

DEPARTMENT OF THE ARMY  
Omaha District, Corps of Engineers  
106 South 15th Street  
Omaha, Nebraska 68102-1618

:NOTICE: Failure to acknowledge : Solicitation No. W9128F 04 B 0012  
:all amendments may cause rejec- :  
:tion of the bid. See FAR : Date of Issue: 09 Aug 2004  
:52.214-3 of Section 00100 : Date of Opening: 08 Sep 2004

Amendment No. 0003  
26 Aug 2004

SUBJECT: Amendment No. 0003 to Specifications and Drawings for Construction of  
Plattsmouth Chute Restoration Project, Missouri River, Plattsmouth,  
NE

Solicitation No. W9128F 04 B 0012.

TO: Prospective Bidders and Others Concerned

1. The specifications and drawings for subject project are hereby modified as follows (revise all specification indices, attachment lists, and drawing indices accordingly).

a. Specifications (New and/or Revised and Reissued). Delete and substitute or add specification pages as noted below. The substituted pages are revised and reissued with this amendment.

<u>Pages Deleted</u>	<u>Pages Substituted or Added</u>
Section 02921	Section 02921
Pages 1-10	Pages 1-8 dated 8/26/04

2. This amendment is a part of the bidding papers and its receipt shall be acknowledged on the Standard Form 1442. All other conditions and requirements of the specifications remain unchanged. If the bids have been mailed prior to receiving this amendment, you will notify the office where bids are opened, in the specified manner, immediately of its receipt and of any changes in your bid occasioned thereby.

a. Hand-Carried Bids shall be delivered to the U.S. Army Corps of Engineers, Omaha District, Contracting Division (Room 301), 106 South 15th Street, Omaha, Nebraska 68102-1618.

b. Mailed Bids shall be addressed as noted in Item 8 on Page 00010-1 of Standard Form 1442.

3. Bids will be received until 2:00 p.m., local time at place of bid opening, 08 Sep 2004.

Attachments: Specs listed in Part 1.a above

U.S. Army Engineer District, Omaha  
Corps of Engineers  
106 South 15th Street  
Omaha, Nebraska 68102-1618

26 Aug 2004  
JDW/4529

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DIVISION 02 - SITE CONSTRUCTION

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**05/04**

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## SECTION 02921

SEEDING  
05/04

## PART 1 GENERAL

## 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.

## AGRICULTURAL MARKETING SERVICE (AMS)

AMS-01 (Aug 95) Federal Seed Act Regulations Part 201

## 1.1.1 Definitions

Stratification is defined as a process where seed is placed in moistened medium and chilled for a period of time specific to the seed. A few species require a warm stratification period followed by cold stratification.

Scarification is defined as breaking, scratching, mechanically or chemically altering or softening the seed coat to make the seed permeable to water.

## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

## SD-03 Product Data

Equipment; G-AO

Manufacturer's literature including physical characteristics, application and installation instructions for equipment.

Equipment; G-AO

A listing of equipment to be used for the seeding operation.

Delivery; G-AO

Delivery schedule.

Seed Establishment Period; One Year

Calendar time period for the seed establishment period. When there is more than one seed establishment period, the boundaries of the seeded area covered for each period shall be described.

Maintenance Record; 3 Months after Establishment Period

Maintenance work performed, area repaired or reinstalled, diagnosis for unsatisfactory stand of vegetation.

#### SD-07 Certificates

Seed; G-AO

Prior to the delivery of materials, certificates of compliance attesting that materials meet the specified requirements are required. Certified copies of the material certificates shall include the following:

a. Seed. Classification, botanical name, common name, percent pure live seed, minimum percent germination and hard seed, maximum percent weed seed content, and date tested.

b. Mulch: Composition and source.

### 1.3 SOURCE INSPECTION

The source of delivered seed shall be subject to inspection.

### 1.4 DELIVERY, INSPECTION, STORAGE, AND HANDLING

#### 1.4.1 Delivery

A delivery schedule shall be provided at least 10 calendar days prior to the first day of delivery.

#### 1.4.2 Inspection

Seed shall be inspected upon arrival at the job site for conformity to species and quality. Seed that is wet, moldy, or bears a test date five months or older, shall be rejected. Other materials shall be inspected for compliance with specified requirements. The following shall be rejected: open soil amendment containers or wet soil amendments; topsoil that contains slag, cinders, stones, lumps of soil, sticks, roots, trash or other material over a minimum 1-1/2 inch diameter; and topsoil that contains viable plants and plant parts. Unacceptable materials shall be removed from the job site.

#### 1.4.3 Storage

If necessary, materials shall be stored in designated areas. Seed shall be stored in cool, dry locations away from contaminants. Chemical treatment material shall be stored according to manufacturer's instructions and not with seeding operation materials.

#### 1.4.4 Handling

Except for bulk deliveries, materials shall not be dropped or dumped from

vehicles.

## PART 2 PRODUCTS

### 2.1 SEED

#### 2.1.1 Seed Classification

State-certified seed of the latest season's crop shall be provided in original sealed packages bearing the producer's guaranteed analysis for percentages of mixture, purity, germination, hard seed, weed seed content, and inert material. Labels shall be in conformance with AMS-01 and applicable state seed laws.

##### 2.1.1.1 Special Seed Properties

Permanent seed species and mixtures to be planted in the spring shall be artificially stratified and/or scarified. Permanent seed species and mixtures to be planted in the fall shall will not require stratification or scarification. Selected seed supplier shall provide guidance on this process.

##### 2.1.2 Permanent Seed Species and Mixtures

Permanent seed species and mixtures shall be proportioned by weight as follows:

#### DISTURBED AREA PRAIRIE MIX

All six grass species as listed below shall be represented in the planting mix at the specified rates. Any substitutions due to unavailability, must be approved by the COR, see Section 2.1.3.

#### NATIVE GRASSES

<u>Botanical Name</u>	<u>Common Name</u>	<u>PLS lbs/acre</u>
<i>Andropogon gerardii</i>	Big bluestem	0.5 PLS lbs/acre
<i>Schizachyrium scoparium</i>	Little bluestem	1.5 PLS lbs/acre
<i>Elymus canadensis</i>	Canada wildrye	1.0 PLS lbs/acre
<i>Bouteloua curtipendula</i>	Sideoats gramma	1.5 PLS lbs/acre
<i>Sorghastrum nutans</i>	Indiangrass	0.5 PLS lbs/acre
<i>Panicum virgatum</i>	Switchgrass	1.0 PLS lbs/acre

All seven forb species as listed below shall be represented in the planting mix at the specified rates. Any substitutions due to unavailability, must be approved by the COR, see Section 2.1.3.

#### NATIVE FORBS

<u>Botanical Name</u>	<u>Common Name</u>	<u>PLS lbs/acre</u>
<i>Rudbeckia hirta</i>	Black-eyed Susan	0.5 PLS lbs/acre
<i>Gaillardia pulchella</i>	Firewheel	0.25 PLS lbs/acre
<i>Desmanthus illinoensis</i>	Illinois bundleflower	0.25 PLS lbs/acre
<i>Coreopsis tinctoria</i>	Plains coreopsis	1.0 PLS lbs/acre
<i>Petalostemon purpurea</i>	Purple prairie clover	0.5 PLS lbs/acre
<i>Cassia fasciculata</i>	Showy partridge pea	1.0 PLS lbs/acre
<i>Monarda fistulosa</i>	Wild bergamont	0.5 PLS lbs/acre

### 2.1.3 Substitutions

Substitutions will not be allowed without written request and approval from the Contracting Officer.

### 2.1.4 Quality

Weed seed shall be a maximum 1 percent by weight of the total mixture.

### 2.1.5 Seed Mixing

The mixing of seed may be done by the seed supplier prior to delivery, or on site as directed.

## 2.2 MULCH

Mulch shall be free from weeds, mold, and other deleterious materials. Mulch materials shall be native to the region.

### 2.2.1 Hay

Hay shall be stalks from oats, wheat, rye, barley, or rice, furnished in air-dry condition and with a consistency for placing with commercial mulch-blowing equipment.

## PART 3 EXECUTION

### 3.1 INSTALLATION LOCATIONS, SEED TIME, AND CONDITIONS

#### 3.1.1 Seeding Operation Location

Seeding operations will occur in areas disturbed by construction that are above the channel dredge cut. No seeding is required within the dredge cut or upon the side slopes of the dredge cut.

#### 3.1.2 Seeding Time

Seed shall be installed from April 1 to June 15 for spring establishment; and from September 1 to November 30 for fall establishment. An alternate seeding time may be determined by the Contracting Officer if favorable seeding conditions occur outside of the designed time frames.

#### 3.1.1 Seeding Conditions

Seeding operations shall be performed only during periods when beneficial results can be obtained. When drought, excessive moisture, or other unsatisfactory conditions prevail, the work shall be stopped when directed.

When special conditions warrant a variance to the seeding operations, proposed alternate times shall be submitted for approval.

#### 3.1.4 Equipment Calibration

Immediately prior to the commencement of seeding operations, calibration tests shall be conducted on the equipment to be used. These tests shall confirm that the equipment is operating within the manufacturer's specifications and will meet the specified criteria. The equipment shall be calibrated a minimum of once every day during the operation. The calibration test results shall be provided within 1 week of testing.

### 3.2 SITE PREPARATION

#### 3.2.1 Finished Grade

The Contractor shall verify that finished grades are as indicated on drawings, and the placing of topsoil, smooth grading, and compaction requirements have been completed in accordance with Section 02300 EARTHWORK, prior to the commencement of the seeding operation.

#### 3.2.1 Prepared Surface

##### 3.2.1.1 Preparation

The prepared surface shall be lightly raked or harrwed to remove debris, rough the surface, and reduce compaction.

### 3.3 INSTALLATION

#### 3.3.1 Installing Seed

Seeding method shall be Broadcast Seeding. Seeding procedure shall ensure even seed distribution.

##### 3.3.1.2 Broadcast Seeding

Native seed mix may be broadcast at the rate of 10 pounds per using broadcast seeders. Half the total rate of seed application shall be broadcast in 1 direction, with the remainder of the seed rate broadcast at 90 degrees from the first direction. Seed shall be covered a maximum 1/4 inch depth by disk harrow, steel mat drag, cultipacker, or other approved device.

#### 3.3.2 Mulching

##### 3.3.2.1 Hay Mulch

If fall planting is selected, mulching shall be completed within 24 hours of having the surfaces seeded. Native hay mulch shall be spread uniformly at the rate of 2 tons per acre. Mulch shall be spread by hand, blower-type mulch spreader, or other approved method. Mulching shall be started on the windward side of relatively flat areas or on the upper part of steep slopes, and continued uniformly until the area is covered. The mulch shall not be bunched or clumped. Sunlight shall not be completely excluded from penetrating to the ground surface. All areas installed with seed shall be mulched on the same day as the seeding.

### 3.4 RESTORATION AND CLEAN UP

#### 3.3 Restoration

Existing vegetation areas, pavements, and facilities that have been damaged from the seeding operation shall be restored to original condition at Contractor's expense.

##### 3.4.2 Clean Up

Excess and waste material shall be removed from the seeded areas and shall be disposed offsite. Adjacent paved areas shall be cleaned.

### 3.4 SEED ESTABLISHMENT PERIOD

#### 3.4.1 Commencement

The seed establishment period to obtain a healthy stand planted vegetation shall begin on the first day of work under this contract and shall end approximately one growing season after the last day of the seeding operation. Written calendar time period shall be furnished for the seed establishment period. When there is more than 1 seed establishment period, the boundaries of the seeded area covered for each period shall be described. The seed establishment period shall be modified for inclement weather, shut down periods, or for separate completion dates of areas.

#### 3.4.2 Satisfactory Stand of Native Plants

A satisfactory stand of vegetation from the seeding operation shall be defined as consisting of 50% plant cover. The total bare spots shall be a maximum 2 percent of the total seeded area. Plants shall be evaluated for species and health by trained personnel through field surveys conducted at the end of the growing season.

#### 3.4.3 Maintenance During Establishment Period

Maintenance of the seeded areas shall include eradicating noxious and/or invasive weeds, insects and diseases. If an overabundance of weeds invade the seeded areas, mowing 10-12 inches high may be required. Trained Corps personnel will determine if mowing is necessary to ensure the success of the newly seeded areas.

#### 3.5.3.2 Repair or Reinstall

Unsatisfactory stand of plants and mulch shall be repaired or reinstalled, in accordance with paragraph SITE PREPARATION.

#### 3.4.3.1 Maintenance Record

A record of each site visit shall be furnished, describing the maintenance work performed; areas repaired or reinstalled; and diagnosis for unsatisfactory stand of plants.

-- End of Section --