

**AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT**

1. CONTRACT ID CODE \_\_\_\_\_ PAGE \_\_\_\_\_ OF \_\_\_\_\_ PAGES

2. AMENDMENT/MODIFICATION NO. _____		3. EFFECTIVE DATE _____	4. REQUISITION/PURCHASE REQ. NO. _____	5. PROJECT NO. <i>(If applicable)</i> _____
6. ISSUED BY _____ CODE _____		7. ADMINISTERED BY <i>(If other than Item 6)</i> _____ CODE _____		

8. NAME AND ADDRESS OF CONTRACTOR <i>(No., street, county, State and ZIP Code)</i>          CODE _____ FACILITY CODE _____	(X)	9A. AMENDMENT OF SOLICIATION NO. _____
		9B. DATED <i>(SEE ITEM 11)</i> _____
		10A. MODIFICATION OF CONTRACT/ORDER NO. _____
		10B. DATED <i>(SEE ITEM 11)</i> _____

**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 \_\_\_\_\_ 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 your 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 ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: <i>(Specify authority)</i> 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 <i>(such as changes in paying office, appropriation date, etc.)</i> 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 <i>(Specify type of modification and authority)</i>

**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.)*

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

Item 14. Continued.

**CHANGES TO PROPOSAL RECEIPT DATE**

1. Standard Form 1442, First Page, Item No. 13.A.- In the second line, change the bid opening date from "22 August 2000" to "25 August, 2000".

**CHANGES TO THE SPECIFICATIONS**

2. Replacement Section - Replace the following section with the accompanying new section of the same number and title, bearing the notation "ACCOMPANYING AMENDMENT NO. 0005 TO SOLICITATION NO. DACA63-00-B-0024:"

SECTION 02373 SEPARATION/FILTRATION GEOTEXTILE

END OF AMENDMENT

SECTION 02373

SEPARATION/FILTRATION GEOTEXTILE

02/98

AMENDMENT NO. 0005

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of the specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3786	(1987) Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics: Diaphragm Bursting Strength Tester Method
ASTM D 4354	(1996) Sampling of Geosynthetics for Testing
ASTM D 4355	(1992) Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus)
ASTM D 4533	(1991) Trapezoid Tearing Strength of Geotextiles
ASTM D 4632	(1991) Grab Breaking Load and Elongation of Geotextiles
ASTM D 4759	(1988; R 1996) Determining the Specification Conformance of Geosynthetics
ASTM D 4873	(1995) Identification, Storage, and Handling of Geosynthetic Rolls

1.2 SUBMITTALS

Government approval is required for submittals with a "GA" designation. Submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01330 SUBMITTAL PROCEDURES:

SD-06 Instructions

Manufacturing Quality Control Sampling and Testing; FIO.

A minimum of 14 days prior to scheduled use, manufacturer's quality control manual including instructions for geotextile storage, handling, installation, seaming, and repair.

SD-09 Reports

Seams; FIO.

Seam strength test results.

SD-13 Certificates

Geotextile; FIO.

A minimum of 14 days prior to scheduled use, manufacturer's certificate of compliance stating that the geotextile meets the requirements of this section. This submittal shall include copies of manufacturer's quality control test results. For needle punched geotextiles, the manufacturer shall also certify that the geotextile has been continuously inspected using permanent on-line full-width metal detectors and does not contain any needles which could damage other geosynthetic layers. The certificate of compliance shall be attested to by a person having legal authority to bind the geotextile manufacturer.

SD-14 Samples

Quality Assurance Samples and Tests; FIO.

Samples for quality assurance testing; 7 days shall be allotted in the schedule to allow for testing.

1.3 DELIVERY, STORAGE AND HANDLING

Delivery, storage, and handling of geotextile shall be in accordance with ASTM D 4873.

1.3.1 Delivery

The Contracting Officer will be present during delivery and unloading of the geotextile. Rolls shall be packaged in an opaque, waterproof, protective plastic wrapping. The plastic wrapping shall not be removed until deployment. If quality assurance samples are collected, rolls shall be immediately rewrapped with the plastic wrapping. Geotextile or plastic wrapping damaged during storage or handling shall be repaired or replaced, as directed. Each roll shall be labeled with the manufacturer's name, geotextile type, roll number, roll dimensions (length, width, gross weight), and date manufactured.

1.3.2 Storage

Geotextile rolls shall be protected from becoming saturated. Rolls shall either be elevated off the ground or placed on a sacrificial sheet of plastic. The geotextile rolls shall also be protected from the following: construction equipment, ultraviolet radiation, chemicals, sparks and flames, temperatures in excess of 71 degrees C, and any other environmental condition that may damage the physical properties of the geotextile.

1.3.3 Handling

{ACCOMPANYING AMENDMENT NO. 0005 TO SOLICITATION NO. DACA63-00-B-0024}

Geotextile rolls shall be handled and unloaded with load carrying straps, a fork lift with a stinger bar, or an axial bar assembly. Rolls shall not be dragged along the ground, lifted by one end, or dropped to the ground.

## PART 2 PRODUCTS

## 2.1 RAW MATERIALS

## 2.1.1 Geotextile

Geotextile shall be a woven or nonwoven pervious sheet of polymeric material and shall consist of long-chain synthetic polymers composed of at least 95 percent by weight polyolefins, polyesters, or polyamides. The use of woven slit film geotextiles (i.e. geotextiles made from yarns of a flat, tape-like character) will not be allowed. Stabilizers and/or inhibitors shall be added to the base polymer, as needed, to make the filaments resistant to deterioration by ultraviolet light, oxidation, and heat exposure. Regrind material, which consists of edge trimmings and other scraps that have never reached the consumer, may be used to produce the geotextile. Post-consumer recycled material may also be used. Geotextile shall be formed into a network such that the filaments or yarns retain dimensional stability relative to each other, including the selvages. Geotextiles and factory seams shall meet the requirements specified in Table 1. Where applicable, Table 1 property values represent minimum average roll values (MARV) in the weakest principal direction. Values for AOS represent maximum average roll values.

TABLE 1. GEOTEXTILE PHYSICAL PROPERTIES

PROPERTY	TEST VALUE		TEST METHOD
Elongation at Break, percent	Less Than 50	Greater Than {AM#5} or Equal To 50	ASTM D 4632
Apparent Opening Size (AOS) (US Sieve)	{AM#6} 0.25 mm (maximum) (No. 60 Sieve)	0.25 mm	ASTM D 4751
Permittivity Sec -1	0.2 (minimum)	{AM#6} 0.2 (minimum)	ASTM D 4491
Grab Tensile, N	{AM#5} 1100	700	ASTM D 4632
Trapezoidal Tear, N	400	{AM#5} 250	ASTM D 4533
Burst Strength, kPa	{AM#5} 2700	1300	ASTM D 3786
Ultraviolet Stability (percent strength)	50	{AM#5} 50	ASTM D 4355

TABLE 1. GEOTEXTILE PHYSICAL PROPERTIES

PROPERTY	TEST VALUE	TEST METHOD
retained at 500 hours)		

## 2.2 MANUFACTURING QUALITY CONTROL SAMPLING AND TESTING

Manufacturing quality control sampling and testing shall be performed in accordance with the manufacturer's approved quality control manual. As a minimum, geotextiles shall be randomly sampled for testing in accordance with ASTM D 4354, Procedure A. Acceptance of geotextile shall be in accordance with ASTM D 4759. Tests not meeting the specified requirements shall result in the rejection of applicable rolls.

## PART 3 EXECUTION

### 3.1 QUALITY CONTROL SAMPLES AND TESTS

#### 3.1.1 Quality Control Samples

Samples shall be collected upon delivery to the site for quality control testing in accordance with ASTM D 4354, Procedure B. Lot size for quality control sampling shall be considered to be the shipment quantity of the product or a truckload of the product, whichever is smaller. The unit size shall be considered one roll of geotextile. Samples shall be identified with a waterproof marker by manufacturer's name, product identification, lot number, roll number, and machine direction. The date and a unique sample number shall also be noted on the sample. The outer layer of the geotextile roll shall be discarded prior to sampling a roll. Samples shall then be collected by cutting the full-width of the geotextile sheet a minimum of 1 meter long in the machine direction. Rolls which are sampled shall be immediately rewrapped in their protective covering.

#### 3.1.2 Quality Assurance Tests

The Contractor will provide quality assurance samples to an Independent Laboratory hired by the Contractor. Samples will be tested to verify that geotextile meets the requirements specified in Table 1. Test method ASTM D 4355 shall not be performed on the collected samples. Geotextile product acceptance shall be based on ASTM D 4759. Tests not meeting the specified requirements shall result in the rejection of applicable rolls.

### 3.2 INSTALLATION

#### 3.2.1 Subgrade Preparation

The surface underlying the geotextile shall be smooth and free of ruts or protrusions which could damage the geotextile. Subgrade materials and compaction requirements shall be in accordance with Section EARTHWORK.

### 3.2.2 Placement

The Contractor shall request the presence of the Contracting Officer during handling and installation. Geotextile rolls which are damaged or contain imperfections shall be repaired or replaced as directed. The geotextile shall be laid flat and smooth so that it is in direct contact with the subgrade. The geotextile shall also be free of tensile stresses, folds, and wrinkles. On slopes greater than 5 horizontal on 1 vertical, the geotextile shall be laid with the machine direction of the fabric parallel to the slope direction.

### 3.3 SEAMS

#### 3.3.1 Overlap Seams

Geotextile panels shall be continuously overlapped a minimum of 305 mm. Where it is required that seams be oriented across the slope, the upper panel shall be lapped over the lower panel. The Contractor has the option of field sewing instead of overlapping.

### 3.4 PROTECTION

The geotextile shall be protected during installation from clogging, tears, and other damage. Damaged geotextile shall be repaired or replaced as directed. Adequate ballast (e.g. sand bags) shall be used to prevent uplift by wind. The geotextile shall not be left uncovered for more than 2 days during installation.

### 3.5 REPAIRS

Geotextile damaged during installation shall be repaired by placing a patch of the same type of geotextile which extends a minimum of 300 mm beyond the edge of the damage or defect. Patches shall be continuously fastened using approved method. The machine direction of the patch shall be aligned with the machine direction of the geotextile being repaired. Geotextile which cannot be repaired shall be replaced.

### 3.6 PENETRATIONS

Engineered penetrations of the geotextile shall be constructed as shown on the drawings or by methods recommended by the geotextile manufacturer.

### 3.7 COVERING

Geotextile shall not be covered prior to approval by the Contracting Officer. The Contractor shall request the presence of the Contracting Officer during covering of the geotextile. Cover soil requirements are described in Section 02620 Subdraining System. The direction of backfilling shall proceed in the direction of down gradient shingling of geotextile overlaps. Cover shall be placed in a manner that prevents soil from entering the geotextile overlap zone, prevents tensile stress from being mobilized in the geotextile, and prevents wrinkles from folding over onto themselves. No equipment shall be operated directly on top of the geotextile. A minimum of 305 mm of soil shall be maintained between

{ACCOMPANYING AMENDMENT NO. 0005 TO SOLICITATION NO. DACA63-00-B-0024}

full-scale construction equipment tires/tracks and the geotextile during the covering process. Compaction and testing requirements for cover soil are described in Section 02620 Subdraining System.

-- End of Section --