

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>		(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> _____
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 _____ 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>	

SECTION 02278

RIPRAP

AMENDMENT NO. 0001

PART 1 GENERAL

This section covers gradation, soundness, procurement, and transportation of the riprap to the site, and also all activities (including floating equipment) required to place the riprap in the discharge channel downstream from the tainter gates.

1.1 REFERENCES

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

CORPS OF ENGINEERS, HANDBOOK FOR CONCRETE AND CEMENT

CRD-C 137	Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate
CRD-C 144	Method of Testing Stone for Resistance to Freezing and Thawing

CORPS OF ENGINEERS, ENGINEERING MANUAL

EM 1110-2-1906	Laboratory Soils Testing 30 Nov 1970
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AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 88-76	Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C 127-80	Specific Gravity and Absorption of Coarse Aggregate
ASTM C 131-81	Resistance to Degradation of Small Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

1.2 MEASUREMENT

1.2.1 Riprap

Unit for measurement for riprap will be the ton of riprap material satisfactorily placed on the channel bottom.

1.3 PAYMENT

1.3.1 Riprap

Costs associated with riprap will be paid on the basis of tons of riprap satisfactorily placed for required permanent work as shown on the drawings

or as required by the Contracting Officer at the contract unit price per ton for "Riprap." See Drawing Sequence No. 5 for information on location and elevation for base bid and option riprap placements. Such payment shall be based on the weight of riprap as documented by certified scale receipts and actually placed in the discharge channel. This payment shall constitute full compensation for furnishing the riprap materials from a commercial source, transportation of the riprap to the job site, all required floating equipment, and for the actual placing of the riprap as specified on the channel bottom.

1.3.2 Access Ramp

No separate payment will be made for access ramps constructed. All labor, riprap, and incidentals necessary to complete the access ramps as described in these specifications or as shown on the drawings shall be included in the contract job sum price for "Preparing of Construction Area."

1.4 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-08, Statements

Designation of Source of Riprap; GA.

The Contractor shall designate in writing the source(s) from which it is proposed to furnish materials for riprap (paragraph 3.2.1).

Placing Riprap in the Channel; GA.

The Contractor shall provide detailed methods and procedures to be used to move the riprap from the channel bank to the proper location in the channel. Also required is the method to be used to ensure the riprap is placed in the location and thickness as shown on the drawings.

SD-09, Reports

Reports of Quality Control; GA.

The Contractor shall inspect, and certify compliance with contract requirements of all materials and operations (paragraph 3.6).

SD-13, Certificates

Materials; GA.

The Contractor shall submit certificate(s) of compliance from the material supplier certifying that the materials furnished for riprap under this specification comply with the quality requirements.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 GENERAL

The work under this section consists of furnishing all plant, labor, equipment and materials and performing all operations in connection with providing riprap to the job site. These materials shall be placed as shown on the drawings in accordance with the specifications and applicable drawings or as otherwise directed by the Contracting Officer.

3.2 RIPRAP MATERIAL

3.2.1 General

Materials shall be durable stone as approved by the Contracting Officer's Representative. Gypsum, anhydrite, chert, shale, and soft or weathered rock will not be approved. The Contractor shall, at least 30 days in advance of planned placement, designate in writing the source or sources from which he proposes to furnish materials. Suitable test results and service records will be used to determine the acceptability of the materials as to quality. In the event that recent quality evaluation test reports and a service record that are acceptable to the Contracting Officer's Representative are not available, the materials shall be subjected to such tests described below as are necessary to determine its acceptability for use in the work. Quality evaluation tests will be made by the Government and at the Contractor's expense. When tests are required, suitable test samples of riprap shall be obtained by the Contractor under the direct supervision of the Contracting Officer, and submitted for approval testing by shipping to U.S. Army Engineers Waterways Experiment Station, ATTN: CEWES-GS-GD (T.J. Griffing), 3909 Halls Ferry Road, Vicksburg, MS 39180-6199. Costs of shipping or delivery of test samples will be at the expense of the Contractor. Test samples shall be submitted at least 60 days in advance of the time when the placing of the stone protection is expected to begin. Stone materials shall not be delivered to the site of the work prior to approval of the test samples. The total overall weight of the sample of riprap shall approximate 1,000 pounds and representative pieces shall weigh not more than 100 pounds. The Contractor shall designate in writing only one source or one combination of sources from which he proposes to furnish stone materials.

3.2.2 Construction Material Sources

Materials for riprap meeting the quality requirements of this specification have in the past been produced from the sources listed hereinafter.

<u>Source</u>	<u>Type of Material</u>	<u>Producer and Location</u>
Arc Spur	Limestone	Texas Industries, Inc., Arlington, TX, produces from a quarry located six (6) miles north of Bridgeport, TX.
Georgetown	Limestone	Texas Crushed Stone Company, Austin, TX, produces from a quarry located three (3) miles south of Georgetown, TX.
Ardmore	Limestone	Dolese Brothers Company, Oklahoma City, OK, produces from Davis quarry located seven (7) miles northeast of Ardmore, OK.

3.4.1 Placement

The Contractor shall place riprap underwater at the location and thickness required in accordance with the contract drawings. It is the intent of these specifications to use the riprap to fill in the large holes that have formed on the channel bottom and finish with a generally smooth channel bottom.

3.4.2 Gradation

Stone for riprap shall be placed within the limits shown on the drawings or otherwise as directed by the Contracting Officer's Representative. Either boulders or quarried rock may be used as stone if conforming to the applicable requirements of Paragraph 3.2, RIPRAP MATERIAL as to quality. The riprap shall be reasonably well graded from the minimum size stone permitted to the maximum size stone permitted. Neither the breadth nor the thickness of any piece of stone shall be less than one-third of its length.

During production, the stone shall be sampled and tested by the Contractor as often as deemed necessary by the Contracting Officer's Representative to determine if compliance with the gradation provisions of the specifications will be possible using the stone being produced. The Contractor shall provide all necessary equipment and labor for the taking, processing and weighing of representative samples, both at the source and in-place. The riprap shall be graded within the following limits (in-place):

<u>Maximum Size</u>	<u>90 Percent Size (1)</u>	<u>Average Size (2)</u>	<u>8 Percent Size (3)</u>
(2700 lbs)	(1600-2400 lbs)	(700-900 lbs)	(100 lbs)

Notes:

(1) Defined as that size such that 90 percent of the stone, by weight, is smaller and 10 percent is larger.

(2) Defined as that size such that 50 percent of the total stone, by weight, is larger and 50 percent is smaller.

(3) Not more than 8 percent of the stone, by weight, shall consist of pieces weighing less than the weights shown.

(4) Additionally, no more than 1% (by weight) shall consist of dirt, sand, and small rocks.

3.4.3 Placement Procedures

The Contractor shall place the riprap underwater into the holes in the channel and to the lines and grades as shown on the drawings. The Contracting Officer shall approve the finished surface, and if, in the opinion of the Contracting Officer, excessive amounts of riprap have been placed outside the lines and locations shown on the drawings, that riprap shall be moved or paid for by the Contractor. The intent of these specifications is to require placement of riprap in a manner that will produce a stable mass of rocks with a finished surface corresponding to the approximate top of river channel. The larger rocks shall be well distributed and the entire mass of rocks in their final position shall

conform to the gradation specified hereinbefore. The desired distribution of the various sizes of rocks throughout the mass shall be obtained by selective loading of the material at the quarry or other source; by controlled dumping of successive loads during final placing, or by other methods of placement which will produce the specified results. Rearranging of individual rocks by mechanical equipment may be required to some extent to obtain a reasonably well graded distribution of rock sizes.

3.4.3.1 Placement Procedures Required

- (1) Placement in such a manner as to minimize segregation;
- (2) the riprap shall be placed in one operation by means of skip box, clam, rock-bucket, orange peel, or hydraulic excavator ("Gradall" or approved equal). No other method of placement shall be used without written approval of the Contracting Officer's Representative and the approval will be contingent on the Contractor's continued ability to provide an acceptable product;
- (3) riprap shall be placed in layers in the channel hole until the mass has been brought up to the lines and grades shown on the drawings;
- (4) the Contractor shall provide sufficient equipment during placement for rearrangement of loose stone, to comply with the end-product requirement of a well keyed and stable mass; and
- (5) the in-place riprap shall conform to the gradation specified.

3.4.3.2 Placement Procedures Not Permitted

- (1) dumping of riprap off a barge into the water;
- (2) moving riprap more than twenty (20) feet by drifting and manipulating with a dragline bucket or other equipment;
- (3) final finishing of the riprap with heavy plates or similar methods which would result in breakdown of the in-place riprap; and
- (4) placing riprap by dumping into chutes or by similar methods likely to cause segregation of the various sizes.

3.5 QUALITY CONTROL

3.5.1 Contractor Quality Control

The Contractor shall inspect and certify compliance with contract requirements, test if required, and record all inspections and required tests of all materials and operations, including, but not limited to the following:

- (1) Equipment
- (2) Materials
- (3) Construction methods
- (4) Line, grade, tolerance, and gradation

If tests indicate materials or workmanship not to be in conformance with the specifications, the materials shall be removed and replaced with

materials meeting these specifications at no additional cost to the government. No material may be delivered to the work site prior to approval of tests and/or certifications.

3.5.2 Grade Tolerances

The Contractor shall, by means of a measuring rod, determine the actual elevation of the top of the riprap as placed on the channel bottom. These measurements shall be provided to the Contracting Officer on a weekly basis. A tolerance of plus three (3) inches to minus five (5) inches from the elevations and grades found on the drawings will be allowed.

3.5.3 Gradation Tests

It is the intent of this specification to rely on certifications for compliance with the required gradations. If, in the Contracting Officers opinion, the riprap being delivered to the job site does not meet the specified gradation requirements or appears to contain excessive amounts of dirt, sand, and small rocks outside the 1 percent allowed, an on-the-job gradation test of a truck load shall be performed on the material. If the results of this test determines the material is out of specification, the contractor shall remove and replace with correct material and shall receive no compensation for the gradation test. If the results of the test indicate that the material was in compliance, the test will be at government expense. The truckload which has been tested and has failed the gradation test will be refused, and no other riprap shall be placed until the Contractor can show that subsequent trucks will fall within the acceptable limits.

3.5.4 Test Procedures

The Contractor shall use the following procedure in performing any required gradation test on a truck load of riprap material under the direction of the Contracting Officer's Representative:

- (1) The Contracting Officer shall select a truckload to be tested. The Contractor shall provide all necessary labor, equipment and scales (sling type).
- (2) Weigh and record results individually for each piece weighing over the specified eight (8) percent size.
- (3) Weigh, collectively, all pieces weighing less than the specified eight percent size and record total weight of this size material.
- (4) Calculate the cumulative percent passing and plot size in pounds against the percent passing.
- (5) Report results on ENG Form 4055. If any tests on riprap materials indicate that the materials do not meet gradation requirements, the materials shall be replaced as directed with materials meeting the specified requirements.

-- End of Section --