence level. Tolerances are relative to existing Government network control points.

Measurement

152.05 Add the following:

Reestablishing missing Government-set terrain cross-section reference hubs, control points, and stakes will be measured under Miscellaneous Survey and Staking when it is paid by the hour. No payment will be made for re-establishing missing hubs, control points, or stakes after construction operations have begun.

Measure centerline verification and staking by the kilometer. Measure only one time per project.

Re-establishing land survey monuments, property corners, and geodetic control monuments found within the construction limits will be measured under Miscellaneous Survey and Staking when it is paid by the hour.

The following items of work listed in 152.02 will be measured for payment under Miscellaneous Survey and Staking by the hour:

- (6) Re-establishing land survey monuments, property corners, and geodetic control monuments found within the construction limits.
- (7) Reestablishment of missing reference hubs prior to construction.
- (8) Change slope stakes as directed by the CO to blend slopes into existing terrain and preserve significant vegetation. This will also include taking original ground cross sections and setting reference hubs and/or slope stakes for portions of approach roads and parking areas not initially referenced under Subsection 152.03 and at selected intermediate points as determined by the CO, but does not include work specified in Subsection 152.03(c) for cross-section locations initially referenced by the Government. This does not include changing slope stakes due to errors made by the Contractor.

The following items of work listed in 152.02 will be measured for payment under Miscellaneous Survey and Staking lump sum:

- (1) Topsoil stripping
- (2) Waste
- (3) Approach roads
- (4) Special ditches
- (5) Turf establishment
- (9) Parking area layout, slope staking, contours, and finish grade control.
- (10) Layout and grade control for trench drains, collector pipes, discharge channels, horizontal drains and all drainage ditches.
- (11) Minor and approach road layout and grade control.
- (12) Underdrain system layout and grade control.

Payment

152.06 Add the following:

Pay Item	Pay Unit
15203C Centerline verification and staking	Kilometer

Miscellaneous survey and staking by the hour will include the following items of work listed in 152.03 (1).

- (6) Re-establishing land survey monuments, property corners, and geodetic control monuments found within the construction limits.
- (7) Reestablishment of missing reference hubs prior to construction.
- (8) Change slope stakes as directed by the CO to blend slopes into existing terrain and preserve significant vegetation. This will also include taking original ground cross sections and setting reference hubs and/or slope stakes for portions of approach roads and parking areas not initially referenced under Subsection 152.03 and at selected intermediate points as determined by the CO, but does not include work specified in Subsection 152.03(c) for cross-section locations initially referenced by the Government. This does not include changing slope stakes due to errors made by the Contractor.

Miscellaneous survey and staking lump sum will include the following items of work listed in 152.03 (1).

- (6) Topsoil stripping
- (7) Waste
- (8) Approach roads
- (9) Special ditches
- (10) Turf establishment
- (13) Parking area layout, slope staking, contours, and finish grade control.
- (14) Layout and grade control for trench drains, collector pipes, discharge channels, horizontal drains and all drainage ditches.
- (15) Minor and approach road layout and grade control.
- (16) Underdrain system layout and grade control.

Section 153 - CONTRACTOR QUALITY CONTROL**Description****Construction Requirements****153.02 Contractor Quality Control Plan.****(a) Process control testing.** Add the following:

See Table 153-1 for schedule of minimum sampling and testing for process control. Where no minimums are specified, submit proposed tests to be performed and the proposed sampling and testing frequencies.

Add the following:

For aggregates and/or aggregate/asphalt mixtures accepted under Subsection 106.03, sample and test for conformity with the Certification a minimum of one time per pay item.

(b) Inspection/control procedures.**(3) Production phase.** Add the following:

(d) Inspect materials or assemblies accepted under Subsection 106.03 to ensure that the work and materials comply with all contract requirements. Furnish the results of the inspection, along with the product certification or commercial certification as applicable, to the CO prior to incorporating the materials into the work.

(c) Description of records. Add the following:

Identify the format for reporting test results and the procedures to be used to maintain inspection records.

(d) Personnel qualifications.**(1) Add the following:**

Designate a Quality Control Supervisor (QCS) whose primary responsibility is managing the inspection system. The QCS shall not be the Contractor's Superintendent. Designate a QCS who is experienced to perform and supervise all sampling, testing, and inspection. The QCS shall monitor all phases of the work and identify deficiencies and take appropriate corrective action.

Add the following:

(3) Personnel assigned to sampling or testing shall have 1 year or more of recent job experience in the type of sampling and testing required by the contract, and the following:

(a) NICET Level II certification in highway materials, or State or industry certification-related sampling and testing equivalent to their intended responsibilities.

or

(b) Current or previous employment by an AASHTO accredited laboratory performing sampling and testing equivalent to their intended responsibilities.

(c) Demonstrated proficiency or successful testing of one or more proficiency samples may be substituted for basic qualifications pending verification of test results.

153.03 Testing. Delete the title and text and substitute the following:

Sampling and Testing. Perform the work required by Table 153-1 and by the acceptable Quality Control Plan.

(a) Sampling.

(1) **Acceptance sampling.** Acceptance sampling schedules and times or locations will be provided by the CO.

(2) **Quality control sampling.** Use a procedure for random sampling. Sample according to the acceptable Quality Control Plan. In addition, sample any material that appears defective or inconsistent with similar material being produced, unless such material is voluntarily removed and replaced or otherwise corrected.

(3) **Certifications.** For materials accepted by certification in accordance with 106.03, review all certifications to insure compliance with the requirements of the contract prior to incorporating materials into the work and provide a signed copy of the reviewed certification(s) to the CO.

(b) Testing. Furnish laboratory equipment which conforms to the applicable test requirements and is properly calibrated. Provide a certification stating the equipment conforms to requirements. The CO may require the Contractor to perform testing to demonstrate acceptable equipment and an acceptable level of technician competence.

Keep laboratory facilities clean and maintain equipment in proper working condition. Provide the CO unrestricted access to the laboratory for inspection and review.

153.04 Records. Add the following to the first paragraph:

When tests are on material being incorporated into the work, report test results within 24 hours.

Add the following to the second paragraph:

Detail inspection results including deficiencies observed and corrective actions taken.

153.05 Acceptance. Add the following:

If chronic deficiencies are noted in the Contractor's inspection or testing systems, the CO may order supplemental inspection and/or testing to be performed. The Government will charge to the Contractor all costs associated with such supplemental inspection or testing.

Table 153-1
Schedule of Minimum Sampling and Testing For Process Control
 (to be performed by the Contractor)

Section(s): 204.

Material	Property or Characteristic	Test Method or Specification	Frequency	Sampling Point
Embankment Construction Composition of Roadbed in Cuts	Classification and Moisture/Density	AASTHO M 145 AASHTO T 99 or AASHTO T 180 (minimum of 5 proctor points).	1 per material/type.	Source of material.
	In-place density and moisture content	AASHTO T 310	2 per lift, but not less than 2 every 800 cubic meters.	Compacted embankment, subgrade as applicable.
	R-value	AASHTO T 190 (Tested by FHWA Central Lab).	1 per 700 meters, or change in material type.	Sample depth: 0-300 mm.
Bedding/Backfill for Structures and Culvert Pipe	Classification and Moisture/Density	AASTHO M 145 AASHTO T 99 or AASHTO T 180 (minimum of 5 proctor points).	1 per material/type.	Source of material.
	In-place density and moisture content	AASHTO T 310	1 per 15 meters/lift. Minimum 2 per lift.	Compacted bedding or backfill as applicable.

Table 153-1
Schedule of Minimum Sampling and Testing For Process Control
 (to be performed by the Contractor)

Section(s): 255.

Material	Property or Characteristic	Test Method or Specification	Frequency	Sampling Point
Select wall backfill 704.13(a) and Wall backfill 704.13(b)	Gradation and liquid limit	AASHTO T 11 AASHTO T 27 AASHTO T 89 AASHTO T 90	1 per material/type	Source of material
	Moisture Density	AASHTO T99, Method C ⁽¹⁾	1 per material/type	Source of material
	In-place density and moisture content	AASHTO T 310	For MSE walls: 1 per 300-mm lift per 75-meters of wall length (minimum of 2 per lift)	Compacted backfill

⁽¹⁾ A minimum of 5 points are required for moisture density test.

Table 153-1
Schedule of Minimum Sampling and Testing For Process Control
 (to be performed by the Contractor)

Section(s): 301.

Material	Property or Characteristic	Test Method or Specification	Frequency	Sampling Point
Subbase, Base Course Aggregate	Gradation (301)	AASHTO T 11 AASHTO T 27	2 per day	Crusher belt
	Moisture/Density	AASHTO T 99 or AASHTO T 180 (minimum of 5 proctor points)	1 per source of material	Source of material
Stabilization and Aggregate Topsoil Courses	In-place density and moisture content	AASHTO T 310	2 per lift at 300 meter intervals, alternating lanes	Compacted aggregate
	Plasticity index (aggregate surfacing only)	AASHTO T 90	2 per day	Crusher belt
	Gradation (304 materials processed in place)	AASHTO T 11 AASHTO T 27	1 per 300 meters	Processed material
Magnesium Chloride and Calcium Chloride	Specific Gravity	Hydrometer	1 per shipment	Transport vehicle

Note: Density and Moisture calculations AASHTO T 310...Density corrections based on moisture for recycled materials containing asphalts, or aggregates containing MgCl or CaCl shall be made based on samples taken from each test site and oven-dried in the laboratory.

Table 153-1
Schedule of Minimum Sampling and Testing For Process Control
 (to be performed by the Contractor)

Section(s): 409.

Material	Property or Characteristic	Test Method or Specification	Frequency	Sampling Point
Chip seal aggregate	Gradation	AASTHO T 11 AASHTO T 27	2 per day	Production belt or spreader discharge
Slurry seal aggregate	Moisture content of aggregates	AASHTO T 255	1 per day	Stockpile or spreader discharge
Asphalt binder Emulsified asphalt	Placement temperature	Thermometer	Prior to each days production, followed by 2 each day	Distributor truck

Table 153-1
Schedule of Minimum Sampling and Testing For Process Control
 (to be performed by the Contractor)

Section(s): 601.

Material	Property or Characteristic	Test Method or Specification	Frequency	Sampling Point
Concrete	Gradation and fineness modulus	AASTHO T 11 AASHTO T 27	1 per day	Aggregate, before batching
	Moisture	FLH T 509	1 per day/stockpile	Aggregate, before batching
	Slump	AASHTO T 119	1 per 25 cubic meters, minimum 1 per day	See note
	Air content	AASHTO T 152	1 per 25 cubic meters, minimum 1 per day	See note
	Unit weight	AASHTO T 121	1 per 25 cubic meters, minimum 1 per day	See note
	Temperature	Thermometer	1 per 25 cubic meters, minimum 1 per day	See note
	Making test specimens for compressive strength	AASHTO T 23	1 set per 25 cubic meters, minimum 1 set per day	At point of discharge

****Note:** If an extended set admixture is used for the sole purpose of extending discharge times, sampling and testing shall be performed by the Contractor at point of batching and discharge location to ensure compliance with Subsection 552.08.

Section 154 - CONTRACTOR SAMPLING AND TESTING**Description****154.01** Delete the second sentence substitute the following:

When there is a pay item for Contractor testing included in the bid schedule, it also consists of testing and reporting required test results.

Construction Requirements**154.02 Sampling.** Delete the second paragraph and substitute the following:

Sample and split samples according to AASHTO or other acceptable procedures. Allow the CO the opportunity to witness all sampling. Immediately perform splits on all samples. Deliver the Government's portion of the sample or split sample in an acceptable container suitable for shipment. Submit form 1600c for each sample to the CO and label all samples with the following information:

- (a) Project number
- (b) Source of material
- (c) Item number
- (d) Sample number
- (e) Date sampled
- (f) Time sampled
- (g) Location sample taken
- (h) Name of person sampling
- (i) Name of person witnessing sampling
- (j) Type of test required on sample

Sample according to the Sampling and Testing tables included at the end of each section.

Perform the initial curing of all concrete test cylinders. Provide for transporting the cylinders to the FHWA-Central Federal Lands Highway's Laboratory unless other testing facilities are authorized by the CO.

Label each concrete mold with the name and number of the Project, the cylinder number, date molded, location of the sample, and the test age (i.e. – 7, 14, or 28 days). Label the mold after casting and the cylinder after stripping to ensure the sample can be identified throughout the entire curing process.

Provide the required cylinder molds.

154.03 Testing Add the following:

Where Process Control Sampling and Testing frequencies in Table 153-1 are identical to the Sampling and Testing Tables for all applicable work the Process Control Samples may be used for acceptance.

Add the following Subsections:

154.03A Field Laboratory (Contractor-Furnished). Furnish a laboratory equipped with all test equipment necessary to satisfy the requirements of the contract.

The sampling and testing services of a commercial laboratory meeting or exceeding the requirements described herein may be used if all contract sampling and testing requirements are satisfied by the use of the commercial facility.

Ensure test equipment has been checked, calibrated, standardized and/or otherwise verified in accordance with AASHTO and ASTM standards by an individual qualified to do this work. Ensure mobile laboratories receive an equipment inspection after the laboratory has been moved to its permanent location on the project site and anytime it is moved thereafter. Inspect equipment within 45 days of actual use in project testing and at least once a year thereafter. Do not use equipment that has not been inspected or is found to be deficient. Mark deficient equipment and it take out-of-service until it is repaired or replaced and shown by subsequent inspection to perform as required. Maintain records documenting these inspections in the laboratory. Provide certification(s) stating the equipment conforms to testing requirements and provide evidence of current inspection.

The CO may require the Contractor to perform testing to demonstrate acceptable equipment and an acceptable level of technician competence. The CO may also check equipment and inspection records to verify condition. Repair or replace equipment not meeting applicable requirements. Keep laboratory facilities clean and maintain equipment in proper working condition. Provide the CO unrestricted access to the laboratory for inspection and review.

-----**BID ALTERNATIVE**-----

154.03B Field Laboratory (Government-Furnished). Refer to the Instructions to Bidders on Page B-7 of this bid proposal for information regarding this bid item alternative.

If the bid item alternative “Item 15401-0000, Contractor Testing, Using Government Furnished Field Laboratory” is included in the awarded contract, the government will provide for the Contractor’s use a mobile field laboratory, including testing equipment as follows:

- Ignition Oven
- Convection Oven
- Liquid Limit Machine and Grooving Tool
- 30,000 Gram Balance
- 12,000 Gram Balance

4,600 Gram Balance (readable to 0.01)
Platform Scale
Mechanical Compactor (Moisture Density) and Accessories
8-inch Sieve Shaker and Sieve Stack
12-inch Sieve Shaker and Sieve Stack
Drill Press with Muller
Large Sample Splitter
Small Sample Splitter

The contractor is responsible for providing any additional equipment or facilities necessary to fulfill the requirements of the Contract.

Transport the laboratory from 12300 West Dakota Avenue, Lakewood, CO to the point of use and return the laboratory to the same Lakewood address upon completion of the work. The trailer will be available upon issuance of Notice to Proceed and must be returned no later than 14 days following final acceptance of the contract. Contact Ms. Denise Leadford at (720) 963-3459 for specific directions to the laboratory storage location.

Assume responsibility for the replacement of any and all missing or damaged equipment and for the repair of any damage to the laboratory. Replacement cost for missing or damaged equipment or facilities will be deducted from any remaining monies owed the Contractor. If sufficient funds are not available under the Contract for such retention, the Contractor agrees to make payment directly to the Government for any damaged or missing equipment or facilities.

Specifics:

Furnished equipment will be inspected by the Government by checking, standardizing, calibrating and/or verifying, as appropriate, in accordance with applicable AASHTO and ASTM standards. The Government equipment inspection will be completed after the laboratory has been moved to its permanent location on the project site prior to actual use in project testing and at least once a year thereafter. Notify the CO at least 30 days in advance of intent to use the testing equipment on the project so that Government equipment inspection can be scheduled and performed. Assume responsibility for additional equipment inspections prior to the Government's yearly inspection if the mobile laboratory is moved. Maintain records documenting these inspections in the laboratory.

Maintain equipment in proper operating condition. Do not use equipment that is found to be deficient or defective. Mark deficient or defective equipment and take it out-of-service and immediately notify the CO. If Government-furnished testing components fail through no fault or negligence of the Contractor, the Government will replace or repair the equipment in the most expeditious manner practicable. Requests for time extension and/or delay damages will not be granted for delays of less than 48 hours for any one occurrence, or for cumulative delays amounting to less than 5 (five) days in any one 365-day period. Requests for time extensions or damages due to equipment-related delays caused by equipment misuse or other Contractor fault will not be granted.

Furnish water to the Government-provided field laboratory which is clear and free of oil, acid, rust, alkali, sugar, and vegetable substances. Furnish 120/240-volt, 60-cycle, single-phase current adequate to operate all of the Government field laboratory facilities at all times as required by the CO. Supply enough power to support a 200 amp service panel. Equip the power supply with a regulator that limits the voltage of the power furnished to the laboratory to not less than 220 volts and not more than 240 volts.

All equipment provided by the Government and replaced by the Contractor will remain with the laboratory and will become the property of the Government.

Use of the laboratory is limited to testing materials in connection with this contract.

-----END OF BID ALTERNATIVE-----

Section 155 - SCHEDULES FOR CONSTRUCTION CONTRACTS

Construction Requirements

155.02 General. Add the following to the fourth paragraph:

No progress payment will be made for any work until a construction schedule is submitted to the CO and accepted by the CO.

Third paragraph, first sentence, delete: “either the Bar Chart Method (BCM) or”

155.03 Bar Chart Method (BCM). Delete the title and text of this subsection and add the following:

Written Narrative

(j) List anticipated monthly and cumulative contract earnings (including, for schedule updates, any contract modifications) for each month from the beginning of construction operations through the completion of the work. Calculate and list each month's anticipated earnings through the close of business on the date provided by the CO as the cut-off date for monthly project pay estimates.

155.06 Schedule Updates. Add the following:

No progress payment will be made for any work until an updated construction schedule has been submitted to and accepted by the CO.

Allow 7 days after receipt for acceptance of the updated construction schedule or a return for revisions.

Section 156 - PUBLIC TRAFFIC

Construction Requirements

156.03 Accommodating Traffic During Work. Delete the last two sentences in the first paragraph and substitute the following:

Submit situation-specific traffic control implementation drawings and alternate traffic control proposals according to Subsection 104.03 for acceptance at least 14 days before intended use.

Add the following:

Road closures not exceeding 4 hours will be allowed for the project during normal work hours. The road closure time restrictions are listed below. No road closures will be allowed during holiday and weekends without approval of the CO.

Days	Time
Monday thru Thursday	8 a.m. to 12 p.m.
Monday thru Thursday	1 p.m. to 5 p.m.
Monday thru Thursday (with CO approval)	5 p.m. to 8 a.m.
Friday	8 a.m. to 12 p.m.

Contact the biologist at the Utah Division of Wildlife Resources at (435) 865-6100 before beginning work on this contract to verify the hunting season schedules. Road closures from 5:00 pm to 8:00 am are not allowed during hunting seasons unless approved by the CO. Coordinate all closures during the hunting seasons with the Utah Division of Wildlife Resources and the CO. The area's hunting season is currently scheduled for August 21st to December 31st.

Cattle typically graze in the project vicinity each year from the beginning of June to mid-October. Provide access for cattle roundups, delivery, and retraction and coordinate schedules with the local grazing associations and the CO. Contact Alan Gurney with the Niotche Grazing Association at (435) 529-7606 and Rick Nelson with the Lost Creek Grazing Association at (435) 979-6006 for schedules.

All notifications of road closures and openings shall be given to the CO for approval. Notification of road closures and openings to the public and others shall begin at least 14 days prior to each scheduled opening or closure period, and be updated weekly.

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.

(c) Delete the text and substitute the following:

Snow removal to facilitate the work is the Contractor's responsibility.

156.06 Limitations on Construction Operations.

(d) Delete the first sentence and substitute the following:

For alternate one-way traffic control, provide a minimum lane width of 3.3 meters. For two-way traffic, provide a minimum roadway width of 6.6 meters. For two-way traffic where the existing road width does not meet a minimum width of 6.6 meters, provide the entire width

of the existing road. Where traffic barrier is used provide an additional 600-millimeter offset to the traveled way from the barrier. Provide well-graded, compacted aggregate surfacing for public traffic during all non-work periods.

(j) Delete the text and substitute the following:

For time periods not approved for road closures the contractor shall limit construction delays during daylight hours. Maintain alternate one-way operation with flaggers and/or pilot cars(s) with traffic delay in either direction not exceeding 40 minutes per passage through the entire project, or provide scheduled pilot car operation(s) for each direction for 15 minutes every hour on the hour. If a consistent cycle time is not maintained, either due to the volume of traffic or due to the Contractor's own operations, reduce the length of alternate one-way operation such that a consistent cycle time can be met.

Unless shown in the temporary traffic control plans, maintain continuous two-way traffic during non-daylight hours.

Limit alternate one-way operations, with flaggers only, to maximum of four separate operations with a maximum total combined length of 1200-meter: Reduce the length of one-way flagger operations as required to limit traffic delay to 40 minutes per passage through the entire project.

The above authority to delay traffic will be contingent upon strict adherence of the Contractor to the agreed schedules, and upon maintenance of satisfactory road conditions for the passage of traffic through the work.

Provide access through the work zone immediately upon arrival at the job site for emergency vehicles, including those carrying County, State and U.S. Government personnel responding to emergency situations. Be prepared at all times to immediately cease construction operations and restore the roadway such that emergency passage can be afforded such vehicles at any time regardless of the traffic control plan in effect.

Section 157 - SOIL EROSION CONTROL**Material****157.02** Add the following:

Erosion Log

Sheet E22

Construction Requirements**157.03 General.** Delete the second paragraph and substitute the following:

Implement the requirements of the National Pollutant Discharge Elimination System (NPDES) for erosion control as specified in Subsection 107.01.

Standard erosion control devices are provided in the contract. Detail site-specific measures for controlling erosion and submit to the CO for acceptance prior to implementation. Provide working drawings and associated data that do not exceed 610 by 920 millimeters in size. Allow 7 days for acceptance of the drawings or a return for corrections. Include the following in the detailed design:

- (a) Address contractual requirements for storm water runoff permits, environmental commitments, and other permit requirements here or in Subsection 107.01 or 107.10.
- (b) Location of each proposed erosion control measure.
- (c) Type of each erosion control measure.
- (d) Quantities and estimated unit costs of proposed temporary erosion control devices to be implemented during construction.
- (e) A schedule detailing coordination of erosion control measures with the various construction operations or stages. Include the furnishing, installation, maintaining, and removing of temporary devices and the installation of permanent erosion control features.
- (f) A schedule outlining the proposed schedule of clearing and grubbing, excavation, embankment, and culvert operations such that the area of disturbed or erodible material is minimized. Schedule the work such that temporary and permanent erosion measures can be incorporated at the earliest practical time.
- (g) Construction methods used in various items of work to minimize erosion.

Add the following:

At least 5 days prior to the preconstruction conference, designate in writing an Erosion Control Supervisor who is responsible for implementing the requirements of this Section and demonstrate that the Erosion Control Supervisor has previous experience in this role on at least 3 previous projects similar in scope to this project. Do not designate the project superintendent as the Erosion Control Supervisor.

When temporary erosion control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as part of the work in a timely manner, provide temporary measures at no cost to the Government.

157.04 Controls and Limitations on Work. Delete paragraphs (c) and (d) and substitute the following:

(c) Unless a specific seeding season is identified in the contract, apply permanent turf establishment to the finished slopes and ditches within 14 days according to Sections 624 and 625.

(d) Apply temporary turf establishment to disturbed slopes and ditches at locations designated by the CO the last week of each month during the construction season and the last week of construction activities prior to winter shutdown, unless the disturbed areas are designated for permanent seeding by the CO.

Add the following:

(e) Apply bonded fiber matrix within 24 hours after seed for the permanent turf establishment has been applied.

157.10 Waterway and Slope Protection Stabilization. Delete paragraph (c) and substitute the following:

(c) **Check Dams.** Construct temporary riprap and erosion log check dams where shown on the drawings. All riprap for Type A rock check dams will be Class 1. Riprap for Type B rock check dams will be constructed of the same riprap class as specified for ditch lining in the locations of the rock check dams.

157.13 Delete the third paragraph and substitute the following:

Remove and dispose of temporary erosion control measures when drainage ditches and channels are lined and stabilized. Remove and dispose of erosion control measures according to Subsection 203.05. Leave erosion logs in place in vegetative-lined ditches. Reuse rock used for riprap check dams in accordance with SCR 251.04(c). Silt fence will not be removed. Leave silt fence in place in "like new" condition and properly supported, with all sediment removed from along the entire length of the silt fence prior to project acceptance.

157.14 Acceptance. Add the following:

Soil erosion control will be evaluated under subsection 106.02 based on the demonstrated ability of the erosion control measures to result in minimal soil erosion, sedimentation and/or siltation, and turbidity increases within or adjacent to the project limits.

Measurement**157.15** Add the following to the second paragraph:

Sub-excavation and geotextile fabric for rock check dams will not be measured for payment.
Sub-excavation for erosion logs will not be measured for payment.

Add the following:

Maintenance and cleanup of temporary erosion control measures as described under subsection 157.13, will not be measured for payment.

Payment**157.16** Add the following:

Payment will be made under:

Pay Item	Pay Unit
15709 Check dams – (type B)	Each
15729 Erosion Logs	Meter
15737 Check dams – (type A)	Meter

Section 158 - WATERING FOR DUST CONTROL**Description****158.01** Add the following:

No provisions have been made by the Government to obtain an adequate source of water for this project. Obtain all necessary permits and approvals for the supply of water.

Construction Requirements**158.03 General.** Add the following:

During periods when watering is required and other work is suspended, such as weekends, apply water by equipment capable of operating safely on the roadway without additional traffic control measures such as signs or flaggers.

Section 201 - CLEARING AND GRUBBING**Construction Requirements**

201.01 Delete the text of this subsection and substitute the following:

This work consists of clearing and grubbing within the clearing limits designated by the CO based on the dimensions shown in the plans, adjusted to fit field conditions.

This work also consists of providing a Consulting Forester licensed in the State of Utah, to determine the valuation of timber to be removed within the clearing limits of the project on private parcels, and as directed by the CO.

201.03 General Add the following:

TREATMENT OF MERCHANTABLE TIMBER AND SLASH

Felling & Bucking of Trees. Fell trees within the clearing limits, usually towards the center, so as to minimize damage to merchantable timber, remaining trees located outside of clearing limits, and adjacent property & structures. Trees shall also be felled to prevent danger to traffic. Buck logs of all limbs to merchantable size described below.

Trimming of Trees to remain Perform all required trimming in accordance with approved horticultural practices.

Timber to be saved All sound, green logs or poles, not used by the Contractor in the project, having a top diameter of 90 millimeter or more and a length of 1200 millimeter or more, as determined by the CO, shall be saved. Material to be saved shall be trimmed of limbs and tops, sawed into such lengths designated below, and stacked in an area readily accessible for loading and hauling equipment, and where they will not interfere with the grading.

The value of the timber harvested from the USFS property from stations 19+450 through 20+450 has been determined as \$934.00 based on a tree appraisal completed by the USFS. The Contractor is required to enter into a Forest Service Timber Settlement contract as per Subsection 107.01 of the Special Contract Requirements. Provide a Consulting Forester, licensed in the State of Utah, to produce a volume estimate by species, including hardwood for timber within clearing limits, and at other locations within the project limits as directed by the CO.

All timber designated to be saved will be defined and treated as follows:

(a) Merchantable Timber. Logs a minimum 33% sound with a minimum diameter of 200 millimeter. Merchantable timber logs will be cut to tree length with small end cut to a minimum diameter of 200 millimeter. Deck merchantable timber harvested between stations 15+700 and 15+920 off of Gates Lake Road. Deck merchantable timber harvested between stations 23+654 and 22+100 adjacent to Cold Springs Road at approximate station 23+480 and adjacent to Farnsworth Reservoir Road at approximate station 22+230. Any cutting of trees shall be in sections from the top downward. Merchantable Timber shall be decked in separate piles than Merchantable Timber (Firewood). Stack timber in piles no more than 3 meters in height in neat piles as directed by the CO.

(b) Merchantable Timber (Firewood). Logs, limbs, treetops, etc., from 90 millimeter (small end) to 150 millimeter in diameter. Merchantable Timber (Firewood) will be cut in maximum 1200 millimeter lengths. Deck Merchantable Timber (Firewood) adjacent to Cold Springs Road at approximate station 23+480 and adjacent to Farnsworth Reservoir Road at approximate station 22+230. Merchantable Timber (Firewood) shall be decked in separate piles than Merchantable Timber. Stack timber in piles no more than 3 meters in height in neat piles as directed by the CO.

Slash Treatment (Piling & Burning). Pile slash in areas within the clearing limit or at locations approved by the CO. Place and construct piles so future burning will not damage remaining trees. Keep piles reasonably free of dirt. Cut unmerchantable logs into lengths of less than 3-meters prior to placement in the pile. Report size of piles to the District Ranger for approval prior to burning. Burn slash piles between October 15th and April 15th and at other times approved in writing by the District Ranger. If initial burning is incomplete, repile and burn the slash remaining until 95% of the material is consumed. Scatter remaining pieces, per the direction of the CO, following the burning process.

201.04 Clearing

(b) Delete the text and substitute the following paragraphs: In areas within the excavation, embankment, and slope rounding limits, remove stumps and roots to a depth that in no case will any portion remain within 600 millimeters of the finished subgrade or slope surface. Stumps shall be removed and disposed of off Forest land. Burning or partial burning of stumps prior to removal will be acceptable.

In areas outside the excavation, embankment, and slope rounding limits, but within clearing limits, cut stumps to within 150 millimeters of the ground.

201.06 Disposal. Add the following after the first sentence:

Nonmerchantable timber material is considered slash. All merchantable timber shall be removed from the project within 30 days of falling.

Measurement

201.08 Add the following:

Do not measure the Consulting Forester. It is considered subsidiary to Clearing and Grubbing.

Section 203 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Construction Requirements

203.04 Removing Material. Delete the fourth paragraph and substitute the following:

Remove all existing culverts shown to be removed on the plans in their entirety, including all end sections connected to the culverts.

Add the following to the end of the fifth paragraph:

Fill and grade areas where existing culverts are removed outside the proposed roadbed in accordance with the roadway obliteration detail shown in the construction plans and these specifications.

203.05 Disposing of Material.

(a) Remove from Project. Add the following:

Secure environmental clearances according to Subsection 107.10. Remove from the project all culvert and end section materials generated during removal of existing culverts.

(c) Bury. Add the following at the end of the second paragraph:

Seed and mulch disposal areas on Government property according to Section 625.

Payment

203.08 Add the following:

Payment will be made under:

Pay Item	Pay Unit
20301H Removal of pipe culverts	Each
20302V Removal of fence	Meter

Section 204 - EXCAVATION AND EMBANKMENT

Description

204.02 Definitions.

(c) Embankment material.

(1) **Rock.** Delete the text and substitute the following: Rock is material containing a minimum of 30 percent rock particles, by volume, that is retained on the 75 mm sieve and having less than 40 percent passing the 4.75 mm sieve or less than 35 percent passing the 2 mm sieve, where a rock particle is defined as any durable particle in excess of 75 mm in diameter.

Construction Requirements

204.05 Conserved Topsoil. Delete the first sentence and substitute the following:

Conserve topsoil from the roadway excavation and from embankment foundation areas to the extent and depth as shown in the plans.

204.06 Roadway Excavation.

(b) **Rock cuts.** Add the following: When blasting rock, use controlled blasting methods according to Subsection 205.07.

204.07 Subexcavation Add the following:

Where shown in the plans as subexcavation with stabilization, backfill the subexcavation with Placed Riprap Class 4 (Stabilization). Place materials for Placed Riprap Class 4 (Stabilization) according to Section 251. Payment for backfill for subexcavation with stabilization will be according to Subsection 251.09.

204.08 Borrow Excavation.

Add the following:

Materials for Select Borrow may be obtained from the Gates Lake material source.

204.09 Preparing Foundation for Embankment Construction.

(a) **Embankment less than 1 meter high over natural ground.** Add the following:

Remove or trim any rock outcrops or large boulders if they encroach in excess of 75 mm into the overlying select borrow layer.

(b) Embankment less than 0.5 meter high over an existing asphalt, concrete, or gravel road surface. Add the following:

Remove or trim any rock outcrops or large boulders if they encroach in excess of 75 mm into the overlying select borrow layer.

204.09 Add the following:

(e) Embankments across grounds in the proximity of spring seeps. In areas where the soils are well above optimum moisture content, which may not conform to compaction requirements, scarify the top 300 millimeters of ground below subgrade elevation and allow the soil to air dry to near the optimum moisture content prior to compacting the area. No measurement for payment will be made for this work.

Within the areas of springs not identified in the plans, if the scarification and air drying technique are unsuccessful due to excessive moisture contents or weather conditions, treat the area according to Subsection 204.07. The CO will approve locations prior to treatment.

204.10 Embankment Construction. Add the following:

It is anticipated that the contractor will encounter abundant amounts of large boulders with observed sizes varying from 300 mm to in excess of 1500 mm in diameter. It is anticipated that the contractor will be required to blast or use other methods such as screening or crushing to reduce boulders to a workable size for embankments and finishing material as required by Subsection 204.10 (b) and if needed, apply mixing to meet the requirements of Subsection 204.10 (c).

Material used in the construction of embankment slopes steeper than 1:2 will exhibit a minimum of 30 percent rock, by volume, of the total embankment. Rock is defined in Subsection 204.02 (c)(1).

It will be up to the contractor to determine the quantity and method of operations required to meet this specification. See the Geotechnical Report and addendum for detailed information regarding existing material characteristics.

204.11 Compaction.

(b) Earth embankment. Delete the first paragraph and substitute the following:

Classify the material according to AASHTO M 145. For material classified A-1 or A-2-4, determine the optimum moisture content and the maximum density according to AASHTO T 180 method D. For other material classifications, determine the optimum moisture content and the maximum density according to AASHTO T 99 method C.

Delete the third paragraph and substitute the following:

Compact material placed in all embankment layers and the material scarified in cut sections 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 procedure.

204.14 Disposal of Unsuitable or Excess Material.

Add the following at the end of the first paragraph:

Unsuitable subexcavation and waste material may be disposed of in the obliteration areas outside the roadway prism.

Add the following at the end of the subsection:

Secure environmental clearances according to Subsection 107.10.

Measurement

204.16

(a) Roadway Excavation.

(1) Include the following volumes in roadway excavation:

(e) Delete the text and substitute the following: Conserved topsoil stripped from cuts.

(h) Delete the text and substitute the following: Conserved material taken from stockpiles and used in Section 204 work except topsoil measured under Section 624.

Only materials required to be conserved by the CO are eligible for measurement under this item.

(2) Do not include the following in roadway excavation:

Add the following:

(m) Conserved topsoil stripped from fills.

Payment

204.17 Add the following:

Payment for Item 20401 is limited to ten percent of the plan quantity of excavation in the cut until the slope rounding in that cut is completed.

Section 207 – EARTHWORK GEOTEXTILES**Measurement****207.07** Delete this section and substitute the following:

Measure earthwork geotextile by the square meter excluding overlaps for blanket drain systems, and special embankment sections.

No measurement will be made for earthwork geotextile used in placed riprap class 4 (stabilization), underdrain systems, horizontal drain systems, or under riprap ditches or placed riprap.

Payment**207.08** Add the following:

No payment will be made for earthwork geotextile used in placed riprap class 4 (stabilization), underdrain systems, horizontal drain systems, or under riprap ditches and placed riprap.

Section 209 - STRUCTURE EXCAVATION AND BACKFILL**Construction Requirements****209.09 Bedding.****(b) Culverts.** Amend the third sentence as follows:

When no class is specified, use bedding material that conforms to class C and to Table 2 of AASHTO M 145 for Classifications A-1, A-2, or A-3 soils.

Add the following:

Where installing plastic pipe, use Class B.

209.10 Backfill.**(b) Culvert.** Delete the first sentence and substitute the following:

Where installing plastic pipe, use backfill material conforming to the requirements of Class B bedding.

Section 211 - ROADWAY OBLITERATION

Construction Requirements

211.02 General. Delete the text of this subsection and substitute the following:

Scarify the existing gravel structure. Fill roadside ditches and slope the obliterated roadway to drain with the adjacent terrain. Grade ditches to match original flow line and match up stream and downstream existing drainage channel cross section in locations where culverts are removed.

Seed and mulch obliterated areas in accordance with Section 625.

Section 251 - RIPRAP

Delete the entire Section and substitute the following:

Description

251.01 This work consists of furnishing and placing riprap for bank protection, slope protection, drainage structures, ditch lining, and erosion control.

Riprap classes are designated as shown in Table 705-1.

Material

251.02 Conform to the following Subsections:

Geotextile type IV	714.01
Riprap rock	705.02

Construction Requirements

251.03 General. Perform the work under Section 209. Dress the slope to produce a smooth surface. If earthwork geotextile is required, place according to Section 207.

251.04 Placed Riprap. Placed riprap is rock placed on a prepared surface to form a well-graded mass.

Place riprap to its full thickness in one operation to avoid displacing the underlying material. Do not place riprap material by methods that cause segregation or damage to the prepared surface. Place or rearrange individual rocks by mechanical or hand methods to obtain a dense uniform blanket with a reasonably smooth surface.

251.04A Riprap Ditch Construct riprap ditch as shown in the plans. The work includes excavation and fill berm construction to provide the minimum depths shown. No measurement will be made for excavation, grading, filling, and geotextile.

251.04C. Rock Check Dams Construct temporary rock check dams of standard riprap rock of the classes specified on the drawings. Remove riprap placed for temporary rock check dams during construction of riprap ditches in the same area as the check dams. Re-use riprap from temporary rock check dams in the riprap ditches that require the same class of riprap as used in the rock check dams.

251.07 Acceptance. Rock for riprap will be evaluated under Subsection 106.02 and 106.03.

Rock placement for riprap will be evaluated under Subsections 106.02 and 106.04.

Structure excavation and backfill will be evaluated under Section 209.

Geotextile will be evaluated under Section 207.

Measurement

251.08 Measure riprap by the metric ton or by the cubic meter in place.

Add the following:

Measure riprap ditch by the linear meter. Measure riprap transition ditches by the linear meter as part of the larger standard ditch on either end of the transition ditch. For example, if the riprap ditch upstream of the transition ditch is a Riprap Ditch, Type 1, Class 3 and the downstream ditch is a Riprap Ditch, Type 3, Class 4, the transition ditch will be constructed of Class 4 riprap and paid as Riprap Ditch, Type 3, Class 4. The locations and quantities of riprap ditch are approximate and are subject to field adjustment by the CO.

Payment

251.09 The accepted quantities, measured as provided above, will be paid at the contract price per unit of measurement for the pay items listed below that are shown in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Payment will be made under:

Pay Item	Pay Unit
25101 Placed riprap class _____	Cubic Meter
25101 Placed riprap class 4 (stabilization)	Cubic Meter
25112 Riprap ditch, class _____ (type ____)	Meter

Section 252 – SPECIAL ROCK EMBANKMENT AND ROCK BUTTRESS

Delete the entire Section and substitute the following:

Description

252.01 General. This work consists of designing and constructing a permanent Rockery Wall at the location shown on the Plans. The Contractor shall furnish all labor, working drawings, or other materials and equipment required to design and construct the wall in accordance with this Specification and the Standard Specifications. The Rockery Wall shall be constructed in accordance with these Specifications and to the lines and grades of the Contract Documents.

252.02 Definitions.

(a) **Hard to Very Hard Rock.** Rock that cannot be scratched with a knife or can be scratched with a knife with difficulty. Specific suitable rock types include igneous rock. Unsuitable rock types are sandstone and limestone.

Materials

252.03 Materials. Materials shall conform to the following:

Structural Backfill. Recycled asphalt and flow-fill material are not allowed to be substituted for Structural Backfill in conjunction with Rockery Walls. Structural Backfill shall be as specified in Section 208.

Boulders. Boulders used for Rockery Walls shall have a minimum dimension no smaller than 1,000 mm. These boulders shall weigh 1,300 kg or more and shall be roughly rectangular in shape (see rock size table on Sheet G1). The longest dimension of any individual rock should not exceed three times its shortest dimension.

Smaller boulders can be used for infilling surface gaps along the wall.

All rock shall be hard to very hard rock that is sound, unweathered, and weather resistant. Native igneous boulders are considered suitable for this application.

All backfill and boulders will be from on-site materials.

Construction Requirements

252.04 Submittals. The Contractor shall submit design calculations, construction sequencing, and working drawings to the CO for review in accordance with the Standard Specifications. The Contractor shall include all details, dimensions, quantities, ground profiles, and cross-sections necessary to construct the walls. The Contractor shall verify the limits of the wall and ground survey data before preparing drawings. All submitted drawings and calculations shall be signed and sealed by the Contractor's Professional Engineer.

(a) Design Calculations and Drawings. Design calculations and drawings shall include, but not be limited to, the following items:

- (1) Qualifications of the Contractor's Rockery Wall specialist. The Contractor's Rockery Wall specialist shall be on site directing all Rockery Wall construction. The specialist shall have successfully constructed at least ten Rockery Walls of similar dimensions in the past 5 years. The Contractor shall provide project descriptions, including project owner's name and current contact information for previous projects used to qualify under this specification.
- (2) The Contractor shall submit locations at which Rockery Walls shall be constructed.
- (3) Cross sections at 10-m intervals and at least one for each Rockery Wall segment showing the base of Rockery Wall elevation, top of Rockery Wall elevation, existing ground surface and proposed slope.
- (4) A written report, which describes the overall Rockery Wall design. As a minimum the report shall address local stability, global stability, material separation and filtration, drainage, boulder and rock size and gradation, construction sequence, and temporary support.

(b) Working Drawings. The working drawings shall be signed and sealed by the Designer of Record and include all details, dimensions, quantities, ground profiles, and cross-sections necessary to construct the wall.

Specifically, the working drawings shall include, but are not limited to, the following:

- (1) A plan view of the walls identifying the following:
 - (i) A reference baseline and elevation datum.
 - (ii) The offset from the construction centerline or baseline to the face of the wall at its base at all changes in horizontal alignment.
 - (iii) Beginning and end of wall stations.
 - (iv) Right-of-way and permanent or temporary construction easement limits, location of all known active and abandoned existing utilities, adjacent structures or other potential interferences. The centerline of any drainage structure or drainage pipes behind, passing through or passing under the wall.
- (2) An elevation view of the wall(s) identifying:
 - (i) The elevation at the top of the wall, at all horizontal and vertical break points, and at least every 10 m along the wall.

- (ii) Beginning and end of wall stations.
 - (iii) The distance along the face of the wall to all steps in the wall base.
 - (iv) Existing and finish grade profiles both behind and in front of the wall.
- (3) Rockery Wall typical sections, including but not limited to staged excavation lift elevations, wall and excavation face batter.

(c) **Construction Sequencing.** Begin construction of rockery wall as late in the season as scheduling permits to avoid higher ground water levels. Identify in sequencing plan stage at which a representative section of wall will be constructed and available for inspection by CO's geotechnical representative.

252.05 Design Requirements.

- (a) **Design Height:** Shall be as defined on the Plans and as determined by the slope geometry.
- (b) **Base Width:** The base of the Rockery Wall shall not be less than 2.15 m.
- (c) **Base Embedment:** The first course of rocks must be embedded under the ground surface. The depth of embedment shall be at least 600 mm.
- (d) **Face Inclination:** The face of the wall shall be inclined at a gradient of about 6:1 (Vertical:Horizontal) back towards the face being protected.
- (e) **Top width:** The top of the wall shall not be narrower than 1.6 m.
- (f) The Contractor shall be responsible for adapting the design and construction of the Rockery Walls to the site conditions, including drainage, and long-term foundation settlement.

252.06 Construction Requirements.

- (a) **Excavation:** The Contractor shall excavate and stabilize as necessary to perform the work and provide for safety. Temporary shoring and ground stabilization may be necessary for construction.

The Contractor shall review the Geotechnical Report and make his own assessment of the groundwater conditions. Localized areas of perched water or seepage may be encountered during excavation at the interface of geologic units or from localized groundwater seepage areas.

The Contractor shall immediately contact the CO if unanticipated existing subsurface drainage structures are discovered during excavation and shall suspend work in these areas until remedial measures meeting the CO's approval are implemented. Surface water runoff flows and flows from existing subsurface drainage structures shall be captured independently of the wall drainage network and conveyed to an outfall structure or storm sewer, as approved by the CO.

(b) Rockery Keyway: The Contractor shall construct a keyway a minimum of 600 mm in depth in which to build the Rockery Wall. The keyway shall extend the full length of the Rockery Wall, and be inclined slightly back towards the face being protected. It should be excavated as wide as the width of the Rockery Wall and associated drainage layer behind the wall. The excavation of the keyway should be staged to minimize slope instability of the temporary construction slope. The base of the keyway shall be prepared in accordance with the requirements for subgrade preparation.

(c) Keyway and Rockery Drainage: Upon completion of the keyway excavation, a minimum 600-mm-wide trench shall be excavated as shown on the plans. The trench shall receive a minimum 200-mm-diameter perforated pipe that is bedded and backfilled with permeable backfill. The permeable backfill will be encapsulated by a woven geotextile as shown on the Plans. The drainage pipe shall be installed with sufficient gradient to initiate flow and promote positive drainage.

(d) Rockery Thickness: The rockery thickness, including the drainage layer behind the wall, shall be at least 40 percent of the wall height. The individual rocks should be arranged in a single course.

(e) Rock Placement: The first course of rock shall be placed on firm, unyielding ground. There shall be full contact between the rock and underlying soil, which may require shaping of the ground surface or dropping the rocks into place so that the soil foundation conforms to the rock face bearing on it. Placing and tamping permeable backfill into the subgrade to develop a firm, unyielding surface, is allowed. The bottom of the first course of rock shall be a minimum of 600 mm below adjacent finish grade. The first lift of rock shall be placed in the excavated area, and the rocks shall be infilled with permeable material to create a fairly uniform surface without completely covering the basic structural boulders.

As the wall is constructed, the rocks shall be placed so that there are no continuous joints or planes in either the vertical or horizontal direction. Each rock shall bear on at least two rocks below it. Rocks shall be placed so that there is some bearing between flat rock faces rather than on joints. Joints between courses shall slope downward towards the material being retained.

The main structural boulders in the wall face shall not be loose or be able to be removed by pry bar after wall construction is complete. Non-structural "chinked" rock in the wall face shall not be loose or be able to be removed by hand after wall construction is complete.

Main structural boulders which comprise the basic structure of the wall shall be placed such that the longest dimension of the boulder is oriented in a perpendicular direction to the line of the wall, in other words, such that it points into the slope.

(f) Voids: Where voids of greater than 150 mm in dimension exist in the face of the wall, the voids will be examined to determine if contact between the rocks exists within the thickness of the wall. If contact exists, no additional action is required; however, if there is no rock contact within the rockery thickness the void will be “chinked” with a smaller piece of rock.

(g) Drainage Layer: A drainage layer shall be installed between the back face of the wall and the soil being retained. This drainage layer shall be at least 600-mm-thick, and should consist of permeable material fully encapsulated by a non-woven geotextile as shown on the Plans.

(h) Surface Drainage: The Contractor shall provide positive control and discharge of all surface water that will affect construction of the Rockery Wall and shall maintain all pipes or conduits used to control surface water during construction. Damage caused by surface water shall be repaired at no additional cost. Upon substantial completion of the wall, the Contractor shall remove surface water control pipes or conduits from the site. Alternatively, with the approval of the CO, pipes or conduits that are left in place may be fully grouted and abandoned or left in a way that protects the structure and all adjacent facilities from migration of fines through the pipe or conduit and potential ground loss.

Surface drainage shall be intercepted by a permanent furrow ditch constructed behind the top of the wall as shown on the Plans. The furrow ditch shall intercept and direct upslope surface runoff away from the wall to a positive discharge below and beyond the toe of the wall.

(i) Wall Backfill: If it is necessary to compact fill behind the wall after the Rockery Wall is constructed, this shall be done in a manner so as not to disturb the Rockery Wall or cause the slope of the face of the Rockery Wall to exceed the Rockery Wall face slope limits specified herein.

252.07 Performance and Acceptance of Walls.

The performance of the walls will be accepted based on visual observations indicating that a stable wall system has been achieved. The CO will use site observations, the design references, and sound engineering judgment to make the determination. This determination will be made at a stage of construction identified in the construction sequencing plan.

Measurement

252.08 Rockery Walls shall be measured by the square meter of the wall front face as shown in the plans and approved for payment by the CO. The wall area for payment purposes shall be the horizontal projection of the wall face in a vertical plane. The square meter area computed for payment shall be based on wall heights measured at 10-m maximum intervals along the bottom of cut wall layout line.

Payment

252.09 The accepted quantity will be paid for at the contract unit of measurement for the pay item listed below:

Pay Item	Pay Unit
25206 Rockery wall	Square meter

Payment will be full compensation for all materials, equipment and labor necessary to complete the Rockery Wall pay item listed above in accordance with Section 109, Measurement and Payment. Rockery Wall construction, monitoring, maintenance, and all work including, but not limited to boulder and aggregate infill placement and boulder wall design shall not be measured nor paid for separately, but shall be included in the work.

Add the following Section and subsections

Section 259– GEOGRID REINFORCEMENT**Description**

259.01 This work consists of furnishing and placing geogrid reinforcement for the special embankment.

Material

259.02 Material for geogrid reinforcement will conform to the following:

Load Capacity	Units	MD Values¹
True initial modulus in use	kN/m (lb/ft)	1,580 (107,950)
Tensile Strength @ 5% Strain	kN/m (lb/ft)	52 (3,560)
Ultimate tensile strength	kN/m (lb/ft)	114 (7,810)
Long-term allowable load in sands, silts & clay	kN/m (lb/ft)	45.2 (3,100)
Long-term allowable load in well graded sand	kN/m (lb/ft)	44.0 (3,010)
Long-term allowable load in aggregate	kN/m (lb/ft)	43.2 (2,960)
Junction Strength	kN/m (lb/ft)	105 (7,200)
Flexural Stiffness	X1000 mg-cm	5,100
Resistance to Installation damage	%SC / %SW / %GP	95 / 92 / 90
Resistance to long-term degradation	%	100

¹ Unless indicated otherwise, values shown are minimum average roll values determined in accordance with ASTM D-4759.

Construction Requirements

259.03 General. Overlap geogrid sections a minimum of 600 mm.

259.07 Acceptance. Material for geogrid reinforcement will be evaluated under Subsection 106.02 and 106.03.

Measurement

259.08 Measure geogrid reinforcement by the square meter excluding overlap.

Payment

259.09 The accepted quantities, measured as provided above, will be paid at the contract price per unit of measurement for the pay items listed below that are shown in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Payment will be made under:

Pay Item	Pay Unit
25901 Geogrid Reinforcement	Square meter

Section 301 - UNTREATED AGGREGATE COURSES

Construction Requirements

301.03 General. Delete the subsection and substitute the following:

Prepare the surface on which the aggregate course is placed according to Section 204 or 303 as applicable.

The quality of the aggregate base from the Government furnished stockpiles is acceptable. The quantity and gradations of the individual stockpiles are listed in Table 301-1a. The contractor will be responsible for determining the amount and type of equipment and work required to blend the stockpiles to produce aggregate base meeting the grading C, D or E requirements.

Submit proposed target values for the appropriate sieve sizes at least 14 days before incorporating the aggregate into the work.

Set target values within the gradation ranges shown in Table 703-2 for grading C, D or E.

Add the following table:

**Table 301-1a
Quantity and Gradation for
Government Furnished Stockpiles**

Stockpile description	25 mm Crushed	12.5 mm Crushed	Dirty Fines	Crushed Fines
Approximate Metric tonnage	8,910	15,935	4,530	15,520
Gradation				
25 mm	100	100	100	100
19 mm	87	100	100	100
12.5 mm	30	100	100	100
9.5 mm	4	85	100	100
4.75 mm	2	16	99	99
2.36 mm	2	2	79	78
600 µm	1	2	46	34
425 µm	1	2	41	27
300 µm	1	2	36	21
75 µm	0.9	1.3	18.8	9.6

301.08 Acceptance.

(a) **Aggregate gradation.** Add the following:

When all the test results are completed and evaluated for a lot, the Contractor may optimize the final pay factor for the lot by changing the originally established target values for the lot. The target values, as changed, must be within the designated range for the grading selected.

Payment

301.10 Add the following:

No direct payment will be made for stockpile blending to produce grading C, D, or E.

Delete table 301-1 and substitute the following:

**Table 301-1
Sampling and Testing**

Material or Product	Property or Characteristic	Category	Test Methods or Specifications	Frequency	Sampling Point
Subbase and Base courses	Gradation ⁽¹⁾ – Specified sieves	2	AASHTO T 11 and AASHTO T27	1 sample per 1000 t	From the windrow of roadbed after processing
	Liquid limit	---	AASHTO T89	1 sample per 3000 t	From the windrow or roadbed after processing
	Moisture-Density (maximum density)	---	AASHTO T180 method D	1 for each aggregate grading produced	Production output or Stockpile
	Inplace density and moisture content	---	AASHTO T310 or other approved procedures	1 for each 500 t	Inplace completed compacted layer

⁽¹⁾ Use only sieves indicated for the specified gradation.

Section 409 — ASPHALT SURFACE TREATMENT

Delete the Section and substitute the following:

Description

409.01 This work consists of constructing a single or multiple asphalt surface treatment with aggregate or precoated aggregate. This work also includes constructing an asphalt fog seal without aggregate.

Surface treatment aggregate designation is designated as shown in Tables 409-1, 409-2, and 409-3.

Provide emulsified asphalt grade HFMS-2P or equivalent meeting the requirements of Table 702-4.

Material

409.02 Conform to the following Subsections:

Aggregate	703.10
Asphalt binder	702.01
Blotter	703.13
Emulsified asphalt	702.03

Construction Requirements

409.03 Qualifications. Submit the following information for approval at least 28 days before placement.

Companies and individuals involved with the placement of asphalt surface treatments must conform to the:

- (a) Demonstrate satisfactory completion of at least 10 comparable projects.
- (b) Provide Superintendent or Foremen experience in surface treatment construction on at least 10 comparable projects.

409.04 Composition. Submit the following information and samples for approval at least 21 days before placement:

- (a) **Aggregate samples.** 35 kilograms from each stockpile produced and the gradation range represented by each.
- (b) **Aggregate gradation target values.** The proposed percentage of each stockpile to be used and the proposed target value for each sieve size.
- (c) **Asphalt samples.** 2 1-liter samples of asphalt binder or emulsified asphalt from the same source and of the type to be used for the surface treatment.
- (d) **Asphalt temperature.** Apply asphalt at temperatures according to Table 702-1.
- (e) **Spread rates.** The proposed spread rate for the aggregate and asphalt material.

409.05 Equipment. Furnish equipment as follows:

- (a) **Asphalt distributor.**
 - (1) Capable of heating asphalt evenly.
 - (2) Adjustable full circulation spray bar to 4.6-meter width.

(3) Positive controls including tachometer, pressure gauge, volume measuring device, or calibrated tank to uniformly deposit asphalt over the full width within 0.08 liter per square meter of the required rate.

(4) Thermometer for measuring the asphalt temperature in the tank.

(b) Rotary power broom. Furnish a minimum of two brooms both with the following capabilities:

(1) Self-propelled.

(2) Capable of controlling the vertical broom pressure.

(c) Pneumatic-tire rollers. Furnish a minimum of two pneumatic-tire rollers both with the following capabilities:

(1) Self-propelled.

(2) Minimum compacting width - 1.5 meters.

(3) Gross weight adjustable within the range of 3.5 to 6.5 kilograms per millimeter of compaction width.

(d) Aggregate spreader.

(1) Self-propelled.

(2) Minimum of 4 pneumatic tires on 2 axles.

(3) Positive controls to uniformly deposit the aggregate over the full width of asphalt within 10 percent by mass of the required rates.

(e) Other equipment. Other equipment of proven performance may be used in addition to or in lieu of the specified equipment when approved by the CO. Provide two-way communication between the asphalt distributor and the aggregate spreader if the roadway alignment does not permit visual contact.

409.06 Surface Preparation. On existing asphalt surfaces, ensure that the surface is dry. Immediately before placing the layer, remove loose dirt and other objectionable material from the surface by approved methods. Fog seal patches using a slow setting emulsion diluted with an equal part water. Apply the diluted emulsion at a rate of 0.65 liters per square meter.

On existing aggregate surfaces, prime the surface according to Section 411. Allow the primed surface to cure at least 5 days for cutback asphalt or 24 hours for asphalt emulsions. Ensure that the primed surface is dry for surface treatments using asphalt binder or slightly damp for surface treatments using emulsified asphalt.

409.07 Weather Limitations. Apply surface treatment or fog seal according to the following:

(a) Apply single or multiple asphalt surface treatments when:

- (1) Between June 15th and September 15th unless other dates are approved by the CO.
- (2) Ambient air temperature is above 20°C and rising and surface temperatures are between 27°C and 60°C
- (3) Weather is not foggy or rainy, and when rain or temperatures below 4°C are not anticipated for at least 24 hours after application.
- (4) Winds are less than or equal to 15 kilometers per hour.
- (5) Complete surface treatment application at least 2 hours before sunset.

(b) Apply fog seal when:

- (1) Ambient air and surface temperatures are above 10°C and rising.
- (2) Weather is not foggy or rainy, and when rain or temperatures below 4°C are not anticipated for at least 24 hours after application.
- (3) Complete fog seal applications at least 2 hours before sunset.

409.08 Production Start-Up Procedures for Surface Treatments. At least 10 days before the start of constructing all surface treatments containing aggregate, arrange for a pre-surface treatment conference. Coordinate attendance with the CO and any applicable subcontractors. Be prepared to discuss or submit the following:

- (a) Proposed schedule of operations.
- (b) List of all personnel involved in the production and construction of the work including equipment calibration, sampling, and testing.
- (c) List of equipment, quantity, and description to be used in the production and construction of the work.
- (d) Proposed traffic control plan.
- (e) Discuss Section 153, minimum frequency schedule for process control sampling and testing (to be performed by the Contractor).
- (f) Discuss Subsections 409.08; 409.09, and 409.10.
- (g) Discuss spill prevention and safety contingency plan.

Provide 7 days advance notice before constructing all asphalt surface treatments containing aggregate. Also use these start-up procedures when resuming production after termination due to nonconforming work.

On the first day of placement of each surface treatment layer, or whenever there is a change in the surface texture or aggregate gradation, construct a minimum of three 100-meter control strips that are one-lane wide. Each control strip will have different application rates of emulsion and/or surface aggregate. The CO will indicate which strip of the will serve as the approved project control strip. Coordinate location of the control strips with the CO.

Construct the control strip using material, lay-down, and compaction procedures intended for the remainder of the surface treatment. Cease production after construction of the control strip until the material and the control strip are evaluated and accepted.

Acceptable control strips may remain in place and will be accepted as a part of the completed surface treatment.

Repeat the control strip process until an acceptable control strip is produced.

409.09 Asphalt Application. Calibrate the asphalt distributor spray bar height, nozzle angle, pump pressure and check the longitudinal and transverse spread rates daily, before start up, and as directed by the CO according to ASTM D 2995. If different asphalt distributors are used, calibrate each before use on the project. Ensure that the length of the spread is no more than can be covered with aggregate immediately after application. Document all calibration and application rates and provide to the CO at the end of each days production.

Protect the surfaces of nearby objects to prevent spattering or marring. Spread building paper on the surface for a sufficient distance from the beginning and end of each application so the flow through the distributor nozzles may be started and stopped on the paper.

Apply the asphalt uniformly with an asphalt distributor at the optimum application rate determined from the test strip. Move distributor forward at the proper application speed at the time the spray bar is opened. Stop application if any nozzles are plugged or if triple nozzle spray coverage is not occurring. Use care not to apply excess asphalt at the junction of spreads.

Correct skipped areas or deficiencies. Remove and dispose of paper or other material used.

409.10 Aggregate Application. When using asphalt binder, the aggregate surface should be dry. When using emulsified asphalt, the aggregate surface should be moist. Verify aggregate stockpiles moisture daily during production with visual inspection.

Apply the aggregate uniformly with an aggregate spreader immediately after the asphalt is applied at the optimum application rate determined from the test strip. Check and record spread rate daily, before start up, and as directed by the CO. Operate aggregate spreader so the asphalt is covered with the aggregate before wheels pass over it.

During part-width construction, leave uncovered a strip of sprayed asphalt approximately 150 millimeters wide to permit an overlap of asphalt material.

Immediately correct excesses and deficiencies by brooming or by the addition or removal of aggregate until a uniform texture is achieved. Use hand methods in areas not accessible to power equipment.

When precoated aggregates are used, they may be mixed on the job or at a central mixing plant. Uniformly coat the aggregate with 1.0 to 2.0 percent residual asphalt, by weight of aggregate. Maintain the flow qualities of the precoated aggregate, so it is satisfactorily spread with an aggregate spreader.

Operate rollers at a maximum speed of 8 kilometers per hour. Do not permit the aggregate to be displaced by pickup or sticking of material to the tire surface. Roll the surface to uniformly and thoroughly bond the aggregate over the full width. Complete rolling within 1 hour after asphalt is applied to the surface.

409.11 Fog Seal. A fog seal consists of applying slow-setting emulsified asphalt diluted with water onto an existing asphalt surface. Unless otherwise noted on the plans, dilute the specified emulsion one part water to one part emulsified asphalt. Apply the diluted emulsified asphalt according to Subsection 409.09 at a rate of 0.45 to 0.70 liters per square meter depending on the condition of the existing surface. Allow the fog seal to penetrate undisturbed for at least 2 hours or until the emulsified asphalt breaks and is substantially absorbed into the existing surface. Then lightly cover remaining spots of excess asphalt with blotter according to Section 411 before opening the surface to traffic.

409.12 Single-Course Surface Treatment. A single-course surface treatment consists of applying asphalt material onto an existing surface immediately followed by a single, uniform application of aggregate. Apply the asphalt and aggregate according to Subsections 409.09 and 409.10 at the approximate rates shown in Table 409-1. Application rates shown in Table 409-1 should be used for estimating purposes only. The contractor shall determine aggregate and

asphalt application rates that may fall outside the ranges shown in Table 409-1. Before curing, the emulsion should rise just below the top of the aggregate. After curing, embedment depth of the aggregate in the residual asphalt should be approximately 60% of the nominal maximum size. Determine the exact rates based on approved control strips.

Use a pilot car according to Section 635 to limit traffic speeds. During the initial 45 minutes after completion of rolling, limit the traffic speeds to 15 kilometers per hour. Limit traffic speeds to 30 kilometers per hour for 24 hours.

Lightly broom the aggregate surface on the morning after construction. Maintain the surface for 4 days by distributing blotter according to Section 411 to absorb any free asphalt and by repairing areas deficient in aggregate. Remove excess material from the surface using a rotary broom. Do not displace embedded material. Do not broom the surface where the air temperature is above 32°C.

Table 409-1
Approximate Quantities of Material for
Single-Course Surface Treatment

Designation	Nominal Maximum Size of Aggregate	Aggregate Gradation⁽¹⁾	Estimated Quantity of Aggregate⁽²⁾ Kg/m²	Estimated Quantity of Emulsified Asphalt L/m²	Estimated Quantity of Asphalt Binder L/m²
1A	19.0 mm	B	24 – 29	2.0 – 2.7	1.3 – 1.8
1B	12.5 mm	C	16 – 18	1.6 – 2.2	1.1 – 1.5
1C	9.5 mm	D	13 – 15	1.1 – 1.8	0.7 – 1.2
1D	4.75 mm	E	10 – 13	0.9 – 1.2	0.6 – 0.8
1E	Sand	F	7 – 10	0.7 – 1.0	0.5 – 0.7

⁽¹⁾ See Table 703-7 for aggregate gradations.

⁽²⁾ Aggregate masses are for aggregates having a bulk specific gravity of 2.65, as determined by AASHTO T 84 and AASHTO T 85. Make proportionate corrections when the aggregate furnished has a bulk specific gravity above 2.75 or below 2.55.

409.13 Double and Triple-Course Surface Treatments. Double and triple-course surface treatments consist of applying multiple layers of asphalt and aggregate. Apply each asphalt and aggregate layer according to Subsections 409.09 and 409.10 and at the approximate rates shown in Table 409-2 or 409-3. Application rates shown in Table 409-2 and 409-3 should be used for estimating purposes only.

The contractor shall determine aggregate and asphalt application rates that may fall outside the ranges shown in Tables 409-2 or 409-3. Determine the exact rates based on approved control strips.

Maintain the surface and limit traffic according to Subsection 409.11.

No wait is required between surface treatment applications when using an asphalt binder. Wait at least 24 hours between applications when using emulsified asphalt.

Table 409-2
Approximate Quantities of Material for
Double Course Surface Treatments

Designation (Thickness)	Nominal Maximum Size of Aggregate	Aggregate Gradation⁽¹⁾	Estimated Quantity of Aggregate⁽²⁾ Kg/m²	Estimated Quantity of Emulsified Asphalt L/m²	Estimated Quantity of Asphalt Binder L/m²
2A (12.5 mm)					
1 st Application	9.5 mm	D	16 – 21	1.1 – 1.6	0.7 – 1.1
2 nd Application	4.75 mm	E	7 – 10	1.6 – 2.0	1.1 – 1.3
2B (16.0 mm)					
1 st Application	12.5 mm	C	18 – 24	1.6 – 2.0	1.1 – 1.3
2 nd Application	4.75 mm	E	10 – 13	2.0 – 2.5	1.3 – 1.7
2C (19.0 mm)					
1 st Application	19.0 mm	B	24 – 29	1.8 – 2.5	1.2 – 1.7
2 nd Application	9.5 mm	D	13 – 16	2.5 – 2.9	1.7 – 1.9

⁽¹⁾ See Table 703-7 for aggregate gradations.

⁽²⁾ Aggregate masses are for aggregates having a bulk specific gravity of 2.65, as determined by AASHTO T 84 and AASHTO T 85. Make proportionate corrections when the aggregate furnished has a bulk specific gravity above 2.75 or below 2.55.

Table 409-3
Approximate Quantities of Material for
Triple Course Surface Treatments

Designation (Thickness)	Nominal Maximum Size of Aggregate	Aggregate Gradation (¹)	Estimated Quantity of Aggregate (²) Kg/m²	Estimated Quantity of Emulsified Asphalt L/m²	Estimated Quantity of Asphalt Binder L/m²
3A (12.5 mm)					
1 st Application	9.5 mm	D	16 – 21	1.1 – 1.6	0.7 – 1.1
2 nd Application	4.75 mm	E	7 – 10	1.3 – 1.8	0.9 – 1.2
3 rd Application	Sand	F	7 – 10	1.1 – 1.6	0.7 – 1.1
3B (16.0 mm)					
1 st Application	12.5 mm	C	18 – 24	1.1 – 1.6	0.7 – 1.1
2 nd Application	9.5 mm	D	10 – 13	1.6 – 2.0	1.1 – 1.3
3 rd Application	4.75 mm	E	7 – 10	1.1 – 1.6	0.7 – 1.1
3C (19.0 mm)					
1 st Application	19.0 mm	B	21 – 27	1.3 – 1.8	0.9 – 1.2
2 nd Application	9.5 mm	D	13 – 16	1.6 – 2.0	1.1 – 1.3
3 rd Application	4.75 mm	E	7 – 10	1.3 – 1.8	0.9 – 1.2

(¹) See Table 703-7 for aggregate gradations.

(²) Aggregate masses are for aggregates having a bulk specific gravity of 2.65, as determined by AASHTO T 84 and AASHTO T 85. Make proportionate corrections when the aggregate furnished has a bulk specific gravity above 2.75 or below 2.55.

409.14 Acceptance. Asphalt binder, and emulsified asphalt, will be evaluated under Subsections 106.03, 106.04 and 702.09. Furnish a production certification for the grade of emulsified asphalt specified in Subsection 409.01.

Aggregate gradation for asphalt surface treatment will be evaluated under Subsection 106.05.

See Table 409-4 for sampling and testing requirements.

The upper and lower specification limits are equal to the calculated mean of all test results plus or minus the allowable deviations shown in Table 703-7, except as follows:

- (a) If the calculated mean value for any tested sieve exceeds the maximum gradation value shown in Table 703-7, the upper specification is equal to the maximum gradation value plus the allowable deviation, and the lower specification is equal to the maximum gradation value minus the allowable deviation.
- (b) If the calculated mean value for any tested sieve is less than the minimum gradation value shown in Table 703-7, the upper specification is equal to the minimum gradation value plus the allowable deviation and the lower specification is equal to the minimum gradation value minus the allowable deviation.

Construction of asphalt surface treatment course will be evaluated under Subsections 106.02 and 106.04.

Prime coat and blotter will be evaluated under Section 411.

Measurement

409.15 Measure the Section 409 items listed in the bid schedule according to Subsection 109.02 for each day's production and the following as applicable.

Measure and provide temperature volume corrections for emulsified asphalt and asphalt binder to 15.6°C.

Measure surface treatment aggregate in the hauling vehicle prior to stockpiling or prior to placement if not stockpiled.

The quantity of emulsion indicated in the bid schedule is an undiluted quantity.

Water for diluting fog seal in accordance with Subsection 409.10 will not be measured for payment.

Indicate a breakdown of total emulsion and water added on the load invoices supplied to the CO for payment.

Measure blotter under Section 411

Payment

409.16 The accepted quantities, measured as provided above, will be paid at the contract price per unit of measurement for the pay items listed below that are shown in the bid schedule except the surface treatment aggregate contract unit bid price will be adjusted according to Subsection 106.05. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Payment will be made under:

	Pay Item	Pay Unit
40901	Surface treatment aggregate designation ____	Metric ton
40902	Surface treatment aggregate designation ____	Cubic meter
40903	Asphalt binder grade ____	Metric ton
40904	Emulsified asphalt grade ____	Metric ton
40908	Fog Seal Grade ____	Metric ton

**Table 409-4
Sampling, Testing and Acceptance Requirements**

Material or Property	Type of Acceptance (subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Aggregate Surface treatment aggregate ⁽¹⁾ (703.10)	Measured and tested for conformance (106.04 & 105)	LA abrasion	---	AASHTO T 96	1 per type & source of material	Source of Material	Yes, when requested	Before using in work
		Sodium sulfate soundness loss (coarse & fine)	---	AASHTO T 104	"	"		"
		Fractured faces	---	ASTM D 5821	"	"		"
		Flat & elongated particles	---	ASTM D 4791	"	"		"
		Adherent coating	---	ASTM D 5711	"	"		"
		Clay lumps & friable particles	---	AASHTO T 112	"	"		"
Aggregate surface treatment aggregate ⁽¹⁾	Statistical (106.05)	Gradation. See Table 703-7 for applicable sieves.	I	AASHTO T 27 & T 11	1 per 750 tons	Production belt or spreader discharge	Yes	24 hours
	Measured and tested for conformance (106.04 & 106.05)	Fractured faces	---	ASTM D 5821	1 per 750 tons	Production belt or spreader discharge	Yes	24 hours
		Liquid limit ⁽²⁾	---	AASHTO T 89	"	"	"	"
Asphalt binder ⁽³⁾ (702.01) or emulsified asphalt ⁽³⁾ (702.03)	Measured and tested for conformance (106.04)	Quality	---	Subsection 409.13	1 per tanker truck including trailer	Point of shipment delivery	2 1-liter samples	---

(1) Applies to each aggregate grade furnished.

(2) For blotter material only.

(3) Applied to each asphalt material furnished.

Section 554 - REINFORCING STEEL**Construction Requirements****554.03 Order Lists.** Add the following:

Prepare and submit an order list for the reinforced concrete headwalls, wingwalls, and slope paving based on the typical details shown on the plans.

554.05 Bending. Add the following to the first paragraph:

Do not shear reinforcing bars in bundles.

554.07 Epoxy Coated Reinforcing Steel. Delete the fifth paragraph and substitute the following:

Field repairs will not be allowed on bars that have severely-damaged coatings. Replace bars with severely-damaged coatings. A severely-damaged coating is defined as a bar where the sum of all areas covered with patching material, including overlaps, exceeds five percent of the total surface area of the bar. This limit on repaired damage coating does not include sheared or cut ends that are coated with patching material. Coat mechanical splices after splice installation according to AASHTO M 284M for patching damaged epoxy coatings.

554.08 Placing and Fastening. Delete the first sentence of the first paragraph and substitute the following:

Place, fasten, and support the bars according to the *CRSI Manual of Standard Practice*. Use precast concrete blocks or metal supports.

Measurement**554.11** Add the following:

No measurement will be made for reinforcing steel for headwalls, wingwalls, and slope paving.

Payment**554.12** Add the following:

No payment will be made for reinforcing steel for headwalls, wingwalls, and slope paving.

Section 601 - MINOR CONCRETE STRUCTURES

Material

Delete Table 601-1 and substitute the following:

**Table 601-1
Composition of Minor Structure Concrete**

Property	Specification
Cement content	362 kg/m ³ minimum
Water/cement ratio	0.49 maximum
Slump	125 mm maximum
Air Content	4% minimum
Size of coarse aggregate	AASHTO M43 with 100% passing the 37.5-mm sieve
28-day compressive strength	20.7 MPa minimum

Payment

601.09 Add the following:

Payment will be full compensation for the work described in this Section, including, but not limited to , excavation, subexcavation, structural backfill, geotextile under the structural backfill, placed riprap, backfill and compaction.

Section 602 - CULVERTS AND DRAINS

Construction Requirements

602.03 General. Delete the text of this subsection and substitute the following:

Furnish culvert pipe with a wall thickness not less than that shown on the plans or determined from the fill-height tables included in the plans. Use the same material and coating on all contiguous pipe sections and special sections, such as elbows, end sections, and branch connections. For culvert extensions, furnish the same material as the existing culvert.

Install either corrugated metal culvert pipe or smooth interior wall, corrugated polyethylene bell and spigot culvert pipe except where corrugated metal pipe is specifically required on the drawings. Install metal end sections on all culverts.

The plans show the approximate size, location and length of culverts. Determine final size, location, skew, length, elevations, and grade according to Subsection 152.03(g). Do not order culvert material until the CO has accepted the final structure size, length, and alignment.

Perform excavation and backfill work under Section 209.

602.05 Laying Metal Pipe. Delete the second paragraph and substitute the following:

Join pipe sections together with soil tight bell and spigot joints or coupling bands according to AASHTO M 36M or M 196M. Limit the use of bell and spigot joints to slopes of 10 percent or less and limit the use of coupling bands with projections (dimples) to attaching prefabricated flared end sections.

602.06 Laying Plastic Pipe. Add the following:

Provide watertight joints for plastic pipe culverts.

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

Payment

602.10 Add the following:

Payment for pipe culverts will be at the contract price per unit of measurement regardless of pipe materials specifically required or provided at the election of the contractor.

Delete the last sentence of the first paragraph and substitute the following:

Payment will be full compensation for the work prescribed in this Section, including, but not limited to, excavation, bedding, backfill, compaction, and any special measures required to protect culverts and drains during construction.

Section 605 - UNDERDRAINS, SHEET DRAINS, AND PAVEMENT EDGE DRAINS

Construction Requirements

605.03 General. Add the following after the second paragraph:

Do not install drain material until the CO has accepted the final location and length.

Measurement

605.08 Delete the last sentence of the first paragraph and substitute the following:

When measurement for a system, do not measure geotextiles, collector pipes, pipe connections, backfill, and outlet pipes that are part of the system unless a pay item is shown in the contract.

Payment

605.09 Add the following:

Pay Item	Pay Unit
60506GP ___ millimeter perforated collector pipe	Meter

Add the following:

Payment shall be full compensation for, but not limited to, all work and materials required to complete the item including drainage geotextile, drainage core, securing devices, adhesives, sewn seems, pipe, pipe connections, filter material, excavation, backfill, drain outlet, and erosion control pads.

Section 610 – HORIZONTAL DRAINS

Construction Requirements

610.05 Installing Horizontal Drain. Add the following at the end of the first paragraph:

Immediately place and secure a screen made of 1.4-millimeter diameter galvanized wire having approximately 13 by 13-millimeter mesh openings over the outlet ends of all horizontal drain pipes that drain directly to daylight.

Measurement

610.08 Delete this Section and substitute the following:

Measure horizontal drain systems by the meter. Measure outlet pipe in accordance with Subsection 605.09.

Payment

610.09 Add the following:

Payment for the work described in this section includes, but is not limited to, drilling, slotted pipe, fittings, connections, and packing. See Subsection 109.05.

Pay Item	Pay Unit
61001 Horizontal drain pipe system	Meter

Section 611 – WATERLINE**611.01 Add the following**

This work consists of locating 2 existing spring fed waterlines crossing under the existing road near stations 15+820 and 15+920 and relocating as necessary to maintain a minimum cover of 900 mm above waterline to finish grade.

This work also consists of constructing 2-150 mm waterline encasement pipes under the proposed road extending to the ROW line on each side of the roadway centerline. The pipes are to be located at stations 16+130 and 18+260 and oriented north/south irrespective of the roadway alignment. The top of each pipe is to be placed as necessary to maintain a minimum cover of 1 meter to finish grade. Permanent location markers, consisting of securely embedded vertical 150 mm PVC pipes, are to be placed at each end of the encasement pipes. The markers are to extend a minimum of 1 meter above ground and buried below the end of the encasement pipe.

Construction Requirements**611.03 General Add the following**

Relocate waterline in kind as directed by the CO.

611.06 Acceptance Add the following

During backfilling of encasement pipe, place a plastic locator strip containing metal that allows detection with a metal detector approximately 300 millimeters above the pipe extending the entire length of embedment.

Payment**611.09 Add the following:**

Payment for the work described in locating and relocating the exiting waterline will be paid as Water System, Lump sum and includes, but is not limited to, locating and protecting existing waterlines, relocating 50 meters of existing waterlines with new 50mm plastic waterline, fittings and connections.

Payment for the work described in constructing waterline encasement pipes will be paid as 150 mm Encasement Pipe, meter and includes, but is not limited to, placing encasement pipes, locator material, backfilling, fittings and connections.

Section 616 – SLOPE PAVING**Measurement****616.09 Delete the text of this subsection and substitute the following:**

Slope paving will be measured per cubic meter under Section 601, Minor Concrete Structures.

Payment

616.10 Delete the text of this subsection and substitute the following:

Slope paving will be paid per cubic meter under Section 601, Minor Concrete Structures.

Section 618 – CONCRETE BARRIERS AND PRECAST GUARDWALLS

Description

618.01 Add the following:

This work consists of furnishing and constructing barrier stone at the locations specified in the plans and in accordance with these Special Contract Requirements.

Construction Requirements

618.03 General Add the following:

Barrier stone: Barrier stones will be a minimum of 900 millimeters measured in the smallest direction. Individual stones will have a minimum volume of .765 cubic meters and approximately 900 kilograms.

Bury individual barrier stones in the existing ground to a depth not less than one-third of their height as directed by the CO. Place the stones so that the largest face is buried. Place the stones randomly and orient to present a natural and pleasing effect. Lay and securely place the stones on firm beds, backfill as required, and compact with hand-operated compaction equipment or as approved by the CO.

Remove and stockpile stones meeting the size requirements during excavation operations. Place stone in accordance with the plans and at the direction of the CO.

Measurement

618.09 Add the following:

Measure barrier stone by the each complete in place. No measurement will be made for excavation or backfill.

Payment

618.10 Payment will be under:

Pay Item	Pay Unit
61806 Barrier Stone	Each

Section 619 – FENCES, GATES, AND CATTLEGUARDS

Construction Requirements

619.03 Fences and Gates Add the following:

(a) **General.** Install wire fence as shown on the plans.

Install and ensure operation of new fences prior to removal of old fences. Care shall be taken to prevent loss of livestock and to prevent livestock grazing on adjacent public property from entering any private pasture land. Prior notice of work shall be given to the CO in order to coordinate with private landowners.

The Contractor shall install temporary fence where needed.

(c) **Wire Fences and Gates.**

(5) **Gate Installation.**

(b) *Metal Gates.* Add the following:

Construct gate hinge to accommodate future leveling without necessary removal of gate.

619.07 Cattle Guards

(C) **Cattle guard.** Add the following:

All materials and work to assemble object markers and signs as shown on the plans are included in the unit item cattle guard. No additional measurement will be made for this work and material.

All material and work to reconnect and/or replace in kind existing fence to new cattle guard is included in the item cattle guard. No additional measurement will be made for this work and material.

Section 625 - TURF ESTABLISHMENT

Construction Requirements

625.03 Turf Establishment Seasons. Delete the first sentence and substitute the following:

Apply turf establishment to finished slopes and ditches between September 15th to October 15th or prior to the first significant snowfall in the area. Apply permanent turf establishment to all areas where final grading has been completed prior to September 15th each year of construction.

625.07 Seeding.

(b) Hydraulic method. Add the following after the second sentence:

Apply the tracer material at a rate of 450 kilograms per hectare to provide visible evidence of uniform application.

625.08 Mulching.

(b) Hydraulic method. Delete the first and second paragraphs and substitute the following:

In a separate application from the seed, use hydro-type equipment according to Subsection 625.07(b).

Apply wood or grass cellulose fiber mulch at a rate of 1700 kilograms per hectare.

Payment

625.12 Add the following:

Pay Item	Pay Unit
62504BBFM Mulching, hydraulic method, bonded fiber matrix	Hectare

Section 633 - PERMANENT TRAFFIC CONTROL

633.01 Delete the text of the second paragraph and substitute the following:

Sign panels for this project are designated aluminum unless specified in the plans.

Delete the fourth paragraph and substitute the following:

Posts are designated as wood, aluminum, galvanized steel, or corrosion resistant steel.

Construction Requirements

633.03 General. Add the following:

Timber material for posts, panel, and other items shall conform to the requirements of Section 718.08(a).

Prepare and submit shop drawings in according to Subsection 104.03. For approval by the CO.

633.05 Panels. Delete the first sentence and substitute the following:

Use type III, VII, VIII, or IX retroreflective sheeting.

Measurement

633.09 Delete the last paragraph and replace with the following:

Measure removing and resetting permanent traffic control devices by the lump sum. Measurement to include all work and appurtenances necessary to place the sign in its new location in the same or better condition.

Payment

633.10 Add the following:

	Pay Item	Pay Unit
63315	Removing and resetting sign	Lump sum

Section 634 - PERMANENT PAVEMENT MARKINGS

Construction Requirements

634.03 General. Add the following to the first paragraph:

For simple curve widening locations (widening only on one side) shift the centerline striping location such that the centerline stripe is midway between the normal edge of shoulders. The shift from the staked centerline will be towards the widened lane and one-half the total curve widening specified for the given station as shown in the plans.

Place the centerline stripe along the existing striped centerline, as recorded under Subsection 152.03(o).

Add the following:

The Contractor may use, upon approval, permanent pavement marking materials and layouts meeting current state approved standards that are practiced in the region of the project in lieu of contract requirements, if the state standards meet the requirements of the MUTCD. The material substituted must be equivalent to that required in the specifications. Obtain the CO's approval before incorporating into the work. When requesting approval, furnish to the CO the applicable state standards (specifications and drawings), manufacturer's name and address, supplier's certification indicating material is produced to state approved specifications, pricing data showing cost difference for labor and materials, and any other available information describing application and performance. When directed, submit samples for approval at the Contractor's expense. Within 14 days, the CO will inform the Contractor as to the acceptance of the request. The unit price for the contract item(s) will be reduced to reflect any cost savings.

Section 635 - TEMPORARY TRAFFIC CONTROL**Construction Requirements****635.03 General** Add the following to the first paragraph:

Use barricades, cones, tubular markers, drums, portable sign supports, vertical panels, truck mounted attenuators, and temporary crash cushions that meet crash testing requirements of NCHRP 350 or that have been accepted by the FHWA for nation-wide use. Submit a written certification that traffic control devices in use on the project meet crash-testing requirements. Information regarding NCHRP 350 and crash-tested FHWA accepted work zone traffic control devices can be found at:

<http://safety.fhwa.dot.gov/fourthlevel/hardware/wzd.htm>

635.03 General. Add the following:

(i) Furnish temporary traffic control devices that meet the NCHRP Report 350, Recommended Procedures for Safety Performance and Evaluation of the Highway Features, crashworthiness standards.

635.05 Barricades. Delete the second sentence and substitute the following:

Use type III retroreflective sheeting.

635.06 Cones and Tubular Markers. Delete the third sentence and substitute the following:

Use type III or VI retroreflective sheeting.

635.07 Construction Signs. Delete the first sentence and substitute the following:

Use type III, VII, VIII, or IX retroreflective sheeting. Provide the same type of sheeting on all post-mounted construction signs that pertain to the project.

635.08 Drums. Delete the third sentence and substitute the following:

Use type III retroreflective sheeting.

635.09 Flaggers. Delete the first sentence and substitute the following:

Furnish flaggers certified by ATSSA, the National Safety Council, the International Municipal Signal Association or a state agency.

635.11 Temporary Concrete Barriers. Add the following:

Use barriers that meet all requirements of NCHRP 350 or have been accepted by the FHWA for nation-wide use.

Section 702 – ASPHALT MATERIAL

702.03 Emulsified Asphalt. Add the following at the end of the first paragraph:

When specified for chip seal application emulsion shall conform to Table 702-4. AASHTO T 59 will be followed for all test methods, except as noted.

**Table 702-4
High Float Emulsion Specification**

Emulsion Grade based on AASHTO M-140	HFRS-2P ⁽¹⁾		HFMS-2P ⁽¹⁾	
	Minimum	Maximum	Minimum	Maximum
Tests on emulsion:				
Viscosity, Saybolt Furol at 50°C, Sfs	50	450	50	450
Storage stability test, 24-hour, % ⁽²⁾	---	1.0	---	1.0
Sieve test, % ⁽¹⁾	---	0.10	---	0.10
Demulsibility, %	40	---	---	---
Residue by distillation, %	65	---	65	---
Oil distillate by volume of emulsion, %	---	3.0	---	3.0
Tests on residue from distillation test:				
Penetration, 25°C, 100 g, 5 sec	70	150	70	150
Ductility, 25°C, 5 cm/min, cm	75	---	75	---
Solubility in trichloroethylene, %	97.5	---	97.5	---
Elastic Recovery, 10°C (CPL-2211)	58		58	
Float test, 60°C, sec	1200	---	1200	---

⁽¹⁾ HFRS-2P and HFMS-2P will be an emulsion blend of polymerized asphalt, water, and emulsifiers. The asphalt cement will be polymerized prior to emulsification and will contain a minimum of three percent polymer by weight of asphalt cement.

⁽²⁾ This test requirement on representative samples is waved if successful application of the material has been achieved in the field.

702.04 Application Temperatures. Delete Table 702-1, and substitute the following:

**Table 702-1
Application Temperatures - Range °C**

Type and Grade Of Asphalt Material	Temperature Ranges Minimum - Maximum	
	Spraying Temperatures	Mixing Temperatures ⁽¹⁾
Cub-back asphalt-		
MC-30	30 - ⁽²⁾	---
RC or MC-70	50 - ⁽²⁾	---
RC or MC-250	75 - ⁽²⁾	60 - 80 ⁽³⁾
RC or MC-800	95 - ⁽²⁾	75 - 100 ⁽³⁾
RC or MC-3000	110 - ⁽²⁾	80 - 115 ⁽³⁾
Emulsified asphalt-		
RS-1	20 - 60	---
RS-2	50 - 85	---
MS-1	20 - 70	20 - 70
MS-2, MS-2h	-	20 - 70
HFMS-1, 2, 2h, 2s	20 - 70	10 - 70
SS-1, 1h, CSS-1, 1h	20 - 70 ⁽⁴⁾	20 - 70
CRS-1	50 - 85	---
CRS-2	60 - 85	---
CMS-2, CMS-2h	40 - 70	50 - 60
Asphalt binder-		
All grades	185 max.	185 max.

⁽¹⁾ Temperatures of mix immediately after discharge.

⁽²⁾ The maximum temperature at which fogging or foaming does not occur.

⁽³⁾ Temperature may be above flash point. Take precautions to prevent fire or explosion.

⁽⁴⁾ For fog seals and tack coats.

Section 703 – AGGREGATE

703.02 Coarse Aggregate for Concrete. Delete the Subsection and substitute the following:

Conform to AASHTO M 80 class A including the restriction on reactive materials, except as amended or supplemented by the following:

- | | |
|---------------------------------------|---------------------------------------|
| (a) Los Angeles abrasion, AASHTO T 96 | 40% max. |
| (b) Adherent coating, ASTM D 5711 | 1.0% max. |
| (c) Grading, AASHTO M 43 | All sizes, except Nos. 8, 89, 9 or 10 |

For bridge decks or surface courses, do not use aggregate known to polish or carbonate aggregates containing less than 25 percent by mass of insoluble residue as determined by ASTM D 3042.

For lightweight coarse aggregate, conform to AASHTO M 195.

Add the following:

In addition to the requirements under **703.01** and **703.02** the following will also apply to fine and coarse aggregate for concrete.

Fine and Coarse Aggregate for Concrete

Alkali reactivity of aggregates (Mortar bar method), ASTM C 1260 0.10% max.

Aggregates tested by ASTM C 1260, which exhibit mortar bar expansions less than 0.10 % at 16 days after casting, are considered innocuous and may be used.

Aggregates tested by ASTM C 1260 which exhibit mortar bar expansions between 0.10 and 0.20 % at 16 days after casting may be used if acceptable supplemental information is submitted which confirms that mortar bar expansions are not caused by alkali-silica reactions. Acceptable supplemental information includes:

- A report of petrographic examination of the aggregate by ASTM C 295 performed within one year from the time of submittal which contains quantifiable data and conclusions verifying that the aggregate is not potentially deleteriously reactive with cement

or

- A report of petrographic examination of the ASTM C 1260 mortar bar samples by ASTM C 856 which contains quantifiable data and conclusions verifying that the aggregate is not potentially deleteriously reactive with cement and that the mortar bar reaction products are not due to alkali-silica reaction.

Aggregates tested by ASTM C 1260 which exhibit mortar bar expansions more than 0.20 % at 16 days after casting *or* aggregates exhibiting expansions between 0.10 and 0.20 % at 16 days after casting that have been found to be potentially deleteriously reactive by acceptable supplemental information may be used if additional supplemental information is submitted which confirms that effective mitigation measures utilizing supplementary cementitious materials have been used in the concrete mix design. Acceptable supplemental information includes:

- Data and test results by ASTM C 1567 which confirm that concrete mix design combinations of cement, fly ash, silica fume and/or ground iron blast furnace slag exhibit expansions less than 0.10 % at 16 days after casting. Lithium compounds shall not be used.

Testing of the reactivity of aggregates by ASTM C 1293 may be substituted for ASTM C 1260. In such a case, the average concrete prism expansion must be less than 0.04 % at one year. Aggregates exhibiting mortar bar expansions more than 0.04 % at one year may be used if additional supplemental information is submitted which confirms that effective mitigation measures utilizing supplementary cementitious materials have been used in the concrete mix design. Acceptable supplemental information includes:

- Data and test results by ASTM C 1567 which confirm that concrete mix design combinations of cement, fly ash, silica fume and/or ground iron blast furnace slag exhibit expansions less than 0.10 % at 16 days after casting. Lithium compounds shall not be used.

703.05 Subbase, Base and Surface Course Aggregate.

(a) **General.** Delete lines (3), (4), (5), and (6) and substitute the following:

- (3) Fractured faces, one or more, ASTM D 5821 50% min.
- (4) Free from organic matter and lumps or balls of clay

(b) **Subbase or base aggregate.**

(1) **Gradation.** Delete Table 703-2 and substitute the following:

**Table 703-2
Target Value Range for Subbase and Base Gradation**

Sieve Size	Percent by Mass Passing Designated Sieve (AASHTO T27 and T 11)				
	Grading Designation				
	A (Subbase)	B (Subbase)	C (Base)	D (Base)	E (Base)
63.0 mm	100 ⁽¹⁾				
50.0 mm	97-100 ⁽¹⁾	100 ⁽¹⁾	100 ⁽¹⁾		
37.5 mm		97-100 ⁽¹⁾			
31.5 mm					
25.0 mm	65-79 (6)		80-100 (6)	100 ⁽¹⁾	
19.0 mm			64-94 (6)	86-100 (6)	100 ⁽¹⁾
12.5 mm	45-59 (7)				
9.5 mm			40-69 (6)	51-82 (6)	62-90 (6)
4.75 mm	28-42 (6)	40-60 (8)	31-54 (6)	36-64 (6)	36-74 (6)
425µm	9-17 (4)			12-26 (4)	12-26 (4)
75µm	4.0-8.0 (3)	4.0-12.0 (4)	4.0-7.0 (3)	4.0-7.0 (3)	4.0-7.0 (3)

⁽¹⁾ Statistical procedures do not apply.

() Allowable deviations (+/-) from the target values

Section 705 - ROCK

705.02 Riprap Rock. Delete the text and substitute the following:

Furnish hard, durable, angular rock that is resistant to weathering and water action and free of organic or other unsuitable material. Do not use shale, rock with shale seams, or other fissile or fissured rock that may break into smaller pieces in the process of handling and placing. Conform to the following:

- | | |
|--|-------------|
| (a) Apparent specific gravity, AASHTO T 85 | 2.40 min. |
| (b) Absorption, AASHTO T 85 | 4.0% max. |
| (c) Los Angeles abrasion, AASHTO T 96 | 50% max. |
| (d) Gradation for the class specified | Table 705-1 |

Section 706 - CONCRETE AND PLASTIC PIPE

706.08 Plastic Pipe. Delete the text and substitute the following:

Furnish perforated and nonperforated plastic pipe conforming to the following for the size and types specified. For watertight joints, conform to ASTM D 3212. For pipe culvert, furnish pipe conforming to types (a), (b), or (c) for the size specified.

(b) Corrugated polyethylene pipe. Delete the text and substitute the following:

Furnish 300 to 1200 millimeter diameter pipe conforming to AASHTO M 294. For sanitary sewer applications, furnish AASHTO M 294, type S pipe with watertight joints.

(d) Corrugated polyethylene drainage tubing. Delete the title and text and substitute the following:

(d) Drainage pipe. Furnish polyethylene perforated or non-perforated corrugated plastic pipe conforming to AASHTO M 252. Furnish perforated or non-perforated polyvinyl chloride pipe with smooth interior, smooth or ribbed exterior conforming to AASHTO M 278, ASTM F 758, or ASTM F 949.

Section 709 – REINFORCED STEEL AND WIRE ROPE

709.01 Reinforcing Steel.

(b) Reinforcing bars. Delete the text and substitute the following:

Furnish deformed, grade 420 bars conforming to AASHTO M31M or M322M.

(c) Epoxy coated reinforcing bars. Delete the first paragraph and substitute the following:

Furnish bars conforming to Subsection 709.01(b). Conform to AASHTO M 284M.

(d) Tie bars. Delete the text and substitute the following:

Furnish deformed, grade 420 bars conforming to AASHTO M31M.

(e) Hook bolts. Delete the text and substitute the following:

Furnish deformed, grade 420 bars conforming to AASHTO M31M with M14 rolled threads or M16 cut threads. Furnish a threaded sleeve nut capable of sustaining a minimum axial load of 67 kilonewtons.

Section 711 - CONCRETE CURING MATERIAL AND ADMIXTURES

711.03 Chemical Admixtures. Delete the text of this subsection and substitute the following:

Furnish water-reducing, retarding, set-accelerating, and hydration stabilizing admixtures, or combinations thereof, conforming to AASHTO M 194. For hydration stabilizing admixtures, conform to AASHTO M 194, type B or D.

Section 713 - ROADSIDE IMPROVEMENT MATERIAL

713.04 Seed. Delete the first sentence of the first paragraph and substitute the following:

Certify all seed used on this project as “noxious weed free”.

Add the following:

Use the following seed mixture for all permanent turf establishment

Species	Pure Live Seed KG per hectare	Percent of mixture
<u>Grass Species</u>		
Mountain Brome (Bromar) (<i>Bromus marginatus</i>)	5	26.5
Slender Wheatgrass (San Louis) (<i>Elymus trachycaulus</i>)	2.5	13.2
Junegrass (<i>Koeleria cristata</i>)	2	10.6
Alpine Timothy (<i>Phleum alpinum</i>)	0.3	1.6
Rocy Mountain Fescue (<i>Festuca saximontana</i>)	1	5.3

Species	Pure Live Seed KG per hectare	Percent of mixture
<u>Forb Species</u>		
Northern Sweetvetch (<i>Hedysarum boreale</i>)	1	5.3
Rockymountain Penstemon (<i>Penstemon strictus</i>)	1	5.3
Silky Lupine (<i>Lupinus sericeus</i>)	0.6	3.2
Pacific Aster (<i>Aster chilensis</i>)	0.6	3.2
Mountain Goldenrod (<i>Solidago multiradiata</i>)	0.6	3.2
Lewis Flax (Appar) (<i>Linum lewisii</i>)	0.6	3.2
Western Yarrow (<i>Achillea millefolium</i>)	0.1	0.5
<u>Shrub/Tree Species</u>		
Mountain Snowberry (<i>Symphoricarpos oreophilus</i>)	2	10.6
Shrubby Cinquefoil (<i>Potentilla fruticosa</i>)	1	5.3
Wood's Rose (<i>Rosa woodsii</i>)	0.6	3.0
<u>Total</u>	18.9	100

Use the following seed mixture for all temporary turf establishment

Species	Pure Live Seed KG per hectare	Percent of mixture
<u>Grass Species</u>		
Slender Wheatgrass (San Louis) (<i>Elymus trachycaulus</i>)	5	55.6
Mountain Brome (Bromar) (<i>Bromus marginatus</i>)	1	11.1
Orchardgrass (<i>Dactylis glomerata</i>)	1	11.1
Alpine Timothy (<i>Phleum alpinum</i>)	0.3	3.3
Rocky Mountain Fescue (<i>Festuca saximontana</i>)	0.6	6.7

Species	Pure Live Seed KG per hectare	Percent of mixture
<u>Forb Species</u>		
Western Yarrow (<i>Achillea millifolium</i>)	0.6	6.7
Ladak Alfalfa (<i>Medicago sativa</i>)	0.5	5.5
<u>Total</u>	9.0	100

713.05 Mulch. Add the following:

(i) **Recycled pulp fiber.** Furnish cellulose fiber mulch products manufactured from natural material diverted from the waste-stream of manufacturing processes or produced from recycled material. These include newsprint, chipboard, corrugated cardboard, wood chips, and similar material. Process the material to eliminate substances that inhibit seed germination and plant growth. Add a colored dye that is non-injurious to plant growth and fades rapidly with exposure to light. The fiber shall readily blend with water, grass seed, fertilizer, and other additives to form a slurry suitable for application with power spray equipment. Furnish a homogeneous mixture conforming to the following:

(1) Synthetic, plastic, metal, or glass material	0%
(2) Weed seed	0%
(3) Moisture content	15% max.
(4) Ash content	7% max.
(5) Organic matter	90 min.
(6) Boron	250 ppm max.
(7) Water-holding capacity	800 to 1200% by mass
(8) pH	4.0 to 8.5

713.16 Silt Fence. Delete the text and substitute the following:

Conform to AASHTO M 288.

Section 718 - TRAFFIC SIGNING AND MARKING MATERIAL

718.04 Steel Panels. Delete the text in the first paragraph and substitute the following:

Furnish 2-millimeter continuous coat galvanized sheet steel blanks conforming to ASTM A 653M. Mill phosphatize the zinc coating (designation G 90) to a thickness of 1.1 ± 0.55 grams per square meter of surface area.

718.08 Signposts.

(b) Steel posts. Delete the text and substitute the following:

(1) U-channel steel posts. Furnish flanged, channel, galvanized steel posts conforming to ASTM A 499, grade 60, and the following:

(a) Dimensions of U cross section

(1) Width of opened end of U including flanges	75-90 mm
(2) Width of closed end of U	25-40 mm
(3) Depth of U	25-50 mm
(4) Thickness of steel	3-5 mm

(b) Punching. Starting 25 millimeters from the top and extending the full length of the post, drill or punch 10 millimeter holes on 25 millimeter centers along the centerline of the bottom of the U. Remove all burrs and sharp edges.

(c) Galvanizing after punching AASHTO M 111

(2) Square tubular steel posts. Furnish square tubular galvanized steel posts conforming to ASTM A 1011M, grade 55, or ASTM A 715, grade 60, and the following:

(a) Dimensions of cross section

(1) Outside dimensions	44.5 mm by 44.5 mm or 50.8 mm by 50.8 mm
(2) Wall thickness	2.1 mm
(3) Mass	2.5-3.0 kg/m

(b) Punching. Starting 25 millimeters from the top and extending the full length of the post, drill or punch 11 millimeter holes on 25 millimeter centers along the centerline of all four sides, in true alignment and opposite each other directly and diagonally. Remove all burrs and sharp edges.

(c) Galvanizing after punching ASTM A 635M, Z275
(inside and outside of post)

(d) Corrosion resistant steel posts. Furnish post and breakaway plates conforming to ASTM A 588 or ASTM A 242.

718.12 Delineator and Object Marker Retroreflectors.

(b) Type 2 (retroreflective sheeting). Delete the first sentence and substitute the following:

Furnish a fungus resistant type III, V, VII, VIII, or IX retroreflective sheeting with a class 1 or 2 adhesive backing conforming to ASTM D 4956.

Section 725 - MISCELLANEOUS MATERIAL

725.11 Precast Concrete Units. Delete the title and text and substitute the following:

Precast Concrete Units and Accessories.

(a) Other precast concrete units not covered by the preceding requirements. Cast the units in substantial permanent steel forms. When reinforcing steel is required, conform to Section 709. Provide additional reinforcement as necessary for handling the units. Use concrete conforming to the following:

- | | |
|---|-------------|
| (1) 28-day strength, AASHTO T 22 | 25 MPa min. |
| | |
| (2) Air content by volume, when required: | |
| (a) 9.5 mm max. size aggregate | 5% min. |
| (b) >9.5 mm max. size aggregate | 4% min. |

Cure the units according to AASHTO M 170M.

Cast a sufficient number of concrete cylinders from each unit or lot of units to permit compression tests at 7, 14, and 28 days. Make at least 3 cylinders for each test. If the strength requirement is met at 7 or 14 days, the units can be certified for use 14 days from date of casting.

Do not use precast concrete units when:

- (a)** Cylinders that are properly sampled, cast, and cured, do not meet the strength requirement by an age of 28 days.
- (b)** Cracks, honeycombed, or patched areas are larger than 0.02 square meters.

APPENDICES

UT PFH 39-1(2)
SEVENMILE-GOOSEBERRY ROAD

APPENDIX A: NPDES

APPENDIX B: Letter of consent, access to Federal land

APPENDIX C: Right of Entry, Private land (R.O.W. is being completed)

APPENDIX D: 404 Permit & 401 Certification Terms & Conditions

Appendix A
NPDES
(Notice of Intent)

STATE OF UTAH, DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER QUALITY

288 North 1460 West, P.O. Box 144870, Salt Lake City, Utah 84114-4870 (801)538-6146

NOI

Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity Under the UPDES General Permit No. UTR108219

Submission of this Notice of Intent constitutes notice that the party(s) identified in Section I of this form intends to be authorized by UPDES General Permit No. UTR108219 issued for storm water discharges associated with construction activity in the State of Utah. Becoming a permittee obligates such discharger to comply with the terms and conditions of the permit. ALL NECESSARY INFORMATION MUST BE PROVIDED ON THIS FORM.

I. OPERATOR INFORMATION

Name (Main operator): Federal Highway Administration Phone: 720 963-3733

Address: 12300 W Dakota Ave Status of Owner/Operator: F - Federal

City: Lakewood State: CO Zip: 80228

Contact Person: Christopher Longley Phone: 720 963-3733

Name (1st Co-permittee): Phone:

Address: Status of Owner/Operator:

City: State: Zip:

Contact Person: Phone:

Name (2nd Co-permittee): Phone:

Address: Status of Owner/Operator:

City: State: Zip:

Contact Person: Phone:

Name (3rd Co-permittee): Phone:

Address: Status of Owner/Operator:

City: State: Zip:

Contact Person: Phone:

Please copy this form if you have more co-permittees than what is allowed on this form.

II. FACILITY SITE / LOCATION INFORMATION

Name: Sevenmile Goosebeery

Project No. (if any): UT 39-1(2)

Address: County: SEVIER

City: State: UT Zip:

Latitude: 38^45'N Longitude: 111^39'W

Is the facility located on Indian Lands?

(Y or N) N

III. SITE ACTIVITY INFORMATION

Municipal Separate Storm Sewer System (MS4) Operator Name: _____

Receiving Water Body: _____

How far to the nearest water body? _____

List the Number of any other UPDES permits at the site: _____

IV. TYPE OF CONSTRUCTION (Check all that apply)

- 1. ___ Residential
- 2. ___ Commercial
- 3. ___ Industrial
- 4. Road
- 5. ___ Bridge
- 6. ___ Utility
- 7. ___ Contouring, Landscaping
- 8. Other (Please list) Reconstruction

V. MANAGEMENT PRACTICES

Identify proposed Best Management Practices (BMPs) to reduce pollutants in storm water discharges: (Check all that apply)

- 1. Silt Fences
- 2. ___ Sediment Pond
- 3. Seeding/Preservation of Vegetation
- 4. Mulching/Geotextiles
- 5. Check Dams
- 6. ___ Structural Controls (Berms, Ditches, etc.)
- 7. Other (Please list) Sediment Control Logs

VI. ADDITIONAL INFORMATION REQUIRED

Project Start Date: Completion Date: Estimated Area to be Disturbed

05/01/08 12/01/10 (in Acres): 79

A storm water pollution prevention plan has been prepared for this site and is to the best of my knowledge in Compliance with State and/or Local Sediment and Erosion Plans and Requirements.

(Y or N) (A pollution prevention plan is required to be on hand before submittal of the NOI)

VII. CERTIFICATION: I certify under penalty of law that I have read and understand the *Part I.B.* eligibility requirements for coverage under the general permit for storm water discharges from construction activities.

I further certify that to the best of my knowledge, all discharges and BMPs that have been scheduled and detailed in a pollution prevention plan will satisfy requirements of *Part I.B.*, and *Part III.* of this permit.

I understand that continued coverage under this storm water general permit is contingent upon maintaining eligibility as provided for in *Part I.B.*

I also certify under penalty of law that this document and all attachments were prepared under the direction or supervision of those who have place their signature below, in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: Certification provided online by Christopher Longley, Project Manager, christopher.longley@fhwa.dot.gov 08/30/07

Amount of Permit Fee Enclosed: \$ 258.33

STATE OF UTAH, DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER QUALITY

288 North 1460 West, P.O. Box 144870, Salt Lake City, Utah 84114-4870

NOT

Notice of Termination (NOT) for Storm Water Discharges Associated with **Construction Activity** Under the UPDES General Permit No. UTR108219 **SEE REVERSE FOR INSTRUCTIONS**

Submission of this Notice of Termination constitutes notice that the operator identified in Section II of this form is no longer authorized to discharge storm water associated with industrial activity under the UPDES program. ALL NECESSARY INFORMATION MUST BE PROVIDED ON THIS FORM.

I. Permit Information

UPDES Storm Water General Permit Number: UTR108219

Check Here if You are No Longer the Operator of the Facility: _____

Check Here if the Storm Water Discharge is Being Terminated: _____

II. Facility Operator Information

Name: Federal Highway Administration Phone: 720 963-3733

Address: 12300 W Dakota Ave

City: Lakewood State: CO Zip: 80228

III. Facility Site/Location Information

Name: Sevenmile Goosebeery

Address: _____ County: SEVIER

City: _____ State: UT Zip: _____

Latitude: 38^45'N _____ Longitude: 111^39'W _____

IV. Certification: I certify under penalty of law that either: a) all storm water discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or b) I am no longer an operator at the construction site and a new operator has assumed operational control for those portions of the construction site where I previously had operational control. I understand that by submitting this notice of termination, I am no longer authorized to discharge storm water associated with construction activity under this general permit, and that discharging pollutants in storm water associated with construction activity to waters of the State is unlawful under the State of Utah Water Quality Act where the discharge is not authorized by a UPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Water Quality Act.

Print Name: _____

Date: _____

Signature: _____

Instructions for Completing Notice of Termination (NOT) Form

Who May File A Notice Of Termination (NOT) Form

Permittees who are presently covered under the State issued Utah Pollutant Discharge Elimination System (UPDES) General Storm Water Permit for Construction Activity may submit a notice of termination (NOT) form when their facilities no longer have any storm water discharges associated with industrial activity as defined in the storm water regulations at UAC R317-8-3.8(b)(c) and (d), or when they are no longer the operator of the facilities.

For construction activities, elimination of all storm water discharges associated with industrial activity occurs when disturbed soils at the construction site have been finally stabilized and temporary erosion and sediment control measures have been removed or will be removed at an appropriate time, or that all storm water discharges associated with construction activity from the construction site that are authorized by a UPDES general permit have otherwise been eliminated. Final stabilization means that all soil-disturbing activities at the site have been completed, and that a uniform perennial vegetative cover with a density of 70% of the cover for unpaved areas and areas not covered by permanent structures has been established, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

Appendix B
Letter of Consent
Access to Federal land



United States
Department of
Agriculture

Forest
Service

Fishlake National Forest
Supervisor's Office
Fax: (435) 896-9347

115 East 900 North
Richfield, UT 84701
Phone: (435) 896-9233

File Code: 2730-3/7720-2-1

Date: April 03, 2006

Christopher Longley, Project Manager
US Department of Transportation
Federal Highway Administration
Central Federal Lands Highway Division
12300 West Dakota Avenue
Lakewood, CO 80228

Dear Mr. Longley,

By letter, dated 12/5/2005, the Federal Highway Administration requested the appropriation and transfer of National Forest System lands within the Fishlake National Forest for right-of-way for the construction, operation and maintenance of PFH 39-1(2), Sevenmile-Gooseberry Road and appurtenant highway facilities across the following described lands, in the county of Sevier, State of Utah, shown on the map entitled "Right of Way Plans for Proposed Forest Highway Project PFH 39-1(2), Sevenmile-Gooseberry Road Phase II, dated 10/21/2005", approved for right of way purposes by Steve T. Rodriguez, Forest Engineer, on January 9, 2006.

A highway 8.5 miles long of variable width, see pages 4-11, 15-21 of the Right of Way Plans for Proposed Forest Highway Project PFH 39-1(2), Sevenmile-Gooseberry Road Phase II, dated 10/21/2005.

A total of 9 parcels with a total aggregate gross take area of 156.3 acres, more or less.

The Forest Service consents to the appropriation and transfer of these lands under the provision of sections (107 (d)) and 317 of the Act of August 27, 1958, (72 Stat. [893] 3/ 916; 23 U.S.C. 317), subject to the construction, operation, and maintenance stipulations, contained herein as Exhibit 01, which shall be included in the Department of Transportation easement issued by the Federal Highway Administration. The Sevier County Road Department has reviewed and agrees with the stipulation.

Sincerely,

MARY C. ERICKSON
Forest Supervisor
MCE/sr
Enclosure

cc: R4 Special Uses (John Shochat), Sevier County Road Department, Steve Rodriguez





United States
Department of
Agriculture

Forest
Service

Fishlake National Forest
Supervisor's Office
Fax: (435) 896-9347

115 East 900 North
Richfield, UT 84701
Phone: (435) 896-9233

File Code: 2730-3/7720-2-1

Date: September 20, 2007

Christopher Longley
Project Manager
US Department of Transportation Federal Highway
Administration
Central Federal Lands Highway Division
12300 West Dakota Avenue
Lakewood, CO 80228

Dear Mr. Longley,

We have reviewed and approve the addendum to the Right of Way Plans for Proposed Forest Highway Project PFH 39-1(2), Sevenmile-Gooseberry Road Phase II, Exhibit A Addendum. The plans are signed, "Approved for right of way purposes," by Steve T. Rodriguez, Forest Engineer, on September 19, 2007.

We understand that the modified right of way configuration adds an additional 13.35 acres from the previous configuration and that the total aggregate area requested for permanent right of way is approximately 169.66 acres.

This amended Letter of Consent also serves as a right of entry for FHWA to construct the road.

Sincerely,

MARY C. ERICKSON
Forest Supervisor

cc: Steve Rodriguez



Appendix C
Right of Entry
Private land
(R.O.W. being completed)

RIGHT OF OCCUPANCY AGREEMENT

WINTCH LAND COMPANY (as Property Owner), hereby grants to Sevier County and its contractors permission to enter upon, take possession of, and commence construction of its public works facility, a portion of which is to be located on the property described in the attached Exhibit, subject to the terms and conditions contained herein. This Right of Occupancy is granted in anticipation of a possible condemnation action by Sevier County and is intended to provide for occupancy of the property pending further negotiations or the filing and pursuit of condemnation proceedings and possible alternative informal proceedings as provided for in this agreement. Property Owner understands that, by executing this Agreement, Property Owner has waived and abandoned all defenses to the eventual acquisition of the property except a claim for the payment of greater amount of just compensation for the acquisition of the property.

It is understood and agreed that the sum of \$66,223.00 (the amount of Sevier County's Approved Appraisal), including the amount needed to pay taxes and the amount of the security deposit, will be paid to the Property Owner (or if there are multiple parties by a payment made jointly to those parties with an ownership in the property or proceeds of a condemnation action) as consideration for the granting of this RIGHT OF OCCUPANCY. The amount paid to the Property Owner under this agreement shall be deducted from a final settlement award, award of arbitration, or other award of just compensation in an eminent domain action should one be filed to acquire the property described in the Exhibit. The amount paid will be for the purposes of this agreement only, and will not be admissible as evidence in any subsequent determination of value of the property.

It is understood and agreed that this RIGHT OF OCCUPANCY AGREEMENT is granted without prejudice to the rights of the Property Owner, pending the settlement, to contest the amount of compensation to be paid the Property Owner for the property described in the Exhibit. If a satisfactory settlement cannot be agreed upon, Sevier County will, upon notice from the Property Owner that the amount of compensation offered and/or other proposed settlement terms are not acceptable, or at its own election, proceed at once to commence and diligently prosecute a condemnation proceeding in the appropriate court for a judicial determination of such compensation.

The effective date of this RIGHT OF OCCUPANCY AGREEMENT shall be the date this agreement is executed by the property owner as shown below, and that date shall be the date of value for fair market valuation purposes in the context of settlement negotiations, or an eminent domain proceeding should one be necessary. It is understood that, according to state law, any additional compensation that is ordered to be paid to the Property Owner for the acquisition of the property will include interest at an annual rate of 8% on any additional compensation that is determined to be payable to the property owner over and above that paid with this agreement, calculated from the date of this agreement.

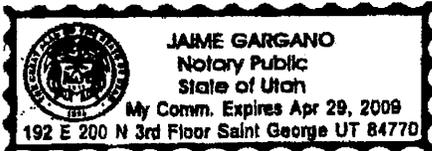
DATED this 7th day of March, 2006.

Wintch Land Company
PROPERTY OWNER

Richard W. Wintch
By: PROPERTY OWNER, President

STATE OF UTAH)
COUNTY OF WASHINGTON ss.

On the 7th day of March, 2006,
personally appeared before me Richard W. Wintch, President the
signer(s) of the above instrument, who duly acknowledged to me that
(t)he(y) executed the same.



Jaime Gargano
NOTARY PUBLIC
Residing at _____
My Commission Expires _____

Page 3—Right of Occupancy Agreement

DATED this 27th day of March, 2006.

Ralph Okertund
Director of Right of Way,
Agent of Sevier County

STATE OF UTAH)
) ; ss.
COUNTY OF SEVIER)

On the 27th day of March, 2006,
personally appeared before me Ralph Okertund, the signer(s)
of the above instrument, who duly acknowledged to me that (t)he(y)
executed the same.

 Barbara Ann Crowther
Notary Public
State of Utah
My Commission Expires 10-23-2008
250 North Main, Richfield, UT 84701

Barbara Ann Crowther
NOTARY PUBLIC
Residing at Richfield UT 84701
My Commission Expires Oct 23, 2008

Appendix D
404 Permit & 401
Certification Terms & Conditions

Other than minor language modifications, these are the 404 and 401 terms and conditions in regards to the UT PFH 39-1(2) Sevenmile-Gooseberry Road Project.

SPK-2005-50618: 404 Permit Special Conditions – Sevenmile-Gooseberry Road

1. To mitigate for Phase 2 project impacts to 1.186 acres of waters of the U.S., the permittee has restored and enhanced, within an 8-acre off-site preserve, a 1,900-lineal-foot reach of Gooseberry Creek and its adjacent riparian/wetland habitat. Based on the Special Conditions for the Phase 1 permit, once successful, the mitigation could be applied to 1.21 acres of future wetlands impact anticipated for Phases 2 and 3 of the Sevenmile-Gooseberry Road project. By the Corps' accounting, approximately 0.02 acre of mitigation credit is available for the Phase 3 roadway.
2. If wetlands are adversely affected by the Phase 2 roadway, the permittee will be required to compensate for the additional wetland impacts. The permittee shall monitor all avoided wetlands within the Sevenmile-Gooseberry Road Phase 2 project area for a minimum of three years following the completion of construction to ensure that roadway construction impacts do not adversely affect wetlands hydrology or vegetation.
 - a. The permittee shall submit a baseline monitoring report of wetlands along the Phase 2 alignment. The permittee shall photo-document baseline hydrology and vegetation conditions of wetlands under snow-free conditions during the growing season.
 - b. The permittee shall submit monitoring reports that photo-document and detail hydrological and vegetation conditions of the avoided wetlands along the Phase 2 corridor. Photo documentation of the avoided wetlands shall occur within two weeks of the date of the initial baseline photo-documentation and shall occur under snow-free conditions.
 - c. The permittee shall submit these monitoring reports with the mitigation area monitoring reports by December 1st of each monitoring year in the format presented in RGL 06-03.
3. The permittee shall continue to monitor the compensatory mitigation area per Special Condition 3 of Department of the Army Authorization No. 199550275, for the remainder of the five-year monitoring period *or* until the success criteria described in the approved mitigation plan are met, *whichever is greater*.
4. Per Special Condition 4 of Department of the Army Authorization No. 199550275, a monitoring report shall be submitted to the Utah Regulatory Office prior to December 1st of each monitoring year. These reports should include all components described on page 23 of the approved Habitat Mitigation and Monitoring Plan and RGL 06-03.
5. The permittee shall implement and maintain appropriate BMPs to control siltation and erosion during any streamside or in-stream work. BMPs must be used during replacement of the culverts. Photographic documentation of the implementation of BMPs will be required. Within 30 days of implementation of BMPs, the permittee shall provide copies of this documentation to the Utah Regulatory Office.

404 Permit General Conditions – Sevenmile-Gooseberry Road

1. The time limit for completing the work authorized ends on October 20, 2011. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

State of Utah - Water Quality Certification Conditions

1. Whenever an applicant causes the water turbidity in an adjacent surface water to increase 10 NTU's or more, the applicant shall notify the Division of Water Quality.
2. The applicant shall not use any fill material which may leach organic chemicals (e.g., discarded asphalt, etc.) or nutrients (e.g., phosphate rock, etc.) into the adjacent surface water.
3. The applicant shall not engaged in any practice (e.g., lawn fertilizers, farm operations, etc.), which may allow nutrients or other pollutants to enter the adjacent surface water.
4. Applicant shall coordinate with the Utah Division of Wildlife Resources to protect any potentially affected fish spawning areas in the adjacent surface water.