

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE	OF PAGES
	1	19

2. AMENDMENT/MODIFICATION NO. A002	3. EFFECTIVE DATE 3/17/08	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable) CA PFH 114-1 (1)
6. ISSUED BY FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION 12300 W. DAKOTA AVENUE, SUITE 360 LAKWOOD, CO 80228 ATTENTION: BRENDA MCGEHEE		7. ADMINISTERED BY (If other than Item 6)	

Federal Highway Administration
Central Federal Lands Highway Division
12300 W. Dakota Avenue, Suite 360
Lakewood, CO 80228
Attention: Brenda McGehee

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)	(✓)	9A. AMENDMENT OF SOLICITATION NO. DTFH68-08-B-00011
	✓	9B. DATED (SEE ITEM 11) 2/21/08
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

- (a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(✓)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

1. Remove pages B-1 through B-10 and replace with new pages B-1 through B-10 bearing revision date 03/17/08. Changes Bid Item 20703-1000 to 20703-2000.
2. Remove page I-124 through I-128 and replace with new pages I-124 through I-128 bearing revision date 03/17/08. Updates Table 714-7. Additional pages replaced to maintain pagination.
3. Remove plan sheets B-1, B-17, and F-2 and replace with new plan sheets B-1, B-17 and F-2 bearing revision date 03/17/08.

*Failure to acknowledge this amendment by the designated date and hour specified in the solicitation may result in rejection of your bid (refer to item 11).
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)		
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)	16C. DATE SIGNED

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
15101-0000	Mobilization ALL	Lump Sum	\$ _____
15206-0000	Slope, reference, and clearing and grubbing stake 6.256 km	\$ _____	\$ _____
15214-0000	Survey and staking, miscellaneous ALL	Lump Sum	\$ _____
15214-2000	Survey and staking, retaining wall ALL	Lump Sum	\$ _____
15215-3000	Survey and staking, drainage structure 44 Each	\$ _____	\$ _____
15215-6000	Survey and staking, roadway cross-sections 150 Each	\$ _____	\$ _____
15216-2000	Survey and staking, grade finishing stakes 12.512 km	\$ _____	\$ _____
15401-0000	Contractor testing ALL	Lump Sum	\$ _____
15501-0000	Construction schedule ALL	Lump Sum	\$ _____
15703-2000	Soil erosion control, temporary turf establishment 14.0 ha	\$ _____	\$ _____
15705-0100	Soil erosion control, silt fence 5,100 m	\$ _____	\$ _____
15705-1400	Soil erosion control, sediment log 500 m	\$ _____	\$ _____
15705-1500	Soil erosion control, sediment wattle 8,400 m	\$ _____	\$ _____
15801-0000	Watering for dust control 50,000 m3	\$ _____	\$ _____

Bid Schedule

Project: CA PFH 114-1(1)

HYAMPOM ROAD - SCHEDULE A

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
20101-0000	Clearing and grubbing 14.0 ha	\$ _____	\$ _____
20201-0000	Selective clearing 0.80 ha	\$ _____	\$ _____
20220-1000	Removal, individual tree 10 Each	\$ _____	\$ _____
20301-1900	Removal of pipe culvert 17 Each	\$ _____	\$ _____
20301-2400	Removal of signs 7 Each	\$ _____	\$ _____
20304-1000	Removal of structures and obstructions ALL	Lump Sum	\$ _____
20401-0000	Roadway excavation 94,000 m3	\$ _____	\$ _____
20402-0000	Subexcavation 1,000 m3	\$ _____	\$ _____
20410-0000	Select borrow 2,000 m3	\$ _____	\$ _____
20441-0000	Waste 3,600 m3	\$ _____	\$ _____
20703-1000	Geogrid, uniaxial 4,400.0 m2	\$ _____	\$ _____
20704-0000	Geomembrane 2,200 m2	\$ _____	\$ _____
20802-0000	Foundation fill 123 m3	\$ _____	\$ _____

Bid Schedule

Project: CA PFH 114-1(1)

HYAMPOM ROAD - SCHEDULE A

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
20811-0000	Shoring and bracing 740 m2	\$ _____	\$ _____
21101-1000	Roadway obliteration, method 1 360 m2	\$ _____	\$ _____
21101-2000	Roadway obliteration, method 2 3,100 m2	\$ _____	\$ _____
25101-2000	Placed riprap, class 2 70.0 m3	\$ _____	\$ _____
25101-3000	Placed riprap, class 3 650.0 m3	\$ _____	\$ _____
25101-4000	Placed riprap, class 4 450 m3	\$ _____	\$ _____
25101-5000	Placed riprap, class 5 420 m3	\$ _____	\$ _____
25201-0000	Special rock embankment 6,000 m3	\$ _____	\$ _____
25205-0000	Rock buttress 800 m3	\$ _____	\$ _____
25302-1000	Gabions, galvanized or aluminized coated 625 m3	\$ _____	\$ _____
25305-1000	Revet mattress, galvanized or aluminized coated 195 m2	\$ _____	\$ _____
25501-1000	Mechanically stabilized earth wall, welded wire face 3,200.0 m2	\$ _____	\$ _____

Bid Schedule

Project: CA PFH 114-1(1)

HYAMPOM ROAD - SCHEDULE A

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
30101-0000	Aggregate base 25,500 t	\$ _____	\$ _____
40301-0500	Hot asphalt concrete pavement, grading E 7,000 t	\$ _____	\$ _____
40305-3000	Antistrip additive, type 3 75 t	\$ _____	\$ _____
40401-0000	Minor hot asphalt concrete 105 t	\$ _____	\$ _____
40920-1000	Fog seal, emulsified asphalt grade CSS-1 or CSS-1h, SS-1 or SS-1h 19.0 t	\$ _____	\$ _____
41101-0000	Prime coat 50.0 t	\$ _____	\$ _____
41105-0000	Blotter 330.0 t	\$ _____	\$ _____
41201-0000	Tack coat 19.0 t	\$ _____	\$ _____
60103-0000	Concrete, headwall 10 Each	\$ _____	\$ _____
60201-0800	600mm pipe culvert 460.0 m	\$ _____	\$ _____
60201-1100	1050mm pipe culvert 70.0 m	\$ _____	\$ _____
60201-1200	1200mm pipe culvert 150.0 m	\$ _____	\$ _____

Bid Schedule

Project: CA PFH 114-1(1)
HYAMPOM ROAD - SCHEDULE A

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
60201-1200	1200mm pipe culvert (with baffles and bulkhead) 12.0 m	\$ _____	\$ _____
60201-1300	1350mm pipe culvert (with baffles and bulkhead) 14.0 m	\$ _____	\$ _____
60201-1400	1500mm pipe culvert (with baffles and bulkhead) 30.0 m	\$ _____	\$ _____
60201-1600	1800mm pipe culvert 75.0 m	\$ _____	\$ _____
60201-1800	2100mm pipe culvert (with baffles and bulkhead) 22.0 m	\$ _____	\$ _____
60210-0800	End section for 600mm pipe culvert 40 Each	\$ _____	\$ _____
60212-0800	Elbow, 600mm 4 Each	\$ _____	\$ _____
60212-1100	Elbow, 1050mm 1 Each	\$ _____	\$ _____
60212-1600	Elbow, 1800mm 2 Each	\$ _____	\$ _____
60230-0000	Debris rack 5 Each	\$ _____	\$ _____
60403-0700	Inlet, Caltrans (Type G0, curb and opening) 35 Each	\$ _____	\$ _____
60501-0000	Standard underdrain system 590 m	\$ _____	\$ _____

Bid Schedule

Project: CA PFH 114-1(1)
 HYAMPOM ROAD - SCHEDULE A

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
60522-0000	Sand 165 m3	\$ _____	\$ _____
60602-0700	Pipe anchor assembly, 600mm 22 Each	\$ _____	\$ _____
60602-1000	Pipe anchor assembly, 1050mm 12 Each	\$ _____	\$ _____
60602-1100	Pipe anchor assembly, 1200mm 28 Each	\$ _____	\$ _____
60602-1150	Pipe anchor assembly, 1350mm 4 Each	\$ _____	\$ _____
60602-1200	Pipe anchor assembly, 1500mm 7 Each	\$ _____	\$ _____
60602-1300	Pipe anchor assembly, 1800mm 10 Each	\$ _____	\$ _____
60602-1400	Pipe anchor assembly, 2100mm 5 Each	\$ _____	\$ _____
60901-2500	Curb, asphalt, 200mm depth 5,910 m	\$ _____	\$ _____
60908-1000	Paved ditch, asphalt 7,090 m2	\$ _____	\$ _____
61701-1350	Guardrail system G4, type 2, class B steel posts 2,550.0 m	\$ _____	\$ _____
61702-0000	Terminal section 1 Each	\$ _____	\$ _____

Bid Schedule

Project: CA PFH 114-1(1)

HYAMPOM ROAD - SCHEDULE A

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
61702-0600	Terminal section, type flared 12 Each	\$ _____	\$ _____
61702-0800	Terminal section type tangent 7 Each	\$ _____	\$ _____
62201-0200	Dump truck, 8 cubic meter minimum capacity 80 Hour	\$ _____	\$ _____
62201-0550	Backhoe loader, 180 liter minimum rated capacity bucket, 600mm width 160 Hour	\$ _____	\$ _____
62201-1050	Wheel loader, 5 cubic meter minimum rated capacity 160 Hour	\$ _____	\$ _____
62201-1400	Bulldozer, 200kW minimum flywheel power 160 Hour	\$ _____	\$ _____
62201-3300	Hydraulic excavator, 0.7 cubic meter minimum capacity 160 Hour	\$ _____	\$ _____
62202-1000	Materials transfer vehicle ALL	Lump Sum	\$ _____
62301-0000	General labor 800 Hour	\$ _____	\$ _____
62302-1000	Special labor, hired technical services 160 Hour	\$ _____	\$ _____
62302-1100	Special labor, hired survey services 160 Hour	\$ _____	\$ _____
62403-0000	Furnishing and placing topsoil 1,350 m3	\$ _____	\$ _____
62409-0000	Placing manufactured topsoil 8,000 m3	\$ _____	\$ _____

Bid Schedule

Project: CA PFH 114-1(1)
 HYAMPOM ROAD - SCHEDULE A

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
62415-0000	Conserve and place forest duff 230 m3	\$ _____	\$ _____
62510-2000	Seeding, hydraulic method 14.00 ha	\$ _____	\$ _____
62515-2000	Mulching, hydraulic method 14.00 ha	\$ _____	\$ _____
62520-0000	Fertilizer 14.00 ha	\$ _____	\$ _____
62542-1000	Seeding supplements, seed (Wetland mitigation site) 6 kg	\$ _____	\$ _____
62630-0300	Plantings, seedlings, container grown 58 Each	\$ _____	\$ _____
62630-0400	Plantings, wetland plant, container grown 733 Each	\$ _____	\$ _____
62635-3000	Cuttings, willow pole 18 Each	\$ _____	\$ _____
62901-0800	Rolled erosion control product, type 2.D 4,500 m2	\$ _____	\$ _____
62901-1000	Rolled erosion control product, type 3.B 10,700 m2	\$ _____	\$ _____
63302-0000	Sign system 22.00 m2	\$ _____	\$ _____
63308-2000	Object marker, type 2 92 Each	\$ _____	\$ _____

Bid Schedule

Project: CA PFH 114-1(1)
 HYAMPOM ROAD - SCHEDULE A

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
63309-0200	Delineator, type 2 60 Each	\$ _____	\$ _____
63401-0300	Pavement markings, type B, solid 51,000 m	\$ _____	\$ _____
63501-2000	Temporary traffic control, traffic signal system ALL	Lump Sum	\$ _____
63502-0600	Temporary traffic control, barricade type 3 4 Each	\$ _____	\$ _____
63502-0700	Temporary traffic control, cone 55 Each	\$ _____	\$ _____
63502-1250	Temporary traffic control, tubular marker, type 1050mm 225 Each	\$ _____	\$ _____
63502-1600	Temporary traffic control, warning light type B 6 Each	\$ _____	\$ _____
63503-0400	Temporary traffic control, concrete barrier 1,000 m	\$ _____	\$ _____
63503-0500	Temporary traffic control, moving concrete barrier 4,950 m	\$ _____	\$ _____
63504-1000	Temporary traffic control, construction sign 110.0 m2	\$ _____	\$ _____
63505-1000	Temporary traffic control, pavement markings 13.60 km	\$ _____	\$ _____
63506-0500	Temporary traffic control, flagger 16,500 Hour	\$ _____	\$ _____
63506-0600	Temporary traffic control, pilot car 5,500 Hour	\$ _____	\$ _____

Bid Schedule

Project: CA PFH 114-1(1)

HYAMPOM ROAD - SCHEDULE A

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
63507-0400	Temporary traffic control, police officer 30 days	\$ _____	\$ _____
63510-0100	Temporary traffic control, traffic and safety supervisor 130 weeks	\$ _____	\$ _____
65101-1000	Draped rockfall protection, wire mesh 13,000 m2	\$ _____	\$ _____

PART A CONSTRUCTION COST SUBTOTAL \$ _____

Number of Days	Road User/ Administrative Cost	Amount Bid
Calendar Days * _____	\$5,000.00 Per Day	\$ _____

* The number of calendar days used shall include all weekends, holidays, periods of inclement weather, winter shutdown periods, and all other days during which work may or may not be performed.

PART B ROAD USER/ADMINISTRATIVE COST SUBTOTAL \$ _____

SCHEDULE A (TOTAL COST BASIS) (A + B) \$ _____

ALTERNATE BID ITEM 15401-0000,
Contractor Testing, Using Government
Furnished Field Laboratory \$ _____

Submitted by: _____
Name of Bidder

from both sides of the sheet and a minimum flow rate of 1 liter per second per meter of width when tested according to ASTM D 4716. Perform the test under the following test conditions:

- (1) 300 millimeter long specimen
- (2) Pressure of 100 kPa
- (3) Gradient of 1.0
- (4) 100-hour seating period
- (5) Closed-cell foam rubber between platens and geocomposite

Add the following:

714.03 Geogrid. Furnish geogrid reinforcement with a regular network of integral connected polymer tensile elements having aperture geometry and junction strength to sufficiently permit significant mechanical interlock with the surrounding soil or rock. Provide geogrid with a structure dimensionally stable and able to retain its geometry under manufacture, transport, installation, ultraviolet degradation, and all forms of chemical and biological degradation encountered in the soil being reinforced.

(a) Physical requirements. Provide geogrids composed of fibers or ribs that are at least 85% by weight polyethylene, polypropylene or polyester. Form a network of fibers that will retain dimensional stability. Conform to the physical requirements in Table 714-7. Units are given in English for procurement purposes.

Table 714-7
Geogrid Physical Requirements

Property	Test Method	Minimum Acceptable Values	
		Type VII-A	Type VII-B
Wide width tensile strength (ultimate), lb/ft	ASTM D 4595	4,800/1,500 ⁽¹⁾	1,100/1,100 ⁽¹⁾
Wide width tensile strength (5% strain), lb/ft	ASTM D 4595	1,500/500 ⁽¹⁾	300/300 ⁽¹⁾
Maximum aperture size, inches	----- ---	1.0/1.0 ⁽¹⁾	0.5/0.5 ⁽¹⁾
Weight, oz/yd ²	ASTM D 5261	9	4
Resistance to soil burial	ASTM D 3083	No change	No change
Long Term Design Strength, lb/ft	GRI:GG4	2,000 ⁽²⁾	500 ⁽²⁾

----- (1) Machine Direction/Cross Machine Direction

----- (2) Principle strength (highest strength) direction

Table 714-7
Geogrid Physical Requirements

Property	Test Method	Minimum Acceptable Values	
			Biaxial Geogrid for Shoulder Stabilization
Wide width tensile strength (ultimate), lb/ft	ASTM D 4595		1,100/1,100 ⁽¹⁾
Maximum aperture size, inches	----- ---		0.5/0.5 ⁽¹⁾
Weight, oz/yd ²	ASTM D 5261		4
Long Term Design Strength, lb/ft	GRI:GG4		500 ⁽²⁾

(1) Machine Direction/Cross Machine Direction

(2) Principle strength (highest strength) direction

Identify, store, and handle geogrid according to ASTM D 4873-88. Limit geogrid exposure to ultraviolet radiation to less than 10 days.

(b) Evaluation procedures. Geogrid will be evaluated under Subsection 106.03. Furnish to the CO three copies of a commercial certification that the geogrid supplied meets the respective index criteria, measured in full accordance with all test methods and standards set forth in these specifications. State on the commercial certification the name of the manufacturer, product name, style number, chemical composition of the filaments, ribs, or yarns, and other pertinent information to fully describe the geogrid. Attest the certification by a person having legal authority to bond the manufacturer. In case of dispute over validity of values, the CO can require the contractor to supply test data from an agency approved laboratory to support the certified values submitted.

When samples are required, remove a 0.9 m (3-foot) long, full-width sample from beyond the first outer wrap of the roll. Label the sample with the lot and batch number, date of sampling, project number, item number, manufacturer, and product name.

Manufacturing Quality Control: The manufacturer is responsible for establishing and maintaining a quality control program to ensure compliance with the requirements of this specification.

Perform conformance testing as part of the manufacturing process; testing may vary for each type of product. Consider the Table 714-8 for applicable index tests as a minimum for an acceptable QA/QC program.

Table 714-8
Minimum Index Tests for QA/QC

Property	Test Method	Minimum Conformance Requirement
Specific Gravity (HDPE only)	ASTM D-1505	To be provided by the material supplier of specialty company
Wide Width Tensile	ASTM D-4595	
Melt Flow (HDPE and PP only)	ASTM D-1238	
Intrinsic Viscosity (PET only)	ASTM D-4603	
Carboxyl End Group (PET only)	ASTM D-2455	
Single Rib Tensile (geogrids)	GRI:GG1	

Section 718. - TRAFFIC SIGNING AND MARKING MATERIAL

718.14 Waterborne Traffic Paint.

(g) **Daylight reflectance.** (without glass beads) Delete the text and substitute the following:

- | | |
|-------------------------|--|
| (1) White, ASTM E 1347 | 84% relative to magnesium oxide standard |
| (2) Yellow, ASTM E 1347 | 55% relative to magnesium oxide standard |

Section 720. – STRUCTURAL WALL AND STABILIZED EMBANKMENT MATERIAL

720.01 Mechanically-Stabilized Earth Wall Material. Add the following:

(k) **Geogrid.** Furnish geogrid reinforcement with a regular grid structure with apertures of sufficient size to allow interlocking with surrounding soil, rock, or earth. Manufacture geogrid using high-density polyethylene, polypropylene, or polyester. Calculate long-term tensile strength “ T_{al} ” and pullout capacity of geogrids according to FHWA publication No. FHWA-NHI-00-043, entitled “Mechanically Stabilized Earth Walls and Reinforced Soil Slopes Design and Construction Guidelines.” The long-term tensile strength “ T_{al} ” must take into account reduction factors “RF” for creep (RF_{CR}), durability (RF_D), and installation damage (RF_{ID}) as defined in FHWA-00-043.

Section 725. - MISCELLANEOUS MATERIAL

725.19 Plastic Lining. Add the following:

Provide geomembrane types with 36mil reinforced Polypropylene lining.

Polypropylene lining consist of 64.5 inch (163.8 centimeters) minimum widths of manufactured Polypropylene sheeting fabricated into large panels by means of special factory bonded seams.

Provide polypropylene sheeting that is manufactured from a composition of high quality ingredients suitably compounded for use in hydraulic structures. Do not use reprocessed or reground materials.

The Polypropylene membrane shall consist of thoroughly mixed Polypropylene compound. It shall be manufactured by the calendaring process and shall be uniform in color, thickness, size and surface texture.

The sheeting shall contain no undispersed materials, divots, deep gas checks and shall exhibit cold flow.

The Polypropylene shall be made by encapsulating reinforcing polyester fabric (scrim) between two sheets of Polypropylene.

The sheeting shall be flexible, durable, watertight product free of pinholes, blisters, holes and contaminants.

The material shall have the minimum physical property characteristics as outlined in the following table. Units are given in English for procurement purposes.

Table 725-1
Reinforced Polypropylene

Property		Test Method	Values	
Thickness (mils nominal)		ASTM D751	36	45
Piles Reinforcing			1	1
Breaking Strength (lbs min)	Warp (MD)	ASTM D751, Method A	275	275
	Fill (TD)	ASTM D751, Method A	250	250
Tear Strength (lbs min)	Warp (MD)	ASTM D751, Tongue Tear	70 lbs	70 lbs
	Fill (TD)	ASTM D751, Tongue Tear	70 lbs	70 lbs
Low Temperature (Degrees F)		ASTM D2136 (1/8" Mandrel, 4 hours)	-65°	-65°
Dimensional Stability (% Δ Max)		ASTM D1204 (180°F/1 hr)	1&	1%
Hydrostatic Resistance (psi min)		ASTM D751, Method A	350 psi	350 psi
Ply Adhesion (lbs/in min)		ASTM D413	25 lbs	25 lbs
Puncture Resistance		FTMS 101C, Method 2031	300 lbs	300 lbs
Water Absorption (max % wt Δ)		ASTM D471	<1%	<1%

UV Resistance (12,000 Hours)		ASTM G26, Xenon Arc @ 80°C)	Pass	Pass
Resistance to Soil Burial (% Tensile Retention)		ASTM D3083 (Part 9.5)	90% min	90% min
Factory Seam Properties				
Bonded Seam Strength		ASTM D751	200 lb min	200 lb min
Peel Adhesion (lbs/in min)		ASTM D413	20 lbs/in	20 lbs/in

725.29 Reinforcing Fibers. Delete the text and substitute the following:

When reinforcing fibers are specified, conform to the following:

(b) Use with concrete. Fibers will be fully oriented, 100% virgin polypropylene, collated fibrillated, white in color, 38 mm long, dosed at 0.9 kilograms per cubic meter of concrete, conforming to ASTM C 1116.

ITEM NO.	REVISIED 03/17/08 - AMENDMENT A002 ITEM DESCRIPTION	UNIT	Sheet Number and Description							ESTIMATED QUANTITIES		REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
			B4	B8-B11	B12-B19	B20	B21-B22	B23-B26	B27	PLAN	BID	R5	CA	CA PFH 114-1(1) HYAMPOM ROAD	B1	B27
			Grading Summary	Drainage Summary	Tabulation of Quantities	Surfacing Summary	Tabulation of Quantities	Tabulation of Quantities	Tabulation of Quantities							
REMARKS AND/OR DETERMINATION OF ESTIMATED QUANTITY																
15101-0000	Mobilization	LPSM									ALL	ALL				
15206-0000	Slope, reference, and clearing and grubbing stake	km			6.256						6.256	6.256	At all xs shown in the Slope Stake Book			
15214-0000	Survey and staking, miscellaneous	LPSM			All						ALL	ALL	For Wetland Mitigation Site			
15214-2000	Survey and staking, retaining wall	LPSM			All						ALL	ALL	For all walls			
15215-3000	Survey and staking, drainage structure	Each		44							44	44				
15215-6000	Survey and staking, roadway cross-sections	Each			150						150	150	As required per subsection 152.03(b)			
15216-2000	Survey and staking, grade finishing stakes	km			12.512						12.512	12.512	For Hyampom Road and approach roads			
15401-0000	Contractor testing	LPSM									ALL	ALL				
15501-0000	Construction schedule	LPSM									ALL	ALL				
15703-2000	Soil erosion control, temporary turf establishment	ha									13.67	14.0	Same area & quantity as seeding/mulching			
15705-0100	Soil erosion control, silt fence	m			4849						4849	5100	Use wire backed fencing			
15705-1400	Soil erosion control, sediment log	m			447						447	500				
15705-1500	Soil erosion control, sediment wattle	m			8162						8162	8600				
15801-0000	Watering for dust control	m3			40500						40500	50000				
20101-0000	Clearing and grubbing	ha			13.122						13.122	14.0				
20201-0000	Selective clearing	ha			0.781						0.781	0.80	For trees on top of existing cuts			
20220-1000	Removal, individual tree	Each			10						10	10	For additional hazard trees, per CO			
20301-1900	Removal of pipe culvert	Each		17							17	17				
20301-2400	Removal of signs	Each						7			7	7				
20304-1000	Removal of structures and obstructions	LPSM									ALL	ALL	Includes steel beam wall, 20+271-20+277.			
20401-0000	Roadway excavation	m3	85445								85445	94000				
20402-0000	Subexcavation	m3	1000								1000	1000	At CO's direction			
20410-0000	Select borrow	m3							1897		1897	2000	for Wetland Mitigation Site			
20441-0000	Waste	m3	3256								3256	3600				
20703-2000	Geogrid, biaxial	m2			3992.9						3992.9	4400	for shoulder stabilization (See M207-A)			
20704-0000	Geomembrane	m2							2088		2088	2200	for Wetland Mitigation Site			
20802-0000	Foundation fill	m3			123						123	123	for MSE and Gabion walls			
20811-0000	Shoring and bracing	m2			673.1						673.1	740	for temp. traffic @ MSE walls			
21101-1000	Roadway obliteration, method 1	m2			330						330	360	minor oblit. At various locations			
21101-2000	Roadway obliteration, method 2	m2			2875						2875	3100	At Dinner Gulch			
25101-2000	Placed riprap, class 2	m3		64.4							64.4	70				
25101-3000	Placed riprap, class 3	m3		590.7							590.7	650				
25101-4000	Placed riprap, class 4	m3		403.0							403.0	450				
25101-5000	Placed riprap, class 5	m3							398		398	420	for Wetland Mitigation Site			
25201-0000	Special rock embankment	m3			5440						5440	6000	See Special M204-50A			
25205-0000	Rock buttress	m3			729						729	800	See Special M252-A			
25302-1000	Gabions, galvanized or aluminized coated	m3			575						575	625	See detail WM253-2			
25305-1000	Revet mattress, galvanized or aluminized coated	m2		182.0							182.0	195	See Special M253-A			
25501-1000	Mechanically stabilized earth wall, welded wire face	m2			3015.7						3015.7	3200.0	See Special M255-50A			
30101-0000	Aggregate base	t				23962					23962	25500				
40301-0500	Hot asphalt concrete pavement, grading E	t				6764					6764	7000				
40305-3000	Antistrip additive, type 3	t				68.1					68.1	75				
40401-0000	Minor hot asphalt concrete	t				99					99	105				
40920-1000	Fog seal, emulsified asphalt grade CSS-1 or CSS-1h, SS-1 or SS-1h	t				17.5					17.5	19.0				
41101-0000	Prime coat	t				47.2					47.2	50.0				
41105-0000	Blotter	t				317.9					317.9	330.0				
41201-0000	Tack coat	t				17.5					17.5	19.0				
60103-0000	Concrete, headwall	Each		10							10	10				
60201-0800	600mm pipe culvert	m		442.8							442.8	460.0				
60201-1100	1050mm pipe culvert	m		67.5							67.5	70.0				
60201-1200	1200mm pipe culvert	m		145.9							145.9	150.0				
60201-1200	1200mm pipe culvert (with baffles and bulkhead)	m		12.0							12.0	12.0	See Special M602-A			
60201-1300	1350mm pipe culvert (with baffles and bulkhead)	m		14.0							14.0	14.0	See Special M602-A			
60201-1400	1500mm pipe culvert (with baffles and bulkhead)	m		30.0							30.0	30.0	See Special M602-A			

The following quantities are approximate unless noted as a contract quantity. Payment will be made for the actual quantities of work performed and accepted or for materials furnished according to the contract.

SUMMARY OF QUANTITIES

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REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
R5	CA	CA PFH 114-1(1) HYAMPOM ROAD	B17	B27

REVISED 03/17/08
AMENDMENT A002

SHOULDER STABILIZATION SUMMARY										
		Item Number					20401-0000	20703-2000		
Station	To Station	Side	Length	Depth (D)	Width (W)	Step Height	Roadway excavation	Geogrid, biaxial	Remarks	
			m	m	m	m	m3	m2	Drawing	
16+780.00	16+802.00	Rt	22.0	0.90	2.40	0.45	47.5	230.6	M207-A	
17+204.00	17+238.00	Rt	34.0	0.90	2.40	0.45	73.4	356.3	M207-A	
17+324.00	17+336.00	Rt	12.0	0.90	2.40	0.45	25.9	125.8	M207-A	
18+478.00	18+502.00	Rt	24.0	0.90	2.40	0.45	51.8	251.5	M207-A	
18+604.00	18+618.00	Rt	14.0	0.90	2.40	0.45	30.2	146.7	M207-A	
19+637.00	19+660.00	Rt	23.0	0.90	2.40	0.45	49.7	241.0	M207-A	
20+050.00	20+080.00	Rt	30.0	0.90	2.40	0.45	64.8	314.4	M207-A	
21+384.00	21+446.00	Rt	62.0	0.90	2.40	0.45	133.9	649.8	M207-A	
21+479.00	21+494.00	Rt	15.0	0.90	2.40	0.45	32.4	157.2	M207-A	
21+534.00	21+546.00	Rt	12.0	0.90	2.40	0.45	25.9	125.8	M207-A	
21+562.00	21+582.00	Rt	20.0	0.90	2.40	0.45	43.2	209.6	M207-A	
22+315.00	22+428.00	Rt	113.0	0.90	2.40	0.45	244.1	1184.2	M207-A	
TOTALS							See Grading Summary	3992.9		

Quantity Assumptions

Average width of reinforced slope = 2.40 m
 Length of biaxial geogrid "wrap" per lift (1v:1h slope) = 4.040 m/unit length
 Area of Excavation and Select Topping backfill per m (two lifts) = 2.160 m2/unit length
 Geogrid quantities are measured as in place area per lift (does not include longitudinal overlap)

ROADWAY OBLITERATION SUMMARY					
		Item Number			
Station	To Station	Side	21101-1000	21101-2000	Remarks
			Roadway obliteration, method 1	Roadway obliteration, method 2	
			m2	m2	
16+430	16+450	Lt	30		before beginning of project
17+720.00	17+750.00	Lt		1389	at Dinner Gulch
17+753.00	17+801.00	Lt		1486	at Dinner Gulch
21+155	21+197.00	Rt	300		
TOTALS			330	2875	

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

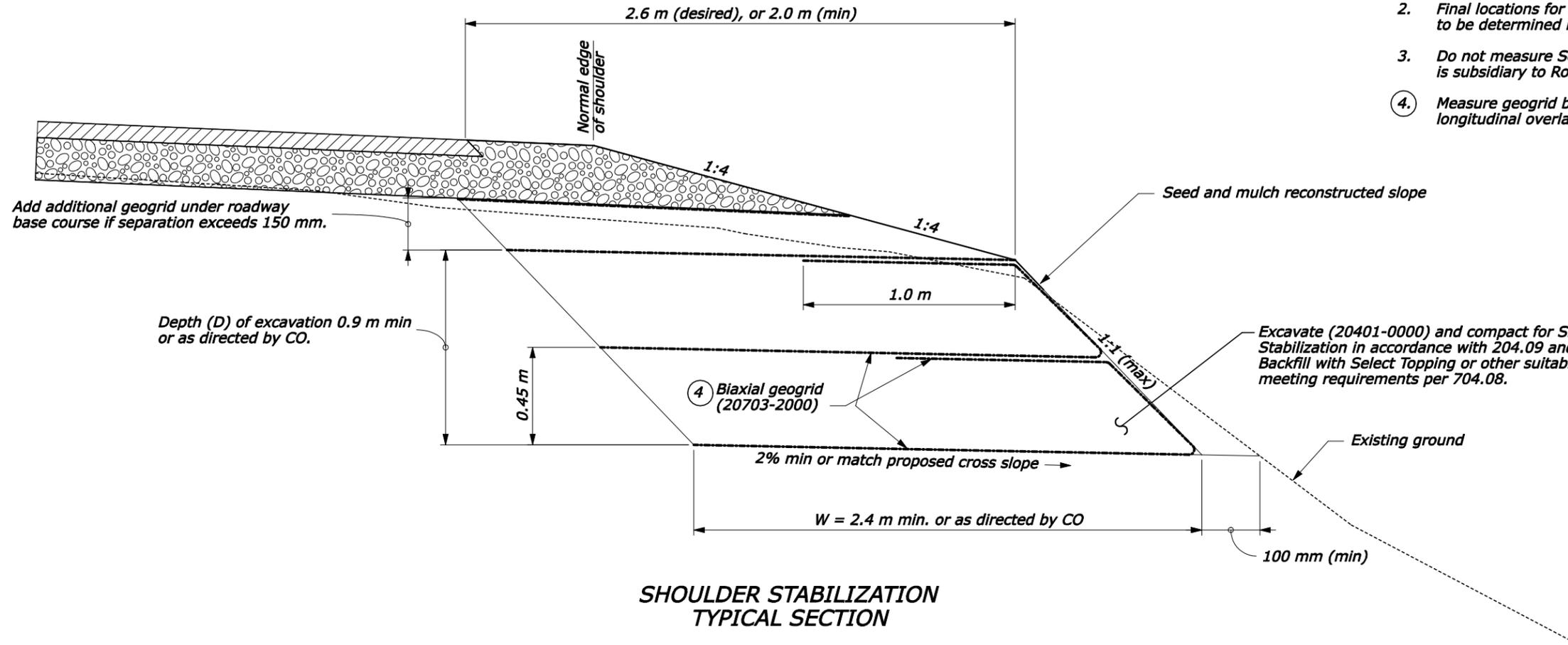
TABULATION OF QUANTITIES

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
R5	CA	CA PFH 114-1(1) HYAMPOM ROAD	F2	F3

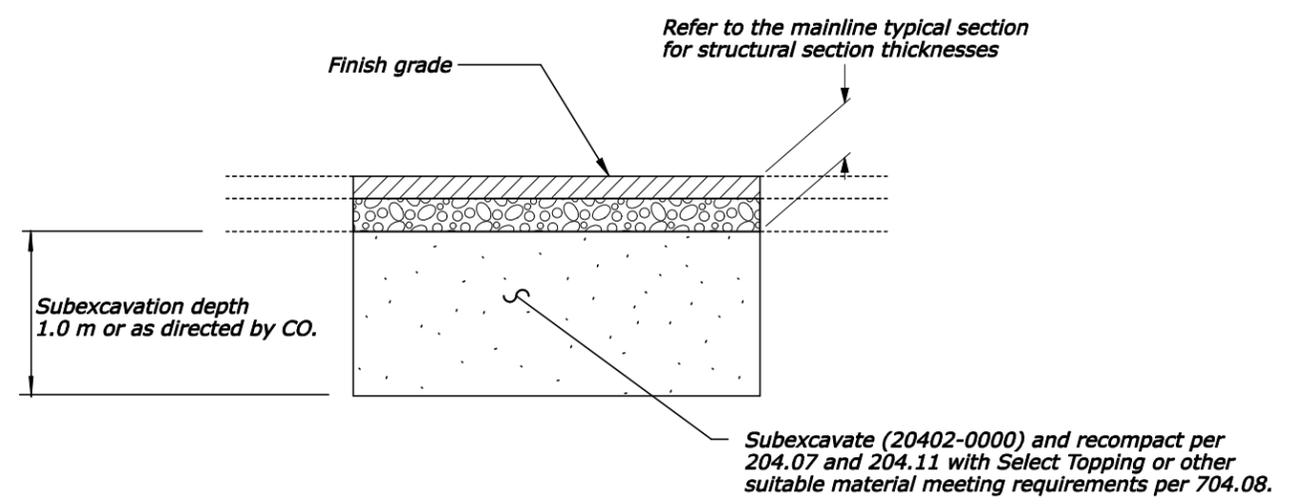
NOTE:

REVISED 03/17/08
AMENDMENT A002

1. Subexcavation is measured and paid for under item 20402-0000. See the Earthwork Representations and Grading Summary for more information.
2. Final locations for shoulder stabilization and subexcavation to be determined by the CO.
3. Do not measure Select Topping for payment. Select Topping is subsidiary to Roadway Excavation and Subexcavation.
4. Measure geogrid by area in place per lift. Do not measure longitudinal overlaps.



**SHOULDER STABILIZATION
TYPICAL SECTION**



**SUBEXCAVATION (SPOT SUBEX.)
TYPICAL SECTION**

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
METRIC SPECIAL	
SUBEXCAVATION & SHOULDER STABILIZATION	
SPECIAL M207-A	

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