

ADDENDUM #1

Date of Addendum: March 29, 2022

**Mississippi Department of Environmental Quality
North Beardslee Lake Marsh Restoration Project
Jackson County, Mississippi**

NOTICE TO ALL BIDDERS AND PLANHOLDERS

This Addendum Number 1 (“Addendum”) shall be part of the Contract Documents for the above referenced-project and modifies the Invitation for Bids issued on March 4, 2022 with amendments and additions to the Invitation for Bids set forth below.

Pursuant to Section 2.18, “Acknowledgement of Addendum,” of the Invitation for Bids, bidders shall acknowledge receipt of this Addendum by identifying the addendum number and date in the space provided for this purpose on the Bid Form (Attachment D). Failure to do so may subject the bidder to disqualification.

BID SUBMITTAL DEADLINE

The bid submittal deadline remains at 3:00 PM CDST on April 5, 2022 and is not changed by this Addendum.

1.0 - SPECIFICATIONS

Item	Section No.	Description of Change
1.1	35 31 19	Remove the Riprap specification (Section 35 31 19) and replace with the Riprap specification – Revision 1 that is attached.
1.2	35 73 13	Remove the Berm Material specification (Section 35 73 13) and replace with the Berm Material specification – Revision 1 that is attached.

END OF ADDENDUM

Engineer: _____
John C. Bourgeois, P.E.

Date: 29 March 2022



SECTION 35 31 19
RIPRAP
(Revision 1)

PART I GENERAL

1-01 DESCRIPTION

- A. The Contractor shall furnish all labor, equipment, materials, and incidentals necessary to install the rock riprap containment berm as described herein and in the Construction Drawings. The work shall include, but is not necessarily limited to, purchase and installation of stone to construct containment berm as shown in the Construction Drawings.

1.02 RELATED SECTIONS

- A. Section 01 20 00 - Measurement and Payment Procedures
- B. Section 01 32 00 - Construction Progress Documentation
- C. Section 01 33 00 - Submittal Procedures
- D. Section 01 35 43 - Environmental Protection
- E. Section 31 05 21 -Geotextile and Geogrid
- F. Section 35 12 10 – Aids To Navigation

1.03 SUBMITTALS

- A. The Contractor shall submit to the Engineer test reports for the material to verify it meets the requirements of the Contract Documents. The test reports shall be signed by the responsible parties employed by the manufacturer and supplied to the Engineer not less than 14 days prior to the commencement of construction.
- B. Additionally, the Contractor shall submit to the Engineer, for each borrow source, test reports for each 1,000 tons of material placed.

PART 2 MATERIALS

2-01 STONES

- A. Aggregate for riprap shall consist of field stone, or rough, unhewn quarry stone as nearly rectangular in section as is practicable. The stone shall be dense, free of clay or shale seems, resistant to the action of air and water, and suitable in all other respects for the purpose intended. Quality requirements for rock to be furnished under these specifications will come from a pre-approved source or be visually approved prior to use.
- B. Stones for 200-pound riprap shall meet the requirements for size by weight of mass as specified in the following table:

200 lb. Riprap Gradation		
Size Rock lbs.	% Retained	% Passing
300	0	100
250	0	100
200	0	100
100	32	68
75	44	56
60	66	34
40	84	16
20	87	13
10	92	8
5	97	3

PART 3 EXECUTION

3-01 GENERAL

- A. Prior to the construction of riprap, the slopes or ground surface shall be shaped to lines and grades indicated in the Contract Documents, or as directed.
- B. Contractor shall review the existing water depths prior to commencing installation operations.
- C. All the outer edges and the top of the riprap where the construction terminates shall be formed so that the surface of the riprap will be embedded and even with the surface of the adjacent slope or ground, and on slopes, the bottom of the riprap shall be placed at least (2) feet below the natural ground surface unless otherwise directed.
- D. All riprap shall be started at the bottom of the slope, progressing upward.
- E. Riprap shall be placed in lifts or as directed by the Engineer. Riprap shall be placed in such a manner that minimizes the development of wrinkles in and/or movement of the grid composite.
- F. Material shall be placed in such a manner as to avoid damage to the underlying composite geogrid or geotextile fabric. No equipment will be allowed to operate over the geogrid or fabric until it is covered with a layer of material of sufficient thickness to protect the geogrid and fabric installation. When the underlying soil is very unstable, the two outer one-third portions of an embankment layer shall be placed approximately 25 feet in advance of the center one-third portion to prevent excessive mudwave movements and damage to the fabric installation.

3-02 ROCK RIPRAP

- A. The stones shall be placed upon a slope not steeper than the natural angle of repose of the filling material. The stones shall be laid with close joints. The course shall be laid from the bottom of the bank upward, the larger stones being placed in the lower courses. Larger interstices shall be filled with smaller stones and spalls.

3-03 INSPECTION AND ACCEPTANCE

Phase 1

1. As soon as practicable after completion of the work shown in the Construction Drawings and required by this section, the Work shall be thoroughly examined by the Contractor, Engineer, and by controlled survey at the expense of the Contractor.
2. Should any material deficiency such as but not limited to: less than required berm section; width; elevations; or slopes be disclosed by this examination, the Contractor shall continue Work at the deficient segment until the unacceptable condition is corrected.
3. After the berm is identified as materially complete, the settlement monitoring surveys will commence as outlined in Section 01 32 23.
4. The acceptable tolerances for berm construction are +/-3 feet of the horizontal position and +/-0.2 feet in elevation.

Phase 2

1. As soon as practicable after completion of the work shown in the Construction Drawings and required by this section, the Work shall be thoroughly examined by the Contractor, Engineer, and by controlled survey at the expense of the Contractor.
2. Should any material deficiency such as but not limited to: less than required berm section; width; elevations; or slopes be disclosed by this examination, the Contractor shall continue Work at the deficient segment until the unacceptable condition is corrected.
3. The acceptable tolerances for berm construction are +/-3 feet of the horizontal position and +/-0.2 feet in elevation.
4. If the performance in any required service is unsatisfactory, and poor performance is the fault of the Contractor, MDEQ at no expense to MDEQ, will deduct the cost of having the Work performed by another party from payment due the Contractor. Deductions will be based on the Contractor's Bid Form, MDEQ's cost to perform the Work, or MDEQ's cost to have another contractor perform the Work.

PART 4 COMPENSATION

4-01 MEASUREMENT

- A. Rock Riprap: Per ton installed to the nearest tenth (1/10) based on delivery tickets or barge displacement.
- B. Geotextile Fabric: No separate measurement or payment shall be made for fabric beneath Loose Stone Riprap.

4-02 PAYMENT

- A. General: Payment for loose stone riprap shall be made at the Contract Unit Price for each complete in place and accepted; which price shall be full compensation for furnishing, hauling and placing all riprap and slope protection materials; for all excavation, subgrade preparation, and backfilling; for all grouting if specified; and for all materials, equipment, tools, labor and incidentals necessary to complete the work in accordance with the Contract Documents.
- B. Geotextile fabric, water, tamping, and other items incident to completion of the riprap containment berm shall not be measured and no separate payment shall be made for such items.

END OF SECTION

**SECTION 35 73 13
BERM MATERIAL
(Revision 1)**

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes labor, material, and equipment necessary for the placement of berm material.

1.02 GENERAL

- A. This work consists of the embankment, material, preparation of subgrades, construction of berms, and the compaction and armoring of the earthen and rock riprap containment berms. All work shall be followed in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans.
- B. Contractor shall furnish all earth-moving equipment, labor, materials, tools, equipment, and incidentals thereto and perform all operations in connection with the work and complete the work as designated on the accompanying plans and as specified herein.
- C. All material shall be installed in strict conformance with the manufacturers recommendations and industry standards. All testing references are for general reference only. The most recent testing standards shall apply.
- D. Contractor shall ensure that erosion control measures, including turbidity curtain, are in place and operational prior to commencing base preparation.

1.03 RELATED SECTIONS

- A. Section 01 20 00 - Measurement and Payment Procedures
- B. Section 01 29 00 – Payment Procedures
- C. Section 01 31 00 – Project Management and Coordination
- D. Section 01 33 00 - Submittal Procedures
- E. Section 01 35 43 – Environmental Protection
- F. Section 01 40 00 - Contractor Quality Control

1.04 REFERENCES

- A. Latest version of American Society for Testing and Materials (ASTM) standards:
 - 1. ASTM D 422, Standard Test Method for Particle-Size Analysis of Soils.
 - 2. ASTM D 698, Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
 - 3. ASTM D 1556, Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
 - 4. ASTM D 1557, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).

5. ASTM D 2216, Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock.
6. ASTM D 2487, Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).
7. ASTM D 2922, Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
8. ASTM D 2937, Standard Test Method for Density of Soil in Place by the Drive-Cylinder Method.
9. ASTM D 3017, Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
10. ASTM D 4220, Standard Practices for Preserving and Transporting Soil Samples.
11. ASTM D 4318, Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.05 SUBMITTALS AND QUALIFICATIONS

- A. The Engineer and testing laboratory shall have free access to all points where earthen berm materials are stored, proportioned or (if applicable) mixed, and all materials, equipment and methods used shall be subject to their inspection, and approval.
- B. The Contractor shall submit to the Engineer, for each borrow source, the following information for the proposed berm materials, a minimum of 14 days prior to the commencement of construction:
 1. The results of grain-size analyses conducted on the proposed material in accordance with ASTM D 422.
 2. The results of liquid and plastic limit tests conducted on the proposed material in accordance with ASTM D 4318.
 3. The results of a Standard Soil Proctor Test in accordance with ASTM D 698.
- C. Additionally, the Contractor shall submit to the Engineer, for each borrow source, the results of grain-size analyses conducted in accordance with ASTM D 422, for each 4,000 cubic yards of material placed.

PART 2 - MATERIALS

2.01 BERM CONSTRUCTION MATERIAL

- A. The material shall be primarily medium or coarse sandy material (SW, SP, SM, or SC as classified by the Unified Soil Classification System) with not greater than 10% fine-grained material passing the #200 sieve. Additionally, the medium or coarse sand material shall be not less than 60% retained by the #50 sieve.
- B. The Contractor shall locate the soil fill material utilized for construction of the sand berm. The backfill material shall be free of debris, foreign objects, roots, organics and other materials considered deleterious by the Owner/Engineer. The soil shall be made up primarily of a sandy material, (SW, SP, SM, or SC as classified by the Unified Soil Classification System).

PART 3 - EXECUTION

3.01 ORDER OF WORK

- A. Work Hours- Operations may be performed 24 hours a day, 7 days a week, including those days which have been declared by Congress to be legal holidays for per diem employees of the Federal government.
- B. The Contractor shall notify the Engineer at least 7 days in advance of intention to perform the work of this Section.
- C. If work is interrupted for reasons other than inclement weather, the Contractor shall notify the Engineer a minimum of 24 hours prior to the resumption of work.
- D. Site Investigation
 - 1. The Contractor is responsible for conducting site investigations. It will be the Contractor's responsibility to visit the sites of Work to determine for himself the conditions affecting the Work to include, but not necessarily limited to, the following: a. Location and condition of existing above water and subsurface conditions located adjacent to and within the job limits as shown on the Contract Documents.

3.02 PLACEMENT OF FILL MATERIAL

A. General Requirements

1. All sand material shall be used for the construction of the containment berms in accordance with the requirements and limitations specified herein. All costs associated with the requirements of the project shall be included in the Bid Form.
2. Installation operations will be suspended at any time water of poor quality is being released into the river based on turbidity monitoring reports.

B. Construction

1. Containment Berm. The Contractor shall be responsible to maintain in satisfactory operating condition, the Containment Berms during the course of construction. The Contractor will not be held responsible for erosion caused by waves or tidal action after final completion of the project.
2. Contractor shall review the existing water depths prior to commencing installation operations.
3. Mechanical operations may be needed to place material to the required lines and grades. The Contractor shall address the placement methods(s) for each Acceptance Section in the Work Plan. Stockpiling, additional longitudinal dikes, and/or other special handling may be needed. It is the Contractor's responsibility to place material to the specified lines and grades within the fill cross section.
4. The material within the project containment limits shall be installed to designated earthen berm locations. There are no provisions for stock piling or dewatering material within the project limits.
5. Unsuitable or perishable materials such as rubbish, sod, brush, roots, logs, stumps (after removal), heavy vegetation, etc., shall not be incorporated in the berms. Rocks, broken concrete, or other solid material shall not be placed in berm areas unless so directed by the Engineer. Such materials shall be removed and hauled to an approved site for disposal at no additional cost to the Agency.
6. Contractor shall place the necessary quantity of fill material as to ensure the specified heights are sustained over the entire length of the proposed berms.
7. The Contractor shall install settlement plates prior to earthen berm material installation as shown on the Construction Drawings and as described below.
 - a. Settlement plates shall be constructed with a 4 foot by 4 foot, ¼-inch thick steel plate with a 2.5-inch diameter steel riser pipe attached to the center of the plate. The settlement plates shall be hot dipped galvanized after fabrication. The riser pipe shall extend a minimum of 3 feet above the design elevation of the berm material.
 - b. Settlement plates shall be placed after installation of the geogrid system and prior to berm material installation at the locations detailed in the Construction Drawings. Plates shall be placed so that the riser pipe is no more than 5

- degrees from true vertical. The riser pipe shall be marked with reflective tape or flagging.
- c. During installation of the berm material, the Contractor shall carefully place materials near the settlement plate and maintain the plates until completion of the appropriate phase of the project. After acceptance of the earthen berm, the Contractor shall cut or remove the riser pipe so that it is no more than 6 inches above the top of the constructed earthen berm elevation.
 - d. Settlement plates shall be surveyed per SECTION 01 32 23 – SURVEYS AND LAYOUT DATA.
8. Earthen material shall be placed in 12- to 18- inch lifts or as directed by the Engineer. Earthen material shall be placed in such a manner that minimizes the development of wrinkles in and/or movement of the grid composite.
 9. Material shall be placed in such a manner as to avoid damage to the underlying composite geogrid or geotextile fabric. No equipment will be allowed to operate over the geogrid or fabric until it is covered with a layer of material of sufficient thickness to protect the geogrid and fabric installation. When the underlying soil is very unstable, the two outer one-third portions of an embankment layer shall be placed approximately 25 feet in advance of the center one-third portion to minimize mudwave movements and damage to the fabric installation. The Contractor shall place berm fill material carefully and gently such that the fill material is spread uniformly to prevent localized unstable condition that may result in mud-waving the underlying foundation soils.
 10. Contractor shall plant new wetland vegetation as to ensure successful growth and as directed by supplier. Plantings shall cover top berm areas and sloped sides to at least the MLLW for the entire length of the berms as shown in the drawings.
 11. Armoring of berm and the placement of wetland vegetation shall be in strict conformance with Regulatory Permits.
 12. No payment will be made for the relocation of material determined to be loosened and or lost into the existing river channel through carelessness or negligence on the part of the Contractor.
 13. All berms shall be constructed to the shape and slopes as described in the construction plans and details. Surfaces shall be neatly and smoothly trimmed. All new grading shall be blended into the surrounding, existing terrain.
 14. All earthen containment berms are to be covered with an erosion blanket and sprigged immediately to prevent erosion. Coastal plantings will be as shown on the Construction Drawings and as described elsewhere in the Technical Specifications.

3.04 FINAL CLEANUP

- A. Final cleanup shall include the removal of all the Contractor's equipment and excess material. Equipment and material to be disposed of shall ONLY be disposed of in a manner and at locations approved by MDEQ. Unless otherwise approved in writing, the Contractor

will not be permitted to abandon pontoons or other equipment in the disposal area, access areas, water areas, or other areas adjacent to the Work site. Pilings and any other debris removed or created as a result of the execution of this Contract shall be disposed of in a manner and at locations approved by MDEQ.

3.05 PERMITS AND RESPONSIBILITIES

- A. The Contractor's attention is directed to Section 01 35 43 ENVIRONMENTAL PROTECTION and the Appendices referenced herein.

3.06 QUALITY CONTROL (Refer to Section 01 40 00)

A. Permits and Licenses

Department of the Army, Corps of Engineers and Mississippi Marine Resources (DMR) permits for the dredging and placement of the material in the shown in the Construction Documents have been obtained by the OWNER. The Contractor shall comply with all terms and conditions of the permits.

3.07 QUALITY ASSURANCE

- A. MDEQ will monitor the Contractor's performance in each functional area under this Contract and reserves the right to use whatever additional surveillance procedure is deemed appropriate.

B. INSPECTION AND ACCEPTANCE

Phase 1

1. As soon as practicable after completion of the work shown in the Construction Drawings and required by this section, the Work shall be thoroughly examined by the Contractor, Engineer, and by controlled survey at the expense of the Contractor.
2. Should any material deficiency such as but not limited to: less than required berm section; width; elevations; or slopes be disclosed by this examination, the Contractor shall continue Work at the deficient segment until the unacceptable condition is corrected.
3. After the berm is identified as materially complete, the settlement monitoring surveys will commence as outlined in Section 01 32 23.
4. The acceptable tolerances for berm construction are +/-3 feet of the horizontal position and +/-0.2 feet in elevation.

Phase 2

1. As soon as practicable after completion of the work shown in the Construction Drawings and required by this section, the Work shall be thoroughly examined by the Contractor, Engineer, and by controlled survey at the expense of the Contractor.

2. Should any material deficiency such as but not limited to: less than required berm section; width; elevations; or slopes be disclosed by this examination, the Contractor shall continue Work at the deficient segment until the unacceptable condition is corrected.
3. The acceptable tolerances for berm construction are +/-3 feet of the horizontal position and +/-0.2 feet in elevation.
4. If the performance in any required service is unsatisfactory, and poor performance is the fault of the Contractor, MDEQ at no expense to MDEQ, will deduct the cost of having the Work performed by another party from payment due the Contractor. Deductions will be based on the Contractor's Bid Form, MDEQ's cost to perform the Work, or MDEQ's cost to have another contractor perform the Work.

PART 4 - COMPENSATION

4.01 Method of Measurement

- A. Measurement for berm material shall be measured by Loose Vehicular Measure based on the barge displacement tables as detailed in Section 01 20 00 – Measurement and Payment Procedures.
- B. Moisture content will be determined from samples taken from each barge of material. The weight of the moisture contained in the material will be deducted from the overall barge tonnage and cubic yardage of dry material will be measured based on dry unit weight from the provided Proctor tests.

4.02 Method of Payment

- A. Payment for Berm Material will be made by the cubic yard utilizing measurement methods described in 4.01. (CY – LVM).

END OF SECTION